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IMPACT EVALUATION OF THE THIRD FRAMEWORK AGREEMENT (FA3-III) BETWEEN DGD AND ITM

Final Evaluation Report – Volume I

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Cover page image: Getty Image

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ABBREVIATIONS & ACRONYMS

ABS	Antibiotic stewardships (network)
AfriVIP	African Veterinary Information Portal
ARV	Antiretroviral
BM	Biomedical
BPKIHS	B.P. Koirala Institute of Health Sciences (Nepal)
BU	Buruli Ulcer
CAR	Central African Republic
CATT	Computer Aided Test Tool
CCSC	Centre de Connaissances en Santé (DRC)
CHNU	Centre Hospitalier National Universitaire Le Dantec (Senegal)
CIPIP	8th International Congress on Infectious and Parasitic Diseases
CM	Centre Muraz (Burkina Faso)
CMHS	College of Medicine and Health Sciences, University of Gondar (Ethiopia)
CNM	National Centre for Parasitology, Entomology and Malaria Control (Cambodia)
CoBAMS	College of Business and Management Science, University of Kampala (Uganda)
COP	Community of Practice
COS	Commission Development Cooperation (ITM)
Covid-19	Coronavirus Disease 2019
CR	Clinical Research (network)
CRC	Clinical Research Centre
CRUN	Clinical Research Unit Nanoro (Burkina Faso)
CS	Clinical Sciences
CSART	Health Centre for Learning and Research
DGD	Directorate General for Development Cooperation and Humanitarian Aid (Belgium)
DIAMA	Research assessing and validating the Deeplex®-MycTB test in Africa and Europe
DNDi	Drugs for Neglected Diseases Initiative
DRC	Democratic Republic of Congo
DVTD	Department of Veterinary Tropical Diseases, University of Pretoria (South Africa)
EDTCP	European & Developing Countries Clinical Trials Partnership
ENSEA	Ecole Nationale de Statistique et de Economie Appliquée (Côte d'Ivoire)
ENSP	Ecole Nationale de Santé Publique (Morocco)
EPHP	Evidence in Public Health Policy (Conference series – India)
ESP	Ecole de Sante Publique, Université de Lubumbashi (DRC)
ESSENCE	Multi-partner initiative to increase the impact of support for research capacity strengthening
EVIDENT	Nutrition Knowledge (network)
FA	Framework agreement (FA1, FA2, FA3, FA4)
FA3-III	Third Framework Agreement, Phase III (2014-2016)
FP7	EU 7th Framework Programme for Research
FPHSM	Fellowship Programme in Health Systems Management
GBV	Gender Based Violence
GCLP	Good Clinical Laboratory Practice
GCP	Good Clinical Practice
GE	Gender Equality
GEWE	Gender Equality and Women's Empowerment
GM	Gender Mainstreaming

CTM-GMU	Centre for Tropical Medicine, Gadjah Mada University (Indonesia)
HAT	Human African Trypanosomiasis
HIA	Health Impact Assessment
HOSP	Hospital
HSN	Health Systems Network
i-Tech	International Training and Education Center for Health
IC	Institutional Collaboration
IHPF	International Health Policy and Financing (network)
INHEM	National Institute for Hygiene, Epidemiology and Microbiology (Cuba)
INRB	Institut National de Recherches Biomédicales (DRC)
IPH-B	Institute of Public Health (Bengaluru, India)
IPH-PUCE	Institute of Public Health, Pontificia Universidad Catholica de Ecuador
IPK	Institute of Tropical Medicine Pedro Kouri (Cuba)
IRESSEF	Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation (Senegal)
ISO	International Organisation for Standardisation
ISP	Instituto de Salud Pública (Institute of Public Health)
ITM	Institute of Tropical Medicine (Antwerp)
IMTAvH	Institute of Tropical Medicine Alexander von Humboldt (Peru)
KII	Key Informant Interview
LAC	Latin American Countries
LF	Logical Framework
LQM	Laboratory Quality Management (network)
LRC	Leishmania Research Centre, University of Gondar (Ethiopia)
LRM	Laboratoire de Référence de Mycobactéries (Benin)
LSHTM	London School of Hygiene and Tropical Medicine
mAECT	mini Anion Exchange Centrifugation Technique (Trypanosomiasis)
MakSPH	School of Public Health, Makerere University (Uganda)
MAXQDA	Content analysis software
MCHN	Mother and Child Health and Nutrition
Mo(P)H	Ministry of (Public) Health
MPH	Master of Public Health
MSc	Master of Sciences
NCHADS	National Centre for HIV/AIDS, Dermatology and STD's (Cambodia)
NCP	National Control Programme
NetSRH	Sexual and Reproductive Health (incl. HIV/AIDS) (network)
NHI	National Health Institute
NHLS	National Health Laboratory Services
NIMPE	National Institute for Malaria, Entomology and Parasitology (Vietnam)
NLAB	National Laboratory
NP	North Promotor
NSS	National School of Statistics
NTD	Neglected Tropical Diseases
NTD&Z	Tropical and Neglected Diseases (incl. zoonoses) (network)
OECD-DAC	Organisation for Economic Co-operation and Development / Development Assistance Cttee
PCM	Project Cycle Management
PCR	Polymerase Chain Reaction
PH	Public Health

PhD	Doctor of Philosophy (Doctorate)
PMTCT	Prevention of Mother to Child Transmission
PNLP	Programme National de Lutte contre le Paludisme
PNLTB	Programme National de Lutte contre la Tuberculose
PNLTHA	Programme National de Lutte contre la Trypanosomiase Humaine (DRC)
PNLUB	Programme National de Lutte contre l'Ulcère Buruli
QA	Quality Assurance
QUAMED	Quality Assured Medicines
RIPSEC	Renforcement Institutionnel des Politiques de Santé basées sur l'Evidence
RMU	Rational Medicines Use
RQ+	Research Quality Plus
SA	South Africa
SCM	Supply Chain Management
SHCH	Sihanouk Hospital Centre of Hope (Cambodia)
SMART	Specific, Measurable, Attainable / Achievable, Relevant and Time-bound
SNA	Social Network Analysis
SOP	Standard Operating Procedure
SORT-IT	Structured Operational Research Training Initiative
SP	South Promotor
SPaRCS	Strengthening pharmacovigilance and regulatory capacities in four southern African countries
SPH	School of Public Health
SRHR	Sexual and Reproductive Health & Rights
SSA	Sub-Saharan Africa
STM-UMSS	School of Tropical Medicine, Universidad Mayor de San Simon (Bolivia)
SWOT	Strengths, Weaknesses, Opportunities and Strengths
TB	Tuberculosis
TB & BU(ruli)	Tuberculosis and Buruli (network)
THA	Trypanosomiase Humaine Africaine
ToR	Terms of Reference
UEM	University of Eduardo Mondlane (Mozambique)
ULB	Université Libre de Bruxelles
UoG	University of Gondar (Ethiopia)
UPCH	Universidad Peruana Cayetano Heredia (Peru)
VL	Visceral Leishmaniasis
VLIR	Flemish Inter-University Board
WANETAM	West-African Network on TB, AIDS and Malaria
WAPHIR	West African platform for HIV Research
WHO	World Health Organization

EXECUTIVE SUMMARY

FA3-III covered five programme components. The first component, including country programmes (24 organisations in 18 countries) and a 'global' programme (ten thematic networks and the annual colloquium/ seminars) was the focus of the current evaluation. Where relevant and feasible, evaluation findings took into consideration longer-term support provided by ITM before and after the review period (2014-2016).

SWITCHING THE POLES

Over the FA3 period ITM and its partner institutions in the south jointly built or contributed to achieving an **equal level playing field**. While this more equal partnership was already in place with some institutions as from the start of the institutional collaboration (IC), the objective was fully achieved or is on track in all but two partnerships. The success in working towards switching the poles, and the appreciation by the ITM south partners is remarkable. Understandably, the speed and the way to achieve this objective was dependent on the south institution's profile, capacity and willingness to take ownership; and on the national context. Surprisingly, the same dynamic did not translate as strongly in the global programme. Although most of the network proposals under FA3-III reinforced the idea of 'switching the poles' through networking, the opinions of members on whether the networks contributed to switching the poles were divided. Some networks attempted to increase the leadership of network participants; however, no financial resources were allocated to southern partners for management and coordination. The networks included in the evaluation (excluding the EV4GH network) were therefore not fully successful in switching the poles.

COUNTRY PROGRAMMES / INSTITUTIONAL COLLABORATION

Capacity needs among the FA3-III partners varied from large national programmes that acquired increased capacity in relatively marginal areas such as operations research, to new and emergent institutions where the IC aimed at comprehensive institutional capacity strengthening. Significant capacity outcomes can rarely be generated in a 3-year cooperation programme and **long-term engagement** with ITM was an important contribution to effective capacity strengthening that distinguished the cooperation from those with other international partners. Overall, ITM is appreciated by south partners as a trustworthy, transparent, flexible and **respectful partner** and an exceptional partner in terms of values and willingness to invest in local capacity strengthening. This strength and profile of ITM should be nurtured and promoted in future undertakings.

In general, **service capacity strengthening** activities under FA3-III were implemented as planned. If delays occurred, they were mostly due to external factors. Capacity support for core laboratory services resulted in adapted national treatment and diagnostic guidelines, high quality diagnostic testing, improved patient care and more effective disease control. It also supported high quality research.

The volume of outputs of collaborations in **research capacity strengthening** in terms of peer-reviewed articles is impressive. PhD sponsorships were strategic in strengthening national health system and public health teaching. The capacity of south partners in participating in international calls for research, submitting joint research proposals and accessing other research funds was strengthened, although not formally or systematically monitored. Capacity built also contributed to raising the status of some institutions, now recognised as national or regional research centres. Research ethics committees were strengthened and, overall, the emphasis on research ethics increased. Improved in-house research capacity was, however, not a priority for all partners, for instance national disease programmes that largely appreciated the support from ITM, however did not strongly internalise research in their institutional mandate.

Along the same lines, ITM strengthened the **institutional training capacity** in most south institutions where it was the project focus. This was, understandably, less successful in a few institutions where support was

limited to only three years, which raises a question about content and scope of collaboration that can be initiated if continuity of support is insecure (e.g. dependent on DGD policy related to partner countries). Several partners increased their **capacity to implement e-learning** programmes, in some cases outpacing developments at ITM.

In interviews, north and south promotors mentioned many examples of **influence on policy and practice** at local, national and global level. Although not verified and often not clearly attributable to IC during the FA3-III period, they are an indication that the projects have contributed to evidence translation. However, only about half of the IC logical frameworks of FA3-III referred to aiming at policy influence, only 7/24 logical frameworks included an indicator for monitoring policy influence, research proposals were largely silent on knowledge translation, and policy influence outputs were not routinely reported. Research dissemination activities were, in the majority, targeted at scientists and technical specialists with few exceptions. Close working relationships between researchers and decision makers were reported by some, however always as a personal initiative that was not considered an aspect of the collaboration with ITM. The under-reporting and limited attention to policy influence in the IC projects was a missed opportunity.

Some of the partnerships under the IC programme were formed with well-established and strong partners that worked with ITM on an equal level and did not require **institutional strengthening.** Both partners contributed specific skills or experiences. The collaboration provided ITM with access to the field for research and training, and the partner access to technologies and scientific expertise in specific areas. Learning occurred in both directions. However, institutional strengthening is more complex than institutional cooperation. It requires thinking on how to structure the collaboration around institutions rather than individuals. ITM will need to develop clear strategies and approaches for institutional collaboration and institutional strengthening, two distinct approaches that are not mutually exclusive. In some cases, ITM should consider insourcing or outsourcing management capacity strengthening as this type of support is beyond ITM's core business.

South-south or rather triangular cooperation was pursued mainly through the networks and colloquia under the Global Programme of FA3-III (see below). Capacity strengthening support through the IC projects, however, also increased the ability of partners to engage in technical and scientific exchanges with other institutions in the Global South, sometimes directly supported by the IC project, sometimes self-initiated, and often under the umbrella of a regional or global multilateral partner. Only two projects under FA3-III had a triangular cooperation architecture. Neither of them was very successful, indicating that the modalities of the FA3 country programme did not lend itself for the support of these types of cooperation projects. Some south-south exchange of technical support has effectively replaced north-south support. It is important for ITM to learn from those collaborations in order to develop the most efficient approaches.

All IC projects were **fully aligned** with local institutional priorities and south partners were fully involved in project formulation and implementation. The main **monitoring** tools were logical frameworks and output tables. A majority of indicators and performance reports against these indicators in the logical frameworks were counting outputs rather than capturing progress in capacity development and effects on the improvement of practices, programmes and policies. They were mostly gender blind. Quantitative output tables were biased towards scientific interests, not gender-specific and lacked important information on capacity built or changes affected. The evaluation noted that there was a considerable improvement in the FA4 theory of change and monitoring frameworks.

Gender was not addressed in previous and current institutional policy plans of ITM, but the latest plans place a stronger emphasis on equality, equity and non-discrimination. In order to address the gender gap, ITM has set up an inter-department working group to develop a gender and diversity policy action plan (currently in

draft). Without mainstreaming gender in the institutional policy plan itself, however, there is a risk that it will be treated as an add-on rather than being mainstreamed in all aspects of ITM's work.

Gender mainstreaming in institutional policies, practices and programmes of partner institutions was not analysed or promoted in the IC projects. Reporting on the integration of gender was mandatory in the annual and final project reports but was usually perfunctory and the reports are not suitable for an assessment of the extent to which gender equality and women's empowerment were integrated in the projects. Interviews with south promotors suggested that the institutions that made advances in promoting gender equality in their institutional policies, training activities and research projects did this independently and without contribution of the IC with ITM.

ITM has a **long track record of efficiently managing collaboration projects** in the south. It works closely with the south partners, understands the local context and has a problem-solving, creative and supportive approach. Even in difficult local contexts, projects achieved their objectives with few exceptions.

The partnership of ITM with south institutions was based on mutual respect, quality, transparency, and integrity which contributed to changing institutional values and were key elements in assuring the **sustainability** of project results. **Insecurity of future funding** made sustainability planning challenging. When formal collaboration ended, partners found different modalities to continue their cooperation. This is, however, not always sufficient to guarantee sustained impact.

GLOBAL PROGRAMME / NETWORKS

Most networks achieved the **goal of capitalising on each other's expertise and experiences** and bringing together scientists from different countries and institutions in the effort to advance knowledge and translate it into applied strategies for disease control and health care. Capacity was built in terms of research, training and delivery of reference services and research and findings were disseminated at national and international events, in online platforms and in peer-reviewed journals. Some network members were able to influence policies and practices, usually because of their personal engagement and merit. **Networks that functioned well and encouraged south-south collaboration** for joint research and collaboration had the following characteristics:

- A common goal and shared vision
- Shared interest in the topic
- A governance structure involving network partners
- Collaboration measured as a result by appropriate indicators
- Participation of network members with time, motivation, and resources to contribute
- Availability of sufficient funding for network activities (either from DGD or sourced externally)
- Regular face-to-face meetings but also sufficient virtual interactions

Most of the **recommendations from the 2010 MTR** were implemented, except for shifting governance to the South.

Gender was not a priority in the implementation of the global programme. The extent of gender mainstreaming varied across and within network projects. It was largely dependent on individuals who advocated for more attention to gender matters, without, however, achieving large-scale buy-in.

Only one of the networks continues to exist, however, several network activities and components continued with or without DGD funding. The relevance of the activities for ITM and collaborating partners, the use of digital tools, availability of funding and synergies with other networks were factors that influenced this continuation.

1 INTRODUCTION

1.1 BACKGROUND

The third framework agreement (FA3) between ITM and DGD, "Switching the poles" 2008-2013 (covering two periods of three years – FA3-I and FA3-II) was extended for another three years, phase three (FA3-III) up to 2016. FA3-III (2014-2016) is the subject of the current evaluation. The programme is funded by the Belgian Directorate General for Development Cooperation and Humanitarian Aid (DGD) and FA3 (2008-2016) was a continuation of previous framework contracts (FA1 –1998-2002 and FA2 2003-2007). hera was contracted by ITM to conduct the evaluation, which was implemented from June to October 2020.

1.2 THIRD FRAMEWORK AGREEMENT (FA3-III)

As indicated in the Terms of Reference (ToR, see Annex 1), the overall objective of the programme was to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby contribute to the reduction of poverty and inequity. The specific programme purpose was to build, reinforce and support appropriate and sustainable capacity in developing countries to conduct research, training and delivery of reference services in order to meet the overall objective.

The target groups of the programme were a) the leaders, scientists and experts in the partner institutions in low- and middle-income countries; b) the health professionals and policy makers that can implement the improved practices and policies resulting from the programme; and c) the communities and individuals that should benefit from the improved practices and policies and were therefore indirect beneficiaries for most institutional collaboration projects.

FA3-III covered five programme components. The first component, including country programmes (1A: 24 organisations in 18 countries) and a 'global' programme (1B: ten thematic networks and the annual colloquium/ seminars) is the focus of the current evaluation. It covered about 59% of the FA3-III budget (€45.25 million)[1]. Components 2 (international scholarships and training) and 3 (policy support) have been evaluated before. In parallel to the current evaluation, evaluations of the Emerging Voices and Because Health initiatives have also been launched.[2]

1.3 SCOPE AND PURPOSE OF THE EVALUATION

The aim of the evaluation is to contribute to learning, building deeper partnerships, and providing accountability to ITM, its partner institutions and to DGD.

Learning refers to the formative aspects of the evaluation, informing current and future interventions (content, stakeholder engagement, modalities). Building partnerships refers to strengthen existing partnerships with a view to continue increasing local ownership.

While the evaluation focuses on FA3-III, it does, where possible and relevant, take into account findings and experiences from the whole FA3 programme (2008-2016) related to country and global programmes. This is mainly based on the FA3-I and FA3-II end of project reports as no evaluation reports are available for phase I and II of FA3. Final reports of FA1 (1998-2002) and FA2 (2003-2007) were only consulted to better comprehend longer-term partnerships with selected countries / institutions (e.g. for the country case studies

[1] Including the PNLTHA project in DRC (which budget of 7.5 M € was added later). Without this additional budget, component one covered 51% of the total budget.

[2] Because Health was also evaluated in 2014

of Benin and Peru). In order to document impact of the country support or institutional collaboration in FA3-III, it was important to take into account support provided before FA3-III (as results achieved in FA3-III may also be a consequence of previous support) and, where applicable, achievements in FA4 that resulted from support provided under FA3. While the resources provided for this evaluation did not allow for a detailed assessment of previous framework agreements or of FA4, the evaluation has, as much as possible, explored important elements in interviews with key stakeholders.

2 APPROACH AND METHODOLOGY

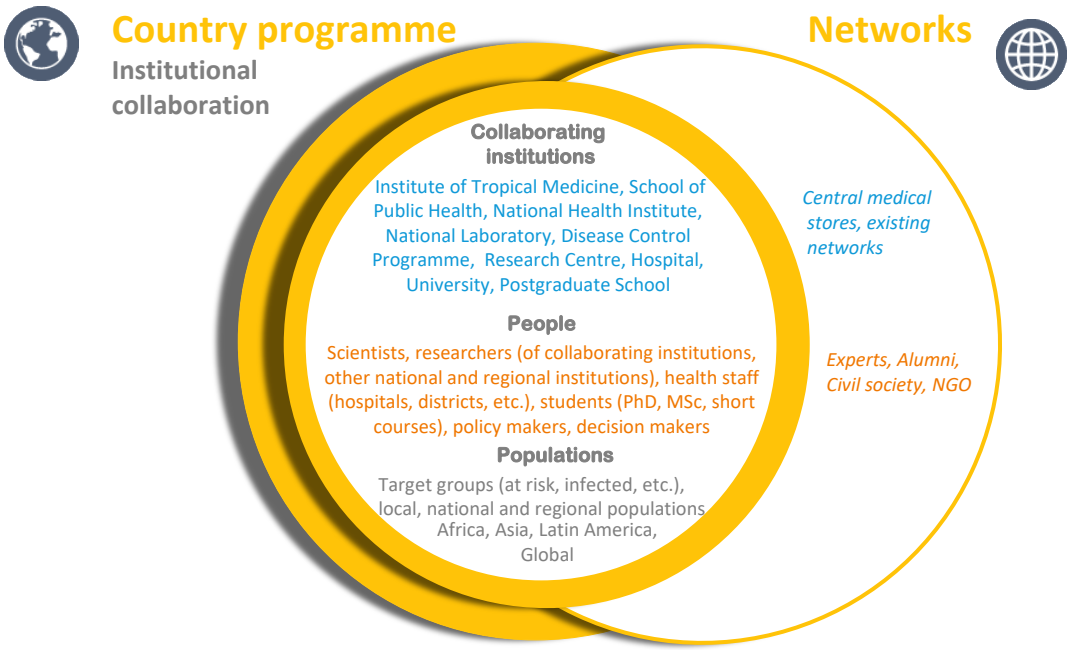
2.1 METHODOLOGY

The evaluation methodology, described in detail in the inception report, applied a mixed methods approach based on matrices of evaluation questions that were developed (by ITM and the evaluation team) for the overall programme (country projects and networks) including the three case studies (Benin, India and Peru) (see annex 2, Table 3). The questions were structured according to the OECD-DAC evaluation parameters. For each evaluation question, data sources were identified. OECD-DAC evaluation criteria, as indicated in the ToR, were applied. Coherence (the latest OECD-DAC criterium) was not included as it was not mentioned in the ToR and was not yet part of the OECD-DAC criteria during the programme period.

The evaluation collected and triangulated data from five main sources: document reviews, on-line surveys, key informant interviews (KIIs), country visits / case studies, and a social network analysis. Field visits by national experts to partner institutions in the three country programmes that were selected for case studies (Benin, India, Peru) were foreseen. Only visits in Benin were realised because of Covid-19 control policies in India and Peru (see section on limitations).

A stakeholder map summarising the universe of institutions, organisations and structures that influenced the FA3 III programme, worked in partnership with the programme or were affected by the programme's activities was prepared as an organising framework. (Figure 1) It provides a sampling frame from which selections were made for interviews and surveys.

Figure 1. Stakeholder Map



Stakeholders for institutional collaboration (IC)/ country programmes (FA3-III 1A) and for networking (FA3-III 1B) overlap to a large extent, but not completely. Stakeholder types for both programme components are listed in Figure 1, based on a review of the 24 institutional collaboration projects and 11 networks (including the colloquium). Network stakeholders that are complementary to those listed for institutional collaboration are presented in italic in figure 1.

A document library for the evaluation was assembled with documents obtained from ITM and expanded throughout the evaluation, including through internet searches and complementary documents or data sources provided by interviewees. Relevant documents were coded according to their contribution to answering specific evaluation questions and analysed using the content analysis software MAXQDA which is designed to triangulate and analyse qualitative and mixed data.

For the evaluation of the network component (1B) a social network analysis (SNA) of four networks was performed using data that were collected in an online survey of 21 network participants. The survey results were analysed with the social network analysis software NodeXLpro.

Key informant interviews (KIIs) were held with stakeholders who were identified jointly with ITM as particularly knowledgeable on all or some of the evaluation questions. These included (1) North and South promotors of IC projects, (2) network organisers (North) and network participants (South), (3) stakeholders involved in the programme's governance, management and financing (DGD, ITM), (4) additional stakeholders and beneficiaries interviewed in country case studies (e.g. staff of the participating institution(s), researchers who completed PhD, policymakers, networking institutions).

Three case studies were conducted (Benin, India and Peru). The case studies covered the institutional collaboration with ITM and, where relevant, the involvement of the local institution in one or more of the ITM networks. The methodology combined site visits, (virtual and face-to-face) KIIs, joint meetings / workshop (to a limited extent because of Covid-19), and e-surveys.

Questions exploring the gender responsiveness of the FA3-III programme were included in the evaluation matrix. The assessment included document reviews (mainly the FA3-III progress reports and ITM policy / strategic documents) and KIIs.

FA3-III indicators to measure individual and organisational capacity development were reviewed. In addition, we adapted a framework developed by the ESSENCE initiative (Planning, Monitoring and Evaluation Framework for Research Capacity Strengthening; version 2016[3]) for the three country case studies. The original framework covers individual, institutional and national research capacity strengthening as well as research networks. We adapted the framework to capture other capacity strengthening aspects targeted by ITM support such as training and service delivery (see inception report). Based on the evaluation findings a set of indicators are proposed for future use (see section 8.2).

2.2 LIMITATIONS

Taking into account that the evaluation budget only provided for one and a half day investment per institutional collaboration (IC) project (excluding the three case studies and the social network analysis), data collection was limited to document reviews and two interviews per IC project and network and did not allow a comprehensive evaluation of each individual project or network. The report therefore does not present an evaluation score per project or network but rather a cross-programme assessment of main findings and lessons learnt. IC projects or networks are only quoted to illustrate findings.

Evaluating a project and network that was implemented 4 to 6 years ago, and is often part of a longer support (starting before 2014 and / or continuing after 2016) is confronted with some practical issues. Not all interviewees were able to re-call what happened in the period 2014-2016 and some key stakeholders involved in the period under review were no longer in post or no longer available for interviews. Where possible, we tried to replace them by other informed stakeholders.

[3] https://www.who.int/tdr/publications/essence-framework-2016/en/

Recommendations that are based on evidence and performance in 2014-2016 may already have been taken up after 2016 (e.g. in FA4) and may no longer be relevant.

The Covid-19 pandemic has interfered with data collection. Many of the virtual interviews had to be rescheduled, because South and North promotors were not available (some played an active role in the national response to the epidemic). Two south promotors were unavailable during the evaluation. The three case studies were much delayed because of difficulties in organising site visits and interviews, especially with government stakeholders. Joint workshops could not be held in any of the three countries and were replaced with individual interviews, e-mail questionnaires and an on-line survey. A physical site visit was only conducted in Benin. Not all members of the four networks selected for the social network analysis contributed to the exercise and therefore the representations of the network are not complete, but the response rate was considered sufficient to present the results.

3 OVERVIEW OF COUNTRY PROGRAMMES AND NETWORKS

The evaluation covered 18 country programmes, including 24 institutional collaborations, and 10 networks (plus a brief review of the ITM colloquium). Four country programmes had more than one institution involved (Cambodia, Cuba, DRC and SA). The IC projects are listed in the table below. They include seven institutes of tropical medicine (ITM), six schools of public health (SPH), three national health institutes (NHI), two national laboratories (NLAB), three national disease control programmes (NCP), one clinical research centre (CRC), one referral hospital (HOSP) and one national school of statistics (NSS). In 15 collaborations, the ITM public health department (PH) was the lead department and it contributed to one more project; the biomedical (BM) and the clinical sciences (CS) departments led respectively in six and three cases. The BM department collaborated in another six projects and the CS department in another three. Budgets varied between a low €150.000 (ESP) and a high of €1.5 million (INRB, DVTD, IMTAvH and IPK). Support to implementing PNLTHA was budgeted at €7.2 million (initially €7.5 million).

Table 1. Overview of institutional collaboration projects

1.A	Partner Institution	Country	Partner name[4]	Inst. type (1)	ITM department involved (2)	FA3-III Budget (,000 €)
	NORTH, WEST AND CENTRAL AFRICA					
1.01[5]	Ecole Nationale de Santé Publique	Morocco	ENSP	SPH	PH	450
1.02	Institut National de Recherches Biomédicales	RD Congo	INRB	NHI	**PH**, BM, CS	1,500
1.02	Ecole de Sante Publique, Université de Lubumbashi	RD Congo	ESP	SPH	PH	150
1.02	Programme National de Lutte contre la Trypanosomiase Humaine	RD Congo	PNLTHA	NCP	**PH**, BM	7,197
1.03	Centre Hospitalier National Universitaire Le Dantec, Laboratoire de Bactériologie-Virologie	Senegal	CHNU	NLAB	BM	750
1.04	Laboratoire de Référence de Mycobactéries	Benin	LRM	NLAB	**BM**, CS	300
1.05	Clinical Research Unit Nanoro / incl. Centre Muraz	Burkina Faso	CRUN	CRC	CS	600
1.07	Ecole Nationale de Statistique et de Economie Appliquée	Côte d'Ivoire	ENSEA	NSS	PH	300
	SOUTHERN AND EASTERN AFRICA					
1.08	Leishmania Research Centre, College of Medicine and Health Sciences, University of Gondar (UoG)	Ethiopia	LRC/CMHS	ITM	CS	450
1.09	School of Public Health, Makerere University	Uganda	MakSPH	SPH	PH	900
1.10	School of Public Health, University of Western Cape	South Africa	SPH-UWC	SPH	PH	450
1.10	Department of Veterinary Tropical Diseases, University of Pretoria	South Africa	DVTD-UP	ITM	BM	1,500
	LATIN-AMERICA					
1.11	Instituto de Salud Pública, Pontificia Universidad Católica del Ecuador	Ecuador	ISP-PUCE	SPH	PH	600
1.12	School of Tropical Medicine, Universidad Mayor de San Simon	Bolivia	STM-UMSS	ITM	PH	450
1.13	Instituto de Medicina Tropical Alexander von Humboldt, Universidad Cayetano Heredia	Peru	IMTAvH	ITM	**BM**, CS, PH	1,500

[4] These abbreviations or names for south institutions are used throughout the report.

[5] Reference number used in FA3-III reporting. Project 1.06 is missing as it was not implemented in FA3-III (Gambia)

1.A	Partner Institution	Country	Partner name[4]	Inst. type (1)	ITM department involved (2)	FA3-III Budget (,000 €)
1.14	Institute of Tropical Medicine Pedro Kouri	Cuba	IPK	ITM	**PH**, BM	1,500
1.14	National Institute for Hygiene, Epidemiology and Microbiology	Cuba	INHEM	NHI	**PH**, BM	
	ASIA					
1.15	Institute of Public Health - Bengaluru	India	IPH-B	SPH	PH	750
1.16	B.P. Koirala Institute of Health Sciences	Nepal	BPKIHS	ITM	**PH**, BM	600
1.17	Sihanouk Hospital Centre of Hope	Cambodia	SHCH	HOSP	CS	750
1.17	National Centre for HIV/AIDS, Dermatology and STD	Cambodia	NCHADS	NCP	PH	300
1.17	National Centre for Parasitology, Entomology and Malaria Control	Cambodia	CNM	NCP	BM	450
1.18	National Institute for Malaria, Entomology and Parasitology	Vietnam	NIMPE	NHI	BM	450
1.19	Centre for Tropical Medicine, Gadjah Mada University	Indonesia	CTM-GMU	ITM	**PH**, BM	300

Note (1): CRC = Clinical Research Centre; HOSP = Hospital; ITM = Institute of Tropical Medicine; NCP = National Control Programme; NHI = National Health Institute; NLAB = National Laboratory; NSS= National School of Statistics; SPH = School of Public Health.
Note (2): BM = Biomedical; CS = Clinical Sciences; PH = Public Health.

In addition, ten networks and one colloquium were covered, as listed in the table below. All networks operate regionally or globally (also called 'the global programmes'). The ITM annual colloquium and seminars combine activities in Belgium and globally. Six of the ten networks were led by the PH department (contributing to a 7th network); CS and BM departments led three and one network respectively.

Table 2. Overview of networks

1.B	Global programme	Network name6	Responsible ITM department (1)	Budget (,000 €)
1.21	International Health Policy and Financing	IHPF	PH	450
1.22	TB & Buruli	TB&Buruli	BM	450
1.23	Tropical and Neglected Diseases (incl. zoonoses)	NTD&Z	PH	450
1.24	Sexual and Reproductive Health (incl. HIV/AIDS)	NetSRH	PH	300
1.25	Nutrition Knowledge	EVIDENT	PH	300
1.26	Laboratory Quality Management	LQM	CS	450
1.27	Health Systems	HSN	PH	300
1.28	Clinical Research	CR	CS, PH	450
1.29	QUAMED	QUAMED	PH	450
1.30	Antibiotic stewardships	ABS	CS	300
1.31	ITM Annual Colloquium & seminars	-	Rotating	400

Note (1): BM = Biomedical; CS = Clinical Sciences; PH = Public Health.

The total FA3-III programme budget was €45.25 million, including €7.5 million for the PNLTHA in DRC. The support to the national disease control programme for human trypanosomiasis in DRC was exceptional. ITM support for the elimination of sleeping sickness started in 2014 with additional DGD funds.

[6] These abbreviations or names for networks are used throughout the report.

Table 3. FA3-III budget with and without support to PNLTHA in DRC

Final budget	2014	2015	2016	Total 2014-2016
Without DRC PNLTHA	12.184.000	12.579.000	12.987.000	37.750.000
DRC PNLTHA	2.500.000	2.500.000	2.500.000	7.500.000
Total	**14.684.000**	**15.079.000**	**15.487.000**	**45.250.000**

The different programme components are presented in the next table. As indicated, the current evaluation focuses on programme components 1A (country programmes) and 1B (global programme) only.

Table 4. FA3-III budget by programme component

	BUDGET 2014-2016	In €	% of total	% without PNLTHA
1	**COUNTRY AND GLOBAL PROGRAMMES**	**26,497,000**	**58.6**	**51.3**
	1.A – Country programmes	22,197,000	49.1	39.7
	1.B – Global programme	4,300,000	9.5	11.4
2	**SCHOLARSHIPS AND TRAINING PROGRAMME**	**10,679,106**	**23.6**	**28.3**
	2.A – Scholarships programme	7,900,000	17.5	20.9
	2.B - Training programme	2,779,106	6.1	7.4
3	**POLICY SUPPORT**	**1,619,644**	**3.6**	**4.3**
4	**NORTH PROGRAMME**	**300,000**	**0.7**	**0.8**
5	**MANAGEMENT**	**6,154,250**	**13.6**	**15.5**
	TOTAL	**45,250,000**		
	Scientific Support (Zuidkader)	**7,224,904**	**19.1**	**16.6**

The scientific support, also called 'Zuidkader', covers technical support provided to any of the above sub-programmes. It typically covers inputs provided by academic staff (excluding professors) to any of the IC projects or networks (and other subprogrammes). Only some of the staff time is funded by DGD.

4 EVALUATION FINDINGS: COUNTRY PROGRAMMES

The evaluation findings are presented separately for the evaluation of the country and the global programme. The presentation follows the evaluation questions as specified in the ToR and further developed in the evaluation matrix (see Annex 2). Main findings are briefly summarised in a text box at the start of the respective sub-section.

4.1 ALIGNMENT WITH LOCAL PRIORITIES AND POLICIES

To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?

1. To what extent did the institutional collaboration projects respond to the priorities and policies of the south institution?
2. To what extent did the institutional collaboration projects aim at having national/regional impact? (See Section 4.2.4)

All 24 IC projects were fully aligned with the priorities of the ITM partners. This was confirmed by all interviewed south promotors.[7] Issues of alignment were noted in one case due to a change in direction and priorities by the south partner (Ecuador), in another case because of differing priorities between two south partners in different countries supported under the same project (Côte d'Ivoire & Uganda), and in a third case because of some tensions between two partners in the same country with overlapping mandates and ambitions supported by two distinct projects (DRC).

Eight of the 24 IC projects partnered directly with institutions that had a public mandate to support national programmes and policies, while all of the remaining partners had established their relevance as research, training or service institutions in the areas of their expertise, providing technical advice or training of cadres for priority programmes in the public sector.

All 24 IC projects were fully aligned with the priorities of the partner institutions in FA3-III. This was also the case for the three ICs that were reviewed over a longer time period in the country case studies (LRM and IMTAvH from before FA1; IPH-B throughout FA3). It confirms that ITM respects evolving priorities with the south partner, as a result or not of institutional capacity strengthening and joint investments. In four IC projects, although fully aligned with the partners' priorities at the start of the programme, implementation was confronted with challenges. In the DRC there were tensions between the national disease programme (PNLTHA) and the national laboratory (INRB), because of competition for laboratory tests and quality control / assurance of decentralised laboratories. This issue existed before FA3-III and is still relevant today. In the same country, the support provided by ITM to PNLTHA that started in FA3-III led to improved programme performance (see Vol II, section 2.1) but implementation was not always in line with the views or priorities of the then Programme Director. This concerned the implementation of an alternative more cost-effective strategy for mobile clinics (and its potential effect on staff revenue) and some administrative issues. In Côte d'Ivoire, while the project proposal was fully aligned with the institutional priorities of the main south partner (ENSEA), it is not clear how much the institutional priorities of the second south partner (CoBAMS[8]) were taken into account during project preparation. This may explain the constrained involvement of CoBAMS involvement in implementation. In Ecuador, the planned PhD programme was developed jointly with the long-standing partner institution, the ISP-PUCE. However, a new director of ISP was appointed in 2014 and introduced far-reaching changes in the structure and strategic orientation of the institute. As a

[7] For the IC projects with INRB and PNLTHA no south promotor involved in FA3-III was interviewed.

[8] College of Business and Management Science, University of Kampala

consequence, the implementation of the cooperation programme was seriously challenged and did not reach its objectives.

The collaboration with national health institutes, reference laboratories and disease control programmes, were by definition aligned with national government priorities.[9] These partners have the mandate to provide technical expertise, laboratory and epidemiological services to their ministries of health (MOH). The LRM in Benin (supported as from before 1998) is a case in point. The laboratory collaborates closely with the national tuberculosis and Buruli ulcer programmes and two PhDs funded under the FA became directors of those programmes. The LRM, as well as the CHNU in Senegal have also evolved into regional referral institutions. In some countries the national institutions were directly involved in the Covid-19 response or member of the national Covid-19 expert committee. Some of the institutes of tropical medicine also have a public mandate to conduct research in support of government policies and programmes such as IPK in Cuba and BPKIHS in Nepal.

National schools of public health work closely with government and provide technical advice to the MOH or train public sector health workers. Examples are the ENSP in Morocco and the ESP in the DRC, also via the Centre de Connaissances en Santé (CCSC) in Kinshasa. Other partners, including private institutions, have established their role as technical resource and service institutions in national or state governments through their expertise in specific areas. Examples are IMTAvH in Peru which is recognised by government primarily for its expertise in malaria, tuberculosis and antimicrobial resistance, IPH-B which provides expertise to state and national governments in India on health insurance, SCHC in Cambodia which trains public sector health staff in the treatment of people living with HIV, or CRUN in Burkina Faso which was recently formally recognised by the Ministry of Research as a regional research centre.

Research and educational institutions linked with public or private universities or with NGO status have an education and/or research mandate that is closely linked to national priorities, but that also generates and influences these priorities. The evaluation found multiple examples such as the work of IPH-B on tobacco control in India; the discovery of melioidosis as a public health problem by SCHC in Cambodia; the work on neglected diseases such as HTLV-1 and cutaneous leishmaniasis of IMTAvH in Peru; or the MPH programmes of several partners that are training mid-level cadres for the public health sector, for instance STM-UMSS in Bolivia. Several provide training and/or expertise on a (sub)regional level such as UWC and DVTD in South Africa, ENSP in Morocco, LRM in Benin, CHNU in Senegal, ESP in the DRC, MakSPH in Uganda, INHEM and IPK in Cuba and IMTAvH in Peru.

4.2 INVOLVEMENT OF PARTNERS

Were partners sufficiently consulted during the development and implementation of the programme?

1. Were partners sufficiently consulted when developing the programme?
2. Were partners sufficiently involved during implementation of the programme?
3. To what extent were partners engaged in M&E?
4. How can partner engagement be improved in the different stages of the programme/project cycle?

South partners were fully involved in project formulation and implementation. **Formulation** was preceded by a consultative process led by south partners. All south partners confirmed that priorities were set locally or jointly with ITM. In about half of the projects, they were in the lead in writing the project proposal. In the other half, ITM was the pen holder but, according to the interviewees, never pushed its own agenda.

[9] 8 projects: LRM (Benin), CNM & NCHADS (Cambodia); INHEM (Cuba); INRP & PNTLHA (DRC); CHNU (Senegal); NIMPE (Vietnam)

In 12/22 collaborations the south partner was strongly in the lead of **implementation**. In the remaining it was much of a joint effort. **Monitoring** and **reporting** was perceived as a joint effort, with south partners always providing the information and ITM in several cases writing or finalising the progress reports.

Most south partners found the collaboration with ITM satisfactory and had no specific recommendations for improvement. Many IC partners called the partnership with ITM a win-win partnership and appreciated ITM efforts to build local capacity. Ideas about improving engagement were primarily specific to a small number of projects that experienced implementation challenges.

4.2.1 FORMULATION

In general, the south partner set the local priorities and requested ITM for specific support. ITM assessed the request from a technical perspective and whether the request responded to an interest of ITM, in order to find common ground. Project formulations in FA3-III were preceded by local consultations that for many partners included SWOT analyses, internal evaluation of IC, consultative meetings, interviews, retreats, or network consultations, etc. Projects that only started in FA3-III were often the result of a longer consultative process between ITM and the local institution or lead expert. For example, with CMHS (Ethiopia) the FA3-III project application was a product of a long process that included several members of the CMHS, some external partners (DNDI, I-Tech, GHC, alumni and staff members of ITM). Visits at ITM and UoG were organised, including for jointly conducting at SWOT analysis and completing the joint scientific writing process. The south promotor wrote the draft IC proposal, shared it with senior staff of UoG, and worked with ITM to finalise the proposal. Similar processes were followed in the formulation of the cooperation with ESP (DRC) and CTM-GMU (Indonesia). Institutional cooperation with these partners was already established through other channels, including ITM-supported networks, but the ICs under FA3-III had different thematic foci.

Interviews with promotors of 23/24 projects confirmed that the projects funded under FA3-III responded to local priorities that were established by the south partner.[10] Final decisions were made in a process of negotiation, especially to ensure that ITM had the staff and the capacity to work with the partner in the selected technical areas. In the IC with IMTAvH in Peru, for instance, cooperation on HIV that was established at the beginning of FA3 was discontinued for this reason. In the cooperation with INHEM in Cuba, on the other hand, the partner persisted in including the proposed research on social determinants of health against initial doubts by ITM. Many examples of negotiated priority setting outcomes were cited in interviews, sometimes resulting in an expansion of the thematic portfolio (e.g. from research on malaria to include other infectious diseases in the cooperation with CRUN) in other cases in a narrowing (e.g. from neglected infectious diseases to helminthiasis in Indonesia). In a few cases, project ambitions had to be scaled down (e.g. ENSEA) or would require a longer implementation period (beyond FA3-III; e.g. CMHS, Ethiopia).

For about half of the projects the south partner led in finalising the proposal, while in the other half ITM took the lead, either because it was a new project or an expansion into a new technical area, or for practical reasons such as meeting DGD deadlines for submission, limitations of the south partner or upon explicit request by the south partner. The profile of south partners as well as the national context differed significantly. Some south institutions collaborated with ITM as equal partners. Examples are universities such as UWC, DVTD, MakSPH, IMTAvH and CTM-GMU) for whom the DGD/FA3-III resources were often marginal compared to resources from other funders, or strong national institutions such as LRM, CHNU, IPK and

[10] The IC with ISP-PUCE in Ecuador ended after 2016, the director of the institute had only joined ISP in the last months of the project and did not know about the planning process. The former NP was dissatisfied with the way the project was managed by both ITM and by PUCE. There were major conflicts during implementation.

INHEM. These institutions tended to be more in the driving seat during formulation. For all institutions, ITM supported or verified the translation of proposed activities in the final project formulation report.

In interviews, all south promotors confirmed that ITM did not push its own agenda during the project formulation. Several mentioned that this distinguished the collaboration with ITM from other financial partners who usually engaged in the partnership to pursue pre-defined strategic interests.

4.2.2 IMPLEMENTATION

Interviews for 12/23 IC projects[11] documented strong leadership of the south partner in implementation. Some projects included joint implementation activities such as jointly organised training courses, for instance with DVTD South Africa on One Health, CHNU Senegal for the regional Cours africain de rétrovirologie biologique and ENSP Morocco on Healthcare Programme Management. Especially the partners that were not primarily research oriented, for instance hospitals, national reference laboratories and national disease control programmes, continued to rely on scientific leadership by ITM while being fully in charge of field implementation of activities.

In the case of the cooperation with NCHADS in Cambodia, ITM continued to play a lead role in the integration of HIV prevention and care in maternity and neonatal care in order to bridge tensions caused by shared responsibilities of the national HIV and the maternal health programmes. New collaborations, for instance with ENS in DRC, or collaborations that expanded their portfolio, generally meant stronger leadership by ITM. For instance, in the collaboration with CRUN in Burkina Faso, the south partner led in the established collaboration on malaria, while ITM was more directive in the research on other infectious disease. Similarly, in the collaboration with IMTAvH in Peru, ITM had a more prominent role in immunology research than in molecular biology as this was a more recent field of activity.

A transfer of implementation leadership during FA3-III to the south partner was noted in the review of all projects. In most cases, the changes documented during the three years of 2014-2016 were minor, but when examined over the entire period of FA3 or even longer, for instance in the three case studies, a major shift in the sense of 'switching the poles' was evident. In some cases, for instance in the cooperation with INRB in DRC or with ISP-PUCE in Ecuador, this progress was impeded by tensions in interpersonal relationships between partners or within partner institutions.

4.2.3 MONITORING AND REPORTING

According to interviewed stakeholders, project monitoring was a shared task. South partners provided the information required for the annual progress and activity reports that were assembled by ITM for submission to DGD. Some south partners were more actively involved in writing progress reports than others, but none of the interviewed stakeholders signalled any issues in the flow and quality of monitoring data.

4.2.4 HOW TO IMPROVE PARTNER ENGAGEMENT

For 9/24 FA3-III projects, institutional cooperation was not continued in FA4 and the interviewed stakeholders refrained from providing comments on how to improve the engagement of partners. The south promotors of the remaining 15 IC projects were satisfied with their engagement with ITM, most describing it as a win-win or an equal partnership (see section 4.5). Cooperation with ITM, as voiced by several south promoters, distinguished itself from the cooperation with other financing partners by having a long horizon, often across different project financing streams, and by investments in strengthening institutional and individual capacities in the partner institution (see section 4.4).

[11] Excluding ISP-PUCE (Ecuador)

Involvement of partners in seminars, colloquia, strategy workshops or teaching at ITM was signalled by several south promotors as a contribution to strengthening their voice in the partnership.

Several of the FA3-III projects had a history of a link between the north promotor and the partner institution, including a personal relationship with the south promotor. While this supported partner engagement in most cases, it could also limit the engagement when there were changes in personnel in ITM or in the partner institution, for instance in the cooperation with ISP-PUCE in Ecuador and to a lesser extent also with ENSP in Morocco and CRUN in Burkina Faso. In another case, one south promotor perceived that the close relationship with a long-standing north promotor limited the access to other departments at ITM. One third of FA3-III projects had technical partners in different departments of ITM, a practice that could be reenforced to avoid the creation of silos and single channels of communication that are subject to disruption when individuals change their positions.

Issues of engagement were signalled in the project of ENSEA in Côte d'Ivoire and CoBAMS in Uganda. ENSEA managed all project funds and was also more involved in the project formulation than CoBAMS. A similar issue was also noted in the IC project with ISP-PUCE in Ecuador which aimed at establishing a regional PhD programme involving several Latin American Universities. All resources were managed by ISP-PUCE which, among other factors, constrained the engagement of the other Latin American partners. The unequal involvement and division of responsibilities among several south partners in a project generated implementation problem that may have been prevented if ITM had taken a more prominent leadership approach in the triangular partnerships with two or more south institutions.

Constraints in institutional capacity may be another challenge for the transfer of leadership to the south partner. For instance, in the cooperation of ITM with INRB in DRC, considerable investments were made in strengthening management capacity, however management and financial management issues persisted while there were good communications on technical and research issues. Currently, a coordinator to deal with collaboration and administrative issues has been placed by ITM in DRC[12]. Although this may seem like a step back from achieving the switching the pole objective, it is likely that institutionally weak partners in difficult environments will continue to require such support.

4.3 MAIN ACHIEVEMENTS

4.3.1 CAPACITY STRENGTHENING

To what extent was appropriate and sustainable capacity built, reinforced and supported to conduct research, training and service delivery?

23/24 IC projects[13] funded under FA3-III documented results in terms of increased capacity outputs, generally in all three areas of research, service delivery and training but with different accents on each. Capacity needs among the FA3-III partners varied from large national programmes that acquired increased capacity in relatively marginal areas such as operations research, to new and emergent institutions where the IC aimed at comprehensive institutional capacity strengthening. Significant capacity outcomes can rarely be generated in a 3-year cooperation programme. This was underlined by interviewed south promotors who mentioned that the long-term engagement with ITM was an important contribution to effective capacity strengthening that distinguished the cooperation from those with other international partners.

Strengthening capacity, or at least sustained capacity, is never a three-year project. In interviews, several south promotors pointed out that ITM distinguished itself from other international partners by supporting

[12] The coordinator is accountable to both ITM and VLIR (Flemish Inter University Board).

[13] All except the IC project with ISP-PUCE in Ecuador

effective capacity strengthening through long-term engagements. Institutional cooperation during the FA3-III period of 2014-2016 contributed to this achievement, but it cannot be isolated from the achievements in preceding periods. A case in point is the cooperation project with CTM-GMU in Indonesia on strengthening the capacity of the university in research on neglected infectious diseases (NIDs). It was initiated in 2014 with the vision of starting a long-term cooperation. It ended after three years when Indonesia was no longer listed among the priority partner countries of the Belgian cooperation. Although the research capacity in NIDs at CTM-GMU has increased over the years, and although ITM still continues to contribute to this process through collaborations outside the framework agreements with DGD, interviewed stakeholders acknowledged that the cooperation under FA3-III delivered some, but not a decisive contribution to this increase.

A longer timeframe of institutional cooperation was reviewed by the evaluation for the three case studies, which also illustrate the range of achievements in service delivery capacity (LRM Benin), research capacity (IMTAvH Peru), and training capacity (IPH-B India). The full case-study reports as well as a brief summary of capacity strengthening achievements for all FA3-III projects can be found in Volume 2.

The need for institutional capacity strengthening varied considerably among the FA3-III partners, in some cases as in Benin and Vietnam also because much had already been achieved in preceding phases. The contribution of the IC programme of ITM to the institutional capacity of partner institutes and units in well-established large universities in Uganda, Senegal, South Africa, Peru, Indonesia, as well as to national disease control programmes and health institutes in Cuba, Cambodia, and Vietnam[14] was less significant than the contribution to increased capacity in specific areas that may or may not have been the main business of these partners. IPK and INHEM in Cuba are also somewhat exceptional because of the relative isolation of the country from international collaboration due to the US blockade. Institutional cooperation with smaller or less well-established partners, for instance in Bolivia and India, on the other hand, had considerable impact on supporting sustained institutional capacity.

Structuring the discussion of capacity strengthening according to the three areas of service delivery, training and research is therefore artificial and does not capture the totality of achievements. The three areas of capacity strengthening are interrelated. Strengthening the capacity of a national laboratory, for instance, creates new opportunities for local researchers, as well as national and regional training opportunities. Supporting MSc and PhD training, goes hand in hand with increasing research capacity. Strengthening the capacity and quality of providing medical treatment, for instance for HIV and Hepatitis C infection in Cambodia, also strengthened the training capacity of the partner institution as well as providing a basis for implementation and operational research. Each of the three examples of capacity strengthening under the following sub-headings can therefore be expanded to cover the other areas of institutional capacity (see the full case studies in Volume II).

Strengthening service delivery capacity – LRM Benin

Institutional cooperation between ITM and LRM in Benin started under FA1 in 1998 with the focus on improving the diagnosis and treatment of Buruli ulcer (BU). Considerable progress was achieved (including the creation of national programme for control of BU), and the scope of the cooperation was expanded to include tuberculosis. FA1 also contributed to the start of the WHO programme 'global initiative against BU' and helped raising international funding for BU. While under FA1, specimen for laboratory testing of BU were shipped to ITM in Antwerp, the technology was transferred to LRM under FA2. Under FA2, the three phases of FA3, and FA4 the capacity of LRM in the laboratory diagnosis of BU and tuberculosis continued to increase. By the end of FA3 in 2016, LRM was recognised as a national and regional laboratory reference

[14] The cooperation with PNLTHA in DRC was on a different scale and level as the IC with other national disease programmes

centre for mycobacteria. A new level-3 biosafety laboratory was constructed and equipped. LRM today provides high-quality diagnostic service for tuberculosis and BU for Benin, ensures the quality of the national diagnostic referral system for tuberculosis and BU, serves as a regional reference centre for laboratory diagnosis of tuberculosis, and leads a regional tuberculosis network. ISO certification of the new laboratory was delayed by the response to Covid-19 but is expected to be achieved within a few months. This is the last requirement for WHO to accord the full Supranational Reference Laboratory status for tuberculosis to LRM.

Strengthening training capacity – IPH-B India

IPH-B was founded in 2005 by an Indian graduate of the ITM MPH programme and, at the time, PhD candidate at Ghent University. In 2008, when the institutional cooperation project started under FA3, IPH-B was a small institution with seven technical staff and an annual income of less than € 50,000 working from a two-room facility. As the market for MPH programmes in India was saturated, IPH-B specialised in developing and implementing certificate training programmes of 2-6 months to fill the knowledge-to-practice gap in health services. With time, it increasingly focused on on-line training, an area in which it developed considerable expertise. In the last year of the institutional cooperation in 2016, IPH-B offered two e-learning courses and 3 blended training courses that included both physical and virtual training for a total of 146 participants. It had 22 technical and five IT staff, a main office and library as well as two field offices. Although the progress in institutional development experienced a set-back when the IC with ITM ended after 2016, IPH-B quickly recovered. In 2020/21, it offered a curriculum of five e-learning courses on subjects such as public health management, health financing, good research practice, scientific writing and research methods with to-date more than 1,900 students. In addition, IPH-B had established itself as an important technical resource to Indian state and federal governments on a variety of issues including health insurance and tobacco control. It also acquired an international profile through its leadership in the Emerging Voices for Global Health training and networking platform that supports the voices of emerging health policy and systems researchers and practitioners from low- and middle-income countries.

Strengthening research capacity – IMTAvH Peru

Cooperation between IMTAvH, a research institute of the Universidad Peruana Cayetano Heredia (UPCH), and ITM started in 1987 and was supported under the three framework agreements (FA1-FA3). IC continues currently with support under FA4. As early as 2003, the partners decided to focus research capacity strengthening on scientific disciplines, without, however, losing the focus on specific diseases, thereby linking the activities to services and to policy/programme support in tuberculosis, malaria, leishmaniasis, viral infections and antimicrobial resistance. The first thrust under FA2 was to strengthen the capacity in molecular epidemiology. Immunology and microbiology were added later under FA3. In 2008, at the start of FA3, IMTAvH staff included seven PhD researchers (1 female and 6 male). By 2020, this number had increased to 18 (7 female and 11 male) among whom five had achieved their degree with support under the FA3 project. The physical research and service infrastructure that was established with support under the agreements included a molecular epidemiology unit (2003), a biosafety level 3 (BSL3) laboratory for brucellosis and tuberculosis (2012), a research centre with office and laboratory space in the tropical rainforest region of Peru that is specialised for research on tropical parasitic diseases (2012), and an immunology laboratory (2017). During the time of cooperation with ITM under FA3-III, IMTAvH received 13 additional major research grants from international sources including the private sector. The number of publications in international peer-reviewed journals in fields covered by the IC with ITM increased from six under FA1 to 89 under FA3. Although ITM continued to provide technical support in newer research areas such as immunology under FA3, IMTAvH is today considered by ITM as a peer research institution on an equal level in terms of research capacity.

4.3.2 TRANSLATION AND DISSEMINATION OF KNOWLEDGE

To what extent has national (or international) policy and/or practice changed as a result of evidence generated by research conducted under the programme; through advocacy /policy support and/or training?
Were lessons sufficiently disseminated among participating institutions and networks? Were results and lessons effectively communicated to an external audience?

In interviews, north and south promotors mentioned many examples of influence on policy and practice at local, national and global level. Although not verified and often not clearly attributable to IC during the FA3-III period, they are an indication that the projects have contributed to evidence translation. However, only about half of the IC logical frameworks of FA3-III referred to aiming at policy influence, only 7/24 logical frameworks included an indicator for monitoring policy influence, research proposals were largely silent on knowledge translation, and policy influence outputs are not routinely reported. Some partners worked closely with policymakers, but this was an exception rather than the rule.

The number of scientific publications generated by research under FA3-III is impressive, and so is the number of dissemination events and venues through a wide variety of modalities, including networks and training programmes. The dissemination activities were, in the majority, targeted at scientists and technical specialists with few exceptions.

The under-reporting or under-documenting of policy influence as well as the limited attention given to policy influence in research plans, project proposals and reports was a missed opportunity.

KNOWLEDGE TRANSLATION AND POLICY INFLUENCE

The programme implemented under FA3 had the overall objective '*to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby contribute to the reduction of poverty and inequity*.' Surprisingly, only 13/24 project logical frameworks under FA3-III explicitly mentioned policy influence. Among those, seven referred to policy in the overall objective but only one of them to knowledge translation at lower levels of the framework. Six frameworks mentioned policy in the project purpose statement. Only seven logical frameworks included indicators (often not SMART) to measure policy influence.[15]

Policy influence or impact on health systems or on beneficiaries were also not included in the outputs monitored and systematically documented by the programme. Interviewed north and south promotors were often convinced that policy influence and health systems impact were achieved by the project, but they were often not able to provide specific examples. Several interviewees confirmed that they did not put sufficient attention to aiming for and monitoring policy influence. As an example, DVTD and ITM invested considerable effort in 'one health' research with the aim of addressing factors affecting the health and wellbeing of poor pastoral communities at the wildlife livestock interface.[16] Interviewees expressed their conviction that this work influenced the behaviour of local farmers but could not provide evidence as it was never measured. The project outputs in FA3-III included 19 publications and 31 MSc thesis, but knowledge translation outputs captured in the indicator 'research findings of 27 projects transferred to regional and national authorities' were not reported.

[15] Examples of non-SMART indicators are for example: 'recommendations to MoH' or 'policy brief' (only one project) or 'results are available and contribute to policy decisions' or 'Research findings of 27 projects transferred to regional and national authorities'.
[16] According to the interviewees a lot of knowledge was transferred to subsistence farmers (contact with wild animals, treating milk, tick bites, etc.).

As far as the evaluation could assess, research proposals rarely specified how the work will translate evidence into policy. They were generally silent about the process and only exceptionally involved policymakers in design and implementation of the projects. Exceptions were the collaborative projects with national public institutions with direct links to ministries of health such as in Cambodia and Cuba. Research conducted by these institutions was often mandated by government and taken up in policy discussions. Other examples are the national laboratories working closely with national disease programmes such as in Benin, DRC and Vietnam where research results influenced national disease programme strategies. But there are also exceptions among non-governmental partners, for instance the IPH-B in India where much of public health research was closely aligned, and often done in partnership with the state government.[17]

> *"In reality, [my institution] never formulated an approach for influencing systems and policies, neither locally nor nationally. If it has happened, then it was a personal initiative. I talked to the Minister when necessary, but there was never a policy that said that this was part of my work."*
> South Partner

Although not systematically captured in project reports and performance monitoring tables, interviewed south and north promotors cited a considerable number of knowledge translation results. These were not verified, and it is also not certain that they can all be attributed to work in the period of FA3-III. They are summarised in Table 5 which is primarily illustrative and does not present a comprehensive list of policy achievements.

Table 5. Examples of knowledge translation outcomes mentioned in interviews

	Country	Partner	Knowledge translation outcomes
1.01	Morocco	ENSP	• MNH policy influenced (related to perinatal deaths and newborn health)
1.02	RD Congo	INRB	• Hospital guidelines on antimicrobial resistance • Local production of mAECT test for DRC and other African countries
1.02	RD Congo	ESP	• Creation of the CCSC in Kinshasa (in the context of RIPSEC), which directly influences policy at central MoH as a technical advisor
1.02	RD Congo	PNLTHA	• Adoption of eAECT and rapid diagnostic test for THA in national policy • The mini-teams and different screening and QA approach is being implemented nationally by PNLTHA • Other national policies and guidelines on THA were overtaken by the availability of new drug treatments
1.03	Senegal	CHNU	• IRESSEF is accepted by the MoH as technical advisor and can directly influence national policies
1.04	Benin	LRM	• National guidelines for Buruli ulcer diagnosis and treatment developed • National guidelines for treating HIV/TB co-infection changed • Global TB guidelines influenced by LRM research
1.05	Burkina Faso	CRUN	• Malaria treatment protocols for pregnant women revised • Malaria vaccine testing is expected to influence WHO policy • Work on malaria drug resistance is expected to influence national and global policy
1.08	Ethiopia	LRC/CMHS	• Global and national guidelines on treatment of visceral and cutaneous leishmaniasis influenced • Guidelines for bedside teaching, influenced by work on AB resistance
1.09	Uganda	MakSPH	• National district league tables revised • Fellowship training influenced local health systems

[17] For example, the study on policy analysis of Karnataka Private Medical Establishment Act; Rashtriya Swasthya Bima Yojana (RSBY) evaluations; Health Stewardship and Regulation (HESVIC) /Health Policymaking (HEPVIC) projects that focused on policies around maternal and child health in India.

	Country	Partner	Knowledge translation outcomes
1.13	Peru	IMTAvH	• Contact tracing guidelines and national treatment guidelines for tuberculosis changed • Hospital guidelines on antimicrobial resistance • National health worker training protocols and diagnostic testing procedures for malaria
1.14	Cuba	IPK & INHEM	• Polyclinics analyse the health situation in their coverage area using parameters of social determinants developed by IPK&INHEM • Criteria for screening of suspected tuberculosis changed • Guidelines for the use of insecticide-treated materials for dengue prevention • Digitalised platform for rapid response to dengue outbreaks and for economic analysis of response
1.15	India	IPH-B	• Many unspecified of inputs in state and federal policies on tobacco control, health financing and universal health coverage
1.16	Nepal	BPKIHS	• Expansion of the kala azar elimination programme to previously categorised non-endemic districts
1.17	Cambodia	SHCH	• Inclusion of drugs to treat melioidosis in the essential drug list and development of national treatment guidelines • Work with the largest cohort of people living with HIV informed HIV and Hepatitis C treatment guidelines
1.17	Cambodia	NCHADS	• National Programme – direct input into national HIV policy and treatment guidelines • Adoption of the 'linked response' for treatment and prevention of HIV in maternal health
1.17	Cambodia	CNM	• Insecticide for long-lasting treated bed nets changed • Insect repellents added to malaria prevention policy for forest workers • First line drugs for malaria changed
1.18	Vietnam	NIMPE	• First line drugs for malaria changed • Diagnostic tools for toxoplasmosis introduced in hospitals

In addition to the research knowledge translation activities, many of the institutions and researchers that collaborated with ITM under the framework agreements are members of national, regional and global technical working groups, taskforces or advisory bodies. They are exerting indirect policy influence on many levels that is, however, not measurable.

In addition, the training programmes implemented by the schools of public health and postgraduate education partners under the framework agreements have, in several countries, educated or influenced decisionmakers and policy leaders. The Benin case study confirmed that PhD training can have long-term impact on health systems, including graduates becoming directors of national disease programmes or being involved in public health training. The PhD scholarship programme at UWC in South Africa, for example carefully selected thought leaders in responsible positions in Africa and beyond. The MPH programme at ESP in the DRC trained most of the senior provincial health staff in Katanga Province. In Bolivia, the current Director of Health, in Peru, a former Minister of Health (2016-17), and in Morocco, the Chief of Cabinet of the Ministry of Health are alumni or have been closely associated with education programmes supported under the framework agreements.

DISSEMINATION

In terms of quantitative outputs, FA3-III reported 450 peer-reviewed publications, 77 other scientific publications, 220 abstracts, 261 MSc thesis, 31 PhD dissertations, 23 websites, 61 on-line modules, and 3 new methods developed. Experts participated in or (co)organised 165 conferences, seminars or workshops.

Only two policy briefs were listed as these are not outputs that are systematically monitored, but they probably should be.

Networks initiated by ITM or by FA3-III project partners (including the colloquium) contributed significantly to sharing research and programme implementation findings. For example, in 2016 a new project DIAMA was set up by LRM in Benin that allowed other members of the TB & BU network to continue to share and collaborate. The CHNU in Senegal is well placed as coordinator of the West African Network for TB, AIDS, and Malaria (WANETAM) and the West African Platform for HIV Research (WAPHIR). Researchers and policymakers who participate in the Emerging Voices for Global Health Network have a prominent place in the biennial Global Symposia on Health Systems Research which is held in Dubai in 2020. Other network sharing activities are discussed in section 5.

Education and training programmes are, of course, also venues in which evidence and lessons are disseminated. International students at ITM, for instance, were introduced to lessons from Uganda during the Uganda week in which top experts from this country provided input in the health policy training module at ITM. The African Veterinary Information Portal (AfriVIP), an online Continuing Professional Development (CPD) platform developed under FA2 and FA3 in DVTD, was an authoritative and quality-assured global online portal of information and credit-bearing, life-long learning opportunities, resources, discussion and interaction about African veterinary and allied science matters. It offered training programmes in the health, management and production of livestock and wildlife with special emphasis on sub-Saharan Africa. IHP-B in India effectively combined its portfolio of e-learning courses that reach health professionals and students throughout India with regular conferences and research days such as the influential national Evidence in Public Health Policy series. It also has a very well-developed internet presence which it has used effectively in its advocacy work for tobacco control. In general, however, these type of activities were exceptions under the FA3-III programme with most projects targeting their communications at scientists and technical health staff.

4.3.3 SOUTH-SOUTH AND TRIANGULAR COOPERATION

To what extent were south-south and/or triangular cooperation achieved?

South-south or rather triangular cooperation was pursued mainly through the networks and colloquia under the Global Programme of FA3-III (Section 5). Capacity strengthening support through the IC projects, however, also increased the ability of partners to engage in technical and scientific exchanges with other institutions in the Global South, sometimes directly supported by the IC project, sometimes self-initiated, and often under the umbrella of a regional or global multilateral partner. Only two projects under FA3-III had a triangular cooperation architecture. Neither of them was very successful, indicating that the modalities of the FA3 country programme did not lend itself for the support of these types of cooperation projects.

Academic exchanges of students and faculty for degree courses or short-term training among educational institutions in the south are another form of south-south cooperation for which the evaluation found many examples. According to some interviewed informants this was not always sufficiently supported, and more could have been achieved by reallocating funds from the much more costly international masters' programme in Belgium.

Cooperation with several institutions in the same country does not fall under the definition of triangular cooperation but implies a similar approach. 10/24 IC projects where located in multi-partner countries. For most of them, the collaboration between them was 'natural' as they worked on different aspects of the same issue. The collaboration between two academic institutions in South Africa also generated added value. In some cases, however, the two partners had few points of common interest and initiatives to promote the cooperation among them were considered 'forced' by interviewed stakeholders.

South-south cooperation, according to a UN definition, refers to sharing of knowledge, skills, expertise and resources among low- and middle-income countries to meet their development goals. When such initiatives are funded or otherwise supported by traditional bilateral or multilateral development donors, it is referred to as triangular cooperation.[18] Both south-south and triangular cooperation were key implementation modalities of the FA3 global programme discussed in Section 5. The institutional collaboration projects supported under the FA3 country programme primarily implemented a traditional north-south model, although, under the objective of switching the poles, they challenged the model itself, in several cases successfully by creating a level platform for technological and scientific exchanges between ITM, the north institution, and its partner in the Global South.

Even within a traditional model of north-south cooperation, exchanges of knowledge and resources among partners in the south can be promoted. Several were documented in the review of the 24 IC projects funded under FA3-III, although it was impossible to fully disaggregate the effects of the country programme from those of the global programme. Exchange of technical expertise in the molecular epidemiology of malaria parasites between NIMPE in Vietnam and IMTAvH in Peru were, for instance, facilitated by the institutional cooperation of ITM with both institutions, but they also took place in the meetings, colloquia and scientific exchange platforms initiated under the network portfolio of the FA3 Global Programme.

The south partners of the FA3-III programme, of course, already had their own collaborative links with other institutions in low- and middle-income countries, sometimes founded on their own initiatives and sometimes on the initiatives of other international partners, particularly multilateral organisations such as WHO and PAHO. While the IC projects may not always have specifically targeted the expansion and intensification of these south-south collaborations, the strengthened institutional and scientific capacity achieved by the projects led to increased recognition by peers and an increased demand for cooperation. The IC support for the development of the LRM in Benin into a sub-regional reference laboratory for mycobacterial infections, for instance, invariably also strengthened the links and promoted the technical exchanges of this institution with national laboratories and disease control programmes in countries of the sub-region. Another example was the technical assistance on social determinants of health provided by INHEM in Cuba to the government of Costa Rica. The expertise of INHEM in this area was enhanced by the IC with ITM, but the initiative for the cooperation was generated independently in Costa Rica.

The many examples of enhanced south-south exchanges under FA3-III also include the international movement of students and guest faculty staff in postgraduate programmes or short-term learning courses among the training institutions in the IC programme. The evaluation found many examples, some of them in the form of structured south-south collaboration programmes such as the provision of a regular training module for students from Fiocruz in Brazil by INHEM in Cuba or the capacity building by the UWC Pharmaceutical Public Health team of the Centre of Excellence in Supply Chain Management for East African countries at the University of Rwanda on pharmaceutical supply training modules; others in the form of regional training courses offered by south partners of IC projects such as the regional '*Cours francophone Africain de rétrovirologie biologique en retrovirologie*' offered by the CHNU in Senegal. Some interviewed informants expressed the opinion that these type of exchanges were not always sufficiently supported. Budget reductions under FA3-III for the STM-UMSS in Bolivia, for example, abolished the ability of the postgraduate school to offer stipends for the masters' programmes to foreign students and led to major changes in the profile and curriculum of the institution. Another informant noted that if some of the expenditures for supporting international MPH students at ITM in Antwerp were applied to stipends for studies in partner institutions in the south, many more students could benefit from this support.

[18] https://www.unsouthsouth.org/about/about-sstc/

Only two projects under the FA3 country programme had partners in more than one country and can therefore be categorised as triangular cooperation: (i) the project for PhD training in public health with the ISP-PUCE as the south partner, but including 15 universities in nine Latin American countries in the implementation; and (ii) the project on HIV prevention among sex workers in Côte d'Ivoire and Uganda with ENSEA in Côte d'Ivoire and CoBAMS in Uganda as south partners. The regional PhD training project in Latin America failed for a number of reasons, including the fact that the initiative to develop the programme as well as the control over the cooperation budget was entirely left to ISP-PUCE which was not able to sufficiently mobilise and support the other university partners. The collaboration between Côte d'Ivoire and Uganda on HIV prevention also experienced constraints in implementation, in part related to the fact that the Ugandan partner was not sufficiently involved in project planning and that the local project budget was managed by ENSEA. While triangular cooperation only had a marginal role in the FA3-III programme, the two examples indicate that it was also not implemented successfully.

Not within the usual definitions of triangular collaboration, but with similar objectives, is the institutional cooperation with several partners in the same country of the south. This was, in fact, promoted in the FA3 country strategy of DGD. 10/24 IC project partners were part of country programmes that were presented in the FA3-III proposal to DGD with consolidated logical frameworks.

Table 6. FA3-III multi-partner country programmes

	Country	Partners
1	Cambodia	NCHADS, CNM, SHCH
2	Cuba	INHEM, IPK
3	DR Congo	ESP, INRB, PNLTHA
4	South Africa	DVTD, UWC

In several cases, the institutions were already 'natural partners':

- SCHC, the hospital in Cambodia with the largest national cohort of people living with HIV on antiretroviral treatment clearly has to maintain links to NCHADS, the technical arm of the national AIDS programme. In addition, SCHC was a sub-recipient of a Global Fund grant for which NCHADS was principal recipient.
- INHEM and IPK in Cuba are sister research institutions under the same public structure, roughly dividing their responsibilities between basic science and applied science research on priority health issues.
- INRB in the DRC is the national reference laboratory for trypanosomal infections while PNLTHA is the national programme for the control of diseases caused by these parasites.

The collaboration between the two academic institutions in South Africa country programme was productive: DVTD supported UWC in developing an e-learning platform; there were exchanges of MSc and PhD students, and the two institutions jointly hosted an Emerging Voices conference. But there was much less overlap and common interest among other partners. Some interviewed informants commented by labelling their aggregation in country programmes as 'forced' or as 'belgo-belgian cooperation'. There are, in fact, only limited thematic overlaps and common interests between the national malaria and the national AIDS centre in Cambodia or between the school of public health in Lubumbashi (ESP) and the biomedical research centre in Kinshasa (INRB).

4.3.4 UNINTENDED OUTCOMES

Were there positive or negative unintended consequences? (by target group)

A number of mainly positive unintended consequences were cited by the interviewees. In general they confirm that the results of IC are going beyond the planned activities or aimed results. They include values, ethics, governance, intercountry collaboration and spinoffs such as the creation of a new institution, new collaborative research and the south partner gaining more confidence and independence.

Negative unintended consequences were few. Some relate to typical development aid issues such as competition between partners, partner procedures leading to internal competition and issues related to inclusiveness.

Interviewed north and south promotors were asked about unintended or unexpected outcomes of the institutional cooperation under FA3-III. Not all of them remembered what had happened four to seven years ago, some of the main promotors of projects in this period could no longer be reached, and several of the outcomes that were mentioned were difficult to document. The unintended outcomes are presented by target group (scientists and policymakers). This categorisation is, however, artificial as in almost all cases the outcomes affect all target groups. Unintended outcomes that only or primarily affected the third target group, the people living in low- and middle-income countries, were not mentioned at all. Positive unexpected outcomes that were mentioned in interviews included:

Policy- / decisionmakers:

- Cooperation on strengthening the laboratory capacity for blood cultures at SHCH led to the discovery of melioidosis as an endemic disease in Cambodia which was previously unknown. It resulted in a change in the essential drug list and the development of treatment guidelines.
- Research by INHEM on the social determinants of disease in Cuba drew the attention of the government of Costa Rica which, with EU funding, requested technical assistance from INHEM for the development of a model for Costa Rica.
- Increased attention to policy influence in research projects where this was included in the objectives (e.g. SORT-IT in Ethiopia).
- Several scientists, promotors and sponsored PhD graduates of partner institutions in the south were appointed to high-level international committees or technical working groups, for instance of WHO or the World Bank.
- In several countries, the IC projects contributed to strengthening the ethical review process of research, for instance by supporting the review of national practice and the updating of ethical review guidelines.

Experts / scientists:

- Promotors of several projects were appointed to boards, scientific committees or adjunct faculty positions of partner institutions. This included south-north cross appointments, for instance to the General council of ITM and appointments of current or retired ITM staff to positions in partner institutions. It also applied to shorter-term teaching appointments, for instance of Ugandan scientists at ITM during the 'Uganda week'.
- Informal contacts with other ITM departments, other south partners and networks (also through Alumni networks and WhatsApp groups) led to new areas of north-south and south-south collaboration.

- South institutions applied and achieved national or regional accreditations as a training, research or service institution as a result of increased institutional capacity.
- The collaboration with STM-UMSS in Bolivia raised the interest in research among health professionals who collaborated with the IC projects, including the initiation of PhD studies and current effort to start a PhD programme in collaboration with Brussels University (ULB).
- Spin-offs of the FA3-III collaboration resulting in joint research projects with the south partner in the lead such as FP7 / EDTCP (RIPSEC, including the creation of CCSS; SPaRCS; DIAMA, etc.).
- Long-term collaboration and capacity strengthening of the CNHU in Senegal led to the creation of the Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation (IRESSEF).
- LRM doing quality assurance of ITM technical work in Antwerp.
- The ITM 'One Health' course on designing and implementing programmes, policies, legislation and research in multiple interrelated sectors, which was initially focused on West Africa (in French) was expanded and is now also offered in English in East and Southern Africa.
- Expertise and acceptance of e-learning at ITM has increased due to the experience and expertise of south partners.

Negative unintended consequences were even more difficult to capture in the interviews. Few were mentioned by informants, some of them procedural issues that affected project implementation, but not the project outcomes. Some informants also mentioned personal perceptions of negative outcomes that could not be documented or verified.

Negative unintended outcomes

- One informant recounted that working conditions and remuneration of staff directly involved in implementing cooperation projects differed from the regular institutional human resource policy. Thereby creating tensions among the staff. Better working conditions and higher remuneration, for instance, were provided for staff working on clinical trials which are often very lucrative for research institutions. This should be taken into account when ITM supports a south partner developing clinical trial skills.
- In another interview, tensions due to differences in the per diem and bonus rates between ITM and other cooperating partners were mentioned. This is, in fact, a perennial issue of north-south cooperation. Support of partners in the development and implementation of an institution-owned system of per diems and bonuses should be part of the efforts to strengthen management capacity which was included in many IC projects.
- A decision to reduce the funding of the IC with the STM-UMSS in Bolivia required a redesign of the curriculum and conditions of the MPH programme. It opened the programme to non-physicians which may be a positive change, but it also made it unattractive to physicians for whom the MPH programme was a step into mid-level careers in the Bolivian public health system. These positions are still mainly reserved for medical doctors. The career prospects of the new graduates are uncertain, while the health policy influence of the MPH programme will likely be diminished in the longer term. It is not certain that these consequences were considered when financial decisions were made.

4.4 EFFICIENCY

4.4.1 USE OF FINANCIAL RESOURCES

To what extent were financial resources used economically and in a timely manner?

ITM has a long track record of efficiently managing collaboration projects in the south. It works closely with the south partners, understands the local context and has a problem-solving, creative and supportive approach. Even in difficult local contexts, projects achieved their objectives with few exceptions. A few partners raised issues related to financial control (workload, strictness, attitude), but by far most partners confirmed that support to financial management and the quality of the financial control was highly appreciated and most often less cumbersome compared to some other funders.

Managing 24 institutional collaboration projects and 10 networks in parallel (in addition to the other programmes and programme components) was a heavy task. Based on the information collected and reviewed by the evaluation, the financial administration by ITM was professional and transparent. The evaluation did not do a detailed analysis nor a value for money assessment.

As indicated in **Table 3**, the total programme budget was €45.25 million. The disbursement rate as reported in the final progress report was overall 95.95 percent for 2014-2016. In the Country and Global sub-programmes, which includes all the IC and network projects (about 2/3 of the total budget), 103 percent of the budget was executed. The operational budget was underspent by €1.4 million (6.4%), which was balanced by over expenditure of the scientific support ('zuidkader') related to these activities. Management costs represented 9.5 percent of the total budget which is relatively low by international standards. The South-North ratio of overall FA3-III programme expenditures was 69%/31%.

Over- and under-expenditures on individual projects (IC and networks) varied from an over-expenditure of more than 25 percent in seven projects[19] and an under-expenditure of more than 25 percent in six projects.[20] This reflects the complexity of managing 24 IC projects and ten networks. Reasons for over and under expenditure are explained in the respective progress reports.

The evaluation did not allow for an in-depth assessment of all project expenditures. Progress reports provide an overview of issues, if any, related to under or over-expenditures of budget lines, overall for the programme and by project. Additional information was collected in interviews with north and south promotors.

All south promotors interviewed confirmed that, apart from the delay at start-up in 2014,[21] funds were timely and sufficiently (as per contract) available throughout the FA3-III period. The delay in availability of funds slowed down the start-up in 2014, especially for new projects in FA3-III. Other institutions, continuing the support from FA3-II, had less implementation problems, often using different funding sources. Other factors that explain some delays in project implementation during the FA3-III period was lesser

"The ITM grants were more flexible and there was assurance that they would continue for many years. This allowed us to actually develop programmes from ground up even in areas where we did not have any capacity yet by covering personnel and administrative costs. This is generally not possible with other grants."
[South Partner]
"ITM/DGD funds facilitated capacity building. This is different from USA funding: they decide everything; they buy the lab."
[South Partner]

[19] LRC, INHEM-IPK, SHCH, NCHADS, CNM, NIMPE; and the LQM network (8 projects if IPK and INHEM are counted separately)

[20] ENSEA, ISP-PUCE, CTM-GMU; and the SRH, Antibiotic Resistance and Health System networks

[21] The first tranche of DGD funding was only released in July 2014. ITM had to organise a bank loan to prefinance some project expenditures. Promotors were asked to limit expenditures until DGD funds would become available.

availability of ITM experts because of the Ebola outbreak in the DRC; import / foreign exchange issues, ethical clearance processes and local staff turnover.

Funds that were allocated to the south partner were managed locally.[22] Depending on the local administrative and financial management capacity, ITM trained local administrative staff in the management of DGD funds.[23] Some institutions received closer follow-up and/or more intensive training,[24] but ITM closely monitored expenditures with all institutions. Local audits were organised regularly and all institutions had at least one local audit during the 2014-2016 period.[25] Institutions in countries that faced foreign exchange issues (e.g. Ethiopia, Cuba) were helped by ITM keeping part of their local budget for example, for buying air tickets, vehicles, international travel and accommodation or specific equipment. ITM and both partner institutions in Cuba even managed to work around the US embargo. When ITM managed part of the local budget, this was always done in a transparent way according to interviewed south promotors.[26]

> *"There were no administrative issues. We never encountered any problems. The administrative unit, the student services and the financial unit at ITM were always very eager to facilitate the activities."*
> South Partner

Some partners had regulations that were not aligned with ITM quarterly disbursements. For example, in one south institution activities could only start when funds were on the account; and a vacancy could only be announced once the funds for the human resource costs had been transferred. This was difficult to reconcile with the quarterly disbursement schedule of ITM. The institution therefore perceived ITM as a difficult partner generating a high administrative burden. This was, however, an exception among the 24 partner institutions.

In a few cases, the north promotor referred to ITM micro-managing local budgets by too strictly applying regulations at micro-level (e.g. accepting a per diem or not; proof for a taxi ticket) and to a high turnover of administrative staff at ITM requiring administrators to learn about the local context of the partner institution.[27] A few interviewed south promotors hinted at the high workload of providing evidence for all expenses, at some disrespect (two partners) or at the attitude of the ITM administration to start from a mistrust rather than a trust position (one partner).[28] However, when discussing that ITM processes were based on DGD regulations and on the need for accountability to DGD, all south partners agreed that ITM

[22] All DGD funds for south partners transit via ITM which is held accountable for the expenditures by DGD. This is in contrast with, for example, VLIR funding (Flemish Inter-University Board) being transferred directly by the funding agency to the south institutions.

[23] The latest joint training for all project administrators was held at ITM in 2010 (and again in 2016, in preparation of FA4). When needed, e.g. when administrative staff changed position or left the institution) on-site training by ITM administrative staff was added.

[24] For example, training in financial management of PNLTHA also aimed at strengthening overall financial management capacity (not only to manage DGD funds). At INRB, training covered administration, finance and to some extent human resource management. In fact, in DRC ITM supported the institutions in setting up accountancy systems, which is not ITM's core business. The context in DRC is particular, which explains the need for more management support.

[25] In a few cases local audits revealed some issues that required closer follow-up by ITM. Based on this experience and a first audit by the DGD financial department (2017; on expenditures made in 2015 and 2016), ITM administration decided to include all institutions in the annual assessments, rather than only by sampling.

[26] Project budgets were developed jointly with the south partner. The full budget (including the ITM part) is attached to the contract of the south partner. If any budget change was agreed, it was attached as an amendment to the south partner's contract. IC budgets were managed with full transparency. There was less transparency in the management of network budgets and of the overall programme (policy support, training, etc.).

[27] ITM administration is aware of this issue, as it requires more efforts by NP and SP to brief new ITM accountants. In FA4 ITM tried to mitigate this by organising regular meetings between administrative staff, NP and SP. This improved mutual understanding and can also avoid having to accept unplanned expenditures ex-post. This is an improvement compared to previous more ad-hoc communications.

[28] ITM administration agrees that striking a right balance and good communication with the south partner is key.

procedures were preferable and more pragmatic when compared to many other funders, and that they understood the need for proper financial management and accountability.

Collaboration with several south partners in a single project where the local budget was managed by one of the partners generated some issues with proofs of expenditures. The other partners had to submit proofs to the managing south partner, sometimes in different currencies, which generated administrative issues in at least two contracts, with one contract not delivering the planned outputs. Other issues mentioned by interviewees included underestimation of certain costs and/or late cancelling of planned expenditures (e.g. flights, hotel costs). Other factors mentioned were political interference or pressure on funds in at least one country.

Benin case study: *The south budget was fully managed locally as per agreed ITM/DGD procedures. Six-monthly financial reports and annual technical reports were submitted by LRM and validated by ITM before releasing the next tranche. Financial audits also took place. According to the south promotor, funding (both volume and timeliness) was never an issue. LRM proposed the priority to tackle, and funding was adjusted during the course of the project. This was very helpful for addressing unforeseen bottlenecks or taking changing priorities or new opportunities into account (e.g. a newly identified PhD candidate). The north promotor perceived the ITM part of the budget as a local budget, and resources could therefore be shifted to LRM when and if needed and jointly agreed.*

When re-allocation of funds between budget lines were required (e.g. to respond to new opportunities or to mitigate underestimation of some budget lines), it was discussed jointly between the south partner and ITM and agreed changes were stipulated in an addendum to the ITM -partner contract.[29] The same applied to shifting resources from ITM to local budgets or vice versa; or re-allocating resources between projects. The latter was communicated agreed with DGD in two amendments (2015, 2016) to the original contract.[30] This 'flexibility' of funding at a higher / strategic level was highly appreciated by all partner institutions and north promotors. Some also requested more flexibility at the micro level.

In a few cases, project budgets were underestimated. This mostly applied to new projects, where implementation capacity was not yet known, such as with the start-up of LRC/CMHS in Ethiopia. Overall, specific budget lines within an IC project were often over or underestimated at the time of formulation. The flexibility of the budget re-allocation procedures however solved that problem.

Overall, most south partners (and all partner institutions in Asia and Latin America) confirmed that they had no issue with administration, finance and budget management. Even when unexpected events happened during implementation (moving buildings, changing PhD candidates, avoiding duplication with other funders), ITM was perceived by the south partner as flexible and understanding of the contextual changes.

"We were a sub-recipient of the Global Fund and we received funding from TB REACH and funding from HOPE Worldwide. ITM was the easiest among all the funding organisations. They were very flexible, and they understood our organisations. We worked with them directly and could discuss any issues and adjust budget lines whenever necessary."
South Partner

[29] Reallocation within the same project budget and if agreed between NP and SP and in line with project objectives and within the same resource envelope was allowed up to 15% of the total budget.

[30] Reallocation between project budgets was not allowed, unless formally agreed by DGD. If there was an annual balance (because of under-expenditure from certain projects) a new call was launched by ITM and projects could submit proposals for budget increases. Internal decisions on re-allocation were made by the (predecessor of) the Development Office / COS. The proposal was submitted to DGD which had to agree. Two contract amendments were made during FA3-III.

4.4.2 HOW TO INCREASE EFFICIENCY

What alternative programming approaches could be used to increase efficiency?

Overall ITM together with the south partners have implemented the collaboration projects in an efficient way. Proposals voiced by interviewees included further promoting shifting training capacity to the south, developing joint courses and invest more in e-learning; continue promoting the synergy between IC and networks; developing a clear roadmap or strategy for institutional strengthening in those IC projects where it is part of the aim (as in contrast to institutional collaboration) with mutually agreed end goals, a sustainability plan (when needed) ; consider contracting a national or international firm to support the development of the management capacities of the partner institution; and for ITM to support the south partner in developing an institutional policy for coordinating all different partner inputs / projects and/or ensure that all investments are included in the institution strategic plan, in order to avoid competition between partners or projects. Finally, in order to optimise allocative efficiency, the research selection process should not only orient itself on the research interests of ITM scientists but also take the research capacity strengthening needs of the partner into consideration.

Overall, ITM and most of the south partners implemented the collaboration projects efficiently, but, as to be expected, efficiency can always be improved. How to increase efficiency is often context-specific. But across projects some lessons learnt emerge that may inspire future projects and/or ITM capacity strengthening strategies.

ITM supports developing training capacity (MSc, PhD) in the south. One informant estimated the cost per masters' graduate in the south is three to four times lower than providing the same training in Belgium, and up to seven times lower when hidden training costs are included. Although this information was not verified by the evaluation, it is plausible that shifting the funding of MPH degrees of southern candidates from ITM to supported schools of public health in the students' region of origin would generate significant economies that could be allocated to more stipends and to further strengthening of the partner programmes. However, training is more than only costs and content and training / expert skills are equally (if not more) important. Specific training skills may be complementary between the south institution and ITM, and benefit from joint organisation. Given the possibilities of distance and e-learning, shifting education from the north to the south and/or jointly developing training courses may be a track to be further pursued. The 'One Health' course of DVTD in South Africa and ITM is a good example.

The efficiency of implementation in Benin was enhanced by the synergy of the FA3-III IC and the FA3-III mycobacterial network, which allowed for exchanges with partner institutions in the region facing similar capacity building trajectories at different levels of advancement. As an example, biomedical engineers from the Medical Research Council (MRC) in Gambia could certify LRM biosafety cabinets, with the goal of sustainable support as an alternative to mobilising engineers from South Africa on an annual basis. This is a strategy that could be pursued more.

Institutional collaboration and institutional strengthening may not be fully distinct strategies, but it is important to decide which strategy to follow and how to implement it. Institutional collaboration on a peer-to-peer basis between ITM and established universities in the south, such as the partners in South Africa, Peru, Indonesia and Senegal, requires a different approach from institutional strengthening support of emerging autonomous institutions such as the partners in India and Burkina Faso, or from strengthening the institutional capacity of a national institution such as the partners in Benin, DRC (INRB) and Vietnam. ITM is a reputable scientific institute in the fields of tropical diseases and public health, and not a management company. As shown by its track record, ITM is capable of training local administrative staff in the management of project funds and in addressing project-related administrative issues. Rarely, ITM support

for management strengthening was more extensive, such as the strengthening of institutional financial management systems in DRC, or the sponsorship of an MSc in management for the administrator at IMTAvH (under FA2).

But ITM does not have strong in-house capacity for the support of the institutional development of new organisations or to cover their future management needs. For example, it would not be within the remit of ITM to support partners in the development of longer-term human resource strategies that address the motivation and commitment of middle-level staff. However, for the growth and survival of the partner institution, this may be critical in order to mitigate staff turn-over.

Supporting the development of a new autonomous institution such as CRUN and IPH-B is stretching the role and capacity of ITM to the limit. IHP-B experienced a funding crisis when the IC with ITM stopped. For such partnerships, ITM could consider contracting a national or international firm to support the development of the necessary strategies and capacities of the partner institution, if so requested. Informing ITM scientists in a workshop or short course about what institutional capacity strengthening entails would help them in identifying institutional capacity strengthening needs and support the dialogue with the south partner, while addressing the management issues could be outsourced.

Among the IC projects in FA3-III, institutional cooperation with ITM most often started with one or more individual relationships between a local champion or PhD student and an ITM expert/scientist. Most often this individual relationship expanded to include several PhDs (building capacity around the local champion's field of work) and progressively developed into an institutional relationship between ITM (one or more departments) and the south institution. Depending on the local institutional capacity and ITM investment, this process evolved more or less rapidly. It was, however, not always the result of a clear institutional strengthening strategy or roadmap and sometimes depended on local opportunities and on interests of the north promotor[31]. Developing a detailed roadmap for institutional strengthening or institutional collaboration with mutually agreed end goals (and, if needed a sustainability plan) could ensure getting best value for money out of investments made. The case of LRC/CHMS in Ethiopia is an example of how initial expectations of institutional development were scaled down to a step-wise, more pragmatic approach. Collaboration with the south partner often occurred in a context of multiple funders and scientific institutions. While agreeing on a single / joint way of reporting and monitoring for all local partners, may be a bridge too far, in the context of switching the poles, it would be logic to respect national or institutional procedures, if they exist and are in line with DGD expectations. The collaboration in Cambodia is an example in that respect, where ITM administration fully adapted to national policies and guidelines. Along the same lines, and especially for long-term collaborations, ITM could pro-actively support the south partner in the development of institutional policies on staff bonuses, benefits and per diems to be respected by all supporting partners. This could, at least to some extent, limit competition for human resources by different partners. Such policies of the south partner institution could also address differences in salaries and benefits between staff working in clinical trials and other research. Finally, in a context of multiple funders, duplication of investments or efforts is a risk. Coordination with other funders or actors is therefore important. In the cooperation with LRC/CMHS (University of Gondar) for example, collaboration with other funders (e.g. INDI) worked well. ITM invested in a biobank open to all projects. It could however be a good investment for ITM to support the university in developing an institutional policy for coordinating all inputs/ projects and/or ensure that all investments are included in the institution's strategic plan. This approach would apply to many IC projects and fit well in the vision of switching the poles.

[31] In some cases, the initial individual relationship lasted throughout the duration of the institutional cooperation, in some cases up to 30 years, until one of both experts retired, with the risk that collaboration comes to an end if no replacement was foreseen or because of lack of interest or capacity at ITM to continue the institutional relationship (e.g. Morocco).

In larger country programmes (e.g. DRC) a country representative (not only for ITM but including for example VLIR) could be helpful to deal with administrative issues and coordination between institutions or projects. This has been applied in DRC as from FA4. Along the same line, one promotor suggested the placement of an ITM staff at the institution to lighten the administrative and management workload of the south promotor. However, it is unclear how this would strengthen the south institution and fit in the switching the poles vision. An alternative could be to fund a local contract / staff to fill this post temporarily until it is taken over by the institution.

Allocative efficiency was discussed by one informant. In IC projects with large universities and research institutions during FA3-III, the research areas were generally selected in a consensus process among both partners. Such processes bear the risk of selecting too many areas and thereby diluting the possible project impact. While reflecting on one such process, the informant noted that ITM focused too much on mature research fields that could guarantee a rich source of publications. Emerging fields in which the partner had real strengthening needs, were less interesting to ITM and therefore not pursued with the same intensity. In order to improve the allocative efficiency of cooperation funds, the breadth of research areas should be adjusted to the budget limitations, and ITM input into the selection process should not only orient itself on the research interests of its scientists but also take the research capacity strengthening needs of the partner into consideration.

4.5 SUSTAINED IMPACT

Has the institutional collaboration under FA3-III generated a sustained impact?

1. Which direct benefits of the institutional collaboration are still visible/useful to the target groups (institutions and people) today?
2. Have institutional or individual norms, values or behaviours changed as a result of the institutional collaboration, and how did these changes affect target groups?

ITM has contributed to sustained impact through policy influence and the influence of the PhD, MSc and MPH graduates that were supported under successive framework agreements on the sustainability of partner institutions and on the improvement of health systems in their countries. Several of the ITM partner institutions were 'self-sustainable' institutions at the outset and did not require ITM support (financial, managerial or technical) to continue their core business. With other institutions, building core capacity was an essential part of the collaboration. ITM strengthened capacity in service delivery (e.g. through the transfer of laboratory technologies) and strengthened local training and research capacity providing a basis for sustained impact. This led to increased visibility and (national or international) recognition of partner institutions. Several of those institutions have developed sufficient capacity to continue independently from ITM or continue collaboration based on equal partnerships. ITM supported institutions in their capacity to attract research funding from other sources but did not always plan for sustainability of training programmes.

ITM partnerships with south institutions is based on mutual respect, quality, transparency, and integrity. This provided a basis for long-term effective partnerships that outlived the end of IC agreements and contributed to changes in institutional and individual values and norms, generating sustained impact.

Insecurity of future funding has been a challenge experienced by partners with whom IC ended after FA3-III, however, in all cases, collaboration with ITM did not end and alternate modalities for continued partnership were found in all cases.

Sustained impact through policy influence and changed health systems is discussed in section 4.2.1.4. This is the most important outcome of the IC and self-sustainable as national or global policies and national health systems continue to be funded and implemented.

The impact of PhD training and its effect on developing and maintaining institutional capacity, attract additional resources and its potential broader effect on national health and higher education systems is discussed in sections 4.2.1.2. PhD sponsorship over several phases and framework agreements has strengthened capacity of partner institution. In many institutions, the graduates now occupy key leadership positions. In other cases, they are links between national disease programmes, research institutions, universities and public health schools. Graduates at the MPH or MSc level from schools of public health and institutes of tropical medicine, as well as graduates of short-course in-service training programmes are occupying mid-level positions as decisionmakers in the public and NGO sector and thereby contribute to sustaining health systems (see section 4.2.1.3). Transfer of technology, for instance in molecular biology or other laboratory disciplines, strengthening teaching and research capacity have been the cornerstone of FA3-III achievements of sustained impact.

Several collaborating partner institutions are strong organisations that are sustainable and do not need ITM funds to remain sustainable. Collaboration with these institutions was based on an equal partnership and some continued after FA3-III independent of IC project funding. This is the case for example with ENSP (Morocco), UWC and DVTD (South Africa), MakPHS (Uganda), IPH AvH (Peru), CTM-GMU (Indonesia), BPKIS (Nepal) and STM-UMSS (Bolivia). It also continued with SHCH (Cambodia) although not an academic institution and with IPH-B in India that is still a young and emerging institution. National disease programmes are funded from the national budget and grants from global disease initiatives.[32] ITM/DGD funds are not required to implement their programmes, but rather to strengthen their capacity in operational research or the quality of technical, including laboratory, services. Collaboration with ITM under the framework agreements strengthened (or continues to strengthen) the capacity of practically all partners to varying degrees and in specific areas. Sustained impact is then more about their capacity to continue their core business without future ITM support and their capacity to attract other funding. IMTAvH in Peru monitored the funding from other sources as a KPI in the IC framework. Others that accredited their success in obtaining new funding to their collaboration with ITM are CRUN, ESP, INRB, LRC, LRM, BPKIHS, IPH-B and IPK/INHEM. In the collaboration with the two Cuban research institutions, ITM provided support to strengthen the administrative capacity in dealing with financing from outside the country by learning how to comply with the rules and regulations of international funders in compatibility with national regulations.

> *"The difference of capacity strengthening by ITM compared to other international support is the long duration of the relationship with ITM. Through ITM cooperation several generations of staff were supported. The first PhD is our current director who completed his PhD in 2006. I completed mine in 2013. My wife started hers in 2017 and is still working on her thesis. With ITM we do not only have a professional relationship, we have personal contacts. Through the continued relationship, for instance we receive support from ITM in applying for grants to the Gates Foundation and other big international funders."*
> [South Partner]

In interviews, south promoters also mentioned that the quality of the interaction with ITM and the mutual respect and integrity of the relationship were contributing factors generating sustained impact and continued collaboration after IC had ended. Most interviewees confirmed that collaborating with ITM is different from collaborating with other scientific institutions or funders. ITM respects local

> *"ITM does not tie our hands. BMG funds research, not capacity building. LSHTM & Welcome Trust sent experts and decision-makers to Africa. ITM has a completely different approach of collaboration and building capacity."*
> *[South partner]*

[32] PNLTHA in DRC is an exception, as DGD funding is also essential for implementation, but government funding has increased.

priorities and builds capacity (which, reportedly is not the case with many other partners). It fosters local ownership and is based on the same values (like-minded). Project management is transparent (South partners even know the total project budget, including ITM budget; reallocation within and between budgets are jointly made). Decisions are transparent and respectful. The project budget is flexible and reallocations within the budget to align with new priorities are possible. In interviews, the partnerships were often described as win-win opportunities.

India case study: *When IPH-B joined the institutions supported under FA3 in 2008, it was a small organisation that had been founded three years earlier and that operated out of a two-room office. The main goal of the IC was to build IPH's capacity in research and education and thereby address public health challenges in India. Faculty exchanges, mentoring and sponsorship to courses and conferences strengthened the capacity of IPH-B in the early years and set the institution on its way to achieve recognition and a firm role in the Karnataka State and the Federal Indian health system. With growing expertise in conducting e-learning courses, IPH-B soon surpassed ITM and drew international attention, including through its hosting of the EV4GH network. IPH and ITM started to jointly apply for funding from other sources. When the cooperation ended in 2016, IPH-B initially suffered a financial crisis because more than half of its budget was covered under the FA3-III IC contract. But within a year the institution recovered and started a new period of growth with a broad base of financial support through grants from Indian organisations. The end of the IC in 2016 was somewhat unexpected, and no sustainability plan had been developed. However the achievements in capacity strengthening over the nine years of cooperation contributed to successful institutional sustainability.*

One constraint faced by ITM and its partners is the insecurity of future funding. Three ICs started in 2014 under FA3-III with the expectation that they would continue under future framework agreements. One of them was discontinued after three years. [33] However, the selection of countries for cooperation is subject to DGD policies and is periodically reviewed and adjusted. In the case of the project with CTM-GMU, initiatives such as the completion of two planned PhD sponsorships and plans for the transfer of molecular biology technology to the centre's laboratory were truncated. Although institutional sustainability was not an issue for the Indonesian partner, the sustained impact of the IC was affected. Contingency and sustainability planning for the end of each funding agreement may mitigate such issues.

In the case of CTM-GMU, one PhD candidate has abandoned his programme while the other, four years after the end of the sponsorship, is still looking for stipends to continue her studies. She does, in fact, have reasons for optimism as in this cooperation, as in all others where funding stopped after FA3-III, the relationship with ITM did not end. When the number of countries for IC projects was reduced from 18 (FA3-III) to 10 (FA4), ITM created the Alliance budget line under FA4 to allow continued (smaller scale) collaborations with some exit countries (e.g. Bolivia, India). Besides this, more or less formal collaboration continued with the others, for instance in joint applications for research funds from third sources, joint coaching of PhD candidates, and participation of ITM staff as guest lecturers and examiners in master programmes of former partners.

Changes in norms and values in the partner institution are another form of sustained impact. They are difficult to document and to verify, but quite a number of them were mentioned in interviews:

- Administrative procedures and behaviour have changed at some south partner institutions due to the administrative training provided by ITM.

[33] IC with CTM-GMU Indonesia discontinued; ICs with ESP DR Congo and LRC Ethiopia continue under FA4.

- New approaches to training were introduced and are now embedded in the south institution training culture.
- Research ethics committees were developed (e.g. ENSP, IPH-B) or strengthened (e.g. Ethiopia). Ethics in research has now become an in-house value in many institutions.
- Quality assurance in research and service delivery has become an embedded value in many institutions. This also includes evidence-based and skills-based thinking.
- Bedside teaching in some hospitals has become more evidence-based (e.g. integration of antibiotics management in bedside teaching).
- Some of the south institutions gained confidence and became more independent in their interaction with financial and technical partners (e.g. refusing to share samples with some scientific institutions).
- Public health and health system thinking of ITM is very specific; it is '*a way of thinking and writing; a willingness to innovate*'. This has influenced thinking and behaviour of many students and experts that worked with ITM. Through collaboration a mutual community of thinking developed, sharing the same health system values and the same focus on multisectoral approaches.
- In some institutions, the internal organisation and practices of service delivery improved and became the new institutional standard. In others, norms and practices changed, in part through the increased international exposure gained through increased capacity and the links to peer institutions that were facilitated by ITM.
- In one institution the collaboration broke down inter-faculty barriers. Through the project, IPs have developed horizontal links with academic staff across several faculties that participate in research and teaching courses in public health.
- In some institutions the quality of the MSc programme became the standard for other university departments.

5 EVALUATION FINDINGS: GLOBAL PROGRAMME / NETWORKS

The networking component of FA3-III complemented the institutional collaboration with ten thematic network projects and the annual colloquium. The programme had a 'global' outlook, helping to address issues that were less visible in the country programmes and to collaborate with other institutions. The networks encouraged south-south collaboration and innovative strategies, such as Community of Practices (CoPs) and knowledge management. Seven networks had already been supported in FA3 and three new ones were created in 2014. The networks, including their purpose, geographic focus, and number of participants are listed in **Table 7**. The aim of the networks was to capitalise on the expertise and experiences of their members, and to bring together basic, clinical, operational and health system scientists for the development of comprehensive knowledge and strategies for disease control and health care.

The Mid-term review (MTR) of the strategic networks conducted in 2010 found that the networking component of FA3 was relevant and well aligned with the FA3 objectives and ITM and DGD policies.[34] As soon as the networks had identified common ground, defined a clear structure, and created trust, the networks were able to implement their activities and achieve the established goals. Constraining factors for the networks' effectiveness included lack of a common language, limited opportunities for meeting physically, a cultural and physical distance, and not keeping the dialogue alive in between physical encounters. The MTR recommended to consolidate those networks that were performing well, providing sufficient seed money for activities and products 'owned' by southern partners, shifting governance to the south and extending networks to non-IC partners where appropriate.

Table 7. The FA3-III Global Programme Networks

NETWORK	PURPOSE	# OF PARTICIPANTS BY END OF 2016	GEOGRAPHIC FOCUS
1.21 International Health Policy and Financing (IHPF)	To empower committed groups of global health experts based in the South through innovative collaborative models which allow them to have greater control on policy and implementation knowledge and management.	4500 participants in 3 COPs 3,640 subscribers to ENG IHP newsletter 1389 subscribers to FR IHP newsletter	COPs: Africa Newsletter: global
1.22 TB & Buruli	The project aims to bring together the expertise on Tuberculosis (TB) and Buruli Ulcer (BU) in research institutions, particularly in West- and Central Africa, with links to ITM, in order to allow scientists at these institutions to jointly develop, set and implement priorities for research and capacity building.	6 research institutions and national reference laboratories in Benin, Burkina Faso, DRC, the Gambia, Mali and Rwanda	West & Central Africa
1.23 Tropical and Neglected Diseases (incl. zoonoses / OneHealth) (NTD&Z)	To bring together the available expertise on neglected tropical diseases (NTD) and zoonoses within the FA3 network of institutional partners and, where relevant, additional network partners, for improved control and evidence-based priority setting in NTD and zoonoses. The network will promote the 'One Health' concept and have a specific focus on capacity building for qualitative research	30 health and veterinary institutions in Benin, Bolivia, Cambodia, Cuba, DR Congo, Ecuador, Ethiopia, India, Indonesia, Morocco, Nepal, Peru, South-Africa and Vietnam	Africa, Asia, Latin America

[34] hera (2017) Mid-term review of the Strategic Network Projects Sub-programme of the Third ITM-DGDC Agreement Programme

NETWORK	PURPOSE	# OF PARTICIPANTS BY END OF 2016	GEOGRAPHIC FOCUS
1.24 Network for Scientific Support in the field of Sexual and Reproductive Health (NetSRH)	To develop and strengthen a network of partners in North and West Africa, to improve research capacity in order to produce evidence, based on needs identified locally, that has a potential impact on sexual and reproductive health and that can be translated into policy and practice.	20 institutions in Algeria, Benin, Burkina Faso, Conakry Guinea, Ivory Coast, Senegal, Morocco and Tunisia	North & West Africa
1.25 International knowledge network for Nutrition (EVIDENT)	To support a Knowledge Network involving both stakeholders and researchers to generate recommendations for decision-making that are specific, actionable, and based on the best evidence, while being adapted to national and sub-national priorities and conditions in African contexts.	14 institutions from Benin, Ghana, Morocco South Africa, Tanzania and Uganda	Africa
1.26 Laboratory Quality Management (LQM)	To strengthen and expand existing regional networks of diagnostic and research laboratories in the objectives of capacity strengthening in laboratory quality from bench-side topics to regulatory issues	5 laboratories in DRC, Cambodia, Burkina Faso, Ethiopia and the Gambia	Africa & Cambodia
1.27 Health Systems Network (HSN)	To strengthen the strategic capacity of health system-oriented regional networks and hubs to allow them to play a stronger role in policymaking and research agenda setting at national, regional and international level. This will contribute to improved capacity at country level for management, policymaking and research for integrated health systems. The HSN will focus on important challenges to integrated health systems. These include (1) chronic diseases and the challenge to organise integrated and effective care platforms in mixed local health systems, and (2) health policies that tend to fragment health service delivery and selective policies.	2 regional networks in Latin America reaching 680 individual members	LAC
1.28 Clinical Research Network (CR)	To strengthen the existing network of Southern partner institutions and further develop their capacity to set-up, conduct and lead non-commercial clinical research programs, designed to address the priority health needs of their populations, while adhering to appropriate ethical and Good Clinical Practice (GCP) standards.	13 institutions from Burkina Faso, DRC, Ethiopia, Indonesia, The Gambia, Benin, Cambodia, Nepal, India, Vietnam, Cuba, Peru, and Rwanda	Africa, Asia, LAC
1.29 QUAMED	To strengthen the capacities of Southern public partners of QUAMED network and further develop their capacity to procure and distribute quality medicines. Beyond this technical support and capacity building purpose, this FA3-III proposal will also focus on the sustainability of the national PC by developing innovative strategies to enable them to efficiently communicate their "quality" added value to their market (especially the international one) in a complementary approach with the regulatory authorities.	10 institutions from Togo, Burundi, Benin, DRC, Madagascar, Burkina Faso, Cameroon, Senegal and Chad	Africa

Network	Purpose	# of participants by end of 2016	Geographic focus
1.30 Strategic Network on Antibiotic stewardships (ABS)	To initiate and maintain in each partner setting effective antibiotic stewardship activities, and to stimulate partners to play a national or regional exemplary role in rational antibiotic use.	5 active partners in Cambodia, Ethiopia, Peru, and Burkina Faso 5 passive partners in Vietnam, Laos, Lesotho, Argentina and South Africa	Africa, Asia, LAC
1.31 ITM Annual Colloquium & seminars	To organise each year a colloquium gathering scientists, experts and other stakeholders from the North and South to present a scientific state-of-the art on a relevant topic as well as an interdisciplinary approach to improve research, practices and policies	2014: 239 individuals from 54 countries 2015: 163 individuals from 36 countries 2016: 240 individuals from 35 countries	Global

5.1 ADDED VALUE OF NETWORKS

What was the added value of the networking component of FA3-III?

1. What was the added value of ITM-initiated networks in comparison to other (non-ITM) networks?
2. What value has the network programme added to country-based institutional collaboration projects?

The ITM-initiated networks brought together institutions and individuals with whom ITM had established relationships. They were considered flexible and adapted to members' needs and focused on sharing experiences and knowledge. Other networks, however, were found to be better resourced, encouraged more continuous activities throughout the year and more often supported exchange visits among members.

In relation to the institutional collaboration, the added value of the networks was the opportunity to collaborate and learn from others. Horizontal collaboration and co-production of scientific projects resulted in cross-fertilisation between research institutions. The focus of networks on specific topics was considered valuable. Participation in the networks allowed individuals and institutions to create visibility and obtain academic recognition.

Participation in networks was often a voluntary activity added to other responsibilities and tasks. The level of active participation in networks often depended on the added value of the network perceived by its members.

5.1.1 ADDED VALUE OF ITM NETWORKS COMPARED TO OTHERS

Compared to other networks, participants considered the added value to lie on their **existing relationship with ITM** (either through an existing funding relationship, or from being student or alumni). This allowed them to engage in the networks easily, as trust had usually already been established. Individuals or institutions that did not have a prior relationship with the ITM promotor, or any of the other network members, usually remained more at the side-line. An evaluation conducted by the EVIDENT network, for example, found that participants were at ease to discuss any issues and felt they were listened to. This was in part attributed to partners' existing relationships with each other prior to the project and their shared values.[35] The personal coaching and mentoring by ITM promotors were also very much appreciated.

The ITM networks were also considered to be **more flexible** compared to other networks, allowing participants to contribute and steer the direction of the network. The evaluation of the EVIDENT network found that its flexibility was a key strength. The ability to adapt the project to evidence gaps identified by the partners by providing tailored short courses, ensured members remained engaged and committed.

[35] Motani P,et al. (2019) 'Lessons learned from Evidence-Informed Decision-Making in Nutrition & Health (EVIDENT) in Africa: a project evaluation', Health Research Policy and Systems (2019) 17:12.

Several participants, however, noted that the physical encounters were rather sporadic and expected more continuous engagements throughout the year. Also, the lack of funding for human resources and research projects – in some of the networks – was an obstacle compared to other (non-ITM) networks with much larger budgets such as the Transform Nutrition West Africa network, for example.

The networks supported by ITM **focused on sharing of experiences and knowledge**, which is a key added value for institutions building their expertise and knowledge in a specific field. One informant from the TB&Buruli network, however, felt that other networks promoted visits between countries more actively than the ITM network. Such learning from peer institutions is considered important to see how others in similar contexts are developing their institutions and resolving their problems. This type of peer to peer learning was more actively encouraged by other ITM networks, such as in the Clinical Research network where researchers from Burkina Faso went to support their peers in Indonesia to set up a GCP training.

5.1.2 ADDED VALUE IN RELATION TO INSTITUTIONAL COLLABORATION

The added value of the networks in relation to the institutional collaboration was premised on the **collaboration with and learning from others**. In the words of one key informant: '*When you talk about IC, you talk about a structured programme and deliverables that were agreed upon beforehand with legal contracts. The network was not as structured and involved other players who may be part of the ITM ecosystem, it provided a broader ecosystem and the collaborating partners had more to look towards in terms of collaboration and learning' [South network participant].* The sharing of experiences and the learning from peers working in a similar environment was found to be scientifically stimulating: '*It was very valuable to see how my peers were building their institutions and to be able to dialogue with them. This was a very big motivating factor to see how people from a similar context are working*' *[South network participant].* Horizontal collaboration and co-production on scientific projects were stimulating and resulted in cross-fertilisation. There are several examples of institutions collaborating across continents, such as Ethiopia and Cambodia or Vietnam and Ecuador. The annual colloquium, while not considered a formal network, was also seen as an opportunity for formal and informal networking with researchers. For many the physical meetings were important to set aside time for coming together and discussing issues arising from their research.

The focus on a **specific topic** was also considered valuable: '*the network answers to the specific needs. The IC works more as a whole with the institution. Our institution has been recognised as a good centre for research and we have been able to attract more funders because of our capacity built on the specific topic*' *[South network participant]*. Another added value of the networks was that institutions had the opportunity to get to know others working on the same topics and to engage in collaborations outside of the network, for instance when responding to proposal calls for research grants that required the collaboration of two or more south institutions.

For the IHPF network, the added value was to be able to **connect to and discuss with a wider group of experts and practitioners**. The IHP newsletter, while perhaps considered more unidirectional in terms of networking, was able to bring together a wide range of subscribers, to which the ITM Department on Health Systems and Policies could reach out to when seeking feedback. Also, the Emerging Voices network, which was to some extent supported by the IHPF network, had an active google group discussing issues related to the newsletter. The CoPs, bringing together more than 4,500 researchers and practitioners, encouraged discussion and collective learning on specific topics.

For the Health Systems network, the added value was seen in the **ability of the network to link operational issues at national level to the international research agenda**. In the words of one informant: '*The networks also allow to keep an international knowledge dimension 'think globally, act locally' is what this network*

does' [South network participant]. The aim of this network was to support three regional networks to play a stronger role in policymaking and research agenda setting at national, regional, and international level.

Finally, the networks have also allowed to **create visibility and academic recognition** for institutions and network members: '*Strengthening our national networking capacity has also given us national leverage as a convener and a much better connection to scientists and policy makers' [South network participant]*.

The participation in networks, however, was usually a supportive activity done on a voluntary basis, particularly for network participants in the south. To some it was felt to be less valuable than conducting research, while for others it opened doors and served as a steppingstone: '*The network is there, it gives you capability and it is up to you to use it. It creates a place and it is up to you to use it for what you want to achieve' [South network participant]*. Participation networks was more dynamic when the added value was also more visible or obvious to the members. For example, the LQM network did not promote south-south learning as much as other networks. The purpose was more to strengthen capacity in laboratory quality in specific institutions or regional networks. While this was much appreciated by network members, they did not always feel they were part of a network as they were less engaged with the other members.

5.2 ACHIEVEMENT OF NETWORK OBJECTIVES

To what extent were the objectives of the programme achieved?

1. To what extent was appropriate and sustainable capacity built, reinforced and supported to conduct research, training and delivery of reference services?
2. Were lessons sufficiently disseminated among participating institutions and networks? To what extent has national (or international) policy and/or practice changed as a result of evidence generated by research conducted under the programme; through advocacy /policy support and/or training?
3. To what extent was south-south and/or triangular collaboration achieved?
4. To what extent was the overall objective of switching the poles achieved?

The networks contributed to **capacity strengthening** for research, training, and service delivery. Several training courses were organised, and some of these trainings were institutionalised in southern institutions. Almost all network members surveyed considered institutional capacity development to have been a main outcome of the networks. Five masters' degrees were obtained, and ten individuals started their PhDs.

All networks aimed at sharing and **dissemination of information** among network members and beyond. Eight networks also aimed to influence policy at national level. For dissemination, all networks participated in events to present findings of studies conducted by network members. Many networks also used online platforms to connect and share information among members and to the wider public. Network members jointly published articles in peer-reviewed journals, six of which presented lessons of the networks themselves. It is, however, difficult to establish a clear link between these dissemination activities and policy influence. While some examples of changes in policies and practices were provided, they were generally linked to personal engagements of researchers or to the involvement of decisionmakers in the research.

Most, but not all, networks stimulated **triangular collaboration**. South-south collaboration among network members worked better when this was an outcome of the network measured by the logframe, there was a governance mechanism including members from the southern institutions, presential annual meetings for members to come together and learn from each other were organised, and virtual platforms and communication mechanisms were used to maintain contact with members in between meetings. The two networks where the collaboration was perceived to be more North-South aimed to strengthen different regional networks or hubs.

5.2.1 CAPACITY BUILDING

Strengthening capacity and thereby transferring leadership to the south was an explicit purpose of all networks. Five masters' degrees were obtained, and ten PhDs were reported to have started between 2014 and 2016. Several **training courses** were developed and organised covering technical capacities in areas such as tuberculosis, antimicrobial resistance, molecular epidemiology, quality assurance and One Health, as well as research skills in terms of GCP, qualitative research, translating evidence into country-specific recommendations, policy brief development and gender and rights-based research. Some of these trainings were taken over by the south institutions (such as GCP and research ethics) and continue to date.

According to the reports, 65 people were issued certificates for courses organised between 2014 and 2016. This capacity building was usually directed at individuals but has in many cases also **influenced institutional capacity**. In fact, 17/18 on-line survey participants from southern institutions confirmed that improved institutional capacity was a main outcome of their participation in a network. Improved individual capacity came second with 14/18 participants indicating their individual capacity had been strengthened. In interviews, key informants confirmed how the capacity strengthening has increased their reputation nationally and internationally: '*we are now recognised for the capacity we have. We collaborate for research on hepatitis, we are one of the partners to research on HIV/TB co-infection. We have strengthened our capacity and we can now involve national stakeholders to support the national programme. We are one of the members of the task force to develop guidelines on GCP in the country*' *[South network participant].*

Besides the short courses and trainings, members of the network also **learnt other skills** such as on digital technologies and facilitation. One institution commented how they now, during the Covid-19 pandemic, benefit from the fact that they learnt how to engage in virtual platforms and social media. '*We have learnt this through our work at the CoP. We have concrete facilitation techniques and tools on how to include those actors in the solutions*' *[South network participant]*.

5.2.2 DISSEMINATION OF LESSONS & IMPACT ON POLICY

Sharing and dissemination of information was an explicit aim of almost all networks. Eight of the ten networks also had an objective to impact on policy at the national level through education of policy makers or translation of research evidence. Table 2 in Volume 2, Section 3 presents an overview of how dissemination and sharing of lessons was integrated in each network and what has been done. Dissemination was directed at immediate stakeholders, often national decision makers or the international scientific community.

Different types of dissemination activities were used. Participation in national and international events was most used, usually presenting the activities and findings of studies promoted by the network or network actors. Websites or online platforms were also a popular way of disseminating information. An example was the Association for Data Management in the Tropics (ADMIT)[36] network bringing together clinical data managers working in low- and middle-income countries (LMICs) to share knowledge and common challenges. Not all networks that planned to have a functional website, however, were able to realise this in the period under review due to lack of technical capacity.

Other dissemination activities directed at audiences outside of the networks included presenting results in peer reviewed articles. A total of 61 peer reviewed articles were published. Many of these were published on studies conducted on the topic of the network. However, several articles also presented lessons learnt

[36] https://www.admitnetwork.org/

about the functioning of the networks themselves.[37] The CR network, for example, published findings on informed consent among socially vulnerable communities and proposed an adaptation of the GCP guidelines for LMIC settings, which was considered innovative.

The IHP newsletter was also a successful way of disseminating knowledge and lessons to a wider audience. By the end of 2016, the English version was reaching 3,640 subscribers and the French version 1,389. The annual colloquium was another vehicle for the dissemination of lessons to peers. There was very little information available, however, on the extent to which network participants were able to present their research at the annual colloquia.

Generally, key informants interviewed very much appreciated the dissemination efforts of ITM, as in the words of one informant '*There has been a lot of dissemination of the results through ITM, this is important because we have limited resources to attend international meetings*' *[South network participant].*

In terms of **impact on policies**, it is difficult to establish a clear link between these dissemination activities and policy changes. The few examples provided of changes in policies or practices originated from personal engagement with policy makers or involvement of decisionmakers in the research:

- The LatinChronic network conducted research in cardiovascular health in a poor commune in Medellin, Colombia involving a chain of local health centres. As a result of the research, cardiovascular risk factors changed between 2014 and 2018, as observed in a recent survey.
- In Ethiopia, a researcher was involved in the development of national research ethics guidelines and GCP guidelines based on the capacity gained through network participation. As a result of this collaboration, the quality of the response and timing of the National Ethics Committee is said to have improved.
- At the conceptual level, learnings from the Communities of Practice were published and have contributed to the development of the 'learning health systems' concept. CoPs existed before and continued after FA3, but the conceptual development from knowledge management to learning health systems was largely achieved between 2014 and 2016.
- One of the ITM promotors became a member of the WHO pre-qualification steering group on diagnostics which was a result of his expertise as well as lessons learnt from the network.

5.2.3 SOUTH-SOUTH OR TRIANGULAR COLLABORATION

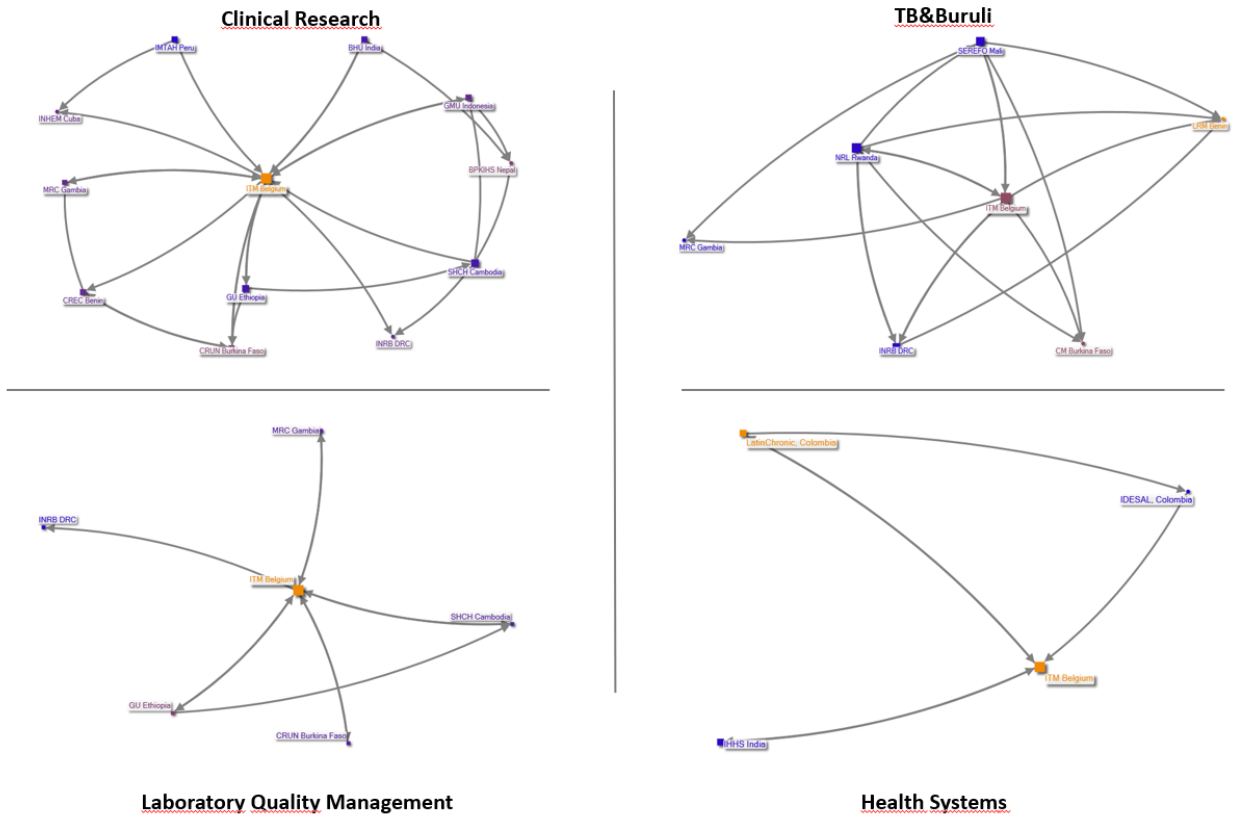
South-south collaboration was a main purpose of most networks and considered a key added value by supporting members to capitalise on each other's expertise and experiences. However, as the ITM was in all networks the provider of funding and therefore also the coordinator, the networks were rather examples of North-South-South or triangular cooperation.

The social network analysis (SNA) (see Annex 4 in Volume 2) highlighted that there were different types of collaborations in the networks. ITM was always in the centre, due to its direct relationship to all the network members. Four networks were sampled to be included in the SNA. In two of these networks, there was active south-south collaboration (Clinical Research and TB&Buruli), compared to the other two networks (Laboratory Quality Management and Health Systems) where there was little collaboration among members (**Figure 2**). For the HS Network, south-south collaboration among the network members was not an explicit aim of the network, instead strengthening the capacity and collaboration of the sub-regional network

[37] For instance: Van der Veke K, et al. Health Research Policy and Systems 2017 15:39; Dossou J, et al. Reproductive Health 2016 13:9; Aryeetey R, et al. Proceedings of the Nutrition Society 2017 76, 589–596.; Ravinetto R, et al. BMJ Global Health 2016;1:e000122; Meessen B, et al. BMJ Global Health 2019;4:e002059; James R. (2010)

members was more important. This is, however, not reflected in the SNA as we were not able to include all 680 members of the sub-regional networks in the analysis.

Figure 2. Social network visualisation of 4 selected networks



Some of the observations of the SNA:

- Participants of both the CR and TB&BU network considered the main outcomes of the network to be increased coalition building, improved communication and increased support or sharing or even collaboration on research proposals. This was not the case for the LQM or HS networks where the main outcomes reported were either individual or institutional capacity strengthening (for LQM) or improved support to sub-regional network partners (for HS).
- In both CR and TB&BU networks, most of the interactions happened during presential annual events or workshops, but there were also quarterly governance meetings using virtual platforms. In the LQM and HS networks, the main method for communication were email and virtual meetings and occasional face-to-face meetings, but there were no annual multi-stakeholder events.
- Three of the four networks (CR, TB&BU and HS) had a governance mechanism in place, where selected members of the South were involved in strategic decision-making, planning of activities and allocation of funding.
- In the CR network, a geographical concentration of connections was observed, with connections among network participants remaining mostly within Africa, Asia or Latin America, except for two institutions reporting on cross-continental collaborations. This was not the case in the TB&BU network where membership of the network was concentrated in West and Central Africa.

- In the TB&BU network, while ITM still occupied a central role, the LRM in Benin was also considered a leading actor, confirmed by the relative power, involvement and contribution of resources that this actor contributed to the network[38].

The MTR had already commented that the LQM network was not a real network but rather a multi-country project. This was confirmed by the current evaluation. There was no overarching network idea, whereby network members could come together and learn from each other. The activities were mostly for the 'internal or regional market' and related to specific technical laboratory problems. Network members only worked together on two external quality evaluations, however, without meeting in person. South-south collaboration emerged towards the end of 2016 between Burkina Faso and Benin but was not reflected in the SNA as Benin was not a network member. The goal of the network, however, was to strengthen and expand exiting regional networks or hubs and in this sense, it was similar to the HSN which also worked with existing sub-regional networks.

Generally, south-south collaboration within the networks was more active when the collaboration among members was an explicit outcome of the network (reported on in the logframe), there was a governance mechanism in place that included members from the southern institutions, presential annual meetings were organised for members to come together and learn from each other, and virtual platforms and communication mechanisms were used to maintain contact with members in between meetings. This was also confirmed by the two evaluations conducted for the NetSRH and EVIDENT networks.[39]

The personality and motivation of network members was also an important factor contributing to the success of the collaboration. Some network members saw value in the collaboration because of the collaboration itself and perhaps future opportunities that may arise, whereas others were more interested in the concrete gains from the network activities, such as trainings and attendance of conferences. Having strong people in the network who were motivated to contribute was considered essential for the network's success.

5.3 EFFICIENCY

To what extent were financial resources used economically and in a timely manner?
Which alternative programming approaches could be used to increase efficiency?

The financial resources were generally spent in a timely manner. Only one network encountered significant delays in the implementation of the planned activities due to the Ebola outbreak. Some networks transferred funds to network partners for the implementation of activities or research, whereas other networks used the funding for organising annual events, trainings, conferences and maintaining online platforms. A large proportion of funding was allocated to ITM staff for network management and coordination. Available funding for network activities was considered too limited by some, whereas others saw the DGD funding as seed funding, which helped them to attract other funding.

[38] The ITM continues to be positioned at the centre of the network in the social network visualisation (figure 2), because unfortunately the institution in Benin did not participate in the survey (see Volume II, section 5.4.3 for more details).

[39] Van der Veke K, et al. 'Research capacity building through North–South–South networking: towards true partnership? An exploratory study of a network for scientific support in the field of sexual and reproductive health', Health Research Policy and Systems (2017) 15:39.
Motani P,et al. 'Lessons learned from Evidence-Informed Decision-Making in Nutrition & Health (EVIDENT) in Africa: a project evaluation', Health Research Policy and Systems (2019) 17:12.

To increase efficiency, two suggestions were made: 1) allocation of resources to a co-promotor based in the south to help increase ownership of network partners and 2) encourage more virtual collaboration in between face-to-face meetings.

5.3.1 USE OF FINANCIAL RESOURCES

A total of €4,123,608 was spent by the ten networks and the Annual Colloquium between 2014 and 2016, representing 95 percent of the Global Programme budget (revised in October 2016). Of this total amount 47 percent was spent on network activities and 53 percent on ITM staff costs for coordination and management (*'Zuidkader'*). The budget was generally well split across the networks and most networks had an expenditure rate ranging between 75 and 120 percent, except for three networks that either largely underspent or overspent. The LQM network exceeded the available budget with 36 percent mostly due to an overspending on the *Zuidkader* budget line. The HS and ABS networks had a large underspending of 38 and 64 percent respectively. This was either because of large underspending on the *Zuidkader* budget line (HS network) or because the planned activities changed because of the Ebola outbreak (ABS Network)

The allocation of funding to network partners differed across networks. In those networks were specific activities were conducted in the countries or by network partners (such as HS, Nutrition, LQM for example), resources were transferred to network partners for implementation. Financial resources were generally allocated in a timely manner. There were only few instances were delays in financial transfers caused delays in activities, but no major examples were found. Other networks did not have specific funding for network partners and funding was mostly used for organising annual events or trainings; facilitating the participation in conferences, seminars and workshops; or supporting collaborative research.

Across the networks, most of the funding was used for either consumables (39%) and travel (28%) (**Table 8**). The category of consumables was very broad and included fees for contracting experts for facilitation, advice or training; the organisation of workshops and trainings and related expenses; hardware and software, including maintenance of websites, registration fees for conferences and basic diagnostic materials to mention a few. Only few networks spent resources on personnel. This included costs to cover the realisation of research (Nutrition, HS network), project management for the organisation of trainings or support to junior staff at clinical sites (CR network), and trained staff to work in the laboratories (LQM).

As mentioned before, no resources or very limited resources were allocated to network participants for management and coordination of the network. This responsibility remained largely with the ITM. Funds from the *Zuidkader* budget line were used to manage the networks. In seven networks these exceeded the funding allocated to activities. In only four networks the amount spent on activities was larger than the amount spent on coordination, with the HS network having a very low proportion spent on ITM coordination.

Table 8. Comparison of expenditures across networks

Budget lines	International Health Policy and Financing	TB&Buruli	Tropical and Neglected diseases	Sexual and Reproductive Health	Nutrition Knowledge	Laboratory Quality Management	Health Systems	Clinical Research	QUAMED	Antibiotic Stewardship	ITM Annual Colloquium	TOTAL
A. Preparation costs	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B. Investment costs	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
C. Consumables	55%	33%	28%	16%	29%	49%	38%	19%	64%	44%	45%	39%
D. Personnel	0%	1%	1%	1%	17%	13%	22%	24%	0%	0%	0%	7%
E. Grants	0%	4%	17%	17%	1%	0%	10%	0%	0%	0%	0%	3%
F. Travel expenses	21%	29%	29%	33%	36%	14%	15%	35%	24%	29%	33%	28%
G. Subsistence/Accommodation	24%	31%	22%	30%	17%	17%	15%	21%	12%	27%	19%	21%
H. Transport costs	0%	0%	1%	0%	0%	6%	0%	0%	0%	0%	0%	1%
I. Overhead	0%	2%	2%	2%	1%	1%	1%	0%	0%	0%	2%	1%
SUBTOTAL Activities	**46%**	**45%**	**44%**	**47%**	**52%**	**31%**	**93%**	**40%**	**43%**	**52%**	**80%**	**47%**
Zuidkader	**54%**	**55%**	**56%**	**53%**	**48%**	**69%**	**7%**	**60%**	**57%**	**48%**	**20%**	**53%**
TOTAL incl ZuidKader	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Zuidkader vs project budget	116%	121%	127%	113%	91%	222%	8%	148%	134%	91%	25%	111%

The limited funding available for activities was a constraint for some network promotors, in particular of those networks with limited budgets that did not allocate resources for conducting research. At the same

time, the funding from DGD for the networks was also seen as 'seed funding', which helped to attract funding from other sources (COPs, QUAMED, SRH, Nutrition network, LQM, etc.) for network activities.

Among the network members interviewed, the opinions on available funding varied. For some the resources were too limited: '*We were trying to squeeze water out of stone. We had to involve a lot of other colleagues who were contributing their time for nothing, which made it difficult. It would be good to have funding to engage time of other colleagues. Time was a major challenge. People had full-time responsibilities and we had to make time to do this. So, we were working on 'borrowed time*'' *[South network participant]*. Whereas others saw the opportunities offered by the network beyond funding as more important: '*Personally, I like to make fire of little wood. Even if funding is limited, we have to take all the opportunities and try to make the best of it*' *[South network participant]*.

5.3.2 HOW TO INCREASE EFFICIENCY

Overall key informants were satisfied with the efficiency of the networks. Only two suggestions were made to increase efficiency:

- Allocation of resources for network co-management with a co-promotor based in the South. This would help to increase ownership of southern network partners. If considered appropriate, the co-promotor function could be a rotating function to allow more network members to be involved in the co-management.
- More virtual collaboration in between face-to-face meeting. Almost all informants interviewed considered the face-to-face meetings important to establish and strengthen the relationship and trust among network members. The two networks where there were no annual meetings organised (HS and LQM) were also the two networks were south-south collaboration among network members was more limited. However, several network participants felt that more effort could have been put in maintaining more regular communication and virtual meetings in between the annual meetings. For one informant, the meetings were too sporadic to be useful.

5.4 SUSTAINABILITY OF NETWORK OUTCOMES

What outcomes of the networking component of FA3-III have been sustained?

1. To what extent have networks continued to function after ITM/DGD funding stopped?
2. What factors contributed to maintain or ending networks?
3. Which direct benefits of the networking are still visible/useful to the beneficiaries today?
4. Have institutional or individual norms, values or behaviours changed as a result of the networking?

Only one of the networks, QUAMED, continues to exist until today as originally designed and supported by the FA3-III. Several components of the networks have continued with or without funding from the DGD. The IHPF network has been successful at continuing all components of the network, although not under the same configuration. The newsletter continues to receive support from DGD, the CoPs have migrated to a new platform and received funding from other agencies, while the Emerging Voices became a standalone network. Members of the TB&Buruli network have continued to collaborate under the DIAMA project led by the LRM in Benin. Similarly, the LatinChronic network has received support from the Cuba IC and continues until today. Some of the network activities supported by the LQM and ABS networks were also integrated in the IC agreements with several institutions under FA4. The EVIDENT network had made plans to continue the collaboration under the leadership of two South members, but this has not materialised. Informal communication between the ITM promotors and network members, however, continues for all networks. This is, however, an initiative from the promotors and rarely communication between network members.

Factors influencing continuation of the networks or certain components include the relevance of the activity for ITM and collaborating partners, the use of digital tools, the availability of funding and synergies with other networks. Only two of the network proposals planned for sustainability in terms of continued resourcing. The news of discontinuation of the networks came for many too late to secure alternative and continued resources.

Despite the discontinuation of networks, many members still reap the fruits of their participation in the networks. Increased capacity building both at individual and institutional level was the main outcome still visible to date; but also continued collaboration between network members, both formally through grant agreements and informally. Some changes were observed in terms of norms (more collaboration between medical and veterinary sector) and behaviour (more autonomy or leadership) of network participants but not in terms of values. Shared values were what connected network members, and these were not deemed necessary to change.

5.4.1 CONTINUATION OF NETWORKS

The Global Programme was not continued in FA4 and only one of the networks, QUAMED, has continued to exist along the same configuration as supported by FA3-III. A new legal entity was created for QUAMED at the end of 2016 and this organisation continues to exist, although with a minority of partners from the south. It received some support for policy engagement in FA4 as part of the Belgian programme. Several components of the networks, however, have continued with or without funding from the DGD:

- The English version of the IHP newsletter was included in FA4 and continues to reach and grow its number of subscribers. The CoPs have also continued although not in the same format. The CoPs were migrated to a new platform 'Collectivity' with funding from the Norwegian Development Cooperation, with new CoPs and increased engagement. The Emerging Voices has also become a standalone network and is currently hosted by the Institute in Public Health (IHP-B) in India.
- In 2016 a new project DIAMA was set up by the Laboratoire de Référence des Mycobactéries (LRM) in Benin which allowed other members of the TB&Buruli network to collaborate. The Benin IC has included a budget line for collaborative research as part of the FA4 agreement.
- Similarly, the LatinChronic network, which was supported by the Health Systems Network, has also continued to exist as a sub-regional network. It has received support from the IC project in Cuba. The network promotor has started PhD studies at the University of Ghent with ITM support.
- Some components of the work conducted by the LQM and Antibiotic Stewardship Networks were integrated in IC agreements under FA4. This was the case for AMR with Peru, Cambodia, Burkina Faso and Ethiopia and laboratory quality management in Benin, Burkina Faso and DRC.

The EVIDENT network on nutrition had made plans for the network to continue under the leadership of institutions in Ghana and South Africa. However, this has not materialised due to changes in human resources and lack of funding. Some of the members of the network, however, continue to work together as part of the Transform Africa Network supported by the International Food Policy Research Institute (IFPRI).

The other networks have not continued to collaborate officially, however, most ITM promotors have continued to communicate with the members using a google group or email communications and continue to share information and relevant literature. This communication, however, is usually only between the ITM promotors and the individual members and not across network members.

5.4.2 FACTORS INFLUENCING CONTINUATION OR DISCONTINUATION

Several factors influenced the continuation of network activities. First and foremost, the **relevance of the activity** and topic for ITM and collaborating partners was an important factor. The IHP newsletter gives the ITM an important international reputation. Subscribers value the weekly updates: '*The IHP newsletter has been a very useful and important binding factor for the network. You can imagine a global network, it is difficult to keep physical conventions, you need a way for people to remain in touch. The IHP newsletter has become this useful trait. There has been a lot of contributions of partners, so it remains one of these commentaries with a lot of southern voices. The way it has been managed and governed has been very inclusive*' *[South network participant].* The integration of issues in FA4 IC agreements demonstrates the relevance of the topics for both ITM and the partner institution.

Networks **using digital tools**, such as the CoP and the IHP newsletter, were more likely to continue. In addition, the concept of the CoP had already been validated prior to 2014. '*The idea of CoP does not die, the platform can change, the place can change but the connections made will remain and that is the strength of this type of networks. There can be very active times of collaboration, but then there may be fewer activities or resources, but the actual connections remain*' *[South network participant].*

Availability of funding has been a major factor encouraging the continuation of existing collaborations. During the period under review, QUAMED actively raised funds to ensure its continuation, while the funding of the DIAMA project also allowed some members of the TB&Buruli network to continue collaborating. Some additional funding has also been secured under the FA4 agreement, which has encouraged continued collaboration in the LatinChronic and the DIAMA network. The Guinea IC also included a budget line to reconvene the members of the SRH Network, but this has not yet happened.

Synergies with other networks, such as WANETAM Plus or the Transform Nutrition Africa Network has also allowed some network members to continue working and collaborating on specific topics.

The network proposals described how they would work towards sustainability. For many of these, capacity strengthening was a major contributor to sustainability. While this has happened and many network participants agree that their capacity has been strengthened (see Vol II, Annex 4.3 on on-line survey results), this has not necessarily contributed to continued collaborations among network partners. Only two networks (QUAMED and EVIDENT) referred to mechanisms for obtaining financing for their activities in their initial proposals, but only QUAMED was successful. QUAMED was a slightly different network and it was clear from the start that it would only be incubated by TM for a short period of time. This was not so clear for the other networks and many ITM promotors interviewed believed that the news of the discontinuation of the networks came too late to find alternative funding.

5.4.3 VISIBLE EFFECTS TODAY

Many key informants and survey respondents believe that networking contributed to results that are still visible today. These can be grouped into two different categories. The first and most referred result is **increased capacity, both at individual and institutional level**. The capacity in terms of research skills was referred to by many: '*I did not know anything about [systematic] reviews but now I take this on quite a lot. In the past I would have to subcontract this. On a personal level, it has been very helpful*' *[South network participant].* But also, the cascading of learnings throughout the institution has resulted into increased capacity of laboratories to conduct surveillance or better understanding of GCP. One key informant went even a step further and mentioned how having participated in several of the networks has paved an important career path: '*Imagine a stairs, in my career path but also that of others, all the activities that we were able to do in the CoP, but also the SRH network, the IHP newsletter, the EV network, all of this has helped us to go up on the stairs and that has given us a lot of importance in our careers but also the*

institutions we are now working in' *[South network participant]*. The experience and capacity gained with the networks has also opened doors for funding from other organisations and donors and for participation in other initiatives. Through these capacity strengthening effects, networks have contributed to a generation of researchers and practitioners who were influenced in their thinking.

Another visible effect of the network is **continued collaboration among some former network members, both formally and informally**. There are examples of institutions that have received external funding (for example from EDCTP) for joint projects and research. Examples include a collaboration between Gambia and Ethiopia (on ethics capacity building) or Morocco, Benin and Guinea (on the French version of 'Sexual Health Matters'). Network members are still able to reach out to others informally: '*We have kept contact with staff from other laboratories. Sometimes we try to contact them when we have difficulties and they help to solve some of our problems*' *[South network participant]*.

5.4.4 CHANGES IN BEHAVIOUR, NORMS OR VALUES

Some changes were observed in terms of behaviour and norms by network participants, but not necessarily in terms of values. For many, the networks and the connection among partners were based on shared values which did not require any changes. An example of change in behaviour was the observation of more autonomy and leadership from 'less confident' network members who were being inspired by their 'more confident' network peers. Some researchers became more convinced about the importance of evidence-based decision making. One researcher even confirmed that he includes this principle in his lecturers.

In terms of norms, the NTD&Z network observed more collaboration between the medical sector and the veterinary sector due the adaptation of the One Health approach in several countries. Also, the SRH Network has aimed to mainstream gender in the research, however it was not possible to verify whether this had also translated in changed norms by those affected by the research.

6 SWITCHING THE POLES

To what extent was the overall objective of switching the poles achieved? If they were not achieved, why not?

1. Country programmes
2. Global programme

6.1 COUNTRY PROGRAMMES

ITM understands under its moto of 'Switching the poles' that '*partner institutes gradually take charge of developing scientific and medical expertise, as they own, lead and are held accountable for their role in the partnership*'[40]. The evaluation found that ITM achieved its overall goal in many of the IC projects under FA3-III. Achieving such a goal in a three-year cooperation project is, of course, not realistic. Wherever there have been significant achievements, they were the result of longer-term cooperation, many of them over a period of the 18 years of framework agreements FA-I to FA-III and some even longer. Some of the ICs that started later did not yet generate conclusive results but were on track to do so. Only very few projects registered no achievements.

Switching the poles required a mind shift both in the north and the south. At ITM it required senior experts to critically assess their mode of working with the south partner. The importance of shifting responsibility, decision-making and accountability to the south partner was generally recognised by all interviewed north promotors, but not always to the same degree and with the same level of consistency. At the same time, it also required a mind shift among the south partners to take the lead and the full ownership of collaborative programmes and activities and apply them to strengthening the capacity of their institution to pursue their core business independently from ITM.

In some partnerships, switching the poles was not a relevant goal. Some partnerships with strong academic institutions, at times stronger than ITM, were implemented on an equal basis. In some cases, for instance in the cooperation with IMTAvH in Peru, this was established over a long period of partnership. The poles had already been switched and the field of cooperation had been equalised. Exchanges of expertise and technology occurred in both directions, distinct for each specific area. In the cooperation with national disease control programmes, the technology and capacity support by ITM was not provided to peer institutions and therefore remained rather unidirectional. These partners have an implementation and policy mandate that differs quite significantly from the remit of ITM. Nevertheless, their strengthened ability to provide a wider range of quality laboratory services and to conduct and translate operational and epidemiological research into evidence-based programmes and policies contributed to a progressive closure of the global south-north gap in science and technology.

Based on interviews and document reviews, the evaluation team assessed the extent to which the switching the poles objectives were achieved in each of the 24 IC projects. This is presented in **Table 9**.

Table 9. Achievement of the 'switching the poles' objectives in IC

NORTH, WEST AND CENTRAL AFRICA	
ENSP Morocco	Objective achieved through long-term capacity building and collaboration, both in training and research. IC not continued in FA4.
INRB DR Congo	Objective achieved through long-term capacity building and collaboration in service delivery (laboratory capacity) and research. Given situation in DRC, collaboration may need to be continued to maintain quality of service delivery.

[40] ITM website. http://2014.itg.be/welcome/switching-the-poles/ consulted on October 3, 2020

ESP DR Congo	Objective not yet achieved. Collaboration under the FA only started in 2014, which is too short. Main focus was on training. Institutional capacity still needs to be strengthened. The post FA3-III set-up of the CCSC is promising.
PNLTHA DR Congo	Objective less relevant. PNLTHA is a national disease programme that has, in principle, the capacity to implement (but depends on external funding). The issue is more about sufficient resources to increase coverage and 'best' strategies to implement the programme more efficiently (two areas that ITM supports). DRC will require further support to achieve the elimination goal for sleeping sickness. Strategies still to be further developed and implemented to increase coverage
CHNU Senegal	Objective achieved. The creation of IRESSEF is the proof. There is no longer a need for capacity building, but CHNU continues to be a partner for joint research activities on an equal level. IC not continued in FA4.
LRM Benin	Objective achieved through long-term institutional capacity strengthening and collaboration in strengthening service delivery and research. The proof is in the recognition as supranational reference centre for TB (WHO), being the lead in the TB & BU network and the national reference centre for tuberculosis and Buruli ulcer.
CRUN Burkina Faso	Objective achieved through long-term capacity building and collaboration in research and clinical trials. New and emerging institution that grew in strength throughout the partnership with ITM. Impressive track record of research and clinical trials. Can benefit from further collaboration for expanding its scope of research.
ENSEA Côte d'Ivoire	Objective not achieved and collaboration discontinued. ENSEA is an outlier as an institution in the profile of ITM collaborating institutions.
EASTERN AND SOUTHERN AFRICA	
LRC-CMHS Ethiopia	Ongoing process of capacity strengthening. Collaboration only started in 2014, but impressive performance in improving service delivery, research and training. Built capacity solicited by WHO to update global VL guidelines. Very promising.
MakPHS Uganda	Mixed project achievements as promising fellowship training was not continued after FA3-III and the creation of Centre of Research on maternal health and nutrition was, reportedly, not a game changer. However, Makerere University does not need institutional capacity strengthening and has since long switched the poles. It is a partner for peer-to-peer collaboration.
UWC South Africa	UWC is a very strong partner and does not require institutional capacity strengthening. Partner for peer-to-peer institutional collaboration or joint research or joint training.
DVTD-UP South Africa	University of Pretoria is a strong partner that does not need institutional capacity strengthening. The joint DVTD-ITM one health course is an example of a win-win whereby DVTD provides the animal health and ITM the human health inputs. Partner for continued peer-to-peer collaboration, especially for the joint One Health course.
LATIN AMERICA	
ISP-PUCE Ecuador	Objective not achieved. Longstanding productive cooperation for the development of a school of public health. Objective changed in FA3-III to the development of a regional PhD programme. New project failed and IC ended but some collaboration with ITM continues.
STM-UMSS Bolivia	Objective achieved. Success in joint development of a quality master's programme in public and international health. IC ended after FA3-III, but collaboration with ITM continues.
IMTAvH-UCH Peru	Objective achieved in longstanding cooperation. Bi-directional scientific exchanges and leadership of UCH in some technology areas. Cooperation with ITM on a peer-to-peer basis.
IPK Cuba	Objective achieved in some research areas (e.g. virology) where ITM has established scientific leadership that does not depend on ITM support. Major progress in other areas.
INHEM Cuba	Objective achieved in some areas (e.g. social determinants of health) where INHEM has established regional scientific leadership. Major progress in other areas.
ASIA	
IPH-B India	Young emergent institution that was only created in 2005 and over the nine years of collaboration with ITM made major progress towards the objective. Still a small institution but with a growing footprint in Indian health policy. No longer supported by ITM with IC and not authorised to receive international funding by the government of India, but on a good path towards becoming a strong autonomous institution in India.
BPKIHS Nepal	Objective achieved. Independent programme of research support for the elimination of Leishmaniasis established. IC ended after FA3-III but collaboration with ITM continues.

SHCH Cambodia	NGO hospital operated by a US-based faith-based NGO. Objective not really relevant for this institution. Service delivery strengthened considerably during many years of cooperation. Research capacity also strengthened, but not a high priority. ITM still leading in the area of research.
NCHADS Cambodia	National HIV programme that relies on ITM support to fill research gaps in a large health policy and implementation programme. Switching the poles is not a relevant objective
CNM Cambodia	Technical unit of the national malaria programme with major service delivery mandate. Switching the poles is not a relevant objective. Research capacity strengthened by ITM but not a priority.
NIMPE Vietnam	National laboratory that has achieved international recognition for its diagnostic capacity for malaria and parasitic diseases. Objective in terms of laboratory strengthening achieved but ITM still leads in the research area. Good progress towards switching the poles.
CTM-GMU Indonesia	A university with strong research capacity on a peer-to-peer level with ITM. Project to strengthen the capacity in diagnosis and research on helminth infections was ended after only three years and did not achieve the switching the poles objective in this area.

Switching the poles was not a relevant, or only a marginally relevant objective for 8/24 IC projects,[41] either because they were national programmes that already have the means to implement their core business, or large national institutions that already had full ownership of their programme and collaborated with ITM on a peer-to-peer basis. In specific areas of research or laboratory strengthening, some switching of poles could be documented although this was not always a priority area of the partner institution.

In 3/24 projects[42] the IC was only over a period of three years which is too short to achieve the objective. However, progress was documented in two of them while IC with the third partner (CTM-GMU) was discontinued without an indication of significant progress.

Achievement of the switching the pole objective or at least major progress towards the achievement was noted in 11/24 projects[43] whereby in almost all cases this was the result of a long-standing institutional cooperation that predated the start of FA3 in 2008. With these institutions ITM has a peer-to-peer relationship that sometimes varies by research areas, whereby the partner is stronger in some and ITM stronger in others. Achievements in more recently started cooperation or younger institutions, for instance IPH-B in India, are more fragile but they are promising.

A failure to reach the objective was registered in two IC projects[44] that were also the only two projects with a triangular cooperation design. ENSEA is a national school of statistics in Côte d'Ivoire and therefore somewhat of an outlier in the portfolio of ITM partners. Implementation was to be shared with CoBAMS, a business college in Uganda, but it did not succeed in part because the Ugandan partner was less or not involved in key areas such as planning and access to project funds. Similarly, during the development of the project with ISP-PUCE on a regional PhD programme, it was correctly analysed that the university in Ecuador did not have the capacity to host such a programme on its own. Several other Latin American universities were included, but they had no ownership in the project nor any access to funds while personality conflicts in the Ecuadorian partner institutions and in ITM prevented the project from implementing its programme.

6.2 GLOBAL PROGRAMME

The 2010 MTR had recommended for the networks to start considering 'switching the poles' by giving responsibilities to regional representatives participating in the networks. Most of the network proposals under FA3-III reinforced the idea of 'switching the poles' through networking. One network even added this

[41] PNLTHA, UWC, DVTD-UP, MaCSPH, SHCH, NCHADS, CNM, NIMPE

[42] ESP, LRC-CMHS, CTM-GMU

[43] ENSP, INRB, CHNU, LRM, CRUN, STM-UMSS, IMTAvH, IPK, INHEM, BPKIHS, IPH-B

[44] ENSEA, ISP-PUCE

concept to its name to indicate its explicit aim of transferring expertise, resources, and decision-making to the south. All networks also invited network members to contribute to the proposals. Most of the networks (CR, TB&BU, NetSRH, EVIDENT, HS, NTD&Z, COPs) established governance mechanisms that engaged south participants in decision-making, in some cases including funding decisions. The governing committees met quarterly, biannually or made decisions at annual events. In most of these cases, the networks also included specific indicators on the functioning of the governance mechanisms and the network in their respective logical frameworks. The governance mechanisms were useful instruments according to key informants: '*Every 6 months we had joint meetings to review what was necessary to respond to the Southern needs, it was a fairly democratic process. It got to a point where we had long debates and there was a lot of room to negotiate what was necessary*' *[South participant]*. This was also confirmed by the EVIDENT evaluation.[45]

The opinions on whether the networks contributed to switching the poles are divided. The network where this seems to have been successful, but which was outside the scope of this evaluation, was the Emerging Voices for Global Health (EV4GH) network. The network is coordinated and managed by a south institution and participants are very much involved in agenda-setting and decision-making. Considerable and continued financing seem to have been a contributing factor in this case. There have also been valid attempts in the networks under review to change existing dynamics, increase the leadership of network participants in activities and to some extent also in steering of the network. For example, the CoPs stressed appropriation and leadership of the facilitation and activities by actors in the South: '*Empowerment of South actors was really in the genes of the network*' *[South participant]*. The SRH network launched a communication platform which was moderated by two southern member institutions. The HS network clearly put the need of the partner institution upfront by providing 'unconditional' funding to the sub-regional networks. Finally, in the EVIDENT network two south partners were interested and ready to take over the leadership at the end of 2016. However, as support to most networks ended, few of the examples mentioned above are still visible. Among the CoPs, however, one of them, the Collectivity,[46] is currently managed by a south institution.

For others, the 'switching the poles' motto was mostly rhetoric, a concept that some promotors took to heart, but which was not translated across the organisation. Particularly at the level of financing, the budget and any decisions related to funding remained in the hands of the ITM. While some network promotors encouraged participation in funding decisions, those who approved the budget execution did not always have the same vision. For example, several of the networks developed mechanisms such as seed grants or micro-grants to enable network participants to manage and take on collaborative research, however, the administration of these grants was difficult, especially if the institution did not have an existing institutional collaboration with ITM. Furthermore, the concept of 'switching the poles' assumes that partners in the South are willing to take over leadership and coordination of the networks. This, however, is not very straight forward and poses two issues. First, the ITM was the coordinator of the network because of their existing relationship with and knowledge of most institutions. For a network to be successful, the network members need to trust those that lead or coordinate the network. A lack of understanding or knowledge on what others in the network were doing was a barrier for some network members to take over the leadership. While some south institutions were in a better position to do this than others, the question remains whether a network without ITM as coordinator would have been acceptable to all members. Second, implementation of switching the poles requires south partners and individuals to invest time and resources. None of the networks, except for the CoPs who had small contracts for the CoP facilitators, allocated funds to a south co-promotor for managing the network.

[45] Motani P, et al. op cit.

[46] www.thecollectivity.org

7 GENDER MAINSTREAMING

7.1 GENDER MAINSTREAMING IN INSTITUTIONAL COLLABORATION

To what extent was gender mainstreamed in the dialogue, agreements and practices of institutional collaboration between ITM and country partners?

1. To what extent has the capacity of partners to mainstream gender in their institutional policies, practices and programmes been analysed and strengthened, if needed?
2. To what extent have ITM capacity strengthening projects mainstreamed gender equality dimensions in (a) the selection of institutions and individuals as well as (b) the profile of participants and the content of capacity building?

Gender was not addressed in ITM's institutional policy plans 2011 – 2015, 2016-2020, nor in its current policy plan 2020-24. The same applies to the 2013 – 2018 research policy plan. The latest plans however place a stronger emphasis on equality, equity and non-discrimination. However, ITM has started to implement actions to realise its commitment to the gender charter, signed in 2018, in the past two years. It has set up an inter-department working group dedicated to developing a gender and diversity policy action plan (currently in draft). Without mainstreaming gender (GM) in the institutional policy plan itself, however, there is a risk that it will be treated as an add-on rather than being mainstreaming in all aspects of ITM's work.

There is no substantial evidence that the capacity of partners to mainstream gender in their institutional policies, practices and programmes was analysed. The country project proposal template for the period under evaluation did not make gender equality mainstreaming a requirement. But reporting on the integration of gender has been mandatory in the annual and final project reports. As for the proposals, the reports on gender provided by the partners are mostly patchy and not suitable to analysing their capacity on gender equality and women's empowerment (GEWE). There is also no evidence that the information available on gender in the proposals and reports was used by ITM to understand capacity building needs on promoting GEWE. Capacity strengthening on GM was not a priority and received little attention despite individual efforts by some ITM promoters to discuss gender related questions with their partners.

According to the 2011 – 2015 institutional policy plan, the selection of partner institutions did not consider gender dimensions. The proposal template lists gender as a possible transversal topic, but not as a requirement.

It was within the south partners' remit of action to mainstream gender in the selection of participants in training activities. ITM did not require disaggregated data for its output reporting and did, hence, not have information on whether or not there was an equal representation of women and men in the capacity strengthening initiatives. The output reporting of all partners was fully gender blind (no data disaggregation, with the exception of some training data by some institutions). It is not possible to draw definite conclusions about the extent of GM in the selection of participants for training programmes. Available data were insufficient for an analysis of GM in the content of training programmes.

Effective gender mainstreaming (GM) requires an institutional commitment to promoting gender equality and women's empowerment (GEWE) that is reflected in policies, strategies and programmatic frameworks. For the period under evaluation, this has not been the case for ITM. The results for institutional GM are discussed in this section. Aspects related to GM at programme level are discussed in the following section.

Gender was not addressed in ITM's institutional policy plan (2011 – 2015). Neither gender nor women's empowerment are referred to in the document. Financial planning did not apply gender responsive budgeting and the human resource sections did not disaggregate data by sex and age groups. There was no

dedicated technical expertise for GM (e.g. a gender specialist or focal points) and no defined budget lines, benchmarks and targets related to gender. The same applies to the 2013 – 2018 research policy plan.

Gender is also not mentioned in the subsequent institutional policy plan (2016 – 2020). It is noteworthy that this plan places a stronger emphasis on equality and non-discrimination, without, however, mentioning gender.

In 2016, an institutional assessment of ITM was carried out by Deloitte which identified the capacity and institutional practices related to gender as weak.[47] This was acknowledged in a written statement by ITM's management.[48] In 2018, ITM became signatory to the '*Gender Charter - A common framework for Belgian civil society and institutional actors*'. Signatory parties commit – among others - to '*take the necessary actions to realise its intentions on gender equality*' and to '*include the fight for gender equality in its overall mission to tackle poverty and inequality*'.[49] ITM, however, did not review its policy plan and programme strategy to respond to Deloitte's assessment results or to implement the commitments of the Gender Charter. Its current institutional policy plan (2020 – 2024) still does not mention gender. Albeit a relatively strong focus on equity, gender is still absent in the situational analysis and the institutional, strategic and programmatic response. Gender is also not identified as a weakness in the SWOT analysis which is part of the institutional policy plan - despite the results of the Deloitte assessment.

One could argue that gender - as one of the social dimensions that enable equity - is sufficiently addressed through ITM's strategic policy commitment to equity. In practice, however, this rarely leads to interventions suited to address inequalities that discriminate against either sex. The operational section of the policy confirms this as it is mostly gender blind.

Despite the absence of gender mainstreaming in its institutional policy plans, ITM has started to implement actions to realise its commitment to the gender charter in the past two years. It has set up an inter-department working group dedicated to the purpose of developing a gender and diversity policy action plan which is planned to be annexed to the institutional policy plan. This document was still at draft stage at the moment of this evaluation. It outlines principles and actions in the following areas

- Increased staff capacity on gender through mandatory training
- Gender sensitive recruitment processes and procedures
- Gender equal pay and gender sensitive promotion processes
- Gender equal representation in committees and panels
- Building of a gender responsive organisational culture (including a 'no harassment' and 'no discrimination policy')
- Visibility and promotion of GE (for example through the celebration of international days)
- Management and monitoring of GE and GM indicators
- Availability of a budget to implement the gender action plan.

The gender and diversity policy plan will address some of the shortcomings discussed in this section. Without mainstreaming gender in the institutional policy plan itself, however, there is a risk that it will be treated as

[47] Koninkrijk Belgie (2016). Advies inzake het statuut van partner van de niet – gouvernmentele samenwerking. Instituut voor tropische geneeskunde.

[48] Coenen, J. (2016). Nota. Analyse van het 'advies inzake statuut van partner van de niet-gouvernementele samenwerking'.

[49] Nota 2018. Charter Gender - Een gemeenschappelijk kader voor Belgische actoren van de civiele maatschappij en institutionele actoren.

an add-on rather than being mainstreaming in all aspects of ITM's work. There are also several dimensions which are not yet explicitly addressed in the draft document:

- While the policy stipulates a commitment to monitoring indicators in relation to gender (e.g. gender balance for new appointments and promotions), it still lacks senior management accountability mechanisms. Without meaningful management arrangements, the gender and diversity plan may remain a bureaucratic requirement.
- The policy does not mention gender mainstreaming in performance management: capacity in GEWE might not be a core competency in an institution like ITM. To effectively mainstream gender, however, it should be assessed as a staff competency during recruitments, staff evaluations and promotions.
- The gender and diversity policy plan foresees a budget for its implementation, but it neither plans to introduce a gender marker in its budgeting processes nor to introduce benchmarks to ensure that GEWE will not be underfunded.
- There are no targets for equitable representation of women in staff and leadership positions.
- There is no explicit plan to improve the gender architecture to ensure that dedicated technical expertise is available to support GM in different departments (e.g. a gender unit, gender advisor or focal points).
- While the document plans different generic actions to ensure a gender responsive organisational culture (e.g. work-life balance, an anti-harassment and anti-discrimination code), there is need to analyse the areas of support and resistance for GEWE in the institution. The results of this evaluation indicated that support for gender is not consistent within ITM. *'At ITM, I always have to push for more attention to gender issues, so we need to strengthen our own capacity in this area. We are getting there among the younger researchers, the older ones don't really get the point.' [key informant]*
- To build on ITM's strengths and to address resistance, the policy should be based on an assessment of whose work and voices are valued and respected and whose are not. This will avoid a checking-the-box mentality in improving GM in ITM's work.
- The draft document plans extensive training to strengthen capacity on gender. This is an important and critical action as lack of capacity in gender is often one of the main obstacles of progress on GEWE. Trainings should be preceded, however, by capacity assessments, to understand what knowledge and attitudes exist in the institution. The results of the assessment will allow tailoring the training content, prioritising groups for training and harvesting existing expertise for training support.
- While the policy outlines extensive actions at institutional level, it fully omits the programme and strategy level: there is no mentioning about how gender is to be mainstreamed in strategic documents, in collaboration with country partners, in project design, research proposals and in reports. This point is elaborated in detail in section 7.1.2.

7.1.1 ANALYSIS AND STRENGTHENING OF PARTNER CAPACITY

To what extent has the capacity of partners to mainstream gender in their institutional policies, practices and programmes been analysed and strengthened, if needed?

We analysed the following data sources to respond to this question: the country project proposals, the annual and final reports as well as the key informant interviews. There is no substantial evidence that the capacity of partners to mainstream gender in their institutional policies, practices and programmes was analysed.

The country project proposal template for the period under evaluation did not make gender equality mainstreaming a requirement. The section IV 'description of projects' of the proposal includes a table on 12 transversal topics. Gender is one of them. These transversal topics '*can be taken into account in the programme*', but none of them is mandatory. Each of the topics is rated on a scale from 0 (this topic is not addressed in the programme) to 2 (this topic is most important objective of the programme).

The information provided by the grant applicants on gender in the proposals is brief – four to five lines at best– and inconsistent: some provide information on institutional GM, some on programme GM and there is visibly no common understanding about what information should go into this section. The content provided by the collaborators does not allow analysing the capacity and ambitions on GM at any level. The information is too limited and vague and none of the collaborators provide an exhaustive overview.

'Institutional questions of gender equality or gender discrimination were never discussed between ITM and [country partner institution]. ITM could make a greater effort and go beyond the tick-box-approach that we have applied so far. For us, this was always a side issue and we should certainly do more.' [south promotor]

'We did not do any analysis, but our staff was over 40% female and among senior staff 61% were women. Most department heads were women.' [south promotor]

'We did not do a formal gender analysis, but we answered the questions on gender in the reports each time, about the number of staff who are female etc.' [south promotor].

Reporting on the integration of gender has been mandatory, on the other hand, in the annual and final project reports. There is a specific section in the template on which gender dimensions have to be described, but gender is not generally mainstreamed in the template, for example, through disaggregated data in the output table. As for the proposals, the reports on gender provided by the collaborators are mostly patchy and not suitable to analysing their capacity on GEWE.

There is also no evidence that the information available on gender in the proposals and reports was used by ITM to understand capacity needs on GEWE. According to key informants, institutional collaborators were also not invited to conduct a gender analysis before project start (or at a later stage). For most respondents, gender was not a subject of discussion between country programmes and ITM promoters. The understanding of gender was also often limited to describing the representation of women in the workforce and during activities.

Capacity strengthening on GM was also not a priority and received little attention despite individual efforts by some ITM promoters to discuss gender related questions with their partners. Gender was integrated by some partners in the training content (South Africa, Senegal, Bolivia) and key informant interviews provided evidence that some of the partners developed gender equality policies. This happened, however, on their own initiative and was not supported by ITM. This was the case for example for LRC-CMHS in Ethiopia, IPH-B in India and for UWC and DVTD in South Africa. The initiatives were not systematically shared with ITM. It has also not been assessed by ITM how many of the country collaborators have such policies and tools and whether or not they are implemented.

7.1.2 MAINSTREAMING GENDER EQUALITY DIMENSIONS

To what extent have ITM capacity strengthening projects mainstreamed gender equality dimensions in (a) the selection of institutions as well as (b) the profile of participants and the content of capacity building?

a) According to the 2011 – 2015 institutional policy plan, the selection of partner institutions did not consider gender dimensions. Most of the institutional partners had already been selected in 2007 following the assessment of a mixed committee at the start of the FA3 programme. In the selection process the following

criteria were considered: the quality of the application, the geographical representation, the representation of low- and middle-income countries and the type of partner (university departments, research institutes, training institutes, disease control programmes).

The absent focus on gender is confirmed by the proposal template which lists gender as a possible transversal topic, but not as a requirement.

b) Capacity building interventions were implemented by institutional collaborators and it was within their remit to mainstream gender in the participant selection. ITM did not require disaggregated data for its output reporting and did, hence, not have information on whether or not there was an equal representation of women and men in the capacity strengthening initiatives.

The key informant interviews as well as the information provided in the project reports indicate that institutional collaborators dealt quite differently with gender dimensions in their capacity building programmes:

- Some actively promoted women's participation in capacity building and aimed at achieving a stronger representation of women in their programmes through different approaches. *'Looking at the gender ratios in the different courses, we noticed that Tropical Animal Health is still very male dominated. The shorter the course and the more flexible, the more balanced becomes the gender ratio. During the selection process women are positively discriminated at equal quality of application. This allows us to reach a percentage of women (among scholarship beneficiaries) between 40 and 50%.' [south promotor]*
  'In [name of institution], there are more women than men, including in leadership positions. Our workplace policy is the national policy for the public sector which assures that there is gender equality and protection from gender discrimination in the workplace." [south promotor]
- Some monitored the representation of men and women in their workforce, without, however pursuing gender mainstreaming objectives. *'At the Institute and at the Faculty of Medicine overall there are a lot more female than male staff and students. That also applies to the project. That is just how the academic environment is in [name of country].' [south promotor]*
  'There were always a lot of female scientists trained […]. Currently three out of five group leaders at [name of institution] as well as the Institute Director are female. There is a lot of leadership by women. This is an observation. I don't know if it is a deliberate result. I think it is more a coincidence.' [south promotor]
- Others did not mainstream gender in their selection processes for their capacity strengthening initiatives. *'The most important thing is to find the best people to do the job, and it makes no difference to me if they are men or women.' [south promotor]*

The output reporting of all partners was fully gender blind (no data disaggregation). It is therefore not possible to draw definite conclusions about the extent of GM in the selection of participants for capacity building projects.

Regarding the extent of GM in the content of capacity building, the data to be analysed were insufficient to draw conclusions. Neither the country proposals, nor the reports, nor the key informant interviews provided substantial evidence on gender mainstreaming in the content of capacity building material. A key informant from ITM reported that ITM's pictorial communications for training material were gender sensitive. One country collaborator shared that the French module of the training course had a module on gender. Another affirmed that *'in the course content, gender is addressed, but usually not extensively and systematically'*. There was no further information in the reviewed data sources. GM in the content and presentation of

capacity building material needs to be studied in further evaluations through a direct assessment of training material.

7.2 GENDER MAINSTREAMING IN PROJECT DESIGN, IMPLEMENTATION AND REPORTING

To what extent was gender mainstreamed during project design, implementation and reporting?

1. To what extent did country projects/ programmes mainstream gender during programme design, implementation and reporting?
2. To what extent was gender taken into account in planning, implementing and monitoring the network projects?

Gender dimensions were invisible at strategic and programme level and resulted in inconsistent GM and missed opportunities at project level. In IC projects, GM was mostly invisible during the design stage and was patchily applied during implementation and reporting. Due to inconsistent information on gender in country programme reports, the actual extent of GM in individual country projects cannot be determined. Due to capacity limitations and reporting gaps on gender at the level of both ITM and partners, it is also not always clear to what extent GM would have been relevant for some of the projects.

Overall, gender was not a priority matter for the global programme. Its integration at design stage was poor and the information provided in the reports shows that the extent of GM varied strongly across and within network projects. The key informant interviews also showed that GM was dependent on individuals who advocated for more attention to gender matters, without, however, achieving large-scale buy-in.

The strategic objectives for the FA-III do not mainstream gender. The overall objective focusses on health system strengthening '*in order to improve the health status of the populations*'. The specific objective is centred on strengthening '*capacity in developing countries to conduct research, training and delivery of reference services in order to meet the overall objective*'. Gender is also not reflected in ITM's strategic objectives (2015 – 2018). Gender dimensions were, thus, invisible at strategic and programme level and resulted in inconsistent GM and missed opportunities at project level. The end of project report of the FA3-III states: *'The mainstreaming of the gender issue in all development cooperation projects we hoped in the course of FA3 has not yet been achieved. We expect to pay stronger attention in all activities.' (p. 14, 3-year project report FA3-III 2014 – 2016 integrating year report 2016).* Our detailed analysis presented in the next two sections confirms this statement.

7.2.1 MAINSTREAMING GENDER IN COUNTRY PROGRAMMES

To what extent did country projects/ programmes mainstream gender during programme design, implementation and reporting?

To assess the degree of GM at design stage, we analysed to what extent gender was mainstreamed in the country project proposals. In their self-rating, 14 out of 18 projects selected the rating 1 '*gender is significant but not the major aim*' and one project selected the rating 2 '*gender is the most important objective of the programme*'. Three proposals selected the rating 0 '*gender is not addressed in the programme'*. In the latter three, GM was evidently not mainstreamed in the design of the project. In the remaining 15, the gender section in itself provides very limited information on gender. None of the proposals, for instance, includes targets related to gender. Five partners provided vague and random information in the gender section and it remained unclear what strategies or actions they intended to implement. One partner, for example, only wrote that *'the programme will support women leadership'*. Only ten of the 18 proposals propose one or more of the following strategies or actions to implement GM:

- Conduct of research that will benefit marginalised women (2)
- Efforts for equal representation and treatment of men and women at institutional level (6)
- Intention to mainstream gender in research projects (e.g. disaggregated data) (1)
- Positive discrimination of women in the capacity building interventions (1).

The logframes in the proposals do not or only inconsistently mainstream gender. Overall, an analysis of the proposals shows that partners either did not place importance in describing their work on gender or that they lacked the capacity to do so. The interviews with key informants indicated that some partners indeed lacked capacity or interest in mainstreaming gender in their programme. Some also perceived that interest and knowledge on gender was limited at ITM.

'To strengthen gender indicators in future, we should put gender indicators into the logical frameworks. I think, ITM lacks the knowledge on how to deal with gender issues.' [south promotor]

'We think we have other sources of funds to address gender issue and we don't see a need to strengthen the gender component in the project implemented with ITM.' [south promotor]

'I agree that ITM should focus more on gender and would appreciate some guidance on this, as we do not know what to do, beyond male/female balance in training, research and project staff. By chance, we have more female staff in [project].' [north promotor]

'It is difficult to include gender issues in research in [country]. I always try but the partners don't see the relevance and importance. ' [north promotor]

Some partners, however, stated in interviews and in their reports that they had expertise on gender in their teams. They described gender responsive approaches in their programmes, also due to requirements from other donors. These are, however, not reflected in their proposals as they perceived that gender was not a priority for ITM. These approaches are:

- Collection of sex-disaggregated data during research (Cuba, Peru, Indonesia, Cambodia, Vietnam, South Africa)
- (Efforts towards) equal participation of women in capacity building programmes (Burkina Faso, Cuba, Bolivia, DRC, Vietnam, South Africa, Uganda, Ethiopia, Nepal, Cambodia)
- Gender was introduced as part of training content (Bolivia, South Africa, Senegal)
- Interventions specifically for women (Cambodia, Nepal)
- Research on gender dimensions in diseases (Cuba, South Africa, Nepal, Vietnam, Cambodia, Peru, Côte d'Ivoire)

Key informant interviews indicated that some partners had strong GM components in their programmes but did not include this information in their reports. It is therefore possible that more or all country partners collected disaggregated data at institutional and programme level, but that they did not included this information in their reports. This is linked to the fact that partners have different levels of understanding about what type of information should be reported on gender. As a consequence, the content provided in the gender section of the reports varied greatly in depth and type of information provided. It is also due to the fact that the reporting template does not require GM (e.g. through disaggregated data in output tables).

7.3 MAINSTREAMING GENDER IN THE GLOBAL PROGRAMME

To what extent was gender taken into account in planning, implementing and monitoring the network projects?

We started by analysing to what extent gender was mainstreamed in the network project proposals to appraise the level of GM at the design stage. According to the self-rating, 7 out of 11 projects rated their proposal as 1 '*gender is significant but not the major aim*' and one project (the SRHR network) selected 2 '*gender is the most important objective of the programme*'. Two network proposals used the rating 0 '*gender is not addressed in the programme*' and did not provide any information on gender. For one network, the gender section had not been filled out. In addition to these three proposals with no information on gender, another two proposals remained inexplicit to an extent that is unclear what their intentions were. The first stated that *'Gender is an important theme on the international development agenda, including in international health policies*' while the other one briefly noted that *'Some course content may be related to gender'*. Only 6/11 proposals included interventions to mainstream gender: five networks committed to efforts for an equal representation and treatment of men and women during their activities and two proposals stated intentions to integrate gender in their research activities.

We assessed the integration of gender during implementation and reporting through a content analysis of the project reports and the key informant interviews. Across all networks logframes and logframe reporting were gender blind. An analysis of the gender section and the interviews showed that more attention had been given to gender than the logframes and their reports reveal.

Five networks reported on the representation of women in the network and in their activities, without, however, specifying whether or not they made any attempts to achieve a gender balanced representation. The remaining six networks described active efforts to ensure an equal representation and participation of women in the network and its activities (facilitation, presentation, trainings, research etc.). The IHP network, for example, encouraged specific female scientists to share their work and to engage in network activities, they shared work on gender in health system research in their newsletter and collaborated with Women in Global Health. Other networks placed particular emphasis on equal representation of men and women at meetings (facilitation, speakers etc.). *'During meetings and colloquia, the network pursues a rightful gender balance in presenting and sharing.' [network promotor] 'The promoter and coordinator of this network are both women. We tried to maintain a gender balance and involvement of early-stage researchers throughout the development of the network.' [network promotor]*

At network level (with the exception of the annual ITM colloquium), it was perceived as easier to achieve equal representation of men and women than equal participation. In most cases, women participate considerably less than men. Network activities usually require engagement beyond working hours which is more difficult for women to accommodate due to family and household responsibilities. *'We observed that those that don't have a problem are the male African experts, they can join google groups and participate. Women seem to be more overwhelmed and don't follow the groups as actively, but this was not just for women in the South, also for women in the North.' [network promotor]*

Two interviewees mentioned a study that had been initiated to investigate obstacles to an equal representation and participation of men and women in networks, but the report (expected in 2017) and its results were not known.

GM in research design and implementation was not or only of limited relevance to some of the networks (e.g. the ITM annual colloquium, QUAMED, Antibiotic Stewardships or Laboratory Quality Management). Among the networks for which it was relevant, it was inconsistent. Only two networks (SRHR and the Tropical

and Neglected Diseases Programme) affirmed to consistently ensure that gender is integrated in studies. The SRHR network also undertook the initiative to provide an introduction to all network members on the integration of gender and human rights in research. Two further networks reported that gender was considered to some extent in some of the studies, but that more emphasis on gender was necessary. One key informant stated: *'I don't remember that gender was a front-centre issue, maybe in the topics that were looked at. We did not deliberately look at gender. We looked at breastfeeding, but it wasn't because we were mainstreaming gender, but it was an issue I work on as part of my research. I don't remember that we placed it strongly at the front and one of the key outcomes." [network promotor]*

As this quote states, gender was not a priority for the network programmes. Its integration at design stage was poor and the information provided in the reports shows that the extent of GM varied strongly across and within project. The key informant interviews also showed that GM was dependent on individuals who advocated for more attention to gender matters, without, however, achieving large-scale buy-in.

'We had a presentation workshop at the beginning of the network on human rights, SRHR and research and gender and research. […] There is not enough focus on this, the attention on gender could be better. But we really tried to strengthen it. […] There were two speakers in Rabat, one lady from WHO and a French speaking woman from Belgium who runs an NGO in Brussels on gender. I pushed for this. Did it have any impact? Not sure, yes and no. We always reviewed the proposal in that respect, but is it still ongoing among partners? Not sure, but at least it rang a bell.' [network promoter]

'Gender is considered in the newsletter, in particular in the blogs and opinion pieces from South Africa and India, there we have strong gender proponents. But not so much in other countries from Sub-Saharan Africa. The CoPs actually noticed at some point that gender was an issue in the CoPs […].' [network promoter]

8 ADDITIONAL EVALUATION REQUESTS

8.1 MAINSTREAMING GENDER IN FUTURE PROGRAMMES

For the period under evaluation, gender mainstreaming (GM) was neither a priority at institutional nor at strategic or programme level. Until now, gender is not reflected in ITM's institutional policy plan. A gender and diversity policy plan is currently under development. It addresses some of the weaknesses at institutional level but does not address shortcomings related to gender at strategic and programme level.

At institutional level, we propose the following recommendations to achieve consistency, effectiveness and commitment to gender mainstreaming:

- Organise a set of participatory sessions with staff to analyse the areas of support for and resistance to GEWE in ITM. The results of this work could be used to **review the current institutional policy plan** with the objective of consistently mainstreaming gender in the document and strategic objectives while building on the strengths of the institution. The participatory process is important to foster buy-in and understanding why and how gender mainstreaming is relevant to different departments and functions.
- Further develop the institutional level actions in the **draft gender and diversity policy plan**, in particular:
    - Outline senior management accountability mechanisms for gender mainstreaming;
    - Establish gender as a competency to be assessed in performance management and recruitment;
    - Introduce a gender marker to the annual budgeting process and establish minimum budget benchmarks for activities supporting GEWE;
    - Reflect on and take decision on reasonable, but sufficiently ambitious targets for women representation in management and leadership positions;
    - Analyse what type of gender architecture will be needed to support GM at institutional, strategic and programme level. The gender and diversity policy plan should include concise commitments for dedicated technical expertise in gender to support both management, promoters and country partners.
    - In preparation of the staff training sessions on gender, plan for capacity assessments of the latter. The results of the assessment will allow tailoring the training content, to prioritise particular groups for training and to harvest existing expertise for training support.
- Add a chapter on GM at programme level to the draft gender and diversity policy plan to elaborate on the following aspects:
    - Establish gender mainstreaming as a mandatory component in project proposals and reporting and revise the templates to encourage gender sensitive design and reporting practices (e.g. by requiring gender relevant information in the situational analysis section, by requesting disaggregation criteria for indicators and disaggregated data for output and outcome targets where relevant). The reporting section '*output in numbers*' should systematically disaggregate data for all relevant indicators. Gender issues remain often invisible when not systematically reported and analysed. It is also worthwhile to consider the introduction of standardised women empowerment indicators that should be applied by all projects for which they are relevant, such as the number and percentage of female authors (and of first authors who are female) in publications.

- Project proposal and reports should be systematically reviewed with a gender lens. The institutional gender architecture needs to ensure the necessary capacity for that.
- For learning and capacity strengthening, good practices related to gender mainstreaming should be documented and disseminated.
- The assessment of GM at institutional and programme level should be considered for all audits and external evaluations.

In the collaboration with country partners and networks, we recommend considering the following actions:

- Conduct an online survey among partners to learn about their capacity in GEWE. To anticipate potential reluctance of partners, it is recommended to emphasise that the survey is about learning about good practices and lessons learnt and not about imposing requirements for institutional collaboration. The survey could look, for instance, at
  - policies and procedures for dealing with sexual harassment and gender-based violence, and discrimination at institutional level
  - policies and procedures for preventing and prohibiting discrimination (e.g. subject choices, technical and vocational courses and apprenticeships, pregnancy, parenthood, and disability)
  - criteria for staff recruitment, professional development and promotion: do they include gender equity standards?
  - guidelines on a gender-sensitive learning environment
  - experience and technical capacity on gender
  - equal representation of men and women (also in leadership functions)
  - applied guides and tools for GM.
- Disseminate the results of the survey including good practices and tools from partners with strong capacity in gender. If there is interest, strong partners could pair up with partners of lower capacity to provide support for GM.
- Collaborate with a group of partners for developing a systematic approach to assessing gender mainstreaming in research. This could be led by a partner with strong gender expertise. It would also aid in identifying studies for which gender mainstreaming is not relevant.

8.2 OPTIONS FOR MONITORING CAPACITY DEVELOPMENT

8.2.1 MONITORING IMPLEMENTATION OF IC PROJECTS

The evaluation ToR include questions about the effectiveness of monitoring frameworks and plans during the implementation of the FA3-III country programme. The responses to these evaluation questions are integrated in this section which focuses primarily on the appropriateness of the FA3-III approach to monitoring capacity strengthening and explores options for improvement. Since 2017, under FA4, the expected results, indicators and targets of institutional cooperation projects are integrated in country programme theory of change frameworks. Under FA3-III, each IC project had an 'Institutional Logical Frameworks' that was the primary monitoring instrument. Only for the two IC projects in Cuba were these frameworks integrated.

The column of 'intervention logic' of the FA3-III logical frameworks had two high-level statements of 'overall objective' and 'programme purpose', followed by a series of results statements. This was followed by an activity monitoring table. Indicators for monitoring progress were formulated at the programme purpose and results levels, and in some cases at the level of overall objectives. No targets were set, although the indicators were in many instances formulated as targets. Progress towards meeting these indicator/targets

was reported in the 'logical framework summary' of the annual reports, as well as in the progress column of the institutional logical frameworks and in the table of activities. In addition, annual 'outputs in numbers' were reported in three categories of people (e.g. number of PhD degrees), publications (e.g. scientific papers), and products (e.g. patents) and listed individually.

The evaluation analysed the indicators and progress reports of the 23 logical/performance monitoring frameworks of FA3-III.[50]

At the overall objective level, 15/23 frameworks included indicators that varied considerably, ranging from statements such as '*NTDs are a public health problem in [country]*' to targeted output statements such as '*the research findings of 27 projects are transferred to regional and national authorities*'. Only some of the projects reported progress against these indicators and only in exceptional cases the indicators were SMART[51] and actually allowed reports on progress as for example in the FA3-III three-year report of the IC with NCHADS in Cambodia:

OVERALL OBJECTIVE	INDICATOR	PROGRESS
To contribute to the elimination of new HIV infections by 2020 and improve the health status of people in Cambodia	Achieve virtual elimination of new paediatric HIV infection with less than 5% of mother-to-child transmission in 2015 and to less than 2% by 2020	According to the GARPR 2016, 83.5% of HIV infected mothers receive ARVs for PMTCT, and MTCT rate of HIV was reduced from 13% in 2010 to 6.2% in 2015.

At the programme purpose level, all 23 frameworks included indicators and progress statements. The quality of the indicators varied ranging from '*increase in outputs of [institution] in accordance with planned results*' or '*coordinating office is opened*' to measurable outcome indicators that provided meaningful information about achievements at the purpose level, for instance of obtaining ISO 15189 accreditation by the laboratory IC partner. In general, the logic linking meaningful purpose statements to SMART indicators and meaningful progress statements was not uniformly applied, and there are few examples such as the FA3-III three-year report of the IC project with CTM-GMU in Indonesia where progress is reported on a measurable indicator that is clearly linked to the project purpose, although, as in most cases, no target is defined.

PROGRAMME PURPOSE	INDICATOR	PROGRESS
Institutional capacity of GMU Centre for Tropical Medicine for NID research strengthened	Number of external research publications citing NID research publications attributed to GMU	Three joint manuscripts with partners have been cited 13 times (baseline: 0)

The FA3-III frameworks list between two and nine outcomes **at the results level**, often with extensive lists of indicators. In many cases, however, the indicators are simply output statements that are reported against with text taken from the activity reports. In one project, for instance, the expected result of '*a new and functional status of the partner institution with strengthened capacity of its leadership*', defined as its sole indicator '*meetings held*' against which progress was reported in a narrative that suggests that relevant meetings had not been organised. The issue is not the outcome or results statement which is quite reasonable in a logical chain of a project aiming at institutional strengthening, but the indicator, which, as in a majority of FA3-III logical frameworks, is simply an output statement against which task completion reports from the activity monitoring table are pasted.

The monitoring frameworks with their three outcome levels and the very detailed activity and output reports as applied in FA3-III, provide for close accountability monitoring of planned versus realised activities, but most of them lacked a coherent logic that allows an assessment of the extent to which the activities

[50] The two IC projects in Cuba had a single logical framework

[51] Specific, measurable, attainable / achievable, relevant and time-bound

contributed to institutional capacity-strengthening in partner institutions and to effective and evidence-based practices, programmes and policies in the partner countries. A review of the theory of change and monitoring framework of country programmes in FA4 suggests that this weakness was addressed to some extent in FA4[52].

Capacity strengthening is the key role of ITM in international cooperation, including the support to strengthening the capacity of institutional partners to conduct research, provide training programmes, deliver services, generally on a sophisticated level of technology, and, translate the research evidence as well as the training and service capacity into improved health practices, programmes and policies. The development of country-focused theory of change frameworks as in FA4 are a big step towards presenting a coherent logic that situates each project in the larger context of national development challenges. However, in order to capture the substantial overall achievements of ITM as a contributor to capacity strengthening at the global level, monitoring and evaluation frameworks of programmes and projects should also maintain a level of cross-comparability. This could be achieved by providing a generic list of capacity strengthening indicators that can be selected as appropriate for each individual monitoring framework.

Table 10. Capacity strengthening indicators for institutional cooperation

Outcome	Indicators	Means of verification
Strengthened individual capacity		
Increased individual research capacity	• Peer reviewed publications with first or second authorship (or as last author if first author is a supervised PhD student) • Conference presentations (number, topic, type of conference) • Awards / prizes • Competitive research grants won (annual) • Total value of research grants won (annual) • Publications of policy briefs and other documents aimed at knowledge users (not scientific papers) • Participation in technical fora, policy advisory groups, and implementation programmes (national and global)	Publications
Increased individual training capacity	• Training courses developed/conducted (in which position) • Professional certifications & academic titles • Academic appointments	Interviews
Increased individual capacity to deliver services	• Professional certifications • Professional career achievements • National/regional/international recognition of expertise	Interviews
Strengthened institutional capacity		
Increased institutional capacity	• Development of infrastructure, major equipment and staffing • Accreditations or certifications achieved • Other forms of national/regional/international recognition • Institutional awards / prizes	Annual reports Accreditation reports

[52] The evaluation did not assess all FA4 project theory of changes. A review of a selection of frameworks suggests that the quality varies between projects (e.g. some frameworks still provide activity outputs as indicators for outcomes; and indicators are not always SMART).

Outcome	Indicators	Means of verification
Research capacity	• Research proposals submitted, and grants obtained by year • Number of publications in peer reviewed journals by year • Partnerships established with other research organisations • Joint research proposals submitted / grants won • Joint publications with other research organisations • Conference presentations • Awards / prizes (by staff of the institution) • Ethics Committee established / operational • Policy briefs developed and shared with policymakers, by topic • Participation in technical fora, policy advisory groups, and implementation programmes • Local, national, regional or global policy influenced	Contracts / memoranda of understanding / accounts / publications / policy documents
Training capacity	• Number and type of courses and curricula developed • Number and type of e-learning courses established • Number and type of joint courses established • Annual number of PhD scholarships awarded, and PhDs graduated, disaggregated by gender and, if relevant, by nationality • Annual number of master's level students trained /graduated, by course, disaggregated by gender and, if relevant, by nationality • Annual number of postgraduate students trained, by course, disaggregated by gender and, if relevant, by nationality	Annual reports
Service capacity	• Scope and annual volume / coverage of services provided (trends), disaggregated by gender (when relevant) • Scope and annual volume of laboratory tests provided (trends) • New laboratory test introduced • Local referral network established / strengthened • Local quality assurance system established / strengthened • Regional referral system established	Annual reports
Strengthened national systems for research, training or service delivery		
Strengthened national standards and regulatory frameworks for accreditation, ethics and quality assurance in research	• National changes of ethics, accreditation and quality assurance standards for research	Policy documents
Strengthened national policies, systems, guidelines for service delivery	• New national programme developed • National policy updated • New prevention / treatment / control guidelines developed, or existing ones updated • National referral network established • National quality assurance network established • Other changes in health system organisation	Policy documents Guidelines National / district annual reports Project reports
Strengthened national systems for training MSc, PhDs and other postgraduate training	• National capacity for PhD training developed • New MSc course established • New postgraduate training established • National curricula adapted • National education policy updated	

8.2.2 OPTIONS FOR MONITORING AND EVALUATING NETWORK PERFORMANCE

A common question asked about learning networks, as supported by the FA3-III, is whether they really make a difference. Do people apply what they learn? Are these annual meetings not a waste of time and money?

These are important but difficult questions to answer, often because the monitoring practices fall short in assessing the learning impacts of the network. Each network had developed a logical framework identifying the overall outcome, key results areas, and specific assumptions and indicators for each result area. The quality of these frameworks and the way they were reported against, however, differed. Some only included quantitative indicators, while other indicators were more loosely formulated to allow capturing qualitative information. Reporting against the indicators also varied with some networks providing one or two lines of feedback without numbers, whereas others provided long descriptions and many numbers. Some logical frameworks identified targets, but others did not. Only few networks included indicators to report achievements in strengthening south-south collaboration which was one of the goals of the network projects. In addition to reporting against the indicators of the logical frameworks, the networks also reported on a standard list of outputs in the format of people, publications and products like the institutional cooperation reports. A review of these outputs, however, identified that the networks had differences of understanding on what should be reported under some of the outputs. The output 'network' for example included either the number of networks supported as part of the networks, the number of networks members were affiliated with besides the actual network or the number of people that participated in the networks. Numbers therefore ranged from 0 to 25, and were not comparable.

According to the 2010 INTRACT briefing note on Monitoring and Evaluation of Learning Networks,[53] the following information should be captured to monitor and evaluate the impact of networks:

1. **Learning activities**: what activities were done, how often, how does it compare to what was planned, how well did it meet the needs of the group, what was the perceived quality and how much did it cost?
2. **Members' engagement in the activities**: are members aware of their role in the network, how many members participated and used the services, how many engagements were there both physically and virtually, how many members opened the newsletter, to what extent are members contributing to the network?
3. **Learning outputs**: how many people were trained, started a master or PHD, what knowledge was generated and how was it disseminated?
4. **Learning outcomes and impact**: what have the members learned as individuals? Have they applied these learnings in their work? Has this made a difference at individual, institutional or other level?
5. **Relationships developed between members**: what collaborations exist because of the network?
6. **Learning for others outside the network**: how has the information and learnings been disseminated and how many people were reached (for example number of downloads, etc.)

The first three elements are internal to the network and can be included in a performance monitoring framework. The last three elements are the more indirect outcomes of the network and are more appropriate for assessment in an evaluation.

While much of information was reported in the annual reports, particular in terms of network activities, not much information was available on how members collaborated and participated in the networks. Furthermore, the very distinct logical frameworks of each project do not allow a comparison of network performance. While it is useful for each network to have a specific logical and performance measurement framework, there are some more standard outcomes, results and indicators related to overall aim of all networks, i.e. to capitalise on members' expertise and experience, and to bring together basic, clinical, operational and health system scientists in developing comprehensive knowledge and strategies for disease control and health care, which should be captured by common indicators. A generic M&E framework for network projects that captures these dimensions is proposed in Table 10, whereby some indicators are

[53] James R. (2010) Monitoring and Evaluation Learning Networks. International NGO Training and Research Centre.

suitable for routine performance monitoring including target definition, while others are evaluation indicators for assessment at mid-term and final evaluations.

Table 11. M&E Framework for network performance

Outcome	Indicators	Means of verification
Increased collaboration among network partners	Number of joint projects or proposals developed by network partners and number of them funded Number of engagements between network partners and reported quality of relationships	Interviews Programme documents Social Network Analysis survey
Increased capacity of network member institutions to produce new knowledge and conduct research	Number of trainings cascaded by network members in their institutions Number of joint peer-reviewed publications by network partners Quality and impact of publications	Interviews Programme documents Publications Citation count
Increased capacity of networks to disseminate knowledge	Level of external visibility and through social media and internet presence; conferences; workshops; webinars; other knowledge sharing events; other platforms; advocacy. Number of downloads of publications and materials available on the web	Interviews Internet searches Social media analytics
Network activities are performed as planned, relevant to members and of quality	Number of planned activities completed Number of activities that respond to partners needs Quality of activities	Annual reports Contracts/memoranda of understanding Interviews Periodic surveys
Network targets in terms of capacity strengthening are achieved	Number of people trained Number of course certificates issued Number of Master and PHD scholars supported from the networks	
Network members contribute to the network functioning	Existence of adequate means for regular communication and exchange Existence of a functional governance mechanism Number of engagements with network members (type of engagement, reason, outcome)	
Network members have the knowledge and skills for networking	Existence of joint documents such as terms of reference, joint action plans, rules around competition, collaboration, etc.	

8.3 OPTIONS FOR REVIVING / MAINTAINING NETWORKS

While this was not an explicit evaluation question, the evaluation did explore whether there was any appetite for reviving the networks. Most key informants were very positive about the networking approach and some network members explicitly asked for more south-south collaboration and networking in the next framework agreement. However, reviving the previous networks with the same configuration was not considered necessary as the networks either achieved their goals or network members felt that the topic or modality had moved along. Networks can be useful for bringing together institutions that work on the same topic. For example, a network on ethics in research could be interesting to discuss how to ensure collaborative partnership with research partners in the South, how to ensure community engagement and benefit sharing for the community, how to establish biobanks in the South, ensure appropriate data sharing, or to conduct research in emergencies or during pandemic such as Ebola and Covid.

If new networks were to be established, the design and participation should be bottom-up. The network should be built based on the needs of partners but also based on what they are able to contribute to the network. South-south collaboration should be a premise and actively monitored, if not among the network partners, then it should be encouraged and measured at the level of regional partners. Networks should

ideally be managed by a southern institutions, have adequate funding, and collaborate with ITM to ensure that all network members are engaged and involved based on their respective expertise.

9 CONCLUSIONS

9.1 INSTITUTIONAL COLLABORATION

Under FA3, ITM and its partner institutions in the south jointly created or contributed to an **equal level playing field**. While a more equal partnership was already in place with some institutions at the start of the IC, the objective was fully achieved or is on track with the majority of the others. In two cases the objective was not achieved, either because the south-south collaboration was not well conceived, or because the scope of collaboration changed without provision of sufficient support. **Switching the poles** required a mind shift both in the north and the south. At ITM it required senior experts to critically assess their mode of working with the south partner; to shift responsibility, decision-making and accountability to the south partner. At the same time, it required the south partner to take up that responsibility and ownership. While this mindshift may not have affected all north and south promotors to the same extent, it is remarkable how successful it has been and the extent to which it is appreciated by the south partner institutions. Understandably, the speed and the way to achieve this objective is very much dependent on the south institution's profile, capacity and willingness to take ownership; and on the national context. Surprisingly, the same dynamic did not translate as strongly in the global programme /networks.

ITM is appreciated as a trustworthy, transparent, flexible and **respectful partner** and an exceptional partner in terms of values and willingness to invest in strengthening local capacity. This strength and institutional profile should be nurtured and promoted in future undertakings.

Institutional capacity strengthening was not a relevant objective in the partnership with well-established south institutions that collaborated with ITM on an equal basis. Often those partnerships were **win-win relationships** with both institutions contributing specific skills or experiences. In the partnerships, ITM gained access to the field for research and training and contributed expertise and expanded access to technology to the south partner. ITM also learnt from collaborating with south institutions. Examples are e-learning, the concept of struggle for health and rights-based approaches, specific skills such as animal health, testing new approaches or tests, field experiences and insights. ITM needs this relationship with the global south in order to allow it to do its core business in research and training. However, as indicated by a south partner, **institutional strengthening** is more complex. '*The approach should be an 'asset' approach rather than a 'deficit' approach of filling gaps, which is prone to be paternalistic engagement'*. Asset approach means identifying the institutional strengths to build on; to build autonomy and agency; to recognise and acknowledge the organisational, political, economic, social contexts of institutions. This requires a long-term relationship, based on mutuality. It requires thinking how to structure collaboration and partnerships on an institutional rather than individual level. The latter may require ITM to reflect more on the concepts of institutional collaboration and institutional strengthening and develop a clear pathway for both (not mutually exclusive) approaches. In some cases, institutional strengthening may require ITM to insource or to outsource additional expertise in strengthening management processes and systems, as this is beyond ITM's core business.

In most of the IC projects under FA3-III, ITM and the south partner implemented all planned activities. This confirms the capacity of ITM and its partners to plan rationally in function of local and ITM capacity. It also confirms ITM's capacity to **efficiently manage** a wide range of projects, some in difficult local contexts. ITM has a track record of efficiently managing collaboration projects with the south. It works closely with the south partners, understands local contexts and has a problem-solving, creative and supportive approach. Although a few partners raised issues related to financial controls, by far most partners confirmed that support to financial management and the quality of the financial control was highly appreciated.

ITM promoted **south-south collaboration** among institutions within the same country and among FA3-III partners in different countries and continents. This was done both through IC and networking. Not all initiatives were successful, but many did deliver and still exist. Overall, they were appreciated by the participating institutions and helped them in sharing experiences, providing technical advice, exchanging trainers and students, implementing joint research, producing joint scientific publications, and increasing their visibility and regional/international respect. Some south-south exchanges of technical support have replaced north-south support. It is important for ITM to learn from these collaborations in order to develop the most efficient approaches to the agenda of switching the poles.

All IC projects were **fully aligned** with local institutional priorities. South partners were fully involved in project **formulation** and implementation. In most cases the south partners were in charge of **implementation**, in others it was a joint effort as mutually agreed. **Monitoring** and reporting progressively moved towards the south partners taking more responsibility, but overall the north promotors were still much involved in preparing and finalising the progress reports. The main monitoring tools were logical frameworks and output tables. A majority of indicators and performance reports against these indicators in the logical frameworks were counting outputs rather than capturing progress in capacity development and effects on the improvement of practices, programmes and policies. They were mostly gender blind. Quantitative output tables were rather biased towards scientific interests, not gender-specific and missed important information on capacity built or changes affected. The evaluation noted that there was a considerable improvement in the approach to programme monitoring under FA4 but this was not based on a systematic analysis.

In general, **service capacity strengthening** activities under FA3-III were implemented as planned. If delays occurred, they were mostly due to external factors. Capacity support for core laboratory services included, among others, transferring technology to expand the range of diagnostic procedures in molecular biology, microbiology and immunology, developing national referral networks and strengthening quality assurance systems. It resulted in adapted national guidelines, high quality diagnostic testing, improved patient care and more effective disease control. It also supported high quality research.

Overall, the **strengthened research capacity** under FA3, and the quantitative outputs of scientific publications are impressive. The approach to building local research capacity by training PhDs strengthened national health systems and public health teaching. The capacity of south partners in participating in international calls for research, submitting joint research proposals and accessing other research funds was strengthened, but it was not formally or systematically monitored. Capacity built also contributed to raising the status of some institutions, now recognised as a national or regional research centres. One important spin-off was the strengthening of ethics committees and overall, the increased emphasis on research ethics. Some of the partners, however, were primarily service and policy implementing institutions such as national disease control programmes. For them, in-house research capacity was not a priority. Research support from ITM was appreciated but there was only weak appropriation of in-house research capacity.

Under FA3, ITM contributed to strengthening the **institutional training capacity** in most south institutions where it was the project focus. This was, understandably, less successful in a few institutions where support was limited to only three years, which raises a question about content and scope of collaboration that can be initiated if continuity of support is insecure (e.g. dependent on DGD policy related to partner countries). **Capacity in e-learning** was built in several IC projects with some partners surpassing ITM in this field. Acceptance of innovative teaching and learning modalities among ITM staff has grown, in part due to these experiences. Overall, the support provided by ITM to strengthen institutional training capacity was very much appreciated by the participating south institutions and was an important pillar of switching the poles. The potential impact on local health systems and individual professional careers cannot be underestimated.

Only about half of the IC logical frameworks referred to aiming at **policy influence**, only seven included indicators to measure policy influence, research proposals tended to be silent on knowledge translation, and only two policy briefs were reported among FA3-III outputs. Nevertheless, in interviews with south promotors, many examples were provided of how research contributed to changing local, national, regional and to some extent global health policy as well as local health systems. Although dissemination activities primarily targeted a technical and scientific audience, the close collaboration of south partner institutions with public sector health authorities and programmes was effective in influencing national policy. Although some policy influence was confirmed, it was generally not sufficiently monitored and reported to provide a full spectrum of achievements of the IC programme.

Gender was not addressed in ITM's institutional policy plans, but ITM has established an inter-department working group for the development of a gender and diversity policy action plan (currently in draft). Without mainstreaming gender in the institutional policy plan itself, however, there is a risk that it will be treated as an add-on rather than being mainstreamed in all aspects of ITM's work.

The capacity of partners in **mainstreaming gender** in their institutional policies, practices and programmes was neither analysed nor supported under the institutional collaboration with ITM. The country project proposal template for the period under evaluation did not make gender equality mainstreaming a requirement, although reporting on the integration of gender was mandatory in the annual and final project reports. Reports, however, were patchy and not suitable for an analysis of the extent to which gender equality and women's empowerment were promoted by the project. Output reporting was fully gender blind (no data disaggregation, with the exception of some training data by some institutions) and it was not possible to draw definite conclusions about the extent of gender mainstreaming in the selection of participants in training activities and degree sponsorships. Capacity strengthening on gender mainstreaming was not a priority and received little attention except for individual efforts of some ITM promoters. In interviews, some south promotors reported increased attention to gender equality in their institutional policies and to gender mainstreaming in their research, but in all cases these initiatives were developed independently of the collaboration with ITM which was perceived to have little interest in these issues.

Overall ITM together with the south partners implemented the collaboration projects in an **efficient** way. Proposals for improving efficiency voiced by interviewees included further promoting shifting training capacity to the south; developing joint courses and invest more in e-learning; continue promoting the synergy between IC and networks; developing a clear roadmap or strategy for institutional strengthening in those IC projects where it is part of the aim (as in contrast to institutional collaboration) with mutually agreed end goals, a sustainability plan (when needed) and good communication; and for ITM to support the south partner in developing an institutional policy for coordinating all different partner inputs / projects and/or ensure that all investments are included in the institution strategic plan, in order to avoid competition among partners and projects.

One key element for **sustainability** was the respect, quality, transparency, and integrity that ITM brought into the partnerships. This was the basis for long-term effective partnerships that in most cases outlasted the end of direct project support and that contributed to positive changes in institutional and individual values and norms, ultimately generating sustained impact. One constraining factor was the **insecurity of future funding**, which made sustainability planning challenging. When formal project collaboration ended, ITM and its south partners continued to seek opportunities for collaboration under different modalities. This was, however, not always sufficient to guarantee sustained impact.

9.2 NETWORKING

The **purpose** of the Global Programme was to help address issues that were less visible in country programmes and to support collaboration with institutions that were not in an IC partnership with ITM. Participants highly appreciated the networking supported under this programme and considered that it added value to the institutional collaboration.

Most networks achieved the **goal of capitalising on each other's expertise and experiences**, by bringing together health systems scientists in the development of comprehensive knowledge and strategies for disease control and health care. Capacity was built in terms of research, training and delivery of reference services. Research findings were disseminated at national and international events, in online platforms and in peer-reviewed journals. Some network members were able to influence policies and practices, usually because of their personal engagement with decisionmakers.

Networks which functioned well and encouraged south-south collaboration for joint research and collaboration had the following characteristics:

- A common goal and shared vision
- Shared interest in the topic
- A governance structure involving network partners
- Collaboration measured as a result by appropriate indicators
- Participation of network members with time, motivation, and resources to contribute
- Availability of sufficient funding for network activities (either from DGD or sourced externally)
- Regular face-to-face meetings but also sufficient virtual interactions

Most of the **recommendations from the 2010 MTR** were implemented, except for shifting governance to the South. There were attempts by some of the networks to increase leadership and steering of network participants, however, no financial resources were allocated to southern partners for management and coordination. The networks evaluated as part of this evaluation (excluding the EV4GH network) were therefore not fully successful in switching the poles.

Overall, **gender** was not a priority matter for the global programme. Its integration at the design stage was poor the extent of gender mainstreaming varied strongly across and within network projects. Interviews confirmed that gender mainstreaming was dependent on individuals who advocated for more attention to gender matters, without, however, achieving large-scale buy-in.

Only one of the networks continues to exist, however, several network activities and components have continued with or without funding from DGD. The relevance of the activities for ITM and collaborating partners, the use of digital tools, availability of funding and synergies with other networks were factors that influenced this continuation. Despite the discontinuation of most networks, many members still reap the fruits of their participation in terms of individual and institutional capacity built but also continued collaboration between network members formally and informally.

10 RECOMMENDATIONS

10.1 INSTITUTIONAL COLLABORATION

The recommendations are based on the review of FA3-III. Some of the recommendations may already have been addressed in FA4 and therefore need to take into account changes already implemented.

Some of the recommendations are explained in more detail in other sections of the report. Where applicable, we refer to the relevant sections in the report.

ITM & SOUTH PARTNERS

- Consider reviewing the approach and modality for project monitoring and learning. This would require:
    - Reviewing FA3-III and FA4 modalities used, such as logical frameworks, theory of change, output tables (including SMART indicators, assumptions, indicators to capture capacity strengthened or changes affected, policy influenced, etc.). See section 8.2.1.
    - Consider using some of the capacity development indicators suggested including joint research, access to additional research funds, policy influence, etc. (see section 8.2.2)
    - Mainstream gender in the logical and/or theory of change frameworks and indicators.
    - Develop logical or theory of change frameworks at sub-programme and programme level, in order for ITM management to be able to monitor overall programme performance.
- Consider giving more space to policy influence in the programme approach:
    - Integrate and measure policy impact as outcome indicator.
    - Integrate knowledge translation and policy influence as a mandatory requirement to be assessed and if relevant, specified in the project/research proposals (the what, the how and the when).
- In the collaboration with country partners and networks (see section 8.1), consider to:
    - Conduct an online survey with partners to learn more about their capacity in promoting gender equality and women's empowerment.
    - Disseminate the results of the survey, including good practices and tools from partners with strong capacity in gender. If there is interest, strong partners could pair up with partners of lower capacity to provide support for gender mainstreaming.
    - Collaborate with partners in the development of a systematic approach to assessing gender mainstreaming in research. This could be led by a partner with strong gender expertise. It would also aid in identifying studies for which gender mainstreaming is not relevant.
- In order to increase efficiency of implementation and avoid duplication and possibly competition for scarce human resources, consider supporting south partners in the coordination of funding partners (e.g. ensuring that all support is integrated in the institutional strategic plan) and the development of institutional procedures to be agreed to by all funding partners (e.g. related to salaries, bonuses, per diems).

ITM

- Consider promoting collaboration between a south partner and several ITM departments, whenever relevant and fitting the scope of collaboration. This may enrich the institutional collaboration.
- Continue promoting south-south collaboration among partners during implementation of IC projects, in joint research, in organising training and through networking and colloquia.

  - Analyse lessons learnt from successes and failures in south-south collaborations, to adapt future collaborations.

- Assess the advantages and disadvantages of embedding e-learning modalities in ITM training courses and joint training courses. Consider promoting e-learning with south partner training institutions.
- Consider developing a guideline for institutional collaboration and for institutional strengthening. This could help north and south promotors to agree on what profile and steps the institutional collaboration would entail, with clear benchmarks and end goals, and (where necessary) a sustainability plan. It would also clarify the estimated timeline to achieve the joint goals of the collaboration and generate critical evidence about project timeframes in negotiations with DGD.
  - For partnerships that include institutional strengthening among the agreed goals, consider outsourcing the management strengthening component and budget it in the project proposal.
- Consider mainstreaming gender in the ITM policy and research plans.
  - Organise participatory sessions with staff to analyse the areas of support and resistance for gender equality and women's empowerment in ITM. The results of this work could be used to review the current institutional policy plan with the objective of consistently mainstreaming gender while building on the strengths of the institution.
  - Further develop the institutional level actions in the draft gender and diversity policy plan.
  - Add a chapter on gender mainstreaming at programme level to the draft gender and diversity policy plan.
- Negotiate with DGD appropriate timeframes for continuing institutional strengthening with selected south partners (as from the start of the collaboration), in order to avoid abrupt ends of institutional strengthening without sustainability planning.

DGD

- Consider accepting longer-term timeframes for funding institutional strengthening projects on the basis of evidence-informed plans for reaching common goals prepared by ITM and its partner institution.
- Consider accepting a budget line for institutional management capacity strengthening in selected projects where this would apply (and allow for sub-contracting)

10.2 NETWORKING

ITM & SOUTH PARTNERS

As networks were considered valuable and useful tools for stimulating south-south collaboration, ITM together with south partners could consider to:

- Identify topics on which there is currently no network and where partners have a lot of interest to collaborate on.
- Identify institutions that are able to contribute to the network in terms of time and resources. This process should be bottom up, allowing all partners to express their interest and willingness.
- Identify an institution in the South that could lead or co-manage the network.
- Ensure south-south collaboration is one of the main aims of the network, and progress towards achieving it is therefore also monitored.
- Ensure that gender is mainstreamed in the functioning, operations and deliverables of the network.

- If no budgets for networking are available, ITM could consider including resources in the IC of a Southern Institution willing to take on the coordination for the management of the network under 'collaborative research'.

DGD

- Consider accepting funds for networks and south-south collaboration to be part of IC project budgets
- Consider accepting south-south networks that aim at improving access to health services or health products (e.g. QUAMED) as a separate project budget line.

ANNEX 1: TERMS OF REFERENCE

ABOUT ITM - MISSION AND VISION

Established in 1906 as a training institute, Institute of Tropical Medicine Antwerp (ITM) has evolved to be a modern, global oriented institute. ITM conducts and Promotes scientific research, professional and academic education as well as scientific and community services in the field of tropical diseases and global health care, with special attention to low and middle-income countries.

PROJECT BACKGROUND

In November 2007, agreement ITM signed a third framework (FA3) with the Belgian Directorate General for Development Cooperation and Humanitarian Assistance (DGD) under the motto "Switching the poles."

The agreement started 01/01/2008, and a planned end date was on 31/12/2013. This six year period were split into two consecutive terms (FA3-FA3 I and II) or three years for both operational (budget) and activity planning. Due to a comprehensive reform of the Belgian development sector starting in 2012, the plan to negotiate a fourth, more progressive framework agreement was temporally stalled. A transition period was installed, How many followers during FA3 was extended up to 2016; with another three year agreement (FA3-III - Volume IV in annex).

FA3-III was made up of the following components:

1. Country and Global Programs
    - A. Country Programs
    - B. Global Program (international thematic networks)
2. Scholarships and Training Program
    - A. Scholarships Program
    - B. Educational support and networking (training program)
3. Policy support
4. North program - Development Education
5. Management

1.A component included scientific capacity strengthening program Aimed to Increase local ownership and capacity of both Individuals and 24 partner institutes to conduct research, train indirect beneficiaries and deliver reference services in order to Improve health care systems and policies in 18 partner countries. To Achieve this aim we worked with experts in the partner institutions in developing countries; health professionals and policy makers responsible to implement the improved practices and policies resulting from the program; Individuals and the communities and bene fitting from the improved practices and policies.

Component 1.B included and tested a "global program" Consisting of 10 thematic network projects, and some ancillary activities as the annual symposium and smaller seminars. These thematic networks were not Meant to "verticalise" health problems, on the Contrary: They Brought together basic, clinical, operational and health systems scientists to develop comprehensive knowledge and strategies for disease control and healthcare, with a transnational and global perspective in a Rapidly evolving world. This program component

allowed to deal with topics That are underrepresented in the Country Programs, and to network with institutes outside Country Programs. South-South collaborations were strongly stimulated. The target groups and the dynamics of the various networks varied, partly due to specific requirements, partly to test

and optimize different approaches. Following FA3, a new multi-year program started in 2017, internally known as FA4 (2017-2021). Based on new legal requirements donor, this Programs follows a country-based structure, without an overarching umbrella logic between countries. This new approach Decreased opportunities for international and regional networking amongst partners (South South) and ITM (South South North).

As component 2-5 are not part of the scope of the evaluation, we will not elaborate Further On Their content. More details can be found on synthesis components in 4: Third framework program agreement - between DGC and ITM (FA3, 2008-2013 / 2016) - FA3-III (2014-2016) - Volume IV - A. The evaluations will be made available to the selected tenderer upon request.

SCOPE OF THE EVALUATION

The evaluation Focuses on the implementation of the framework agreement from 2014-2016 (FA3-III), as due to changes in human resources and document management it can prove kettle to access information on the first two programming cycles. Where relevant However, the whole nine year period (FA3-I, II and III) How many followers during the framework agreement was Implemented can be taken into account.

The evaluation shouldering focus on the whole of component 1 - Country and Global Programs - 1.A and 1.B. Previous evaluations already covered components 2 and 3; interventions under 4 are too limited for a stand-alone evaluation. We will make results from thesis evaluations available to the contracted team.

Where Phase 1 - desk review should consider all partner countries, Phase 2 - case studies can be limited to several at in-depth analysis. For a more detailed explanation please see below the chapter - methodology.

EVALUATION FOCUS

Purpose of the Evaluation

With this evaluation we intending to reach a triple aim:

1. **Learning** - to inform decision making on how to Improve current and future interventions both in terms of content, as in terms of stakeholder engagement and project modalities (fi networking)

2. **Build deeper partnerships** - Through this evaluation, we want to give voice to our partners, strengthening on existing working relationships, to increasement mutual understanding, trust and open communication - in the future we want to move beyond 'switching the poles' to true local ownership. This evaluation can help pave the way.

3. **Accountability** - towards our beneficiaries and donors

Evaluation criteria and questions

As per donor requirement, all DAC criteria need to be Evaluated. In Addition, specific attention should be given to the evaluation of the gender lens used (or lack of its use) in our interventions, and to the program design, especially the assessment of the use of the right indicators to measure capacity strengthening interventions.

The following evaluation questions have been Discussed with partner Organizations during the Joint Partner Meeting PartnerIMTAvH used 54 of 2017 at the COS (commission on development cooperation) and are approved by DGD.

[54] The Joint Partner Meeting is a bi-annual meeting during which ITM partners and staff come together to exchange on topics of common interest such as innovation, knowledge management etc.

1. Relevance:

- To what extend were the interventions and approaches suited to the priorities and policies of the people and institutions they were Intended to benefit?
- Were Consulted partners Sufficiently When drafting / Implementing the program? How can we improve their engagement in the different stages of the program / project cycle?
- Did we disseminate and use learning from the program in a sufficient is manner?
- For component 1.B - Global Program: To what extent does the programmatic network approach have an added advantage in comparison to Existing networks and / or country projects?

2. Effectiveness:

- To what extent did we achieve our objectives? (End line assessment of goals, objectives and indicators for all countries based on the information from previous reports)
- What are the reasons, both internal and external, we did (not) reach our objectives?
- Which unintended (positive or negative) consequences for anybody involved or affected by the interventions did our (not) reaching these objectives have (differentiate by different target groups).

3. Efficiency[55]:

- To what extend were financial resources used economically and in a timely manner?
- Which alternative programming approaches could be used to increase efficiency?

4. Sustainability:

- Which direct benefits from the intervention are still visible / useful to the beneficiaries today?

  O Note: ITM collaborations in partner countries vary between 3 to 20 years. The tenderer needs to take this into consideration when proposing a methodology. Focus should remain on FA3-III, but can take into account the longer programming history.

- For component 1.B - Global Program: Axis network projects were no longer Implemented under FA4, we want to explore factors which contribute to the sustainability of networks, as some of them continued while others perished.

5. Impact:

- Which positive and negative, primary and secondary, Intended and unintended long-term, higher level effects can be observed? Have norms, values or behaviours of people within institutions or changed? If yes, did this have positive or negative effects on different target groups?

Besides the DAC criteria, considering learning and future programming, we want to receive answers to the following questions:

- Quality of the program design: were the indicators used appropriate to assess individual and organizational capacity strengthening? Can other indicators be proposed for future, similar interventions?
- Gender: To what extent did the projects / program take into account gender-sensitive approaches in all different stages of the PMC? (Planning, formulation of indicators, implementation etc.) Did the program explicitly aim for results That Improve gender equality? How can this be improved in the future?

[55] Note: Efficiency should not look strictly at lowest possible cost / benefit, but take into account the approaches used, our specific target groups and the mission and vision of ITM as a scientific institute.

We recognize that criteria often influence one another and should (*not?*)[56] be seen as isolated pillars. Therefore, the final appraisal of the intervention should include clear reflection on positive versus negative consequences.

USERS OF THE EVALUATION

Different users will benefit from the findings of the evaluation:

1. **At ITM**:

   a. The **(co) promoters**[57] of the projects will use the findings to Improve Future collaborations
   b. The Commission on Development Cooperation (**COS**)[58] at ITM and, by extension, the Academic Council of the COS is part, and the Director's office will be informed of findings, to ensure informed decision making on development interventions
   c. The **Development office**[59] at ITM will use the findings to inform future interventions

2. **Our partners**: Through this evaluation, we aim to give voice to our partner institutions, to ensure they are listened to, and to increasement our understanding on how to transfer ownership even more in future interventions. We want our partners to use this evaluation as a starting point for discussion on future interventions. This can happen for instance at a next Joint Partner Meeting.

3. **DGD** will use the findings for accountability purposes, to inform its policy, and evaluate ITM as a development actor

METHODOLOGY

We expect the final evaluation to include three phases:

1. Phase 1

A **desk review** of all program / project documents for general appraisal of the evaluation questions and to gain an in-depth understanding of the program and its various components - a list of available documents can be found in annex. This desk review shouldering includes key informant interviews with promoters and co-promoters and other relevant staff to ITM ensure all documents are well understood.

A report of the desk review is expected, which will be discussed during a meeting in Antwerp before the start of the second phase. This meeting will help (re) orient phase 2 and appraise findings from the desk review.

2. Phase 2

A number of case studies to help define factors which enable impact and sustainability, and help gain insights on how to transfer ownership to implementing partners - a report and presentation of findings in the country will be expected after each of the visits. A presentation in Belgium can be done after the visits. In addition to key informant interviews, we encourage consultants to propose participatory evaluation methods for the field visits. Please note that the visit may be joined by ITM staff acting as resource persons and / or observers. Based on a number of criteria (availability of staff who worked on the project, mix of locations and types of

[56] Added by the evaluation team

[57] Every country project is run by an ITM academic staff member (supervisor), assisted by a number of co-promotors. In addition, the project is managed on site by their counterparts, the local promoters.

[58] The COS is a sub commission of the Academic Council, Which has the mandate to give non-binding advise to the management committee on development cooperation.

[59] The Development Office gives policy support to ITMs management committee on development cooperation, and is the liaison office between DGD and ITM.

collaborations, duration or collaboration) ITM preselected India, Benin, Peru and Burkina Faso[60] as options for field visits. These locations can be discussed with the contracted tenderer.

3. Phase 3

A synthesis of the above, including a final report and restitution - the synthesis should combine findings from the desk review with those from the field visits.

However tenderers are free to propose other methodologies if deemed suitable to answer the evaluation questions asked. A source of inspiration to Evaluate University Development Cooperation initiatives can be the impact evaluation commissioned by the Special Service for Evaluation -

https://diplomatie.belgium.be/sites/default/files/downloads/evaluation_belgian_udc_en.pdf

ETHICS AND INTEGRITY

Ethics and integrity are of key concern is all ITM's work. A paragraph shouldering be included in the proposal on how ethics will be taken into account during the evaluation.

[60] If security allows, please note tenderers are responsible for their own risk assessment.

ANNEX 2: EVALUATION MATRIX

Table 12. Evaluation matrix

EVALUATION QUESTIONS	EVALUATION SUB-QUESTIONS	DATA SOURCES
Switching the poles (Component 1A and 1B 2014-2016)		
1. To what extent were the objectives of the programme achieved? If they were not achieved, why not? Were there positive or negative unintended consequences? (per target group)	1.1 To what extent was appropriate and sustainable capacity built, reinforced and supported to conduct research, training and delivery of reference services? 1.2 To what extent has national (or international) policy and/or practice changed as a result of evidence generated by research conducted under the programme; through advocacy /policy support and/or training? 1.3 To what extent was south-south and/or triangular collaboration achieved? 1.4 To what extent was the overall objective of switching the poles achieved?	Key-informant interviews Document reviews Country case studies Network assessment Social network analysis
2. To what extent were financial resources used economically and in a timely manner?	-	Key-informant interviews Document review Country case studies
3. Which alternative programming approaches could be used to increase efficiency?	-	Key-informant interviews Country case studies Network assessment
4. To what extent was gender mainstreamed in the dialogue, agreements and practices of institutional collaboration between ITM and country partners?	4.1 To what extent has the capacity of partners to mainstream gender in their institutional policies, practices and programmes been analysed and strengthened, if needed? 4.2 To what extent have ITM capacity strengthening projects mainstreamed gender equality dimensions in (a) the selection of institutions and individuals as well as (b) the profile of participants and the content of capacity building?	Key-informant interviews Document review Country case studies Network assessment
5. To what extent was gender mainstreamed during project design, implementation and reporting?	5.1 To what extent did country projects/ programmes mainstream gender during programme design, implementation and reporting? 5.2 To what extent was gender taken into account in planning, implementing and monitoring the network projects?	Key-informant interviews Document review Country case studies Network assessment
Country Programme (Component 1A 2014-2016)		
6. To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?	6.1 To what extent did the institutional collaboration (IC) projects respond to the priorities and policies of the south institution? 6.2 To what extent did the institutional collaboration projects aim at having national/regional impact?	Key-informant interviews Document review Country case studies Project proposals (2014) Project completion reports (2016)
7. Were partners sufficiently consulted during the development	7.1 Were partners sufficiently consulted when developing the programme? 7.2 Were partners sufficiently involved during implementation of the programme?	Key-informant interviews Document review Country case studies

EVALUATION QUESTIONS	EVALUATION SUB-QUESTIONS	DATA SOURCES
and implementation of the programme?	7.3 How can partner engagement be improved in the different stages of the programme/project cycle?	
8. Were the programme results and lessons effectively disseminated and applied?	8.1 Were lessons sufficiently disseminated among participating institutions and networks?	Key-informant interviews Document review Country case studies
	8.2 Were results and lessons effectively communicated to an external audience?	Key-informant interviews Document reviews Internet search
9. How well was the programme monitored?	9.1 Did the programme have an effective monitoring framework and plan, and was it implemented? 9.2 Were the monitoring indicators for individual and organisational capacity strengthening appropriate? 9.3 To what extent were partners engaged in M&E?	Document reviews Country case studies Essence framework
10. Has the institutional collaboration under FAIII-3 generated a sustained impact?	10.1 Which direct benefits of the institutional collaboration are still visible/useful to the target groups (institutions and people) today? 10.2 Have institutional or individual norms, values or behaviours changed as a result of the institutional collaboration, and how did these changes affect target groups?	Key-informant interviews Country case studies Document review
Global Programme (Component 1B 2014-2016)		
11. What was the added value of the networking component of FA3-III?	11.1 What was the added value of ITM-initiated networks in comparison to other (non-ITM) networks? 11.2 What value has the network programme added to country-based institutional collaboration projects?	Key-informant interviews Country case studies Network assessment Social network analysis
12. What outcomes of the networking component of FA3-III have been sustained?	12.1 To what extent have networks continued to function after ITM/DGD funding stopped? 12.2 What factors contributed to maintain or ending networks? 12.3 Which direct benefits of the networking are still visible/useful to the beneficiaries today? 12.4 Have institutional or individual norms, values or behaviours changed as a result of the networking?	Key-informant interviews Network assessment Social network analysis

ANNEX 3: LIST OF INTERVIEWEES

INSTITUTIONAL COOPERATION

Name	Institution	Responsibility
Abderrahmane Maaroufi	Director Institut Pasteur Morocco	South Promotor Morocco FA3
Achille Yemoa	Université d'Abomey Calavi –FSS	Professor (PhD)
Adolfo Gerardo Alvarez Perez	INHEM (Cuba)	South Promotor FA3/4
Alejandro Llanos	IMTAvH (Peru)	(ex) Director
Alicia Reyes	IPK (Cuba)	Coordinator FA3/4
Alida Agoua	LRM (Benin)	Responsible for BU culture
Alphonsine Manouan	ENSEA	Research administration
Ana Lucia Torres Castillo	ISP/PUCE (Ecuador)	Director
Ann Peters	ITM	General Manager
Ann Verlinden	ITM	Academic Coordinator – Research
Anna Rosanas Urgell	ITM	North Promotor Vietnam FA3/4
Bart Criel	ITM	North Promotor India FA3, ESP FA3-III/FA4, MakSPH FA3-III
Bea Vuylsteke	ITM	North Promotor Côte d'Ivoire FA3-III
Bouke de Jong	ITM	North Promotor Benin FA3
Christian Johnson	Université d'Abomey Calavi - CIFRED	Professor (PhD)
Christine Tashobya	MakSPH	Coordinator fellowship programme FA3
Coralith García	IMTAvH (Peru)	Researcher
Dionicia Gamboa	IMTAvH (Peru)	Researcher
Dissou Affolabi	LRM (Benin)	South Promotor FA3
Dorothy Lall	IPH (India)	Assistant Director (Education)
Eduardo Gotuzzo	(ex) IMTAvH (Peru)	(ex) South Promotor
Epco Hasker	ITM	Key informant PNLTHA/DRC
Ermias Diro	LRC (Ethiopia)	South Promotor FA3-III / FA4
Faustino Torrico	UMSS (Bolivia)	South Promotor FA3
Françoise Malonga Kai	ESP (DRC)	South Promotor FA3-III / FA4
Gert Van der Auwera	ITM	Coordinator Peru FA4
Ghislain Sopoh	Université d'Abomey Calavi – IRSP	Professor (PhD)
Hanumappa Sudarshan	Karuna Trust (India)	Director
Halidou Tinto	CRUN (Burkina Faso)	South Promotor Burkina Faso FA3
Heleen Annemans	ITM	Development Office / Evaluation
Helen Schneider	UWC / SPH (South Africa)	South Promotor FA3-III / FA4
Ignace Ronse	(ex) DGD	Desk Officer Health within D2.3
Jan Coenen	ITM	Head Development Office
Jan Jacobs	ITM	Researcher INRB / DRC FA3
Jean-Claude Dujardin	ITM	North Promotor Peru
Jean-Claude Senou	LRM (Benin)	Chief of the maintenance / Division for biomedical equipment; Responsible for molecular biology
Jean Gabin HOUEZO	PNLUB (Benin)	Coordinator
Jean-Pierre Unger	(ex) ITM	South Promotor Ecuador FA3
Johan Van Griensven	ITM	North (co) Promotor Ethiopia FA3-III / FA4
Jorge Arevalo	IMTAvH (Peru)	Scientific Coordinator FA3/4
Kaouadio Kouassi	ENSEA (Côte d'Ivoire)	Director ENSEA
Katja Polman	ITM	North Promotor Indonesia FA3

Name	Institution	Responsibility
Larissa Otero	IMTAvH (Peru)	Researcher
Laurence Yèhouénou	LRM (Benin)	Deputy Head
Luc Kestens	(ex) ITM	North Promotor Senegal FA3
Lut Lynen	ITM	North Promotor SHCH FA3/4
Ly Penh Sun	NCHADS (Cambodia)	South Promotor FA3/4
Marc Coosemans	(ex) ITM	North Promotor CNM FA3
Marc-Alain Widdowson	ITM	Director
Marinda Oosthuyzen	DVTD (South Africa)	South Promotor FA3-III / FA4
Maxime Madder	(ex) ITM	North Promotor DVTD / SA FA3
Michael Talledo	IMTAvH (Peru)	Researcher
Narayanan Devadasan	HSTP India (ex IPH)	(ex) South Promotor FA3
N'Dira Sanoussi	(LRM) / Benin	PhD (completed 2019)
Ouk Vichea	NCHADS (Cambodia)	Coordinator FA3/4
Patrick Van der Stuyft	(ex) ITM	North Promotor Cuba & Bolivia FA3
Phillipe Büscher	ITM	North (co) Promotor PNLTHA/INRB/DRC FA3-III
Prashanth Nuggehalli Srinivas	IPH (India)	Assistant Director (Research)
Rebecca De Backer	ITM	Administration FA4
Sanathkumar Gurum	Karnataka State MOH (India)	District TB officer
Sunil Nandaraj	(ex) WHO (India)	(ex) National Programme Officer
Surendra Uranw	BPK (Nepal)	Coordinator FA3
Tandakha Dieye	Le Dantec / IRESSEF (Senegal)	South Promotor FA3
Thai Sopheak	SHCH (Cambodia)	South Promotor FA3
Thang Ngoduc	NIMPE (Vietnam)	Coordinator FA3/4
Thérèse Delvaux	ITM	North Promotor NCHADS FA3/FA4
Tho Sochanta	CNM (Cambodia)	South Promotor CNM FA3/4
Upendra Bhojani	IPH (India)	Director; South Promotor FA3
Umberto d'Alessandro	(ex) ITM	North Promotor Burkina Faso FA3
Valerie Bastiaensen	ITM	Administration FA3
Vijayashree Yellappa	HSTP India (ex IPH)	(ex) IPH Faculty
Vincent De Brouwere	(ex) ITM	North Promotor Morocco FA3
Wim Van Damme	ITM	North Promotor UWC/SA FA3-III / FA4
Yodi Mahendradhata	Gadjah Mada U. (Indonesia)	South Promotor FA3

Additional people interviewed during the country case studies for Benin, India and Peru are listed at the end of each case study report (see Volume II)

NETWORKING

Name	Institution	Network
Bruno Meesen	ITM	International Health Policy and Financing
Wim Van Damme	ITM	International Health Policy and Financing
Jean-Paul Dissou	Centre de Recherche en Reproduction Humaine et en Démographie, Benin	International Health Policy and Financing Sexual and Reproductive Health (incl. HIV/AIDS)
Bouke de Jong	ITM	TB & Buruli
Muriel Aloni	Laboratoire de Référence Nationale, DRC	TB & Buruli
Musala Sissy	Laboratoire de Référence Nationale, DRC	TB & Buruli
Faustino Torrico	Universidad Mayor de San Simón, Colombia	Tropical and Neglected Diseases (incl. zoonoses)

Name	Institution	Network
Pierre Dorny	ITM	Tropical and Neglected Diseases (incl. zoonoses)
Richar Hidalgo	Instituto de Investigación en Salud Publica y Zoonosis, Ecuador	Tropical and Neglected Diseases (incl. zoonoses)
Thérèse Delvaux	ITM	Sexual and Reproductive Health (incl. HIV/AIDS)
Patric Kolsteren	ITM	Nutrition Knowledge
Richmond Aryeetey	University of Ghana	Nutrition Knowledge
Jan Jacobs	ITM	Laboratory Quality Management
Pierre Mukabi	Institut National de Recherche Biomédicale, DRC	Laboratory Quality Management
Ermias Diro	Gondar University, Ethiopia	Laboratory Quality Management Clinical Research Network Antibiotic stewardships
Thai Sopheak	Sihanouk Hospital Centre of Hope	Laboratory Quality Management Clinical Research Network
Bruno Marchal	ITM	Health Systems
Upendra Bhojani	Indian Hub on Health Systems (IHHS)	Health Systems
Rafaella Ravinetto	ITM	Clinical Research Network QUAMED
Mr Gaston Nyamambichi	Association Régionale D'Approvisionnement en Médicaments Essentiels, DRC	QUAMED

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IMPACT EVALUATION OF THE THIRD FRAMEWORK AGREEMENT (FA3-III) BETWEEN DGD AND ITM

ITM FA3-III Evaluation 2020

Final Evaluation Report – Volume II

October 2020

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Cover page image: Getty Images

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ABBREVIATIONS & ACRONYMS

ABS	Antibiotic stewardships (network)
AfriVIP	African Veterinary Information Portal
ARV	Antiretroviral
BM	Biomedical
BPKIHS	B.P. Koirala Institute of Health Sciences (Nepal)
BU	Buruli Ulcer
CAR	Central African Republic
CATT	Computer Aided Test Tool
CCSC	Centre de Connaissances en Santé (DRC)
CHNU	Centre Hospitalier National Universitaire Le Dantec (Senegal)
CIPIP	8th International Congress on Infectious and Parasitic Diseases
CM	Centre Muraz (Burkina Faso)
CMHS	College of Medicine and Health Sciences, University of Gondar (Ethiopia)
CNM	National Centre for Parasitology, Entomology and Malaria Control (Cambodia)
CoBAMS	College of Business and Management Science, University of Kampala (Uganda)
COP	Community of Practice
COS	Commission Development Cooperation (ITM)
Covid-19	Coronavirus Disease 2019
CR	Clinical Research (network)
CRC	Clinical Research Centre
CRUN	Clinical Research Unit Nanoro (Burkina Faso)
CS	Clinical Sciences
CSART	Health Centre for Learning and Research
DGD	Directorate General for Development Cooperation and Humanitarian Aid (Belgium)
DIAMA	Research assessing and validating the Deeplex®-MycTB test in Africa and Europe
DNDi	Drugs for Neglected Diseases Intitaive
DRC	Democratic Republic of Congo
DVTD	Department of Veterinary Tropical Diseases, University of Pretoria (South Africa)
EDTCP	European & Developing Countries Clinical Trials Partnership
ENSEA	Ecole Nationale de Statistique et de Economie Appliquée (Côte d'Ivoire)
ENSP	Ecole Nationale de Santé Publique (Morocco)
EPHP	Evidence in Public Health Policy (Conference series – India)
ESP	Ecole de Sante Publique, Université de Lubumbashi (DRC)
ESSENCE	Multi-partner initiative to increase the impact of support for research capacity strengthening
EVIDENT	Nutrition Knowledge (network)
FA	Framework agreement (FA1, FA2, FA3, FA4)
FA3-III	Third Framework Agreement, Phase III (2014-2016)
FP7	EU 7th Framework Programme for Research
FPHSM	Fellowship Programme in Health Systems Management
GBV	Gender Based Violence
GCLP	Good Clinical Laboratory Practice

GCP	Good Clinical Practice
GE	Gender Equality
GEWE	Gender Equality and Women's Empowerment
GM	Gender Mainstreaming
CTM-GMU	Centre for Tropical Medicine, Gadjah Mada University (Indonesia)
HAT	Human African Trypanosomiasis
HIA	Health Impact Assessment
HOSP	Hospital
HSN	Health Systems Network
i-Tech	International Training and Education Center for Health
IC	Institutional Collaboration
IHPF	International Health Policy and Financing (network)
INHEM	National Institute for Hygiene, Epidemiology and Microbiology (Cuba)
INRB	Institut National de Recherches Biomédicales (DRC)
IPH-B	Institute of Public Health (Bengaluru, India)
IPH-PUCE	Institute of Public Health, Pontificia Universidad Catholica de Ecuador
IPK	Institute of Tropical Medicine Pedro Kouri (Cuba)
IRESSEF	Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation (Senegal)
ISO	International Organisation for Standardisation
ISP	Instituto de Salud Pública (Institute of Public Health)
ITM	Institute of Tropical Medicine (Antwerp)
IMTAvH	Institute of Tropical Medicine Alexander von Humboldt (Peru)
KII	Key Informant Interview
LAC	Latin American Countries
LF	Logical Framework
LQM	Laboratory Quality Management (network)
LRC	Leishmania Research Centre, University of Gondar (Ethiopia)
LRM	Laboratoire de Référence de Mycobactéries (Benin)
LSHTM	London School of Hygiene and Tropical Medicine
mAECT	mini Anion Exchange Centrifugation Technique (Trypanosomiasis)
MakSPH	School of Public Health, Makerere University (Uganda)
MAXQDA	Content analysis software
MCHN	Mother and Child Health and Nutrition
Mo(P)H	Ministry of (Public) Health
MPH	Master in Public Health
MSc	Master of Sciences
NCHADS	National Centre for HIV/AIDS, Dermatology and STD's (Cambodia)
NCP	National Control Programme
NetSRH	Sexual and Reproductive Health (incl. HIV/AIDS) (network)
NHI	National Health Institute
NHLS	National Health Laboratory Services
NIMPE	National Institute for Malaria, Entomology and Parasitology (Vietnam)
NLAB	National Laboratory

NP	North Promotor
NSS	National School of Statistics
NTD	Neglected Tropical Diseases
NTD&Z	Tropical and Neglected Diseases (incl. zoonoses) (network)
OECD-DAC	Organisation for Economic Co-operation and Development / Development Assistance Cttee
PCM	Project Cycle Management
PCR	Polymerase Chain Reaction
PH	Public Health
PhD	Doctor of Philosophy (Doctorate)
PMTCT	Prevention of Mother to Child Transmission
PNLP	Programme National de Lutte contre le Paludisme
PNLTB	Programme National de Lutte contre la Tuberculose
PNLTHA	Programme National de Lutte contre la Trypanosomiase Humaine (DRC)
PNLUB	Programme National de Lutte contre l'Ulcère Buruli
QA	Quality Assurance
QUAMED	Quality Assured Medicines
RIPSEC	Renforcement Institutionnel des Politiques de Santé basées sur l'Evidence
RMU	Rational Medicines Use
RQ+	Research Quality Plus
SA	South Africa
SCM	Supply Chain Management
SHCH	Sihanouk Hospital Centre of Hope (Cambodia)
SMART	Specific, Measurable, Attainable / Achievable, Relevant and Time-bound
SNA	Social Network Analysis
SOP	Standard Operating Procedure
SORT-IT	Structured Operational Research Training Initiative
SP	South Promotor
SPaRCS	Strengthening pharmacovigilance and regulatory capacities in four southern African countries
SPH	School of Public Health
SRHR	Sexual and Reproductive Health & Rights
SSA	Sub-Saharan Africa
STM-UMSS	School of Tropical Medicine, Universidad Mayor de San Simon (Bolivia)
SWOT	Strengths, Weaknesses, Opportunities and Strengths
TB	Tuberculosis
TB & BU(ruli)	Tuberculosis and Buruli (network)
THA	Trypanosmiasis Humaine Africaine
ToR	Terms of Reference
UEM	University of Eduardo Mondlane (Mozambique)
ULB	Université Libre de Bruxelles
UoG	University of Gondar (Ethiopia)
UPCH	Universidad Peruana Cayetano Heredia (Peru)

VL	Visceral Leishmaniasis
VLIR	Flemish Inter-University Board
WANETAM	West-African Network on TB, AIDS and Malaria
WAPHIR	West African platform for HIV Research
WHO	World Health Organization
ABS	Antibiotic stewardships (network)
AfriVIP	African Veterinary Information Portal

1 COUNTRY CASE STUDIES

1.1 BENIN

1.1.1 METHODOLOGY

The methodology proposed in the inception report was further adapted to take into account the Covid-19 impact in Benin. During the period of the evaluation the South Promotor was very much engaged in the national response and supported the MoH as national coordinator. Nevertheless, he participated in two virtual interviews.

Given the complexity to organise corona-proof physical meetings with LRM staff (e.g. in order to discuss capacity strengthening), only one joint staff meeting was held (in the absence of the LRM Director). The output of these discussions was limited as local technical and administrative staff was not fully aware of technical and material support provided by ITM under the FA3-III. A short, corona-proof, visit to LRM was organised. In addition to the original proposal, virtual interviews were also organised with five individuals who completed a PhD during the three Framework contracts (1998-2019), with a view to document individual capacity strengthening and career development.

1.1.2 HISTORY OF INSTITUTIONAL COLLABORATION LRM-ITM

Institutional collaboration between LRM and ITM started with FA1 (1998-2002), and continued during FA2 (2003-2007), FA3 (2008-2016) and currently FA4 (2017-2021). Actual collaboration started already in 1995. As from the start of the institutional collaboration, ITM Professor Armand Van Deun supported LRM in managing tuberculosis (TB); Professor Portaels mainly focused on Buruli ulcer (BU). Before FA3-III, LRM promotors were Dr Anagonou Séverin, et Dr Guédénon. The FA3-III north promotor was Dr Bouke de Jong; the south promotor was Dr Affolabi. Both are still promotors in FA4. The project summaries[1] below show the evolution of the ITM-LRM institutional collaboration over more than 20 years.

FA 1 (1998 – 2002): Develop tools for the prevention, early diagnosis and management of Buruli ulcer (BU) to combat the severity and resurgence of the disease

The DGCI 1998-2002 project "Buruli Ulcer in Benin" raised the recognition of the importance of this disease in Benin and other countries where the disease is endemic. The ITM support contributed to set up a "Global Buruli Ulcer Initiative" programme and the creation in Benin of the National Buruli Ulcer Control Programme (PNLUB), whose coordinator as from 2003 became Dr. R.C. Johnson [2], who was supported by DGD for his PhD (graduated in 2005). Important project results included: tools developed for the specific diagnosis of UB, the discovery and description of the various forms of the disease, the protective effect of BCG vaccination against severe forms of UB, the discovery of the etiological agent in the environment, and the acquisition of data on the incidence of the disease. This project also helped to develop techniques and partnerships that not only enable Benin to establish an effective fight against UB, but also to extend ITM activities to TB by integrating the diagnosis of these two mycobacterial diseases at the LRM level.

FA 2 (2003 - 2007): Improve the fight against TB and mycobacterial diseases in Benin and Africa by supporting the LRM (Ministry of Health) in its reference tasks and its research on optimizing diagnostic and therapeutic strategies

ITM support contributed to developing an excellent, reliable national laboratory, which provides both the microbiological diagnosis of TB and of UB and which allows the LRM to evaluate the effectiveness of the

[1] The sources used are the progress and/or final programme reports. The content is based on self-reporting by ITM and the South partner.

[2] The current coordinator since 2016 is Dr J.G. Houézo, who also studied at ITM (but did not complete his thesis)

treatment of both mycobacterial diseases. The role of ITM in quality control of LRM activities was considered essential; as well in the ongoing training of health managers and staff. One measure of this impact was the year-over-year increase in the number of publications whose first author is African. Reportedly, it is thanks to these publications that the Beninese actors of the 2003-2007 project were able to gain international credibility and recognition. These two elements were essential to securing future funding and sustaining their work. Thanks to the quality of the work carried out by the LRM, it was then proposed to become a supranational reference laboratory of WHO and UNION (formerly the International Union against Tuberculosis and Respiratory Diseases) for TB.

Dr. R.C. Johnson defended his thesis in 2005 and, thanks to the skills acquired during his Doctorate, continued to be the coordinator of the UB control program and the leprosy program for Benin. Drs. D. Affolabi and G. Sopoh were still engaged in PhD programs and several articles and papers were published.

FA 3 - I (2008 - 2010): Establish a regional reference and research laboratory for the diagnosis of BU in West-Africa

In 2008, the LRM extended its scope of diagnostic tests by setting up PCR facilities for BU diagnosis. For this purpose, an intensive training was provided at ITM. In 2009, an international external quality control for laboratories performing PCR all over the world confirmed that LRM performed accurately the three internationally recommended tests for diagnosis of BU patients (smear microscopy, culture and PCR). LRM by then had the intrinsic capacity to function as a national and even regional reference laboratory for BU. Initially, it was planned to help neighbouring BU-endemic countries in improving laboratory services for diagnosis of BU. Despite many efforts made to get these countries involved in a partnership with LRM, this was not always successful. For the future it was decided to focus more on the establishment of a well-functioning national microscopy network for the diagnosis of BU. A well-functioning national laboratory network for BU diagnosis was established, including the LRM and two peripheral laboratories.

Dr Dissou Affolabi graduated in 2009. PhD support and mentoring for Dr Ghislain Sopoh and Dr Achille Yemoa continued.

FA 3 - II (2011 - 2013): Establish a regional reference and research laboratory for the diagnosis of BU in West-Africa

Activities to maintain a well-established laboratory for BU diagnosis in West-Africa as well as a good national microscopy network were maintained and strengthened. National guidelines for the BU microscopy network were validated and implemented. The equipment for real time PCR was provided and LRM staff trained. This technique was adopted at LRM and is routinely used on samples received from BU centres. Several studies were published. A proposal was submitted to the UBS Optimus Foundation and approved. Some regional network activities were established. Links with labs in DRC were established (Kinshasa and Kimpese) and visited by LRM. LRM trained several technicians from DRC at LRM. Some exchanges happened with labs in Ghana. Some samples were received from Nigeria.

Dr Ghislain Sopoh and Dr Achille Yemoa defended their thesis in 2011. New studies on the differential diagnosis of BU and geographical mapping of BU and TB started.

The ITM TB/Buruli network was established in 2010 and maintained through the whole period. Most of the network partners were based in TB laboratories, both National Reference Laboratories and primarily research laboratories. They all had experience and/or interest in screening for drug resistance and circulating genotypes. Priorities were mainly knowledge and training exchanges, and joint research proposals. Three annual meetings were held (see the main report, Vol I, section 5 for more details on the TB&BU network).

FA 3 - III (2014 - 2016) : Establish an excellence centre for diagnosis and research in mycobacterial endemics in West-Africa in order to better control these diseases in Benin, to serve as example to other countries and/or to help them strengthening their capacities

LRM became a reference institute for mycobacteria in Benin and the West African region. Prof D. Affolabi greatly advanced the access to high quality diagnostic services for mycobacterial diseases like TB and BU in Benin as well as countries in the region, such as Togo, Niger, Nigeria, Guinee, Chad, and DRC. The new building for the BioSafetyLevel3 (BSL3) laboratory was completed, and a company selected for the laboratory construction. This was the last requirement for WHO to accord the full tuberculosis Supranational Reference Laboratory status to LRM. LRM is supposed to achieve this in 2020 or 2021, pending the Covid-19 epidemic, when the audit will be realised for accreditation according to ISO15189 for diagnostic laboratories. LRM implemented novel techniques, strengthened the laboratory network for the country and integrated microscopy diagnostics for BU and TB in Lalo.

N'Dira Sanoussi was appointed as PhD student after international selection in 2015. LRM continued to receive trainees from other institutions in the region, as well as providing on-site technical support in other laboratories, and formal courses on a variety of laboratory related topics, including the annual mycobacteriology course. Prof Affolabi successfully proposed a 5-year multicenter observational study for novel molecular diagnostics for MDR-TB, called 'DIAMA', to the EDTCP.

FA4 (2017-2021): Institutional strengthening of the Mycobacterial Reference Laboratory (LRM) for providing quality services and improving quality health care at the national and regional level, on mycobacteria and other clinical bacteria

As per FA4 programme document, the specific objective of this cooperation is the institutional strengthening of the mycobacterial reference laboratory (LRM) for high-quality services and a better quality of health care in terms of mycobacteria and other pathogenic bacteria, at national and regional level. The intended results are: 1. Staff is skilled in scientific TB research as well as routine diagnostics and management 2. A (bio)safe working environment 3. The grant administration office is functional 4. LRM is an active supranational reference laboratory 5. LRM exchanges electronic results with the regional reference laboratories and the national TB programme 6. CNHU (Centre National Hospitalier Universitaire) is adept at containing (non-mycobacterial) resistance against antibiotics, and ensures high quality in microbiological surveillance, antibiotic management and hospital infection prevention and control with a network of district hospitals.

1.1.3 ALIGNMENT WITH LOCAL PRIORITIES AND POLICIES

To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?

1 To what extent did the institutional collaboration projects respond to the priorities and policies of the south institution?
2 To what extent did the institutional collaboration projects aim at having national/regional impact?

As from FA1 the IC was very much aligned with the priorities of LRM as well as the national TB (and later) BU programme. This was confirmed by all interviewees. It is an example of a step-by-step, continuous institutional capacity strengthening track, taking into account local institutional capacity, investing in human capacity and leadership, linking the LRM to the relevant national programmes to ensure that improved laboratory services, new knowledge and national laboratory networks directly affect health service delivery and access to better diagnosis and treatment.

The above project summaries confirm that the support provided to LRM and the institutional collaboration with LRM is part of a logic long-term capacity-building and collaboration track between LRM and ITM that still continues today. It started with a focus on increasing local (and global) knowledge on prevention, diagnosis and management of BU in Benin with a view to improve national policy and management for this neglected disease (FA 1). Broadened the scope by addressing and integrating TB and BU (FA 2) and continued with building individual and institutional national (laboratory) capacity to address TB and BU (including microscopy, culture and PCR) in Benin. Initially, most analyses were done at ITM, but the required

technology was transferred to LRM. This resulted in a performing national laboratory, doing all laboratory tests locally with some quality control services provided by ITM. From FA3 onwards the scope broadened towards establishing a regional network (FA3, I-II-III) while in parallel developing and maintaining the national referral network (84 TB diagnostic centres, 3 BU diagnostic centres) and continued support to training in and installing new tools and tests (e.g. real time PCR). In FA3-I, for TB, the LRM was designated by the WHO as the only supra national reference laboratory (SRL) candidate for the Western/ Central Region of Africa (24 countries). Currently (FA4), the BioSafetyLevel3 (BSL3) laboratory was completed, equipped, and operationalised. The full tuberculosis Supranational Reference Laboratory status to LRM now only depends on the (planned) accreditation according to ISO15189 for diagnostic laboratories. In the context of a UN Global Fund project, LRM coordinates a regional network on TB in 29 countries. A similar WHO supranational reference laboratory status does not exist for BU, but BU collaborating centres[3]. Cameroon may become the regional collaboration centre. However, according to ITM, LRM also has the capacity to perform this function. LRM has developed some regional BU collaboration and improved access to high quality diagnosis for BU with DRC, Ghana, Niger and Nigeria.

The Director of the LRM, Dr Dissou Affolabi, a former ITM student, whose PhD was funded by DGD, is currently leading the entire laboratory, which serves as a reference centre for Western and Central Africa. Laboratory technicians, biologists as well as TB Program managers regularly visit the lab for training in various aspects.

The above long-term growth path would never have been possible, if not responding to the institutional and national priorities. Both TB and BU are still important diseases in Benin. TB in terms of high mortality and morbidity; BU in terms of morbidity and disability; incidence of TB is much higher than BU[4]; both diseases have an economic and social cost. LRM works closely with the national TB programme and the national BU programme. Many research publications were made by staff linked to the national TB programme (see further). LRM fully aligns with the national programmes for TB and BU. Alignment of FA3 (and all FA) was confirmed by all interviewees. The SP confirms that ITM always has supported the objectives set by LRM.

This project clearly aimed at national and regional impact, and succeeded to put LRM on the global map as a formal supranational reference centre (TB) (also supported by TGF) and as a knowledge / expertise centre (BU) for Benin and the West-African region. ITM supported the development of the national BU programme and supported LRM in developing a national TB & BU diagnostic referral network. Through the TB&BU network, where Dr Affolabi was strongly involved since 2014, he managed to contribute his expertise to regional dialogue and support national institutions in the region. Over the whole FA, LRM and ITM have managed to put BU, a neglected tropical disease, on the global health map, increasing global knowledge and quality on prevention, treatment and management. Policy influence is further discussed in section 1.1.5.

1.1.4 INVOLVEMENT OF PARTNERS

Were partners sufficiently consulted during the development and implementation of the programme?

1 Were partners sufficiently consulted when developing the programme?
2 Were partners sufficiently involved during implementation of the programme?
3 How can partner engagement be improved in the different stages of the programme/project cycle?

[3] WHO does not have the structure of supranational referral centres for Buruli as it has for TB; but collaborating centres. ITM has been for long the WHO collaborating / referral centre for Buruli (world-wide quality control of BU molecular biology). ITM now suggested to WHO to make endemic countries responsible for Buruli referrals and quality control.

[4] Globally, WHO registers about 10 million TB cases per year; compared to about 2500-3000 cases of BU (12 countries reported 5000 cases in 2009; and 2,200 cases in 2014). In Benin TB incidence decreased from 86 (2000) to 56 per 100.000 population (2018, about 7000 new cases). Benin reported 219 new BU cases in 2018.

LRM led the design and implementation of the FA3-III IC. Reportedly it is also fully in charge of FA4. This has much evolved since FA1, when ITM was much more in the lead. The collaboration with ITM is highly valued, also in comparison with other funders or collaborating institutions.

The consultation round was highly effective. For FA3-III, the draft proposal written by LRM staff was sent to ITM partners for their comments and the proposal was finalised after email exchanges. This was preceded by an internal evaluation of the IC, involving LRM staff, LRM programme manager, and representatives from peripheral centres for TB and BU. Key findings were discussed with ITM via conference call and main project activities were jointly agreed. ITM has made some suggestions for capacity strengthening or for research topics. LRM decided. Reportedly, the current Director is very much in charge; deals with several 'hats' at the same time (Director LRM, University hospital, WHO TDR, GF, EDTCP, …), is a natural leader and will only accept what he thinks makes sense. As such, Dr Affolabi puts the patients first (and not bacteria, tests, …).

Implementation is the responsibility of LRM. The north promotor ensures that ownership is with the south partner and considers the full project budget (including the ITM project budget) as the locally owned budget. If changes are to be made to the ITM project budget, this is being agreed first with the south partner, and changes are included as annex to the ITM-LRM contract. However, given the many responsibilities and other projects / funding, the south promotor is often overloaded and project coordination is therefore a joint undertaking. For the same reason, and in order to respect DGD deadlines, progress reports are mainly written by the north promotor (but based on progress information and data on output indicators received from the LRM).

Collaboration with ITM is valued and considered special when compared with other funders / agencies. "ITM asks us what we want do and supports us in addressing our priorities; as opposed to some who tell us what to do". Reportedly, ITM / 'Belgians' can accept critics or different opinions, which are perceived as a way to learn and move forward. Collaboration is more based on mutual trust.

The SP does not expect any changes in the way both ITM and LRM design, manage and report the project. The flexibility of DGD funding is highly appreciated.

1.1.5 SUSTAINED IMPACT

Has the institutional collaboration under FA3-III generated a sustained impact?
1 Which direct benefits of the institutional collaboration are still visible/useful to the target groups (institutions and people) today?
2 Have institutional or individual norms, values or behaviours changed as a result of the institutional collaboration, and how did these changes affect target groups?

The analysis of the current scope of services provided by LRM, its current role as a national and regional referral centre, its respect as a knowledge centre, the published research, the documented influence on national and global TB and BU policy, the key functions taken up by previous PhD students in the field of TB, BU and other NTD at national, regional and global level, as well as its continuous involvement in regional networks on TB & BU, confirms that this project has had a major, long-term and sustained impact. The evolving vision of the role of LRM from managing TB and BU, to mycobacterial diseases and now infectious diseases suggests that the institution will continue to play an important role in Benin and within the region.
The IC has led to changed norms and procedures related to TB and BU management at LRM and national level (including the diagnostic network). This has had a major impact on access and quality of TB and BU diagnosis and management, directly affecting the ultimate beneficiaries. Under the leadership of the current Director, the patient is the central focus (rather than the bacteria). Whether the latter is a result of the IC with ITM is unknown by the evaluation team.

Service delivery

During FA1 and FA2, the local (and global) knowledge on prevention, diagnosis and management of BU and TB has been strengthened. LRM capacity to perform all BU tests locally was transferred from ITM to LRM. The impact of this support was the basis for the current LRM capacity in managing TB and BU and becoming a supranational centre for TB.

Over the FA3 (I-II), the institutional collaboration between ITM and LRM has improved LRM capacity in several domains:

- LRM was designated as a supranational reference laboratory candidate for TB by the WHO and serves as a centre of excellence for other countries in the West/ Central African Region
- LRM has established a well-functioning national lab network for BU diagnosis, conducts regular supervisions of peripheral labs, and completes external quality controls showing excellent results.

During FA3(III), this capacity was further strengthened:

- The infrastructure for the BSL3 lab was completed. Construction of the laboratory, equipping and operations were completed under FA4. WHO recently performed an accreditation visit and LRM received full supranational reference status. Only ISO accreditation is pending and, COVID-19 willing, will be completed still in 2020 or early 2021. The functioning of the BSL3 lab is further supported under FA4.
- Lab (real time PCR) and national network capacity were further strengthened.

The laboratory today provides a continuous high-quality diagnostic service for TB and BU in Benin, covering the whole country. In addition, it serves as a regional referral centre for TB and leads a regional network.

Dr Affolabi confirms that developing the national diagnostic network for BU as well as the regional BU network is/was more difficult for BU than for TB. At a regional level this may reflect the lesser importance of BU (compared to TB) and the ongoing north-south relationships between national BU centres and their northern scientific counterpart (who may be more interested in maintaining the individual north-south relationship rather than establishing south-south working relationships). Also the bi-annual international meeting called by WHO in Geneva, inviting all BU countries / experts contributes to maintaining the separate N-S relations. The national BU diagnostic network is (logically) much smaller than for TB. Only a few labs have been strengthened (e.g. Lalo, Zangnanado, Allada; not Pobè[5]) with a view to have part of the diagnostic tests referred to those centres. A conflict between LRM and Allada in 2016 resulted in Allada now referring to Pobè for PCR. This resulted in reducing the number of tests done at LRM.

Research and publications

FA3-I final report lists 11 articles, six on TB and five on BU. All (but one[6]) articles are based on Benin data and have a Beninese expert as first or second author.

FA3-II final report refers to 19 peer reviewed articles, including 9 on TB, 5 on AB resistance, 4 on Buruli, one on HIV. Fifteen articles focused on Benin, while 4 were multi-centres studies. 16/19 articles had a Beninese expert as first or second author[7].

FA3-III progress reports refer to 10 publications in peer reviewed journals. Eight of those focused on TB, one on UB and one on another subject[8]. Four publications covered multi-country studies including Benin

[5] Both labs do PCR testing. The lab of Pobè is supported by the Foundation Raoul Follereau (is an autonomous centre with quality control done by the University of Angers).
[6] Prospects for a vaccine for BU.
[7] The evaluation did not look at last authorship, which may reflect seniority in academic career (e.g.; supervising a PhD student)
[8] H3 Africa Consortium. Research capacity. Enabling the genomic revolution in Africa.

(first author: ITM 3, LSHTM 1). Four out of ten articles had a Beninese expert[9] as first and/or second author.

Table 1 Number, focus and authorship of peer-reviewed publications in FA3-III

FA 3 phase	Peer reviewed publications	Focus of research: TB/ BU / other topic	Benin vs. multicentre	First or second authorship with national expert
2008-2010	11	55% / 45% / 0%	91% / 9%	91%
2011-2013	19	47% / 21% / 32%	79% / 21%	84%
2014-2016	10	80% / 10% / 10%	60% / 40%	40%

Focus on BU in peer-reviewed publications dropped from 45% to 10% over the review period, while focus on TB increased up to 80%. In parallel, multi-centre publications increased progressively from 9% to 40%. This resulted in a decrease of first or second authorship by a Beninese expert, from 91% to 40%. While the growing emphasis on TB may reflect the importance of TB, it seems that BU recently receives less attention in research and publications. The shift to multi-country or multi-centre publications confirms the international respect for LRM quality work, the increased involvement of LRM in the regional and global disease debate and networks, as well as in joint research. Logically, this results in joint publications and less frequent authorship by Beninese experts. The evaluation did not assess whether this trend continued after 2016.

As an example of multi-centre research, DIAMA (research funded by EU- EDTCP, 2016) is the result of the TB & Buruli network collaboration and brings together 8 SSA countries, ITM, WHO and LSHTM. It is led by LRM.

PHDs

Since the start of the IC, five PhDs graduated. One PhD was initiated during FA3-III.

- Dr. R.C. Johnson (PhD in 2005) became director of the PNLUB (2003-2010); now professor at the University of Abomey Calavi; currently member of the WHO Expert Group on BU; Medical responsible of the Foundation Raoul Follereau ; President of the francophone Association of Leprologists ; President of the International Leprosy Association (ILA)
- Dr. C. Zinsou (PhD not finalised); did a MSC in public health; continued to, work at LRM but died in an accident in 2015
- Dr. Dissou Affolabi (PhD in 2009) – currently Director of LRM. Head of national TB programme. Member of WHO TDR. National coordinator of the Covid-19 advisory committee to MoH.
- Dr. G. Sopoh (PhD in 2011) was head of lab in Allada; as from 2018 professor Public Health at the regional public health school at Ouidah, Bénin. Member of the TAG BU at WHO Geneva; co-chair of the sub-group « epidemiology and surveillance »; member of the AFRO Regional Group for reviewing cutaneous NTD programmes
- Dr. Achille Yemoa (PhD in 2011). Currently Vice-Dean and professor at the Faculty of Health Sciences at University of Cotonou
- N'Dira Sanoussi (started her PhD in 2015; graduated in 2019); left LRM; still unsure about future.

All PhDs are still in Benin. Three of five are or were involved in managing TB and/or Buruli. Two are now posted at a national Public Health school and one in the Faculty of Health Sciences. Several are member of regional or global working groups / committees that deal with TB, BU or NTD. This confirms that the investment in training PhDs (individual capacity building) has been successful and contributed to maintaining the high-quality TB & BU services in Benin and/or further developing public health. It also continues to

[9] National TB programme; University of Abomey; LRM.

contribute to the global dialogue on TB and NTD. We refer to the annex on individual capacity building for more information on how PhD training influenced individual careers.

Training[10]

During FA3-III LRM organised the eight-international course on mycobacteriology for the francophone national TB programmes (8ème course sur la Mycobactériologie appliquée aux besoins des Programmes Nationaux contre la TB pour les pays francophones). 13 participants from eight countries of the region participated. LRM organised this course as from 2007 onwards (11 courses: last one in 2018). Initially it was organised together with the Union (IUATL). Recent courses were organised independently by LRM. LRM does not organise international courses on BU.

In April/May 2013, LRM hosted a regional course on fluorescence microscopy. Recently, it organised a formal course in Cotonou about shipping dangerous goods with regards to IATA regulations, in collaboration with WANETAM and WANETAM+. LRM also organised multiple IATA courses (completed the third one).

At the national level LRM provides practical trainings for laboratory and MoH staff (national BU network). Regularly health staff from other countries of the region participate in ad-hoc short courses, including on quality control of microscopy and other tests, TB diagnosis, microscopy, culture and PCR (e.g. from DRC, Togo, Ghana).

The ITM TB&BU network was very much alive during FA3-III, also thanks to the investment / effort by Dr Affolabi.

Policy influence

National policy has been influenced in several ways. According to the SP, diagnosis, treatment and monitoring of both TB and BU in Benin have greatly improved thanks to the FA support. Or in his words: « Le LRM est à l'avant-garde grâce à ses bonnes performances ».

The FA1 support led to the creation of the national programme for BU. BU national guidelines have been put in place and were regularly adapted, based on new knowledge, over the whole FA support period. National guidelines for the BU microscopy network are in place since FA3-III and used. FA1 also contributed to the start of the WHO programme 'global initiative against BU' and helped raising international funding for the neglected tropical disease through WHO, the UNION, the EC and several NGOs.

Global TB guidelines were influenced by research and new knowledge developed at LRM.

Benin initially chose the Bangladesh nine months TB therapy, which lead to adapting the WHO guidelines on treatment with rifampicin and monthly audiometry. In 2016 WHO TB guidelines were discussed based on OFLOTUB research on reducing TB treatment to 4 months. TB guidelines are likely to be influenced again now on basis of the work of N'Dira Sanoussi's PhD work (on false drug resistance if bacterial load is too low).

Research on combining AVR and TB treatment led to adapting national guidelines. Research on vaccines did not yet result in evidence for influencing policy.

Dr Affolabi recently organised a conference of all TB experts in Africa. LRM and the national TB programme influence regional and global TB policy. He is member of WHO TDR. Dr Affolabi currently is the head of the national TB programme.

Dr Sopoh (previous PhD) became head of the national Buruli programme.

[10] The courses listed here are illustrative. The list is by no means not comprehensive.

Values

According to the SP, the whole behaviour of LRM changed over time by the capacity built, the tests being done locally, new tests being introduced (e.g. culture, PCR, real time PCR), the national and regional networking. Also, implementing research has introduced concepts of quality, rigour, ethics. "When research results become available and are relevant, we adapt our strategies".

LRM's vision broadened from a focus on TB and BU to mycobacterial diseases (as per purpose of FA3-III and FA4). This also how the SP sees the future of LRM as a national and supranational centre. With TGF support it will become a centre of excellence in training mycobacterial diseases.

A strong value, impersonalised by the current LRM Director, is the patient standing central (social & economic impact of disease and management strategies), rather than the bacteria.

The collaboration between LRM and ITM also changed over time. Working with Dr Affolabi is considered a privilege, which is also concretised by LRM currently doing quality control of ITM work.

1.1.6 DISSEMINATION AND USE OF RESULTS

Were the programme results and lessons effectively disseminated and applied? 1 Were lessons sufficiently disseminated among participating institutions and networks? 2 Were results and lessons effectively communicated to an external audience?
Given the participation in several relevant networks, number of articles published, that research influenced national and global policy and that LRM has been recognised by WHO as a supranational referral centre for TB, we assume that LRM has effectively communicated lessons learnt within networks and to external audiences.

Research was discussed above. FA3-III resulted in 10 peer-reviewed articles, two articles published in non-peer reviewed journals and seven abstracts or book sections. As per FA3-III progress reports, no presentations at conferences or workshops were reported (this may be an underreporting, given the involvement in different regional networks; see below).

Influence on national and global policy was discussed above. As Dr Affolabi and other (previously trained) PhDs are member of WHO expert committees on TDR, TB & BU, we presume that research findings and lessons learnt were also regularly shared at that level.

Besides LRM being an active member of the TB&BU network funded by DGD, with a view to share best practices amongst south partners, it also participates in other networks funded by other agencies such as OFID TB network (Pasteur Paris & Pasteur Cameroon), aiming at training in mycobacterial techniques not available in the West/ Central African Region and WANETAM Plus network (financed by EU) aiming at strengthening research capacity within West African research institutions from this region. The trainings tend to be accessible to partners from all networks. These networks also provide the opportunity for LRM to share its experiences and research findings.

1.1.7 EFFICIENCY

1 To what extent were financial resources used economically and in a timely manner? **2 Which alternative programming approaches could be used to increase efficiency?**
No issues were voiced by the interviewees (nor reported in the progress reports) related to the budgets, the timeliness of release of funds or the reporting / accounting procedures. The flexibility of DGD funding was highly appreciated. Using regional resources for technical support (e.g. certification) may reduce cost compared to making use of international / global resources.

LRM may need to address how to strengthen and retain its mid-level cadres, also with a view to become a regional reference centre; and how to attract additional (research) funding.

The evaluation did not verify expenses recorded under FA3-III, beyond what was reported in the progress reports.

The budget for FA3-III was 300,000 euros (compared to 94,000 and 124,000 euros for respectively phases I and II). The progressive increase reflects the progressively increased scope of responsibility and services provided by LRM (number and variety of tests), both at national and regional level. The increased budget for FA3-III mainly covered the initial set-up and operationalising of the BSL3 as well as general operational expenses. No PhD funds were budgeted for under FA3-III but a potential candidate was identified (N'Dira Sanoussi) and initial funding was provided. FA4 (about €1.3M) provides a much higher budget for operationalising the BSL3.

The south budget was fully managed locally as per agreed ITM/DGD procedures. Six-monthly financial reports and annual technical reports were submitted by LRM and validated by ITM before releasing the next tranche. Financial audits also take place. According to the South promotor, funding (both volume and timeliness) was never an issue. With the FA, the South partner can propose what priority to tackle and funding is flexible and can be adjusted during the course of the project. This is very helpful as it can address unforeseen bottlenecks or take into account changing priorities or new opportunities (e.g. the above PhD). The NP perceives the ITM part of the budget also as a local budget; resources can shift to the south partner if needed and jointly agreed.

The efficiency of implementation was enhanced by the synergy of the FA3-III IC and the FA3-III mycobacterial network, which allowed for exchanges with partner institutions in the region facing similar capacity building trajectories, some of which are advanced in certain fields. As an example, biomedical engineers from the MRC in Gambia could certify LRM biosafety cabinets, with the goal of sustainable support as an alternative to flying in engineers from South Africa on an annual basis.

Reportedly, local leadership could have been even more reinforced by avoiding local staff turn-over (e.g. by investing more in local working conditions). Investments could also have addressed more the middle cadres of LRM (especially regarding IT, administration and management), if considered within scope of ITM support. According to the SP, more cadres with MSc training would be welcome and strengthen the mid-level cadre of LRM. Other important investments would be to develop a strategy for retaining staff that benefited from training; and supporting LRM in finding additional research funding (through ITM or other funders).

1.1.8 SUSTAINABILITY

It is important for LRM to continue investing in PhDs and ensure some high-level cadres who are capable to support and eventually take over leadership (when/if current Director would leave). This would also help building the function of a supranational reference centre for TB.
Building local capacity for attracting research (and operational) funds is another priority for ensuring sustainability.

Reportedly, the current team is very strong, but given salary conditions, turnover is too high especially for non-technical staff. LRM needs a strong and continuous middle cadre; as well as a strong administration. While the FA has contributed to this, more could be done (see efficiency).

If Dr Affolabi would leave LRM, this would be a great loss. While provision of services would continue, regional networking and research would suffer. One PhD student, currently doing his PhD in France, is said to be a possible future candidate to support local leadership.

However, no sustainability plan was developed, also because it was anticipated that FA3 would be continued by FA4. In the later FA it is foreseen to support the grant administration office. This could be a strategy to strengthen LRM administration in attracting other research funds which may help to sustain LRM operations.

1.1.9 SWITCHING THE POLES

The IC between LRM and ITM is a nice example of how ITM has managed to live up to its adagio of switching the poles. LRM does no longer need ITM to deliver its core business. It advises other institutions in the region. Formally taking up the regional referral function for TB is a new given that may still require some technical or managerial support. One illustrative example of how the poles were switched, is the fact that LRM today does quality assurance of some of ITM's laboratory activities.

The above story confirms that ITM has, step by step, built the capacity of the southern partner's institution, who is now respected as a key national centre for diagnosing TB and BU and for quality assurance of the national diagnostic network; as a supranational reference centre for TB and a knowledge centre on BU in the West-African region. By LRM's involvement in research and its quality services, it is in a good position to attract additional resources for service delivery (e.g. TGF support for the referral centre) and for research.

According to the SP, "at the beginning of institutional cooperation, it was the IMT that was at the forefront of everything. But from 2009 onwards, it is LRM; the roles of both partners started to reverse. The FA3-III project marked the total change. This dynamic has strengthened the LRM's leadership".

1.1.10 ANNEX1. ESSENCE FRAMEWORK

We applied the adapted Essence Framework to assess capacity strengthening at the institutional level and capacity building at the individual level.

Individual capacity building was documented through interviews with 5 individuals who completed their PhD during and as a result of FA support (1998-2019). They all completed the framework.

Institutional capacity strengthening was assessed by documenting relevant activities reported in the FA1, FA2 and FA3 end-of programme progress reports. In addition a LRM staff meeting was organised to discuss institutional capacity building. Some complementary information was collected through the virtual interviews with NP and SP.

The findings are presented in the following tables. This information will be further used to inform the section on capacity building in the main report.

Table 2 M&E framework for capacity strengthening in case study countries

Outcome	Indicators	Means of verification
Strengthened individual capacity (among southern partners who were FA grantees)		
Increased individual research capacity	Five PhDs graduated between 2005 and 2019. The data provided below cover the period 2008 to 2019; the detailed data are provided in annex. 1. **Dr. R.C. Johnson** (PhD in 2005) became director of the national BU programme; currently professor at the University of Abomey Calavi 2. **Dr. Dissou Affolabi** (PhD in 2009) – currently Director of LRM; Head of national TB programme. 3. **Dr. G. Sopoh** (PhD in 2011) was head of the laboratory in Alada; as from 2019 professor Public Health at the regional public health school at Ouidah, Bénin	Interviews Publications

Outcome	Indicators	Means of verification
Strengthened individual capacity (among southern partners who were FA grantees)		
	4. **Dr. Achille Yemoa** (PhD in 2011) Responsible of the laboratory for chemic analysis and analysis of medicines (LCAM, Medical School, Cotonou, 2018); Head of operational research & training at the PNLT, 2019; deputy-dean of the training and operational research unit for pharmacists of the Medical school, Cotonou, 2019 5. **N'Dira Sanoussi** (PhD in 2019) – no longer with LRM; looking for job opportunities11 **Peer reviewed publications with first or second authorship (after completing PhD)** a) 42/94 (after PhD, out of total) b) 26/35 c) 68 d) 11 e) 3 **Conference presentations (after completing PhD)** a) +/- 20 b) Plenty c) 76 d) 4 e) 5 **Awards / prizes** a) (Lettre de félicitation du recteur de l'UAC; décoration dans l'ordre national du Bénin) b) Prix André Gouazé du meilleur Professeur Agrégé, CAMES, Yaoundé, Novembre 2014 c) (Prix Raoul Follereau 2009; Lettre de Félicitation du Ministre de la Santé 2011; Lettre de Félicitation de L'IRSP, 2014) d) (Prix Caventou-Pelletier 2013; Prix Sponsor Diamant FESPAO 2019) e) Meeting with Queen of Belgium at the 60th ITM colloquium (2019) **Effect on career development** a) Direct impact on professional and academic / university career b) Direct impact on professional promotion from Assistant to Professor c) Direct effect on two subsequent opportunities (Admission à l'IRSP comme Enseignant chercheur en 2012; 2018: Maitre de conférences agrégé en Santé Publique) d) Direct effect on 3 subsequent opportunities (Assistant en Chimie Analytique et Bromatologie à l'Université d'Abomey Calavi (Bénin), 2012; Maître-Assistant du CAMES (Conseil Africain et Malgache pour l'Enseignement Supérieur) en 2016; Concours	

[11] In the sections below a) to e) refer to the five PhDs who graduated and were supported by DGD funding.

Outcome	Indicators	Means of verification
Strengthened individual capacity (among southern partners who were FA grantees)		
	d'Agrégation de Pharmacie du CAMES à Libreville au Gabon (2018) e) Too early **Competitive grants won since graduation** a) Co-investigator in more than 6 research projects and clinical trials (list provided is not exhaustive); total value estimated at about € 2M b) Four major research projects (10.9 M €): – RAFAScreen (Expertise France): 1,5 millions euros – RAFAgene (NIH): 1,1 million euros – DIAMA (EDCTP): 2,9 million euros – TB LAB (Global Fund): 5,4 million euros c) Co-investigator in 7 research grants (total value estimated at € 2M) d) Scholarship post doctorate ELAN 2016; student Microproject (€ 25.000) e) Too early **Publications of policy briefs and other documents aimed at knowledge users (not scientific papers)** a) Co-author of several books (Manson sur l'UB; International Texbook on Leprosy); contributed to several WHO and ILEP documents and guidelines on lepra and BU b) Two books (Mycobacteriology in low-income countries; A Practical Handbook for National TB Laboratory Strategic Plan Development); and one WHO manual on BU c) One book chapter (BU). And five contributions to training manuals or implementation guidelines (UB and NTD) d) None yet. e) Too early, but PhD thesis is likely to influence WHO TB guidelines **Participation in technical fora, policy advisory groups, and implementation programmes** a) Member of the WHO Expert Group on BU; President of the International Leprosy Association (ILA); member of the technical commission of ILEP, etc… b) Several over time. Currently: a) Member of the WHO network for supranational referral centres for TB; b) President of the national Covid-19 expert committee (MoH); c) executive Secretary of the networks WARN/ CARN-TB c) Member of the TAG BU at WHO Geneva; co-chair of the sub-group « epidemiology and surveillance »; member of the AFRO Regional Group for reviewing cutaneous NTD programmes d) Member of the National Commission on Medicines; Instructor of aspiring candidates in the context of the InterAfrican consultative committees of the CAMES	

Outcome	Indicators	Means of verification
Strengthened individual capacity (among southern partners who were FA grantees)		
	e) Too early. Coaching a MSC student of University of Antwerp	
Increased individual training capacity	**Training courses developed/conducted (in which position)** a) Participated as facilitator in several international training courses on lepra and BU b) Professor Microbiology (Faculté des Sciences de la Santé de Cotonou); Director of the international course: Mycobactériologie Appliquée aux besoins des Programmes Nationaux de lutte contre la Tuberculose (CIMA) c) Is now professor in public health at the regional public health school at Ouidah, Bénin (provides training in 2 licences, 5 MSc courses and coaches PhDs in public health). d) Developed 5 courses for pharmacy students at the Medical School of Cotonou, department of health sciences; gives training to university students in DRC and Burkina Faso. e) Contributed as PhD student to 4 training courses; and contributed to developing two training modules. **Professional certifications & academic titles** a) Two certificates: Maître de conférences des universités du CAMES; Habilitation à Diriger des Recherches (Angers, France) b) Professor Microbiology c) Professor in Public Health d) Two certificates: Maître de Conférences Agrégé (LAFMCA); Maître-Assistant (LAFMA) e) NA. Graduated in oct 2019. All reported titles are from before PhD **Academic appointments** a) NA b) Professor Microbiology. c) Professor in public health at the regional public health school at Ouidah, Bénin C d) Pharmacist at CHNU (Cotonou, 2015); Responsible of the laboratory for chemic analysis en analysis of medicines (LCAM, medical school, Cotonou, 2018); Head of operational research & training at the PNLT, 2019; deputy-dean of the training and operational research unit for pharmacists of the Medical school, Cotonou, 2019) e) Too early.	Interviews
Increased individual capacity to deliver services	**Professional certifications** a) ? b) ? c) NA d) University degree in applied biotechnology for medical products (Montpellier, 2015); University degree in pharmaceutical supplies (Ouagadougou); Maître-	Interviews

Outcome	Indicators	Means of verification
Strengthened individual capacity (among southern partners who were FA grantees)		
	Assistant (CAMES, 2016) et Maître de Conférences agrégé (CAMES, 2018); Spécialité: Chimie Analytique et Bromatologie. e) NA **Professional career achievements** a) Responsable Médical de la Fondation Raoul Follereau; Président de l'Association des Léprologues de Langue Française; Président de l'ILA (International leprosy Association) b) Creation of the WARN/ CARN-TB network; guiding LRM towards the supranational referral centre status (TB, WHO) c) NA d) Creation of the 'Laboratoire de Chimie Analytique et Analyse des Médicaments (LCAM) à la Faculté des Sciences de la Santé de Cotonou. e) NA **National/regional/international recognition of expertise** a) See above under career achievements; participates in many international courses on lepra and BU b) See above under career achievements c) NA d) Participates in training assignments abroad (Burkina Faso, DRC); Board member at NGO BETHEDA; represents the public sector in the National council of Pharmacists e) NA	

Note: As part of the PhD training ITM organises many short courses and/or workshops, including on:

- Research integrity (short introduction and dilemma's)
- Authorship ethics (real life cases)
- Handling biosamples in research
- Good Documentation Practices
- Workshop 'The floor is yours, because life is too short for bad presentations'
- Workshop 'Hurray, another group just published the research findings that we are about to report
- How to get the most out of peer review (or not)?
- Leadership & academic work: necessity or necessary evil?
- Measure your impact: a quick guide to bibliometrics
- How to get your research funded?
- Discussion: 'Career choices: the mobility imperative'

Outcome	Indicators	Means of verification
Strengthened institutional capacity		
Increased institutional capacity	**Development of infrastructure and staffing of the institution since 2014 :** The main development was the start of the new	Progress reports Site visit

Outcome	Indicators	Means of verification
	building that would house the BSL3 facility (and later on the equipping, operationalising of the biosafety lab; as well as facilitating the recognition by WHO of the LRM as a supranational referral centre for TB, including the ISO certification) **Capacity strengthening modalities used since 1998:** Over the period 1998-2002: Most testing was performed at Antwerp (local budget: equipment 5000€; supplies: 12.500€) – Equipment for PCR, culture and smear microscopy[12][13] – Training of lab technicians and medical staff at ITM – Training of lab technicians at LRM in Cotonou – Installing new diagnostic techniques – Testing treatment schedules – Increasing local knowledge on UB: mapping, incidence, early diagnosis, improving diagnosis by confirmed microbiology lab test, detection of new / unknown forms of UB, ethology of disease – Joint research and joint publications – PhD training Over the period 2003-2007 (in addition to the above): testing was transferred from ITM to LRM (local budget: equipment 7500€; supplies: 120.000€) – Structural re-organisation, cold room – Regional training in TB – Capacity developed at LRM for clinical trials – Capacity for active screening of UB and AB treatment fully established – Quality control by ITM of tests done at LRM (+ transfer of knowledge and skills to LRM) Over the period 2008-2016 (in addition to the above): – Developing a national BU network (lab diagnosis of BU) – Developing (2010) and maintaining the regional network TB&BU (LRM Director was part of the steering committee); this network led to joint research proposals & training exchanges & launched a call for seed grants – LRM continued to receive trainees from other institutions in the region, as well as providing on-site technical support in other laboratories, and formal courses on a variety of laboratory related topics, including IATA shipment certifications and the annual mycobacteriology course **Accreditations or certifications achieved since 2014** – Proposed as a supranational reference laboratory of WHO and UNION for TB in 24 countries – Accreditation according to ISO15189 for diagnostic laboratories (ongoing)	Interviews (Accreditation reports)

[12] LRM is supported by ITM, TGF, ANESVAD, etc. LRM staff could not indicate with certainty (in the absence of the Director) which equipment was funded by ITM

[13] A preventive and curative maintenance system for equipment is in place at LRM (as part of all equipment maintenance). Planning is implemented and records are up-to-date (as observed during the file visit).

Outcome	Indicators	Means of verification
	– Expected to achieve the supranational status in 2020/21 **Other forms of national/regional/international recognition** – National referral centre for TB & BU – Coordinating the regional TB network – Recognised as BU centre of excellence for other countries in the West/ Central African Region – In 2009, an international external quality control for laboratories performing PCR all over the world showed a complete agreement with the results expected, confirming that LRM performs accurately the three internationally-recommended tests for diagnosis of BU patients (smear microscopy, culture and PCR).	
Research capacity	**Partnerships, joint activities, joint publications with other research organisations – development since 2008** – 40 peer-reviewed joint (LRM-ITM) publication since 2008, of which 10 in 2014-16 – Multi-centre publications increased progressively from 9% to 40% over the period 2008-2016. – First or second authorship declined from 91% in FA1, 84% in FA2 to 40% in FA3, when increasingly multi-centre research started. – As an example, DIAMA (research funded by EDTCP, 2016) is the result of the TB & Buruli network collaboration and brings together 8 SSA countries, ITM, WHO and LSHTM **Collaboration with implementing organisations** (public, private, NGO) – LRM is supported by an international NGO ANESVAD, who supports the management of NTDs	Progress reports Web Interviews (Contracts / memoranda of understanding)
Training capacity	**Number of courses and curricula developed since 2008** – At the national level LRM provides practical trainings for laboratory and MoH staff. Regularly health staff from other countries of the region participate in ad-hoc short courses, including on quality control of microscopy and other tests, TB diagnosis, microscopy, culture and PCR (e.g. from DRC, Togo, Ghana) – National BU network: training of lab technicians and quality control (internal and external) of microscopy – LRM organises every second year the international course on mycobacteriology for the francophone national TB programmes (since the mod nineties; originally together with the UNION for TB, now by itself) – Organization of a formal course in Cotonou about shipping dangerous goods with regards to IATA regulations, in collaboration with WANETAM and WANETAM+ – In April/May 2013, LRM hosted a regional course on fluorescence microscopy **Number of PhD and Master's level students since 2008**	Annual reports

Outcome	Indicators	Means of verification
	– Five PhDs graduated at ITM or a Belgian university. – The LRM Director currently coaches one PhD student from the University of Antwerp. – Few MSc graduated	
Service capacity	**Scope and volume of services provided** – All TB and BU testing done locally (microscopy, culture, PCR) – New tests introduced and implemented when becoming available. LRM is very much up to date with recent laboratory developments. – Currently also does QA of BU tests at ITM – Serves as a regional referral and knowledge centre for TB and to a lesser extent for BU – Manages and quality assures the national TB and national BU diagnostic network	Interviews

Outcome	Indicators	Means of verification
Strengthened national systems for research, training or service delivery (contribution of FA3-III institutional cooperation in 2014-2016)		
Strengthened national standards and regulatory frameworks for accreditation and quality assurance in research, training or service delivery	National changes of ethics, accreditation and quality assurance standards (with plausible contribution of FA) – National programme for BU was developed as a result of support provided in FA1 – National guidelines for BU microscopy network were developed in FA3 and are currently used – National TB guidelines have been adapted based on research and: or clinical trials done by LRM in FA2 and FA3 (e.g. on combining ARV & TB treatment; duration of TB treatment; etc.) – -Evidence from research has been incorporated in national training curricula	Interviews Policy documents

1.1.11 ANNEX 2. PEOPLE INTERVIEWED

Institution	Name	Function
Laboratoire de Référence de Myobactéries (LRM)	Dissou Affolabi	Director LRM, Director PNLTB, South promotor
Laboratoire de Référence de Myobactéries (LRM)	SENOU Jean-Claude	Chief of the maintenance division for biomedical equipment
Laboratoire de Référence de Myobactéries (LRM)	SENOU Jean-Claude	Responsible for molecular biology (paillasse)
Laboratoire de Référence de Myobactéries (LRM)	YÈHOUÉNOU Laurence	Deputy head, LRM
Laboratoire de Référence de Myobactéries (LRM)	AGOUA Alida	Responsible for BU culture

Institution	Name	Function
Université d'Abomey Calavi – Centre inter facultaire de formation et de recherche en environnement pour le développement durable (CIFRED)	JOHNSON Christian	Professor
Université d'Abomey Calavi – Institut Régional de Santé Publique de Ouidah (IRSP)	SOPOH Ghislain	Professor
Université d'Abomey Calavi – Faculté des Sciences de la Santé (FSS)	YEMOA Achille	Professor
Programme National de Lutte contre l'Ulcère de Buruli	HOUEZO Jean Gabin	Coordinator
(ITM)	SANOUSSI N'Dira	Completed PhD in 2019
ITM	Bouke de Jong	North promotor

1.2 INDIA

1.2.1 METHODOLOGY

Public health measures to contain the spread of SARS-CoV-2 in India affected the methodology of conducting the case study on the institutional cooperation between ITM and the Institute of Public Health, Bengaluru (IPH). A planned site visit and group meetings with IPH staff could not be realised, and all data for this evaluation were collected in document reviews and remote interviews.

Nine semi-structured interviews were conducted with current and former IPH staff as well as decisionmakers in the public and NGO sector. A list of informants is provided in Section 1.2.12.

To assess the impact of the institutional cooperation on capacity strengthening, the current director of IPH completed a data tool to collect information on institutional capacity, and three of the four scientists who received PhD scholarships completed a similar data tool about individual capacity. The tools were adapted from the ESSENCE Planning, Monitoring and Evaluation Framework for Research Capacity Strengthening.[14]

To assess the impact of the IPH's e-learning programme, alumni of the public health management and the health financing courses conducted between 2014 and 2016 were invited to complete an on-line survey. The IPH Secretariat sent invitations and reminders to 308 course participants. However, among the 37 respondents, only 16 stated that they attended the public health management course during this period and no responses were received from the alumni of the health financing course. Given that 259 students were registered in the public health management courses between 2014 and 2016, a response rate of six percent was not sufficient to draw conclusions.

1.2.2 HISTORY OF THE COOPERATION BETWEEN ITM AND IPH

IPH was founded as an NGO in 2005 by Dr Narayan Devadasan and a small group of colleagues. Dr Devadasan, who was the first Director of IPH had been associated with ITM since 1993 as an MPH student and as a tutor, and he was, at the time, pursuing a PhD degree at Ghent University where he defended his thesis in 2011.

Institutional cooperation between IPH and ITM started in 2008 under the first phase of FA3. It ended after 2016, because India was no longer listed as a partner country by the Belgian cooperation. Concurrently, the Indian Ministry of Home Affairs withdrew the permission of IPH to receive and use foreign grants. IPH continues, however, to cooperate closely with ITM in networks, including the Alliance for Education in Tropical Medicine and International Public Health, *'a platform for joint activities including student and staff exchange, global fellowships, quality assurance, curriculum development and digital learning forms*'.[15] In 2020, IPH and ITM signed a memorandum of understanding with the intention to '*further develop their mutual collaboration, and to provide a broad framework for steering such collaboration and partnership in the future.*'[16]

Over the nine years of cooperation, the financial support provided to IPH under the ITM-DGD framework agreement amounted to Euro 1.3 million, about 71% of the allocated budget. One of the reasons for low budget execution rates in the early years were delays in obtaining the authorisation for external funding from the Government of India.

[14] www.who.int/tdr/publications/essence-framework-2016/en/
[15] ITM FA4 – Country 11 - BELGIUM
[16] MOU between IPH and ITM; agreed August 28th, 2020

	Budget	Expenditure	Execution
2008-2010	453,334	312,412	69%
2011-2013	781,632	447,885	57%
2014-2016	637,500	571,094	90%
Total	**1,872,466**	**1,331,391**	**71%**

- **FA3-I (2008-2010)**

The vision of IPH was to develop public health in India as the core of an equitable, integrated, decentralised and participatory health system. When IPH applied for institutional cooperation funding under FA3 in 2007, it was a small organisation with a full-time staff of five faculty members. It expanded rapidly during the first three years of cooperation. By the end of 2010 it had 14 full-time faculty staff, an ethics committee and a governing board. In 2008 IPH, in collaboration with the Karnataka State government and with support from ITM, started a long-term action research initiative on district health services in Tumkur District linked to a training course for district health managers. It also provided research support to initiatives for the establishment of public health insurance schemes in Karnataka and other states. IPH was an active member in a number of ITM-initiated networks, including the network on quality in education in international health, the health systems strengthening network and the alumni network. Furthermore, IPH served as the international secretariate for four institutions participating in the Research and Action on Chronic Conditions in Asia (ReACh) project.

Under FA3-I two MPH candidates were supported who completed their degree at ITM in 2010. In addition, two PhD scholarships and one pre-doctoral scholarship were awarded. Seven papers were published in international peer-reviewed journals, three of them (43%) with first or second authors of IPH.

- **FA3-II (2011-2013)**

IPH continued to grow during the second phase of FA3. By 2013 IPH had 35 staff members including faculty and support staff. It started to widen its funding base with grants from several international organisations such as the European Commission and the Alliance for Health Policy Research. It also widened its network of collaboration with both Northern and Southern research institutions

The portfolio of IPH research activities widened to include, in addition to the district health action research and the research on health financing, private sector health service delivery, access to medicines and urban health. Just prior to the start of FA3-II, in December 2010, IPH organised a national Evidence in Public Health Policy (EPHP) conference in partnership with the Indian government. A second EPHP conference was held in 2012 with each conference bringing together about 300 influential researchers and decisionmakers from the public and private sectors nationwide.

The portfolio of short-course training programmes offered by IPH increased significantly during FA3-II. In addition to the training course for health managers that was linked to the action research in Tumkur District, IPH piloted its first distance learning course on public health management (ePHM) in 2012.

In November 2011, IPH started a tobacco control project that aimed at using media and political advocacy to promote tobacco control in Karnataka. This started a long-term engagement in anti-tobacco advocacy and led to IPH serving on state and national committees on tobacco regulation.

Under FA3-II, one more PhD scholarship was awarded in addition to the two that continued from FA3-I. The number of publications in international peer reviewed journals increased from seven in FA3-I to 23 in FA3-II, and the proportion of these publications with first or second authorship by IPH staff from 43% to 74%.

- **FA3-III (2014-2016)**

In 2016, IPH had a staff complement of 31, including 22 technical and five e-learning staff. However, in October 2016 the Federal Ministry of Home Affairs withdrew the permission for IPH to receive and use

foreign grants, and the institutional cooperation with ITM under FA3 ended in December. IPH experienced a financial crisis and in 2017 had to let go about half of its workforce. It started to grow again in 2018 and by 2019 counted 24 staff, including 18 technical and 2.5 e-learning staff.

The national and international recognition of IPH for its excellence in health systems research grew throughout the programme period. In 2016, IPH was commissioned by the Federal Ministry of Health and Family Welfare to conduct health impact assessments of policies and programmes in non-health departments and ministries. IPH also established a reputation for its research portfolio on non-communicable diseases and continued its advocacy for tobacco control. A third EPHP conference was organised in 2016, increasing the reputation of this event among health systems researchers and decisionmakers.

The market for MPH programmes in India was saturated according to an analysis of IPH, and IPH instead took up a leading role in developing and administering distance learning programmes both in the form of certificate e-learning courses with a duration of two to six months, and in the form of shorter blended workshop courses with on-site and remote learning components. Although these courses are open to all professionals meeting the entry requirements, the main target has always been public health officials in the public sector. Between 2014 and 2016 IPH conducted six courses on public health management (ePHM) for health managers at different levels. Inscriptions in these courses totalled 259 with a successful completion rate of 76 percent. A three-month course on health financing (eFHS) started in 2016 with 26 participants among whom 17 graduated. This work set the stage for the expansion of the IPH e-learning portfolio which, by 2020 included five recurrent thematic courses with to-date more than 1,900 inscriptions.

In 2014, IPH took on the leadership and secretariat functions of the Emerging Voices for Global Health (EV4GH) network that was started by ITM as a training programme in 2010. EV4GH continued to grow into an influential network of young researchers and decisionmakers from lower- and middle-income countries, increasing their voices in global health. Among other achievements, EV4GH became a thematic working group of Health Systems Global, a global membership organisation that hosts the biennial Global Symposia on Health Systems Research. In 2016, IPH organised a blended training workshop for EV4GH with two months on-line and one-week face-to-face teaching for an international group of 40 young researchers.

During FA3-III, two of the PhD candidates who received their scholarship during FA3-I defended their theses and one new PhD scholarship was awarded, bringing the total number of sponsored PhD candidates to four. The number of publications in international peer reviewed journals decreased from 23 in FA3-II to 16 in FA3-III, however the proportion with first or second authorship of IPH staff increased further from 74% to 94%.

1.2.3 ALIGNMENT WITH LOCAL PRIORITIES AND POLICIES

To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?

IPH was conceived by an Indian graduate of the ITM MPH programme who had spent additional time at ITM as a tutor of international MPH students. It was based on a perceived need to strengthen public health functions in the highly privatised Indian health care system. In 2007, when the decision was taken to include IPH among the grantees under FA3, the institution was an outlier. It was a small and relatively insignificant partner among the large universities, disease control programmes and research institutes in the FA3 portfolio. Institutional links of IPH to the Federal Government of India were weak and existed only in the form of personal contacts. However, IPH strengthened its links to the Karnataka State Government through the foundation of the Swasthya Karnataka (Karnataka Health) consortium which included the major health trusts, NGOs and research institutions in the state. Swasthya Karnataka was responsible for establishing the comprehensive district health action research programme and the associated training course for health managers in Tumkur District.

Through its research programme on health insurance and health financing that started in early years and gained strengths over time, IPH established its position as a relevant research institution that filled a need for evidence as the state and national governments in India were exploring the roll-out of health insurance schemes in the context of their strategies to achieve universal health coverage.

During the time of institutional cooperation with ITM from 2008 and 2016, IPH gradually widened its scope of research, training and advocacy activities by including urban health, non-communicable chronic disease care and prevention, and tobacco control. Not all of this was funded with grants under FA3, but it was influenced by the continued active exchange between ITM and IPH. Strategic initiatives supported by ITM, for instance the EPHP conferences, contributed significantly to increasing the recognition of IPH beyond the state boarders.

A key decision influencing the alignment and relevance of the IPH-ITM cooperation was based on the analysis that the market for MPH programmes in India was saturated. IPH therefore specialised in the development and implementation of modular e-learning and blended skills-building courses. Initially, this involved adapting the Tumkur district health managers course to an e-learning platform. Other thematic courses followed, all of them linked to a research portfolio pursued by IPH.

The evaluation team's survey of e-learning graduates did not have a sufficient response rate to provide representative data. The responses, however, suggest that the e-learning course on public health management filled a need. Among the 14 respondents based throughout India who had completed the course, all were currently employed in the public, NGO and private sectors, all rated the training as useful or very useful, 6/14 stated that it greatly improved their skills in their current job while another six stated that it contributed to a major degree to advancing their career.

1.2.4 INVOLVEMENT OF PARTNERS

Were partners sufficiently consulted during the development and implementation of the programme?

From the start of the institutional cooperation, the partnership between ITM and IPH has been collaborative. Some approaches implemented by IPH were developed while the founding director was studying in Antwerp. This is, for instance, visible in the initial focus on district health management. However, he also had extensive experience in the Indian health system at national and state level, and together with his growing team of young researchers took the lead in building the research and training portfolio of IPH.

While the ITM approach to district health systems development had a major role in the foundation of IPH, the direction of its growth and development was entirely driven by its Indian faculty, with ITM assuming an advisory role.

1.2.5 SUSTAINED IMPACT

Has the institutional collaboration under FA3-III generated a sustained impact?

The impact of the third phase of FA3 from 2014 to 2016 cannot be assessed in isolation from the impact of the nine years of collaboration between ITM and IPH between 2008 and 2016. The sustained impact of the collaboration is the institutional sustainability of IPH as a centre of excellence for health systems research and training in India.

The acid test for this sustainability came rather abruptly in late 2016 when IPH lost its authorisation by the Indian government to receive foreign grants. The situation was critical as would be expected for any young institution suddenly losing a major source of its annual income. In 2016, financial support under the FA3 project accounted for 53 percent of the income of IPH. The institution survived this crisis, and, after an initial slowdown of activities, has been on the way to recovering its former strength.

In 2007, IPH was a small institution with seven technical staff that generated an annual income of less than 50,000 Euro through activities and grants from eight donors. By 2019 IPH had an 18 technical and field staff and 2.5 e-learning staff who generated an income of more than 500,000 Euro from 17 donor grants and through course registration fees.[17]

At the same time, IPH grew its international network through the hosting of the EV4GH secretariat and through multiple south-south institutional collaborations. In the Indian health system at national level, it established its position, especially through the EPHP conferences. One senior informant, however, felt that IPH did not 'market itself' sufficiently at national level. IPH staff participate in national policy fora on primary health care, tobacco control and health financing, however this is not always linked to sufficient institutional recognition of IPH.

1.2.6 DISSEMINATION AND USE OF RESULTS

Were the programme results and lessons effectively disseminated and applied?

The media footprint of IPH is surprisingly large considering the fact that it is, by many standards, still a relatively small institution. Since 2011, IPH publishes an on-line newsletter that has a wide distribution list. Two issues were published in 2020 drawing attention to the widening scope of the research by IPH which, in addition to the traditional fields of district-level primary health care and health financing included research on tuberculosis, chronic health conditions of the urban poor, tobacco control, road safety and health equity including tribal health. The IPH internet site also hosts a blog page with many up-to-date entries on current global and national health issues.

IPH research publications in scientific journals have continued to grow. The three EPHP conferences organised by IPH during the period of the institutional cooperation with ITM, and its leadership role in the EV4GH network have contributed to the visibility of IPH among health systems researchers nationally and internationally, while also strengthening the engagement of researchers with decisionmakers in India. The most recent EPHP was held in 2016. Since 2018 IPH hosts a series of 'annual days orations' with high profile speakers including researchers, activists and policy-makers.

Advocacy activities of IPH gained public attention in 2011 when IPH succeeded in a legal challenge of the conflict of interest in governments on tobacco control in the High Court of Karnataka. The court directed the federal government to adopt a code of conduct preventing the interference of the tobacco industry in public policy.

1.2.7 EFFICIENCY

To what extent were financial resources used economically and in a timely manner?

At the start of the institutional cooperation in 2008, project financing encountered a bottleneck as government approval for receiving funding from outside India was only obtained in January 2009. Only 18 percent of the first-year budget could therefore be executed. This was partly corrected in 2009, but the overall budget execution under FA3-I remained low at 69 percent. Budget execution fell even further behind under FA3-II when only 57 percent of the three-year budget was spent. The main reason was the low execution of the grants budget which accounted for about 60 percent of the unspent balance. The reason for this spending gap is not entirely clear.

According to the IPH Director, ITM was flexible in terms of disbursement of funds, responding to project requirements and accommodating contextual challenges. ITM also invested in building administrative capacity through training of finance and human resource management staff. IPH submitted six-monthly

[17] Sources: Audited financial reports 2007/08 and 2018/19

activity reports, annual reports on the utilisation and justification of funds, and biennial external audit reports. ITM informants attested to a high level of integrity in IPH management and confirmed that throughout the period of cooperation, no issues in financial management were identified.

1.2.8 SUSTAINABILITY

The cooperation between ITM and IPH under the DGD framework contract ended in 2016. The sustainability of this cooperation is reflected in the sustained impact discussed in section 1.5.

1.2.9 SWITCHING THE POLES

The FA3 motto '*Switching the Poles*' refers to the application of the principles of country ownership as expressed in the overall objective of FA3 '*to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby contribute to the reduction of poverty and inequity*'.

Ownership of the cooperation programme with IPH was never an issue that required a major effort of 'switching'. In 2009, IPH defined its strategy along three major lines:[18]

1. **Research**, with the main objective of strengthening health systems and with four major themes:
    - Local health systems
    - Social protection (including health financing)
    - Health promotion
    - Health policy
2. **Training** to fill the gap between the knowledge of academics and the applied knowledge in health services
3. **Advocacy** for strong health systems rather than individual disease control programmes

These programmatic foci were elaborated by IPH in a joint workshop with ITM staff. The programmatic approaches in the early years of the cooperation had a distinct ITM flavour, and ITM provided significant technical support in the initial phases. However, the foci and the approaches were determined by the founders of IPH, their deep knowledge of the challenges and needs of Indian health systems, as well as their technical knowledge acquired in their formative years in the ITM MPH programme.

After the initial phase of the cooperation agreement, the role of ITM in the partnership became purely advisory and all activities were planned, initiated and executed by IPH. Indicators of the extent to which the project achieved the objectives of switching the poles include:

- the nomination of an IPH staff member and sponsored PhD graduate to the General Council of ITM;
- the transfer of the secretariat and leadership of the EV4GH network from ITM to IPH; and
- the IPH technical expertise in developing and implementing virtual training modules which, according to interviewed ITM staff, has surpassed the technical expertise at ITM, providing opportunities for a south-north flow of skills and knowledge.

1.2.10 GENDER MAINSTREAMING

- **INSTITUTIONAL POLICIES AND PRACTICES**

IPH developed a human resource policy that included a gender policy in 2009 independently of the collaboration with ITM. The policy is family-friendly with provisions for six-month maternity and 15-day paternity leave. There are arrangements for breastfeeding in the workplace and policies for the transition of staff from maternity/paternity to work by allowing work from home, flexible work hours and possibilities of part-time work. IPH has a Gender Issues and (prevention of) Sexual Harassment (GISH) committee and

[18] The IPH Perspective Plan 2009-2014

guidelines that conform to the requirements of the Government of India and provide for an effective and confidential reporting mechanism in case of gender discrimination. IPH routinely organises gender sensitisation activities for staff and has recently conducted a gender audit.

The current governing Board of IPH is presided by a female economist and has four female and five male members. The director of IPH is male and of the four assistant directors who make up the core faculty two are male and two are female.

- **PROGRAMMATIC POLICIES AND PRACTICES**

IPH has Institutional Ethics Committee and Research Advisory Board that evaluate all internal proposals for ethics and integrity including on gender issues. Although there is no specific body or mechanism overseeing gender integration in research at IPH, the director stated that the institutional values of IPH include the application of an equity and a gender lens in all of the institutes work. As for institutional policies and practices, efforts to mainstream gender in the research and training portfolio were developed by IPH without ITM input. The logical frameworks and performance frameworks of the institutional cooperation project throughout FA3 were gender blind.

On the IPH website, at least three entries with relevant gender content can be found:

- A 2016 newspaper article on initiatives to remove transgender from the list of mental illnesses that quotes IPH staff in support of the initiative;
- a 2017 blog on the coverage of gender issues at the 2016 Global Symposium on Health Systems Research in Vancouver; and
- the summary of a 2019 IPH webinar with the theme of 'Gender Inequities in Publicly Funded Health Insurance Schemes'

1.2.11 CAPACITY STRENGTHENING

Four PhD scholarships were awarded under the FA3 cooperation agreement. Two candidates, Prashanth Nuggehalli Srinivas and Upendra Bhojani defended their theses prior to the end of the institutional cooperation in 2016. A third candidate, Vijayashree Yellappa completed her degree in 2019 while the fourth, Dorothy Lall, is nearing completion. All four were interviewed and the three who had completed their PhD were asked to complete a data collection table that was developed on the basis of the ESSENCE framework. The table was not completed by Upendra Bhojani who instead, as the current director of IPH, completed a similar data table with information on institutional development of IPH.

Table 3. Individual Capacity Strengthening

Individual Capacity Strengthening		
Indicator	**Prashanth N.S. (male)**	**Vijayashree Yellappa (female)**
PhD degree	**PhD Sponsorship**: 2008 **PhD Defence**: 2015 **Institution**: U Louvain **Thesis**: Realist evaluation of capacity building programme of health managers in Tumkur, India	**PhD Sponsorship**: 2012 **PhD Defence**: 2019 **Institution**: U Maastricht **Thesis**: Optimising the involvement of private practitioners in Tuberculosis care and control in India
Professional development	**2010-2017**: IPH Faculty and Equity Cluster Lead **Currently**: Assistant Director (Research) and DBT/Wellcome Trust India Alliance Fellow at IPH	**2010-2017**: IPH Faculty **Currently**: Senior Specialist, Health System Transformation Platform (HSTP), and Non- Resident Fellow, National Institution for Transforming India (Government Policy Commission)

Individual Capacity Strengthening		
Indicator	**Prashanth N.S. (male)**	**Vijayashree Yellappa (female)**
Peer-reviewed publications with 1st or 2nd authorship 2014-2018	• **2014**: 2 • **2015**: - • **2016:** 1 • **2017**: 2 • **2018**: 3	• **2014**: 2 • **2015**: 2 • **2016:** 3 • **2017**: 5 • **2018**: 1
Policy briefs and other (non-scientific) publications 2014-2018	Multiple policy briefs not individually listed	• **2014**: 1 • **2015**: - • **2016**: - • **2017**: - • **2018**: -
Conference presentations 2014-2018	Multiple presentations in Global symposia on Health Systems Research (2014, 2016, 2018)	• **2014**: 1 • **2015**: 1 • **2016**: - • **2017**: 2 • **2018**: 2
Academic awards and prizes 2014-2018	• **2014**: - • **2015**: - • **2016**: - • **2017**: - • **2018**: -	• **2014**: - • **2015**: - • **2016**: - • **2017**: - • **2018**: -
Competitive research grants won 2014-2018	• **2014**: 1 ($100K) • **2015**: 1 ($100K) • **2016**: - • **2017**: - • **2018**: -	• **2014**: 1 ($50K) • **2015**: - • **2016**: - • **2017**: - • **2018**: -
Boards and technical group memberships	**2014-2018**: Chair then Co-Chair of EV4GH **2018-2021**: UKRI International Development Peer Review College for the Global Challenges Research Fund **2020-onwards:** Governing Council, ITM **Not dated**: Honorary Associate, Nature Conservation Foundation **Not dated**: Member of Governing Board, Vivekananda Girijana Kalyana Kendra **Not dated**: Trustee, Karuna Trust	**2014-2017**: Senate, Rajiv Gandhi University of Health Sciences **2014-2016**: Honorary Visiting Associate Professor, department of Public Health at Sri Devraj Urs Medical College **2015-2017**: Expert Committee of Advanced research, Rajiv Gandhi University of Health Sciences **2018**: National TWG Tuberculosis
Perceived effect of PhD sponsorship on personal career	*"It helped me launch an independent career as a researcher rooted in the global south"*	*"It has been phenomenal"*

Table 4. Institutional Capacity Strengthening

Institutional Capacity Strengthening	
Indicator	**Value**
Staffing in 2008	Total staff 9 (4 female; 5 male) (2 support staff; 7 technical staff)
Staffing in 2016	Total staff 31 (13 female; 18 male) (4 support staff; 5 IT and e-learning staff; 22 technical and field staff)
Staffing in 2019	Total staff 24 (11 female; 13 male) (3.5 support staff; 2.5 IT and e-learning staff; 18 technical and field staff)
Annual expenditures in 2008	INR 43.58 lakhs (ITM contribution 12%)
Annual expenditures in 2016	INR 366.95 lakhs (ITM contribution 53%)
Physical infrastructure development since 2008	Expansion from a two-room structure in 2008 to the current infrastructure of a main office comprising 6 rooms and a library space plus field offices in BR Hills and Mysore
Accreditations and institutional certificates since 2008	2012: Member of Karnataka State Anti-Tobacco Cell 2012: Nodal agency for technical expertise nominated by Government of Karnataka 2014: Member of Framework Convention Alliance 2017: Recognised Institution by Karnataka Evaluation Authority 2017: Recognition as SIRO (Scientific and Industrial research Organisation) under Ministry of Science and technology (GOI) 2018: NGO Darpan portal 2020: Organisational Capacity Enhancement Programme 2019-20 by Financial Management Service Foundation 2020: Member of Global Alliance of NGOs for Road Safety
Other forms of national or international recognition since 2008	Mostly covered above - except for getting several competitive research grants
Other collaborations	*No response*
Training programmes conducted between 2008 and 2016	**2014** • 3 e-learning courses on public health management (188 trainees) **2015** • 1 e-learning course on public health management (27) • 1 blended training workshop on education techniques (35) **2016**: • 1 e-learning course on public health management (44) • 1 e-learning course on health financing (26) • 3 blended training workshops/courses on health research practice, e-learning and emerging voices (total 76)

Institutional Capacity Strengthening	
Indicator	**Value**
Research projects initiated between 2008 and 2016	2008: Strategies for Improving Health Activities of MMC (Mumbai Mobile Creches) 2009: Health system stewardship and regulation in Vietnam, India and China" (EC) 2010: Comprehensive Tobacco control Karnataka (Tobacco-free Kids Action Fund) 2011: Urban Health Project in Kadugondanahalli (Medico) 2011: Socially inclusive health care financing in West Africa and India (Health Inc. / EC) 2013: Qualitative Research Study on Barriers to Point of Care Testing in India (McGill U.) 2013: Improving access to quality health care for slum dwellers in Bengaluru (Misereor) 2013: Training for implementation of VAS for key officials of SAST, ISA technical staff and department officials (Suvarna Arogya Suraksha Trust) 2014: Improving equitable access to quality generic medicines for patients with NCD in Tumkur (AHPSR) 2015: Technical support for costing of health services and determination of packages prices of hospital procedures (Jitender, Navneet & Co. cost accountants) 2016: Optimising the involvement of private practitioners in TB care and control in Tumkur District (TDR) 2016: Advocacy for stronger road safety and transport legislation in India (Global Road Safety Partnership) 2016: Funding the Health Care and Prevention Programmes (SAN Engineering & Locomotive Co Ltd) 2016: Support of NACO in the formulation of the National Strategic Plan for HIV/AIDS 2017-2024 (UNAIDS) 2016: Rapid Health Impact Assessment of Policies and Legislations towards prevention and control of NCDs (WHO)
Advocacy, research or training activities conducted in collaboration with NGOs and private sector between 2008 and 2016	• Swasthya Karnataka Consortium: Karuna Trust; St. John's Research Institute; C-LAMPS (2008-2012) • Private healthcare providers in KG Halli (Bangalore urban) from 2010-2016 • Private healthcare providers in Tumkur & Kolar districts • The Union on tobacco control activities • Many NGO representatives trained as part of IPH's e-learning programs; GHRP courses and Health Insurance workshops

Institutional Capacity Strengthening	
Indicator	**Value**
Government-led technical working groups or committees since 2008	• Karnataka State Anti-Tobacco Cell • Karnataka State Mentoring and Monitoring Group under NRHM for pilot and roll-out of community-based planning and monitoring of health services in Karnataka • Committee appointed by GOK Dept of Health and Family Welfare Services on developing state action plan on trauma care • Committee appointed by GOK Dept of Health and Family Welfare Services on regulation of smokeless tobacco and pan masala like products • Boards of KHSRC, NHSRC and SAST (Karnataka) • Committee on regulation of private health sector by GOK Dept of Health and Family Welfare Services • Committee by Karnataka Knowledge Commission on developing state health policy in Karnataka (*this is not an exhaustive list as we are not able to readily collate all data from past for such engagements*)

1.2.12 PEOPLE INTERVIEWED

Institution	Name	Function
(ex) WHO India	Sunil Nandaraj	(ex) National Programme Officer
HSTP India	Vijayashree Yellappa	Senior Specialist
HSTP India	Narayanan Devadasan	Technical Adviser; (ex) South Promotor
IPH	Dorothy Lall	Assistant Director (Education)
IPH	Prashanth Nuggehalli Srinivas	Assistant Director (Research)
IPH	Upendra Bhojani	Director; South Promotor
ITM	Bart Criel	Professor; North Promotor
Karnataka State	Sanathkumar Gurum	District TB officer
Karuna Trust	Hanumappa Sudarshan	Director

1.3 PERU

1.3.1 METHODOLOGY

Public health measures to contain the spread of SARS-CoV-2 in Peru affected the methodology of conducting the case study on the institutional cooperation between ITM and the Instituto de Medicina Tropical Alexander von Humboldt (IMTAvH) of the Universidad Peruana Cayetano Heredia (UPCH). A planned site visit and group meetings with IMTAvH staff could not be realised, and all data for this evaluation were collected in document reviews and remote interviews. Planned interviews with government stakeholders could not be conducted as they were working in crisis mode dealing with the rapidly expanding pandemic in Peru.

Nine semi-structured interviews were conducted with current and former staff of IMTAvH and ITM. A list of informants is provided in Section 1.13.

To assess the impact of the institutional cooperation on capacity strengthening, the coordinator of the cooperation programme at IMTAvH completed a data tool to collect information on institutional capacity, and six of the 15 scientists who received PhD scholarships with DGD funding under any of the three

framework agreements completed a similar data tool about individual capacity (Section 1.12). The tools were adapted from the ESSENCE Planning, Monitoring and Evaluation Framework for Research Capacity Strengthening.[19]

1.3.2 HISTORY OF THE COOPERATION BETWEEN IMTAVH AND ITM

IMTAvH is a research institute of UPCH, a private not-for-profit university that is one of the main academic institutions in Peru. UPCH is primarily financed with student fees and research grants. IMTAvH is active in research, training and clinical care for infectious and tropical diseases. It is located in a large public referral hospital in Lima and operates a molecular epidemiology laboratory on the main university campus. It has study sites in several locations of Peru where different tropical infections are endemic. Since 1995, IMTAvH organises the annual Gorgas International Course in Clinical Tropical Medicine together with the Gorgas Memorial Institute and the University of Alabama.[20]

The institutional collaboration between IMTAvH and ITM started in 1987 and is supported since 1998 under the framework agreements between ITM and the Belgian cooperation (DGD) (FA1, FA2, FA3, FA4). In addition to the institutional collaboration, IMTAvH participated in several scientific and academic networks supported by ITM.

- **FA1 (1998-2002)**

Under the first framework agreement, IMTAvH and ITM established a cooperation in four research fields: Cutaneous/mucocutaneous leishmaniasis; tuberculosis and Buruli ulcer; mycoses; and malnutrition/micronutrient deficiencies.

A clinical component was added to the research portfolio later under FA1, with the aim of building a strong link between clinical and laboratory sciences and services. The full integration of the clinical and laboratory components was achieved in 2002. Towards the end of FA1, a further change was initiated. The leishmaniasis research unit had acquired considerable capacity in molecular biology, and IMTAvH decided to build on this achievement by strengthening the capacity in molecular biology in all research components. According to the former director of IMTAvH, this was a change from a focus on diseases towards a focus of scientific and clinical disciplines.

- **FA2 (2003-2007)**

Under FA2, the change towards a discipline-oriented collaboration was implemented by a double team of South promotors at IMTAvH, the director who focused on clinical research, and the scientific coordinator whose focus was on molecular biology. This was also reflected at ITM with initially two promotors, one for clinical and the other for laboratory research. Immunology and microbiology were added to the portfolio of collaboration, further strengthening the laboratory infrastructure and capacity.

Strengthening the institutional management capacity of IMTAvH was an additional focus of cooperation under FA2. Support was provided to the project administrator to pursue his master's degree in administration. Management functions such as planning, monitoring and quality control were strengthened, a result that was acknowledged in interviews as having contributed to the successful integration of the laboratory and clinical research streams in the IMTAvH strategy and to the success of IMTAvH in managing grants from other sources.

Institutional collaboration on nutrition research was not continued in FA2. The thematic areas of cooperation included leishmaniasis, malaria, HTLV-1, tuberculosis, HIV and bartonellosis. Laboratory

[19] www.who.int/tdr/publications/essence-framework-2016/en/
[20] www.uab.edu/medicine/gorgas/

strengthening and scientific support in molecular biology were successful in improving the access to better diagnostic procedures for patients with tuberculosis, malaria, leishmaniasis and HTLV-1 infection and in epidemiological studies. Activities also started in the area of microbial resistance with the production of promotional material advocating the rational use of antibiotics. The number of publications of joint research in international peer reviewed journals increased steadily from one in 2003 to nine in 2007. Two sponsored PhD candidates obtained their degree during FA2, while three more were nearing completion.

- **FA3 (2008-2016)**

Four departments of ITM were involved in the cooperation with IMTAvH: Parasitology, Microbiology, Clinical Sciences and Public Health. In 2011, the coordination at ITM was consolidated in the Department of Biomedical Sciences with staff of the Clinical Sciences and Public Health departments mentioned as collaborators and co-promotors.

The goal of the institutional cooperation to strengthen IMTAvH as a scientifically autonomous centre of excellence in the field of applied clinical research on infectious and tropical diseases did not change under FA3. However, PhD training was emphasised to renew and strengthen the academic leadership at IMTAvH. Research and institutional capacity strengthening were conceived around the work of sponsored PHD scholars.

Throughout FA3, 14 PhD scholarships were awarded, and eight candidates defended their theses (three of them funded with scholarships under FA2). Four PhD candidates were still working towards their degree by the end of FA3. Some PhD candidates dropped out of the programme. This was one reason why cooperation in the field of bartonellosis and HIV were discontinued. The other thematic areas of cooperation, tuberculosis, malaria, leishmaniasis, HTLV-1-related diseases continued from FA2 and microbiology, specifically research on antimicrobial resistance, became a new strong focus. A distinguishing feature of research conducted at IMTAvH was the combination of clinical and epidemiological research with modern laboratory methodologies in all research areas.

The translation of research into health interventions and policies as well as research, development and implementation support of new tools for the control of infectious diseases was an implicit objective of the collaboration throughout FA3, but it became an explicit objective in the logical framework of the third phase (FA3-III).

Scientific publications in international peer-reviewed journals continued at a high level throughout FA3 with 22 publication in the first, 43 in the second and 24 in the third phase. The large majority of these publications had Peruvian first or second authors.

Specific achievements under the three phases of FA3 included:

FA3-I 2008-2010	IMTAvH was accepted as a clinical site for the STOP-TB programme; laboratory capacity was further strengthened; a biosafety committee and quality assurance system were established; a telemedicine programme was launched.
FA3-II 2011-2013	One sponsored PhD graduate took up a permanent position in the Faculty of Science of UPHC. Of 67 funding proposals submitted in response to international research proposal calls, 17 (25%) were funded. ITM and IMTAvH jointly organised the 'Latin-American training workshop on molecular epidemiology applied to infectious diseases' in 2013.

FA3-III 2014-2016	Three sponsored PhD graduates took up faculty positions at UPCH, and one was awarded the 'woman of science' prize of the national research council of Peru (CONCYTEC). Results of clinical and laboratory research on tuberculosis were taken up in the 2017 national guidelines for tuberculosis control, and work on the prescription habits of physicians under the antimicrobial resistance component fed an intervention that was rolled out nation-wide in 2017- 2019.

Expenditures under the FA3 framework contract, excluding ITM staff costs, amounted to 4.5 million Euro over the nine years of cooperation.

Years	Budget	Expenditure	Execution
2008-2010	1,470,730	1,536,147	104%
2011-2013	1,786,217	1,630,665	91%
2014-2016	1,331,946	1,313,840	99%
Total	**4,588,893**	**4,480,652**	**98%**

In addition, IMTAvH participated in four strategic networking projects of ITM: The Strategic Network on Tuberculosis; the Strategic Network on Neglected Tropical Diseases and Zoonoses; the Strategic Network on Laboratory Quality Management; and the Strategic Network for Clinical Research. Under these network projects, IMTAvH researchers obtained several grants, participated in international meetings and symposia and organised a training course on good laboratory practice in collaboration with partner institutions in Cuba, Bolivia and Ecuador. However, key informants at IMTAvH commented that the networking projects primarily supported links with ITM and not sufficiently among the other Latin American network partners. Another weakness mentioned was that, in comparison with other networks that organise exchanges among partners as frequently as twice per month, the ITM networks did not hold regular physical or virtual meetings. Opportunities to exchange among network partners were infrequent and occurred primarily during conferences and associated with other formal events.

1.3.3 ALIGNMENT WITH LOCAL PRIORITIES AND POLICIES

To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?

For each funding round under the framework agreements, the areas of cooperation for joint research and capacity strengthening were first identified by the Peruvian partners and then discussed with ITM. For FA4, for instance, in a three-day workshop in Antwerp. Some of the areas were not maintained because no matching counterpart was available at ITM. Furthermore, at least since FA3, ITM scientific and technical support in each research area was linked to PhD scholarships as a component of leadership strengthening. For research in bartonellosis and in nutrition, for instance, no matches could be identified at ITM in FA2, and the cooperation was discontinued. When the PhD candidate for HIV declined his scholarship during FA3, this component was also discontinued by mutual agreement.

Peru is implementing a plan for malaria elimination[21] for which research conducted under FA3 provided substantive inputs. It is also among the 30 highest burden countries for multi-drug resistant and rifampicin resistant tuberculosis in the world with an incidence rate that is ten times higher than the regional average.[22] The high prevalence of antimicrobial drug resistance in Peruvian hospitals was documented in a

[21] https://pesquisa.bvsalud.org/portal/resource/pt/biblio-965065
[22] https://tbfacts.org/mdr-tb/

surveillance study of IMTAvH.[23] These three programme areas are government priorities under national health initiatives and programmes. Leishmaniasis and HTLV-1 infection, on the other hand, are neglected diseases. They do not have a major contribution to the burden of disease in Peru but they affect poor and marginalised populations (leishmaniasis) and have an impact on the safety of blood transfusions (HTLV-1). They are institutional priorities for IMTAvH because of expertise in these areas, although they are not explicitly identified as national priorities.

Since the start of the collaboration with ITM, IMTAvH identified priorities according to an assessment of need and capacity to respond. Over time, the growing expertise in the areas of malaria, tuberculosis and antimicrobial resistance was rewarded with increased participation and influence in national programme and policy decisions. The research on leishmaniasis and HTLV-1, on the other hand, focused more on the development of diagnostics that could be patented as part of a sustainability strategy of the Institute, although the availability of new diagnostics will also have an impact on control strategies and on the national burden of disease. Furthermore, the change of orientation at the start of FA2 from a disease-oriented approach to an approach that linked the development of laboratory technology to clinical service provision and epidemiological evidence generation has proven itself, for instance by facilitating the expansion of molecular biology techniques from laboratory studies of leishmania to malaria parasites. The potential to expand the scope of virology research on the basis of the expertise and infrastructure acquired for HTLV-1 is already being realised in FA4.

1.3.4 INVOLVEMENT OF PARTNERS

Were partners sufficiently consulted during the development and implementation of the programme?

All interviewed informants at IMTAvH and ITM confirmed the leadership of IMTAvH in the development and implementation of the cooperation programme, with input from ITM that varied according to the maturity of the research field at IMTAvH. '*Project leadership at IMAvH was already very strong from the start. IMTAvH already had a strong line of research. It did increase somewhat, but we reached a level where we are working as complete equals on all components. We collaborate with them like in any other project where we need a strong partner.*' [ITM respondent] This was confirmed by respondents from IMTAvH in different research areas who stated that IMTAvH was in charge of determining priorities and research questions, especially in the mature areas of tuberculosis, malaria and leishmania research. In virology and in the relatively new cooperation area of immunology, a stronger influence of ITM was also acknowledged.

IMTAvH staff, however, raised the issue that the decision to link research capacity strengthening to PhD scholarships at the start of FA3 was an ITM initiative. '*PhDs were part of a European philosophy. For us, it seemed more important to develop short courses, master level studies and training programmes.*' [IMTAvH respondent][24]

1.3.5 SUSTAINED IMPACT

Has the institutional collaboration under FA3-III generated a sustained impact?

The purpose of the cooperation project as stated in the logical framework for FA3-III was to '*strengthen IMTAvH as a centre for research and development of new tools for the control of infectious diseases and their implementation in communities.*' Sustained impact can therefore be expected on two levels. On the level of research and development capacity of IMTAvH, and on the level of health programmes and policies that use the evidence and tools generated by IMTAvH. The cooperation between IMTAvH and ITM has

[23] Garcia C et al. Emerg Infect Dis. 2012 Mar; 18(3): 520–521.doi: 10.3201/eid1803.100878
[24] Note: All quotes from IMTAvH respondents are translated from Spanish by hera

continued into FA4. It progressed through all framework agreements and phases without major changes in direction and only a few changes in content. It is therefore impossible to isolate the three-year period of FA3-III for an assessment of sustained impact.

On the **institutional level**, IMTAvH has acquired a unit for molecular epidemiology with trained staff and sophisticated equipment for PCR, electrophoresis, image recording, and amplicon manipulation. It has a BSL3 biocontainment facility for mycobacterial diagnosis, a research centre in Cusco that is strategically located for research on tropical parasitic diseases, and, since 2017, also a new immunology laboratory. The laboratories have gained international recognition, including by WHO. They provide a wide range of diagnostic services, and have contributed to attracting international grants, especially for research on malaria and tuberculosis.

Generating impact on **health programmes and systems** was not a primary objective throughout the years of collaboration. It was formally included for the first time in purpose statement of the logical framework of FA3-III. '*In reality, IMTAvH never generated a policy of how to influence and reach government systems, neither locally nor nationally. It is done on personal initiative. Researchers talk to the minister when necessary, but there is no policy that obliges us to do so*.' [IMTAvH respondent] Whether by personal initiative or as part of a programme objective, significant impact was achieved in malaria control by the prominent contribution of IMTAvH researchers to the national malaria elimination plan and by nation-wide training of malaria workers in techniques and procedures developed by IMTAvH. Tuberculosis research has influenced guidelines for case finding and for contacts of patients with drug-resistant tuberculosis. Research on anti-microbial resistance has changed hospital practices and prescription guidelines, initially among collaborating facilities but later rolled-out country-wide. A treatment guide for leishmaniasis was developed with IMTAvH input, and rapid diagnostic tests (RDTs) for HTLV-1, malaria and leishmaniasis can potentially have a significant impact on transfusion blood safety, clinical practice and disease control activities one they are ready for the market.

1.3.6 UNINTENDED OUTCOMES

Were there positive or negative unintended outcomes?

To some extent, the influence of IMTAvH on disease control programmes and policies in Peru was not an intended outcome from the start, but, as underlined by several interviewed informants, an achievement due to the personal initiatives of some researchers. It was, of course, supported by the strengthened research capacity of the Institute, and it was formally included in the logical framework of FA3-III. But knowledge translation was already on the agenda of ITM much earlier as illustrated by a quote of a senior IMTAvH staff: '*There was another issue that [the former ITM Director] insisted on, and I think it was one of his achievements. He used to ask: "… with all this research you are doing, are you having an impact on public health in the country". For him, this reconciliation [of objectives] was very important, and this is what we are doing: having an impact on the country.*'

An unexpected outcome mentioned by several respondents at IMTAvH, was the perceived high attrition rate of sponsored PhD candidates who did not complete their studies or who left UPCH or the country after completion. The time between the award of the scholarship and the achievement the degree was, in most cases quite long, varying between six and eight years. This, according to an ITM respondent, was primarily due to the fact that many candidates were medical doctors working in clinical practice rather than full-time researchers. Of the 15 PhD candidates who received scholarships under FA1-FA3, eight had completed their degree at the time of the evaluation, one was still working towards the degree, and six did not complete it. In interviews, three successful PhDs candidates were mentioned who had left the country after they were

awarded the degree. One of the issues mentioned were the limited opportunities for new PhDs to join the faculty of UPCH.

1.3.7 DISSEMINATION AND USE OF RESULTS

Were the programme results and lessons effectively disseminated and applied?

IMTAvH was active in research dissemination to the scientific community in Latin America and beyond through publications in peer reviewed journals, conferences and workshops. During the FA3-III period, they included, for instance, the organisation of the IV Annual Meeting of the International Centres of Excellence in Malaria Research with 120 participants from 20 countries, followed by an Advanced Seminar on Population Genetics with workshops attended by 300 participants. It also included annual theoretical and practical courses in the application of molecular epidemiology in infectious diseases.

IMTAvH also organised and conducted a large portfolio of training workshops for clinicians, including, for instance, during the FA3-III period, a course on basic concepts of tuberculosis for nurse technicians, or a course on the management of common bacterial infections for general practitioners. An even wider impact of dissemination activities was achieved through telemedicine for e-learning courses and for clinical cohort management, particularly in the tuberculosis and antimicrobial resistance components.

The application of results, i.e. the success of IMTAvH in knowledge translation, is discussed in Section 1.5. This aspect of the collaboration gained momentum during the latter part of FA3, but it only became a clearly stated objective in FA4: '*We will use a proactive strategy and actively disseminate findings to the Ministry of Health, assuming that the Ministry is in constant need of input to make and improve policy.*'[25]

1.3.8 EFFICIENCY

To what extent were financial resources used economically and in a timely manner?

Strengthening the management capacity of IMTAvH was primarily pursued during FA2, including the sponsorship of an administrator for a Master programme in administration. Respondents at IMTAvH and at ITM confirmed that programme administration was efficient. According to an IMTAvH respondent, there were occasional bottlenecks in the flow of funds from DGD, but ITM always reacted quickly and all research projects continued without cutbacks or stoppages. ITM respondents confirmed that financial management at IMTAvH was rigorous and transparent. However, as noted by one IMTAvH respondent, the Belgian cooperation as well as other international funders are '*demanding more complicated things in less time*', and there is therefore a continued need for IMTAvH to strengthen its administration.

The attrition of PhDs was mentioned as an efficiency issue by several IMTAvH respondents. One of them suggested that rather than training more PhDs, postdoctoral positions at UPCH should be supported which could potentially bring some emigrated graduates back to IMTAvH. In fact, the support for two postdoctoral positions was included in the plan for FA4. While sponsored candidates who do not complete their degree or who leave the Institute after completion could be considered a lost investment in the cooperation project, the risk of PhD sponsorship is known. The completion rate of the sponsored candidates was in line with the average completion rate in PhD programmes globally which is roughly about 50 percent.

One IMTAvH researcher acknowledged that the cooperation with ITM opened the access to other sources of research funds and to the participation in international networks. '*ITM has been part of our growth but it has not prevented us from growing in parallel in collaboration with other countries.*' [IMTAvH respondent]

[25] ITM: Meerjarenprogramma 2017-2021 version May 2017

1.3.9 SUSTAINABILITY

The institutional sustainability of UPCH and of IMTAvH is not an issue as they are well-established institutions in Peru with international reputation. Because of their private not-for-profit status, however, financial sustainability of the research activities of IMTAvH depend on a regular income from international research grants. '*There has always been a flow of money for the Institute as a result of the competitiveness of its researchers but the question we asked ourselves was, what would happen if this international flow of money is cut off, can the Institute be sustained, that is, is the university capable of sustaining the Institute? Is the Peruvian state capable of sustaining the Institute? Because living on research projects is not sustainable.*' [IMTAvH respondent]

Although briefly mentioned in FA3-III documents, financial sustainability was addressed explicitly in the FA4 strategy, reportedly written by IMTAvH staff: '*Financial sustainability will be promoted through the patenting process to be followed in order to license RDTs for commercial exploitation; at the same time, their proper use will be ensured from the social point of view. We will promote that the State would be the main distributor of the RDTs, something expected for diseases that affect the lowest socioeconomic groups in disease endemic areas*.'[26] The foundations for this sustainability strategy were laid during many years of research cooperation with ITM.

1.3.10 SWITCHING THE POLES

The FA3 motto '*Switching the Poles*' refers to the application of the principles of country ownership as expressed in the overall objective of FA3 '*to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby contribute to the reduction of poverty and inequity*'.

The objectives of improved health, reduced poverty and greater equity appeared somewhat late in the institutional cooperation strategies between ITM and IMTAvH, but they were addressed towards the end of FA3 and clearly formulated under FA4. In the institutional cooperation, on the other hand, switching the poles objectives were pursued systematically and successfully. '*We really applied switching the poles. From early on, the Peruvian colleagues decided what they wanted to do. Over time, there were three Belgian scientists embedded in the Institute, but they went there to learn, not to teach or to build capacity or to supervise.*' [ITM respondent] These sentiments were echoed by a researcher at IMTAvH: '*Two years ago, ITM invited me as a teacher to the master's degree in public health that I have been teaching since 2008. This is an example of switching the poles. In the same way that we continue to invite ITM staff as expert teachers in our training programmes, they invite us because of our expertise. This illustrates the principle of switching the poles.*' [IMTAvH respondent]

Interviews with informants from both institutions described a mutually beneficial synergy, not so much a switching of poles but rather a horizontal equilibration between them. For research in virology, scientific and technical support is still provided by ITM; for malaria, tuberculosis, antimicrobial resistance and leishmania research, the expertise of the two institutions is complementary and mutually enriching; the scientific and technical lead in the research and development work on RDTs is at IMTAvH.

1.3.11 GENDER MAINSTREAMING

In FA3 project reports, gender as a transversal issue was treated as a 'ticking the box' issue. In interviews, respondents mostly referred to the high proportion of women leaders in UPCH, in IMTAvH and among

[26] ITM: Meerjarenprogramma 2017-2021 version May 2017

sponsored PhD candidates. They also acknowledged that this was more due to coincidence or to a general trend in health sciences than because of a gender equality strategy.

In research, sex-disaggregated data are collected as part of good research practice. Both ITM and IMTAvH respondents confirmed that gender mainstreaming in institutional and in research practice was never a topic of discussion between them. The cooperation was largely gender-blind. Gender issues received more space in the FA4 strategy which shows some gender-awareness by declaring that researchers will '*explicitly consider strategies to reach women in studies in case they may be underrepresented*.' This would, however, only be a first step in the integration of gender in research.

1.3.12 CAPACITY STRENGTHENING

Capacity strengthening to the level of reaching a capacity equilibrium, has been a major focus and achievement of the ITM collaboration with IMTAvH. This was acknowledged by a senior IMTAvH staff: '*My experience with other collaborating partners is that they do not have the same vision as the Belgians. The Belgian cooperation has the advantage of having an institutional or global vision of investing part of the resources in institutional strengthening. This is one of the things that allows me to differentiate it from the cooperation with other countries.*' [IMTAvH respondent]

For a systematic assessment of institutional and individual capacity gains, the evaluation team applied a data collection instrument adapted from ESSENCE Planning, Monitoring and Evaluation Framework for Research Capacity Strengthening. The results are presented in the following table. They are less conclusive and reflective of actual achievements than expected because only six of the 15 sponsored PhD scholars completed the data tool, not all with the same level of consistency.

Institutional Capacity Strengthening	
Indicator	**Value**
Staffing in 2008	7 Laboratory Heads (5 female, 2 male) 3 Unit Heads (0 female, 3 male) 8 PhD Researchers (1 female, 7 male) ? Programme Heads (data not available)
Staffing in 2019	12 Laboratory Heads (6 female, 6 male) 7 Unit Heads (0 female, 7 male) 18 PhD Researchers (7 female, 11 male) 3 Programme Heads (1 female, 2 male)
Annual expenditures in 2008	(Information not available)
Annual expenditures in 2016	(Information not available)

Institutional Capacity Strengthening	
Indicator	**Value**
Physical infrastructure development since 2008	• Molecular Epidemiology Unit (2003-up to now) The Molecular Epidemiology unit (PCR core) is equipped with thermocyclers, real-time PCR machine, electrophoresis equipment, image recording equipment, and facilities to carry out amplicon manipulation and differential display analysis under good practice rules to avoid DNA contamination and achieve reliable data acquisition. The laboratory personnel is trained in the responsible conduct of clinical research, hazardous materials and biosafety as well as on the international shipping of biological agents culture capabilities with CO2 incubator and 5 network computers with data analysis and flow cytometry software (FlowJo). This lab routinely supports the HIV cohort by processing patients' CD4 counts. • BSL-3 facility for brucellosis and tuberculosis (2012) • The UPCH-UTMB Collaborative Research Center (2012) This is a facility with over 1,300 square feet of office and laboratory space in Cusco city. The centre is strategically located near areas endemic for tropical parasites like Fasciola, soil transmitted helminths, and intestinal protozoans like Giardia and Cryptosporidium. • Laboratory of Immunology (2017) The recently renewed Laboratory of Immunology occupies two adjacent environments with a combined area of 60m2. Up to twelve working stations are available with two additional class A2 biosafety cabinets, light, inverted and fluorescent microscopes, ELISA reader, automated plate washer, four refrigerators, one ELISpot reader, two refrigerated centrifuges and one microcentrifuge
Accreditations and institutional certificates since 2008	• Laboratory of Malaria: Quality Practice certified by the WHO/ FIND. • Clinical Mycology Laboratory: certified by the College of American Pathologists • Laboratory of Parasitology: Quality Management certified by Faculty of Medicine, Universidad Peruana Cayetano Heredia
Other forms of national or international recognition since 2008	• UNESCO-Equatorial Guinea International Research in Life Sciences 2014
Other collaborations	N/A
Training programmes conducted between 2008 and 2016	• PARACAS: Program for Advanced Research Capacities for AIDS in Peru: 14 trainees • Peru ICOHRTA Network for AIDS/TB Research Training: 15 trainees • Strengthen & Capacity for Improving Strategies and / or Methods for Diagnosis: 3 trainees • Endemic Infectious Diseases in the Peruvian Amazon Training Grant: No data available • Molecular Epidemiology Applied to Infectious Diseases: Not data available

Institutional Capacity Strengthening	
Indicator	**Value**
Research projects initiated between 2008 and 2016	1. "Strengthen R & D Capacity for Improving Strategies and/or Methods for Diagnosis, Monitoring and Control of Infectious Diseases" (2014- 2016). 2. Caribbean, Central and South America Network for HIV Epidemiology (CCASAnet) 3. A novel transnational strategy to control high risk tuberculosis transmission events (2016-2019) 4. A proof-of-concept, open label study to assess the efficacy, safety, tolerability and pharmacokinetics of single doses of DSM265 in adult patients with acute, uncomplicated Plasmodium falciparum or vivax malaria, mono-infection over a 28-day-extended observation (2015). 5. A randomised, double blind, doubly dummy, comparative multi-centre study to assess the incidence of haemolysis, safety, and efficacy of tafenoquine (SB-252263, WR2386605) versus primaquine in the treatment of subjects with Plasmodium vivax malaria (2015). 6. Evaluation of a Diagnostic Device, CL Detect™ Rapid Test, for the Diagnosis of Cutaneous Leishmaniasis in Peru Phase I 7. A multi-centre, double blind, randomised, parallel group, active-controlled phase II study to evaluate the efficacy, safety and tolerability of Tafenoquine (SB-252263, WR238605) in subjects with Plasmodium vivax malaria. 8. Towards Elimination of Malaria in Peru (2015-2018) 9. Sero-surveillance tools for the detection of Plasmodium vivax infections and the monitoring of efforts for the control and elimination of malaria in Amazonian countries (2016-2018) 10. Efficacy, Immunogenicity and Safety Study of Clostridium Difficile Toxoid Vaccine in Subjects at Risk of Developing C. difficile Infection (2015) 11. Invasive pneumococcal disease in Peruvian children (2016-2019). 12. Recognition of the primary infection by Pneumocystis in infants: a silent threat to public health (2015-2019). 13. Antimicrobial resistance profile of Enterobacteriaceae in Peru. 14. Diagnosis of Latent Tuberculosis in patients with Diabetes at outpatient endocrinology clinic at referral Hospital in a prevalent Tuberculosis area in Lima, Peru (2015). 15. Linkage between Tuberculosis and Diabetes (2016-2018) 16. Residual malaria hotspots in Peru and Brazil: setting the stage for testing improved interventions". The objective of this project is to investigate the magnitude and causes of residual malaria parasite transmission in selected settings (communities in Mazan, a riverine area in Loreto) (2016-2017). 17. Joint project to strength research skills on molecular epidemiology and to uncover malaria transmission features relevant for its control in the Peruvian Amazon (2016-2018)
Advocacy, research or training activities conducted in collaboration with NGOs and private sector between 2008 and 2016	• N/A
Government-led technical working groups or committees since 2008	• Eduardo Gotuzzo, Expert Committee collaborator for the HIV control and prevention program at MoH (2010-Present) • Coralith García, Member of the multisectoral commission to face antimicrobial resistance at MoH (2016-present) • Patricia García, Member of the Advisory Committee at the National STI/ HIV Program. MoH (2005-present) • Patricia García, Minister of Health (2016-2017)

Individual Capacity Strengthening 1			
Indicator	**Vanessa Adaui**	**Christopher Delgado**	**Coralith Garcia**
PhD degree	Sponsored 2005-09 PhD 2011	Sponsored 2012-18 PhD 2019	Sponsored 2009-12 PhD 2016
Professional development	Universidad Peruana de Ciencias Aplicadas (UPC): Researcher	University of Antwerp: Researcher	UPCH: Chief of Research, Faculty of Medicine
Peer-reviewed publications with 1st or 2nd authorship 2014-2016	• **2014**: 0 • **2015**: 1 • **2016**: 1	• **2014**: 1 • **2015**: 0 • **2016:** 1	• **2014**: 1 • **2015**: 0 • **2016:** 2
Policy briefs and other (non-scientific) publications 2014-2016	• 1 (2015)	• 0	• 0
Conference presentations 2014-2016	• **2014**: 3 • **2015**: 1 • **2016:** 3	• **2014**: 1 • **2015**: 1 • **2016**: 2	• **2014**: 3 • **2015**: 4 • **2016:** 4
Academic awards and prizes 2014-2018	• 1 (2016**)**	• 2 (2014 & 2015)	• 0
Competitive research grants won 2014-2018	• 1 (2015) €96K	• 1 (2016) €75K	• 6 (2016-2018) Total $61.5K
Boards and technical group memberships	-.-	Expert group on collaboration with the South and Global Engagement (UAntwerp)	Multi-sector group to elaborate the Peruvian national plan for fighting against antimicrobial resistance. National committee to evaluate the development of the national plan for combating antimicrobial resistance. National sub-committee to elaborate the plan for implementation of antimicrobial stewardship in Peruvian hospitals.

Individual Capacity Strengthening 1			
Indicator	**Vanessa Adaui**	**Christopher Delgado**	**Coralith Garcia**
Perceived effect of PhD sponsorship on personal career	*Pursuing a PhD allowed me to learn first-hand all the scientific process, to realise that every scientific venture has its own set of challenges, to experience how scientific knowledge is built and revised, and the important role and value of mentorship. It also allowed me to improve my leadership and communication skills and get training in manuscript and grant proposal writing. All this learning process has been instrumental for reinforcing my passion and interest in becoming an academic researcher*	*For my PhD project I used data from a malaria study carried on during the FA2 between ITM A and UPCH. The results gathered from my data analysis were quite useful to accomplish my PhD degree but also allowed me to get travel grants to continue my training in US and Belgium*	*I am recognised as a national leader in the study of antimicrobial resistance. I have been working with different sectors of the Ministry of Health to combat antimicrobial resistance and to improve the use of antimicrobials in the hospital environment since 2018*

Individual Capacity Strengthening 2			
Indicator	**Veronica Soto**	**Dionicia Gamboa**	**Larissa Otero**
PhD degree	Sponsored 2009-2012 PhD: Not completed	Sponsored 2000-06 PhD: 2008	Sponsored 2010-2013 PhD 2016
Professional development	MoH: Monitor of the national zero malaria plan	UPCH: Chief, Department of cellular and molecular sciences	UPCH: Assistant Professor Faculty of Medicine
Peer-reviewed publications with 1st or 2nd authorship 2014-2016	• **2014**: 1 • **2015**: 0 • **2016:** 0	• **2014**: 0 • **2015**: 1 • **2016:** 2	• **2014**: 1 • **2015**: 3 • **2016:** 3
Policy briefs and other (non-scientific) publications 2014-2016	• 0	• 1 (2015)	• 5 (for national TB programme)
Conference presentations 2014-2016	• 0	• **2014**: 3 • **2015**: 2 • **2016:** 2	• **2014**: 2 • **2015**: 1 • **2016:** 1
Academic awards and prizes 2014-2016	• 0	• 2 (2015 & 2016)	• 1 (2014)
Competitive research grants won 2014-2018	• 0	• 13 (2014-2018) ca $2.4 million	• 2 (2014 & 2018) $168K

Individual Capacity Strengthening 2			
Indicator	**Veronica Soto**	**Dionicia Gamboa**	**Larissa Otero**
Boards and technical group memberships	-.-	WHO-FIND malaria RDT evaluation programme Malaria Cero Plan advisory group, Peruvian MOH IMTAvH-UPCH directory board member LID-FACIEN-UPCH directory board member WHO pfhrp2/3 gene deletion lab network member ITM Antwerp General council Nominated member of the malaria elimination guideline development group, Global Malaria programme	National Network of Paediatric Tuberculosis Research Steering Committee of the Instituto de Medicina Tropical Alexander von Humboldt Consultant, Monitoring and Evaluation Unit, Global Tuberculosis Program, WHO
Perceived effect of PhD sponsorship on personal career	-.-	*I learnt how to work in a multidisciplinary team from two different cultures; but with a common objective: to demonstrate that science could be done in sophisticate as well as under very difficult conditions*	*Very high impact. I deepened my learning on epidemiology, operational research, and research methods in general, supported by high quality mentorship in Belgium and Peru, and supported to conduct field research in Peru.* *The PhD title from a prestigious university has positively impacted my CV*

1.3.13 PEOPLE INTERVIEWED

Institution	Name	Function
UPCH- IMTAvH	Alejandro Llanos	Prof. Emeritus; ex Director IMTAvH
UPCH- IMTAvH	Coralith García	Chief of Research, Faculty of Medicine; ex sponsored PhD
UPCH- IMTAvH	Dionicia Gamboa	Coordinator malaria unit; ex sponsored PhD
UPCH- IMTAvH	Eduardo Gotuzzo	Prof. Emeritus; ex South Promotor
ITM	Gert van der Auwera	Senior Post Doc.; Coordinator IMTAvH collaboration in FA4
ITM	Jean-Claude Dujardin	Prof; North Promotor
UPCH- IMTAvH	Jorge Arevalo	Coordinator leishmania unit; Scientific Coordinator ITM collaboration
UPCH- IMTAvH	Larissa Otero	Coordinator tuberculosis unit; ex sponsored PhD
UPCH- IMTAvH	Michael Talledo	Coordinator virology unit; ex sponsored PhD

2 SUMMARY OF CAPACITY STRENGTHENING RESULTS BY INSTITUTIONAL COLLABORATION PROJECTS

Capacity strengthening in service delivery, training and research is interrelated. Strengthening the capacity of a national laboratory, for instance, creates new opportunities for local researchers, as well as national and regional training opportunities. Supporting MSc and PhD training, goes hand in hand with increasing research capacity. Strengthening the capacity and quality of providing medical treatment, for instance for HIV and Hepatitis C infection in Cambodia, also strengthened the training capacity of the partner institution as well as providing a basis for implementation and operational research.

Structuring the discussion of capacity strengthening according to the three areas of service delivery, training and research is therefore artificial and does not capture the interactions. To illustrate the achievements in the three areas of capacity strengthening, we are presenting the findings from the more detailed analysis of the cooperation with LRM (Benin) for service delivery, IPH-B (India) for training, and IMTAvH (Peru) for research capacity.

2.1 CAPACITY STRENGTHENING IN SERVICE DELIVERY

ITM supported developing the capacity of many south institutions in doing their core business. Collaboration with national laboratories includes knowledge and skills transfer from ITM to the local institution, ensuring that the laboratory can locally do all relevant diagnostic tests; regularly updating the local equipment and skills set to perform the latest 'state of the art' tests (respecting GCP and GCLP); extending the scope to include other infectious or neglected tropical diseases (NTD); developing and quality assuring national diagnostic networks, involving decentralised facilities; involving the national institution in regional networks and the regional/global dialogue on specific disease(s); and eventually co-built its capacity to becoming a national or regional knowledge or referral / reference centre. ITM's track record on progressively building an equal level playing field with its south partners in provision of laboratory services is successful. Also, activities planned under the FA3-III were to a very large extent implemented. The link with building research capacity is discussed in the next section.

A similar approach was used for strengthening national disease programmes and research centres, most of which also provide laboratory services. With exception of PNLTHA (DRC) where significant resources were invested to support national programme implementation, ITM/DGD funds are often too modest to support national programme implementation. Depending on the local context, resources are more spent on building laboratory service capacity, training of staff, doing research. However, some national disease programmes or institutions do confirm improved overall performance in terms of coverage, to which ITM support has contributed (e.g. PNLTHA, NCHADS). The result of ITM support on building the capacity of research centres (e.g. CRUN, LRC) is equally significant.

Support to institutes of tropical medicine also included strengthening of the laboratory services with a view to implement research.

Overall, service capacity strengthening activities under FA3-III were implemented as planned. If delays occurred, it was mostly due to external factors or to currency exchange issues (see efficiency).

Of the 24 south partners, there is one hospital (SHCH), one semi-private research centre (CRUN), two national laboratories (CHNU, LRM), three national health institutions (INRB, INHEM, NIMPE) and three national disease control programme (CNM, NCHADS, PNLTHA) often also providing laboratory services. The remaining are all training institutions, either public health schools, institutes of tropical medicine, post-graduate schools or universities. Also, CHNU is part of a university. In 11/24 collaborating institutions strengthening service delivery was an important part of the support provided, often also with a view to strengthen institutional research capacities.

If the main focus (or service) of the south partner is on training MSc or PhDs, capacity strengthening is discussed under 'training'.

Benin case study: Often, institutional capacity built is the result of a long and continuous process, as is documented for Benin (**see case study in Vol II, section 1.1**). During FA1 and FA2, the local (and global) knowledge on prevention, diagnosis and management of Buruli Ulcer (BU) and TB has been strengthened through IC with **LRM**. LRM's capacity to perform all BU tests locally was transferred from ITM to LRM. The impact of this support was the basis for the current LRM capacity in managing TB and BU and being recognised as a supranational centre for TB. Over the FA3 (I-II), LRM was designated as a supranational reference laboratory candidate for TB by the WHO and served as a centre of excellence for other countries in the West/ Central African Region; and LRM established a well-functioning national laboratory network for TB and BU diagnosis. During FA3-III, this capacity was further strengthened as the infrastructure for the Biosafety Level 3 laboratory was completed. Construction of the laboratory, equipping and operations were completed under FA4. Only ISO accreditation is pending and, Covid-19 willing, will be completed still in 2020 or early 2021. The functioning of the BSL3 lab is further supported under FA4. The laboratory today provides a continuous high-quality diagnostic service for TB and BU in Benin, covering the whole country. In addition, it serves as a regional referral centre for TB and leads a regional TB network.

The main purpose as from FA1 was to develop **INRB**'s (DRC) capacity as a national referral laboratory and research centre. Today the unit of molecular biology is completely implemented and functional and serves as a support for all INRB departments (parasitology, bacteriology and epidemiology). Trypanolysis, a reference technique, was implemented at INRB. The PNLTHA regularly sends samples to be analysed at INRB. The mAECT and MSC production workshop is fully operational. Both confirmation tests are provided to PNLTHA and DNDi. PNLTB and PNLUB also use the services of INRB. INRB also supported the Direction for disease control (DLM, MoH) in outbreak investigations (cholera, typhoid fever). Meanwhile, INRB has become a WHO reference lab for THA in the DRC. De facto INRB is a Regional reference centre as WHO asks INRB to quality control samples from Chad and CAR. It also provides mAECT testing materials to other countries.

Over the period 2014-2016, the **PNLTHA** has been strongly supported by ITM with an important additional budget (2,5 M € per year), for supporting the implementation of the national programme; amongst other for equipment, supplies and transport. ITM provided strategic support. Performance of the PNLTHA has significantly improved over FA3-III (the first support under the FA). PNLTHA increased the number of people screened by using CATT tests and new rapid diagnostic tests. PNLTHA also tried to integrate some control activities into the health system through operational research as well as pilot projects in the optimization of active screening by using mobile mini-teams, digitization and vector control. Integration was also assessed through a PhD study (expert from ESP) that led to a policy paper on integration under FA4. The concept of the small, flexible teams doing house-to-house screening (rather than people queuing for the whole day), also in less endemic areas has resulted in higher detection rates and higher coverage of male adults – who often were missed in the national mobile clinic strategy. Another new concept was the added quality assurance on the spot. Over the period 2014-2016 infection rates dropped progressively from 0.17% to 0.07%; participation at active screening increased from 82% to 86%. Coverage of people at risk, although still at the lower end, increased from 15% to 21% over the same period. Those figures confirm that ITM support has been effective but that the road to eradication is still long. Reportedly, performance continues to improve with FA4 support.

An important achievement was that the laboratory of Immunology of **CHNU** (LD, Senegal) was recognized as a national reference centre for CD4 counting. Every year, LD still coordinates the national external quality

control assessments all over Senegal (28 labs) with the assistance of QASI[27]. The laboratory continued to evaluate new emerging technologies for CD4 counting (immune monitoring) for their suitability in settings with limited resources. As a reference centre, the laboratory staff were consulted frequently by the national AIDS programme to provide advice or to evaluate new technologies. In 2016 the clinical laboratory performing CD4 counting received ISO 15189 certification. A new institution was created after 2016, the IRESSEF (Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation; see next section on research). It is a reference lab for UNAIDS and is internationally recognised.

FA3 has helped accelerating the development of **CRUN**, especially the quality of the lab ("probably the best lab in the country") and expanding the scope of research and clinical trials, CRUN's core business. CRUN started its activities in two hospital rooms and is now housed in a separate building. Staff increased from 10 to 245 (at one point). Capacity has been maintained and further developed after 2016. The Strategic Network on Laboratory Quality Management provided extra support. The CRUN itself strengthened the quality management system at the CM Clinical Biology Unit (via internal audit in 2014). CM was CRUN's partner as from FA3-III. See next section on research for more relevant information.

The **LRC** (Ethiopia), after only three years of FA3-III support, delivered high quality laboratory services that benefited service delivery and research. Laboratory quality was introduced, a molecular and immunological laboratory platform established. The laboratory adheres to good clinical practice (GCP)/and good clinical-laboratory practices (GCLP). Evidence-based practices were introduced, and an antibiotic stewardship committee was established. More research on antibiotic resistance led to more evidence which is currently being used in bedside teaching and training modules. Standard operating procedures (SOPs) are now available for all leishmaniasis research linked laboratory procedures. An external quality control system was established. The biobanking capacity was enhanced and the leishmaniasis laboratory now serves as a quality laboratory for UoG, and allows UoG to conduct high quality clinical and laboratory research. Further needed support for the microbiology laboratory was included in FA4 support.

At **ITM-PK** (Cuba) the capacity of laboratory staff for molecular diagnosis and typing of T. Cruzi and for the optimization of serological tests for the diagnosis of Toxocara infection was strengthened to support the planned research. The FA support resulted in a significant increase in laboratory services.

The reference molecular laboratory at **BPKIHS** (Cuba) was upgraded and strengthened with a deep freezer, a real-time PCR machine and consumables for molecular activities and serological tests in FA3-III. This upgrading of the biological laboratory made it possible to perform the necessary tests (with serology and PCR) on human and animal blood samples as well as on sandflies captured for the evaluation of local transmission. This has directly resulted into the expansion of Visceral Leishmaniasis (VL) surveillance and control activities in research districts. The effectiveness of the current VL treatment regimen has been monitored and the clinical outcomes of VL/PKDL were assessed.

ITM provided **SHCH** (Cambodia) with equipment for the microbiology laboratory for antibiotic resistance monitoring, trained laboratory personnel and helped establish quality assurance systems. The programme was about 50% laboratory strengthening and 50% clinical training. SCHC is also one of the biggest service providers for HIV treatment in Cambodia (covering more than 10% of all people on ART in the country). The shift to MGIT technology aligns SHCH's diagnostic strategy with national policy and strengthens their role as national diagnostic and treatment centre for tuberculosis. SHCH also passed the quality control by the Research Institute for TB in Japan (through CENAT). Also, SHCH has developed capacity to screen, diagnose and treat hepatitis C infection. A treatment program for HCV/HIV coinfected patients was started with technical support and medicine supply through the FA-3 III program.

[27] The Canadian international program on quality control in CD4 flow cytometry: "The Quality Assurance and Safety Initiative" (QASI)

NCHADS (Cambodia) has funds from many sources for national programme implementation, so the main objective of the contribution from ITM was to strengthen the human resource capacity through training programmes of health staff to implement the national strategy (see training). NCHADS' activities to enhance integrated service provision included regular coaching and mentoring visits in the three ODs. Over the life of the project, these ODs showed improvements in the percentage of pregnant women being tested for HIV and syphilis (from 88% to 100%), and 100% of HIV-exposed infants in these ODs received ARV prophylaxis and DNA-PCR tests.

The IC with **NIMPE** (Vietnam) aimed at infrastructure and technological development, strengthening of the national institution, human resource development and training, and knowledge development. A big part of the cooperation was about transfer of technology and technology development. Capacity in quality assurance was part of the capacity development. The laboratory infrastructure at NIMPE was improved within this program and advanced techniques for improved diagnosis were transferred in order to perform high level scientific research complying with international safety and quality standards. During the three year framework SOPs were developed for molecular biology techniques aiming at increasing the sensibility and high-throughput capacity in order to optimize the analysis of samples for large epidemiological studies and prepare NIMPE for the implementation of molecular surveillance tools within control programs (further developed within the FA4 program). This has been achieved through laboratory training of research staff from NIMPE at ITM, organization of a Molecular Epidemiology course with participation of NIMPE staff and technological transfer with follow up monitoring. A system of external quality control of laboratory analysis was implemented and further developed in the FA4 program.

In several countries the project interventions included setting up national or regional quality assurance networks (e.g. regular quality assurance of diagnostic services provided by decentralised facilities), which was highly appreciated. Noteworthy is that LRM (Benin) does quality assure some tests performed at ITM.

2.2 CAPACITY STRENGTHENING IN RESEARCH

Most of the research addresses national health or health system issues, with a view to improve national health programs or health system performance; or to contribute to global knowledge. Often this goes hand-in-hand with strengthening the service delivery capacity of the collaborating institution, be it a laboratory, a hospital, a research centre, a national disease programme, a training institution.

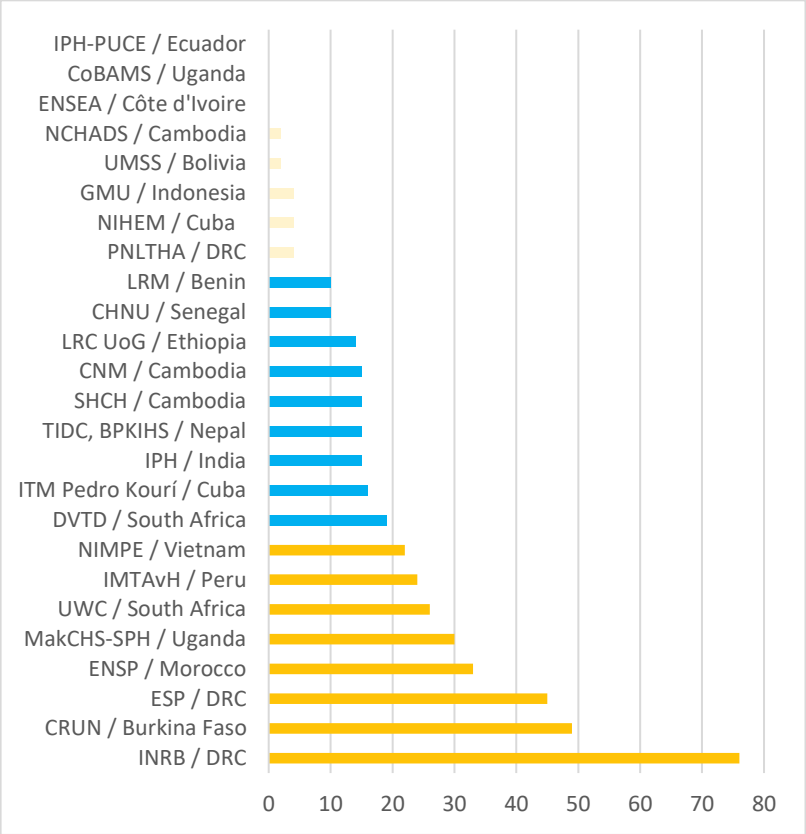
Overall, the research capacity built and the quantitative output in terms of peer-reviewed articles is impressive. The approach to build local research capacity by training PhDs is a strategy that works. The Benin case study shows that all PhDs trained over the FA2 and FA3 remained within the health system. Most are still working at the national laboratory (south partner), at the respective national disease programmes (TB, BU) or at a national public health school / University. As an example, CRUN's capacity is built on 19 PhDs. BPKIHS is another strong example. Obviously, it does not work to the same extent in all country / institutional settings.

ITM has contributed to strengthening the capacity of the south partner in participating in international calls for research, submitting joint proposals with other international institutions and accessing other research funds. It also contributed to raising the status of some institutions, now recognised as a national or regional research centre.

It is debatable whether efforts to strengthen research capacity in national institutions and/or national disease programmes that are mainly implementing agencies is worth the effort, if staff is not interested. It may be more to the benefit of the ITM expert than the south partner.

Strengthening research capacity was a major focus in most IC projects, except in Bolivia, Cuba (NIHEM), Ecuador, Indonesia, and DRC (PNLTHA). In some projects it was mainly limited to PhD research products. 17 IC projects produced more than 10 articles in FA3-III, of which 8 projects more than 20 articles. But overall, research has been a major output of the FA3-III (and of the FA3 in general), as indicated in the figure below.

Figure 1. Number of reported peer-reviewed publications by IC project (2014 to 2016)



The above figure lists the 450 peer-reviewed publications as reported in the three progress reports of FA3-III. The evaluation team did not verify if reported publications were all linked to the FA3-III support. For some institutions the reported number seems high compared to the scope and budget of the FA3-III intervention[28]. In addition, FA3-III also led to 20 publications in non-peer reviewed journals, and 57 other relevant scientific publications

Capacity in research is mainly achieved through engaging PhDs. 72 PhD scholarships were awarded between 2014 and 2016 (in 16/24 IC projects). 31 PhDs graduated during the same period (in 14/24 IC projects). In only 5 IC projects no PhD scholarship was awarded, and no PhD graduated in the period under review (ENSEA, GMU, NCHADS, SHCH and UMSS).

Beyond research implemented in the context of an individual PhD, the aim is to build institutional capacity in research, broadening the scope of research and help institutions to attract additional resources for research and preferably joint research with other countries or institutions (e.g. FP7 / EDTCP). This output is not measured under the quantitative FA3 outputs. While as a scientific institute and for individual academic careers, peer-reviewed publications are important, more important is whether the institution has the capacity to expand its research envelope, do more collaborative research and attract additional funding; and whether research influences policy or action (which is also not measured as an outcome of FA3-III; see Vol I, section 4.5 for policy influence). It was not possible, within the limitations of the evaluation to assess these potential outputs in a consistent way, but some evidence was reported through KII and document review. A few examples are described below.

[28] The many publications by INRB are well documented. At least 20 operational studies were initiated which resulted in more than 75 scientific publications in international reviews. The same applies to CRUN. On the contrary, the high number of peer-reviewed publications reported by ESP (DRC) covers a very wide span of medical topics. The link with the FA3-III intervention is not always obvious.

Benin case study: The case of **LRM** in Benin confirms how capacity building in service provision and research over several FAs has led to international recognition. Over the whole FA3 period, 40 articles were published in peer reviewed journals (almost exclusively on TB and BU). FA3-III progress reports refer to 10 publications in peer reviewed journals. Eight of those focused on TB, one on UB and one on another subject. Four publications covered multi-country studies including Benin (first author: ITM 3, LSHTM 1). Four out of ten articles had a Beninese expert as first and/or second author. The shift from mainly national first authorship in FA3-I (91%) and FA3-II (84%) to less national authorship (40%) because of multi-country or multi-centre publications in FA3-III (and FA4) is noteworthy. The increase in multi-centre research confirms the international respect for LRM quality work, the increased involvement of LRM in the regional and global disease debate and networks, as well as in joint research. The five PhDs who graduated during the FA support (between 2005-2019) published 150 articles in peer reviewed journals since their graduation. Three PhDs attracted additional research funding, totalling about 15 M€ (of which 10,9 M€ via LRM). This confirms the research capacity built at LRM and in other national institutions (e.g. the PNLTB, PNLUB), as well as the local capacity to attract additional funding. More details are provided in the Benin case study (see Volume II, section 1.1).

From the beginning of FA1, **INRB** has conducted numerous research projects on diagnosis, stage diagnosis, treatment, post-therapeutic follow-up of THA, and resistance to melarsoprol. The INRB supports DNDi, which conducts research on new THA drugs in the DRC, with reference tests. Meanwhile, INRB has become a WHO reference lab for THA in the DRC. At least 20 operational researchers were initiated through the various INRB departments in particular in Parasitology departments (5), bacteriology (7), epidemiology (4) and molecular biology in association with the veterinary y laboratory (6). This research resulted in more than 75 scientific publications in international reviews. Four PhD thesis were defended during this project and 4 others were completed after 2016. Three PhD scholarships were awarded during FA3-III. Of the PhDs only one works at INRB. The others work at major collaborating hospitals, the university, the PNLTHA or the PNLTB. INRB is perceived as a 'breeding ground' for national scientists. INRB also organised the 8th international congress on infectious and parasitic diseases (CIPIP).

A similar track record can be documented for **CHNU** (Senegal), and now IRESSEF. The capacity building in immunology over the past 15 years resulted in international recognition of the immunology expertise of the laboratory, which facilitated attracting other funding. CD4 quality assurance (national and regional) has been great achievement of previous FA support. In 2015, the laboratory was involved in the phase II trial on the immunogenicity of a new anti-EBOLA vaccine finalised in 2016.The long-term support resulted in the creation of a new international centre « "Institut de Recherche en Santé, de Surveillance Epidémiologique et de Formation (IRESSEF) » (which includes the lab). IRESSEF, a Foundation (semi-public) co-financed by government, was created by the Director of CHNU (together with Director Pharmacy). It is the reference lab for UNAIDS and is internationally recognised (does now do Covid-19 research). This is what ITM aims for, an independent, high quality African research and training centre. ITM contributed to this success (all 3 PhDs and post-doc currently work at the IRESSEF), together with BMGF and Oxford University.

Another success story is CRUN (Burkina Faso). Over the FA 3 period, CRUN participated in 38 externally funded research projects, of which it managed 18 itself as coordinator. During the FA3-II period the CRUN was able to attract 15 research grants (including a phase 3 malaria vaccine trial) and generated 24 publications in international journals. The site was also able to set-up a Health and Demographic Surveillance System (HDSS) including about 60,000 people. In FA3-III twelve research projects were obtained or launched, 49 publications made in peer reviewed journals. The FA3-III aim to broaden the scope of research to other infectious diseases was successful, as 8 research projects were obtained and 10 articles published. Three collaborative research projects were launched with CM (e.g. Ebola vaccine). And CRUN and CM have jointly applied to an EDCTP call for the renewal of the WANETAM network funding in 2016 (and later for Covid-19 vaccine trial). To conclude, the FA3-III support contributed directly and indirectly to the development of the CRUN from a small research unit (starting in two hospital rooms) to a widely recognized research and training institute. As a recognition of this high performance the Ministry of Research has established the CRUN as a Regional Directorate for Health research in the Centre West region of Burkina Faso. This also provided CRUN some breathing space as some of operational expenses are now covered by the public budget. CRUN now attracts substantial global funding. According to the SP, no other institution built capacity of CRUN as ITM did. Diversification of research portfolio was only possible through capacity building and support in implementation by ITM as CRUN lacked the relevant expertise (the SP is malaria expert). The collaboration with CM allowed CRUN to develop expertise in reproductive health. CRUN has today about 15 PhDs (of which 6 are/were financed through FA). Five PhDs graduated and all work at CRUN. Some future PhDs are expected to work at CRUN, others at satellite centres.

> "Without the continuous support received by ITM, I would now have been in the USA" [south partner]

The significant financial support and collaboration between the **DVTD** and ITM have facilitated good, multidisciplinary research, and strong scientific outputs. A One Health approach was explicitly used and multidisciplinary project teams were utilised to design and implement key studies. Between 2014 and 2016, academic staff and students published 19 papers under the FA3-III framework agreement, all in accredited journals. Research included a wide variety of topics related to one health. Fourteen PhD scholarships were awarded. Of those 3 work now at UEM (Moz); one at Egerton University, Kenya; one at National Health Laboratory Services (NHLS), Bloemfontein, South Africa; one at the Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa; one doing postdoc at the Centre of Excellence for Vector-Borne Diseases, Kansas State University, USA; and one postdoc at the University of Pretoria and working at the National Agricultural Research Organization, Uganda. One PhD stopped. This suggests that individual capacity built through PhDs further strengthens institutional capacity of their home institutions.

At the **ITM AvH**, in the 2014-2016 period, five PhD candidates successfully defended their thesis and are pursuing research careers, most of them within the collaboration. Two of them have supported, as post-docs, the management of the FA3-III project at IMT AvH. Three have been incorporated as faculty at UPCH and are teaching and mentoring undergraduate and graduate students in conducting research. Bridging the generation gap of faculty at UPCH as well as strengthening the careers of PhD graduates was a key priority for 2014-2016 collaboration, and the goal was achieved. Twelve papers were published in peer-reviewed journals, directly related to the collaboration.

The impact of the cooperation with **IPK** (Cuba) has been its contribution to its development into an internationally recognised research facility. Some progress that can be directly attributed on the cooperation with ITM. It allowed to incorporate new technologies and to also work in a more interdisciplinary fashion addressing diseases in the context of an integrated health framework. Reportedly, this revolutionised IPK studies in dengue and arboviruses. During 2014-2016 research focused on a variety of topics including Dengue and TB. Over the years, quite a few people obtained PhDs both in Belgium and in Cuba. In FA3-III two PhDs graduated.

At **INHEM** (Cuba) the joint research portfolio included studies on health systems/services organisation for the provision of chronic care, on social determinants of health and on disease control strategies (dengue, tuberculosis, helminths and zoonosis) with integration, participation and multi-sectoriality as crosscutting themes. Published research for the period 2014-2016 included hypertension care, diabetes and the impact on the population's health of socio-political changes. One PhD graduated under FA3-III.

IPH (India) continued its portfolio of intervention research on availability of and access to care for non-communicable diseases (NCDs), and on availability and access to quality primary care in deprived urban environments. In 2016 IPH added Health Impact Assessments of policies and programmes of non-health ministries to its research portfolio. The fact that IPH was commissioned to start the Health Impact Assessments by the federal Ministry of Health and Family Welfare testifies to the unique position that IPH has gained over time within the Indian public health policy landscape. Seven PhD scholarships were awarded and two PhDs graduated in FA3-III. Fifteen articles were published in peer-reviewed journals.

ITM has trained a number of permanent faculty of **BPKIHS** (Nepal) at PhD level. 5 permanent staff completed a PhD at BPKHIS with ITM support (none in FA3-III), all of them in different specialty areas. Most of the 15 research articles published in FA3-III are part of the PhD outputs. Three PhD scholarships were awarded in FA3-III.

SCHC (Cambodia) is a hospital and not a real research partner. However, the research output is significant. ITM gradually built SCHC's research capacity over several FA. As from FA4 SCHC was leading the activities with some technical and clinical support from ITM experts. Both clinical and research capacity were strengthened. Other international agencies are now working with SCHC for their studies because of the well-trained clinical staff and because of the laboratory capacity. Specific achievements in 2014-2016 was the documentation of high level of resistant bacterial infections among people who presented with fever; documenting high prevalence of HIV Hep C co-infection; and the diagnosis of Melioidosis which was not previously described in Cambodia. No PhDs graduated in 2014-2016 and no PhD scholarships were awarded. Research output was 15 articles in peer-reviewed journals.

NCHADS (Cambodia) is an implementing organisation, not really interested in research. ITM did put a lot of effort in strengthening the capacity for operational research and for writing publications, but NCHADS is not interested in publishing in journals (but rather in presenting results at meetings, conferences). Capacity in conducting operational research has increased, but there are only a few people who are really interested in conducting research. There is only one person in NCHADS fully involved in research and his capacity has tremendously increased. Three papers on PMTCT were published. No PhD scholarships were awarded and no PhDs graduated.

The main achievement of the IC with **CNM** (Cambodia) was to build the capacity of at least two people who were able to provide scientific support to the programme. One PhD graduated in 2017 but did not stay at CNM. A two-year cluster randomised trial was successfully finalized showing that there is no additional impact of topical repellent in providing community protection against malaria. The research output was 15 articles in peer-reviewed journals, most with an ITM expert as first author.

Also for "start-ups" such as the **LRC** (UoG, Ethiopia) research capacity building can be rewarding and productive. The FA3-III project was the first scientific capacity strengthening collaboration between UoG and ITM. It started as a relatively small project, with focus on laboratory quality, needs assessment, research training and projects, evidence-based medicine and antibiotic stewardship. A high number of staff were trained on research methodology and involved in research projects. UoG has now the capacity to conduct quality laboratory and clinical research projects and numerous projects take place, providing opportunities for UoG Master students and PhDs. More than 20 clinical and laboratory research projects were developed. The LRC was involved in two VL clinical trials. Based on this clinical trial experience, external partners have approached UoG for two additional clinical trials (one on malaria, one on helminths). The research activities

have moved beyond VL to cutaneous leishmaniasis and TB. Nineteen scientific publications were published (of which 5 after 2016). FA3-III increased access to other funding, such as two projects with FP7/ EDTCP on research ethics. INDi chose UoG as local hub for research; and several new partnerships with institutions from USA, UK, and EUR were established. Two PhDs were selected (one left for Australia). Another candidate was identified in FA4.

Another "start-up" within FA3-III was the IC with **MakPHS**[29]. The research focus was to facilitate and implement research and dissemination of research findings on Maternal and Child Health and Nutrition (MCHN) by setting up the MCHN Research Centre. Six research studies focussing on family planning, food security, pregnancy outcomes and health systems readiness amongst refugees and host populations in Adjumani District were carried out in 2016. Three of the research studies led to MSc theses by 2016, the others were completed later. During 2014-2016, a total of 4 candidates successfully completed their PhD, of which two were linked to the MCHN centre. A couple more PhDs graduated, but not under FA3-III funding. A total of 30 publications in peer reviewed journals (14 in 2014, 6 in 2015 and 10 in 2016), 13 abstracts and 1 book chapter were produced. The MCHN still exists today (without FA4 support).

Over the whole FA, about 20 PhDs have been funded at **UWC** (mostly from other African countries and not all reported in the progress reports). Some are still working at UWC; others went back to their respective countries or institutions. Research spin offs of the ITM-UWC collaboration include the EDCTP Project (Strengthening pharmacovigilance and regulatory capacities in four southern African countries [SPaRCS]). The research partners from Namibia, Eswatini, South Africa and Zimbabwe built on prior relationships with MPH students from these countries who took short courses, online modules or carried out their mini theses in the Pharmaceutical Public Health area at UWC.

In some cases, investments in laboratories combine the purpose of providing a better service and allowing the laboratory to set-up or participate in large scale studies. For example, the laboratory infrastructure at **NIMPE** (Vietnam) was improved within this program and advanced techniques for improved diagnosis were transferred in order to perform high level scientific research complying with international safety and quality standards. 3 PhDs graduated and one PhD scholarship was awarded during FA3-III.

The 3 years support of FA3-III was too short to meaningful build institutional research capacity in some countries where the support was limited to FA3-III. This was the case in ENSEA (Côte d'Ivoire), CoBAMS (Uganda) and GMU (Indonesia). In Bolivia and Ecuador, research was no focus of the IC.

A (not always planned) consequence of institutional capacity strengthening in research was the strengthening or developing of research ethical committees in some countries (e.g. Ethiopia, India, Morocco). Overall, the emphasis on research ethics by ITM was highly appreciated by many south partners (see also section on unintended outcomes).

Policy influence is discussed in Vol I, section 4.3.2.

2.3 CAPACITY STRENGTHENING IN TRAINING

ITM has strengthened the institutional training capacity in most south institutions where it was the project focus. This was less successful in a few institutions where support was limited to only 3 years (e.g. ENSEA, GMU).

Several south partners have developed their capacity in organising postgraduate or MSc courses (ENSP, ESP, CRUN, LRC, MakPHS, UWC, DVTD, UMSS, IPH Bangalore). Some of those also attract students from the region or beyond (ENSP, ESP, CRUN, UWC, DVTD) and some are organised jointly with ITM (One Health – DVTD). Capacity to coaching PhDs has been strengthened in a few institutions (CRUN, LRC, DVTD). Some of those initiatives were not successful either because of underestimation or lack of resources (IPH-PUCE), too short

[29] Collaboration between ITM and the University of Makerere existed before through other funding modalities.

duration of support (GMU), delays in implementation (ENSP) or fall-out of key focal persons (joint PhD training programs by African schools of Public Health). Overall, strengthening institutional capacity for MSc training has been more successful than for PhDs. Understandably, not all south partners have the mandate nor the capacity to mentor PhDs.

Capacity in e-learning was built at DVTD, UWC (with support from the University of Pretoria/DVTD) and IPH Bangalore. In fact, the University of Pretoria and IPH Bangalore were much ahead of ITM in distance learning and e-learning. Reportedly, exposure to these innovative teaching modalities has gradually introduced a mind-shift, at least with part of the ITM staff, towards e-learning.

Many of the other institutions provide regularly short courses for national (health) staff (INRB, LRM, SCHC, NCHADS) and some even provide regional short courses (LRM, CHNU), but these were not specified as FA3-III outputs. To some extent however, continuous ITM support also led to increased local capacity to provide such courses.

Overall, the support provided by ITM to, strengthen institutional training capacity was very much appreciated by the participating south institutions and is an important pillar of switching the poles (see further). The potential impact on local health systems and individual professional careers cannot be underestimated.

All IC projects had a training component in the sense that staff from the respective institutions is trained or coached by ITM staff either in loco, in another partner country or at ITM. Exchange visits between ITM experts and south experts was standard practice in all projects. Some south experts are involved as teachers in training courses or workshops at ITM.

Many south partners provide training courses at national or regional level. As an example, we briefly describe the training outputs provided by a few south partners that mostly are no training institutions. The remainder of this section focuses on those IC projects where the project had a major focus on building institutional capacity in providing MSc or PhD training or other postgraduate training. Individual PhD training is covered under research. Other IC projects without much reported evidence on training courses developed are not commented here.

<u>Examples of south partners providing local training courses</u>

As from FA1, **INRB** (DRC) has trained PNLTHA and laboratory staff int he diagnosis of THA. During FA3-III, as planned, INRB trained technical staff of the MoH Disease Directorate (DLM) as well as staff from main disease programmes (PNLT, PNLTHA, PNLUB, PNLP) in diagnostic reference techniques and QA. As an example, 142 laboratory technicians from health facilities and mobile teams were trained for PNLTHA, 187 microscopists were trained for malaria for PNLP. At least 121 people coming from diverse institutions were trained to molecular biology techniques.

Benin case study: A similar story applies to LRM (Benin). At the national level **LRM** provides practical trainings for laboratory and MoH staff (national BU network). Regularly health staff from other countries of the region participate in ad-hoc short courses, including on quality control of microscopy and other tests, TB diagnosis, microscopy, culture and PCR (e.g. from DRC, Togo, Ghana). In 2013, LRM hosted a regional course on fluorescence microscopy. Recently, it organised a regional course about shipping dangerous goods with regards to IATA regulations, in collaboration with WANETAM and WANETAM+. During FA3-III LRM organised the 8th international course on mycobacteriology for the francophone national TB programmes (8ème course sur la Mycobactériologie appliquée aux besoins des Programmes Nationaux contre la TB pour les pays francophones). 13 participants from eight countries of the region participated. LRM organised this course as from 2007 onwards (11 courses: last one in 2018). Initially it was organised together with the Union (IUATL). Recent courses were organised independently by LRM. Training capacity of LRM has been strengthened, to which the FA contributed (but strengthening training capacity was not a major objective of FA3).

CHNU (Senegal), together with the University of Dakar, continued organising the MSc training in Immunology of Diseases (in total 13 students); and mentored another 4 MSc students (2 from USA). The course "Cours francophone Africain de rétrovirologie biologique en retrovirologie" was organized for the last time in 2014. It was the flagship for 8 years and had reached its main goal: the training of laboratory staff from the West-African region in setting up monitoring tools for the evaluation of treatment of HIV & tuberculosis in settings with limited resources. An important co-sponsor of this course (ESTHER, France) provided most of the scholarships until 2014. The final product was the publication of a book entitled « Biologie appliquée de l'infection à VIH et de ses comorbidités en Afrique". The newly created institution IRESSEF (see research) is now providing several national and regional trainings.

Capacity of **ENSEA** (Côte d'Ivoire) in implementing LQAS was strengthened and the training module is now part of the standard curriculum for organising surveys. Capacity of CoBAMS was not strengthened. This was not an institutional collaboration project because of the limited scope and duration. The south-south collaboration failed. ITM had to step in to develop itself the training module. The ambition to exchange and develop language skills ENG/FRE was reduced to only ENG for ENSEA staff. While, reportedly, meetings were held mostly in ENG, the indicator or result was not measured.

SHCH (Cambodia) trained plenty of laboratory people in the country and from the university health sciences department.

NCHADS (Cambodia) has funds from many sources for programme implementation, so the main objective of the contribution from ITM was to strengthen the human resource capacity through training programmes of health staff to implement the national strategy. More than 10 NCHADS staff also obtained their masters' degrees with ITM support. Some of them are already retired.

In 2018 **NIMPE** started international training in anthropology and in 2019 training in molecular biology (together with ITM), based on work done between 2014 and 2016.

Examples of south partners where building institutional training capacity was a major IC focus

ENSP (Morocco) has been supported by ITM in building training capacity since 1989. Over the period 2014-2016, the ENSP organised several trainings at the national level for the MoH, Ministry of Local Government and the National Health Insurance (CNSS) upon request. As for postgraduate training, the School launched a new option 'Family Health and Community Health' in 2015 and 'Healthcare Programs Management' in 2016. The later was mainly supported by ITM (inspired by the ITM Disease control MSc); and so was the Public Health / hospital management training (started before FA3-III). Skills of lecturers/researchers and PhD students were strengthened through the teachers exchange program organised between the ENSP and ITM. 48 MSC degrees were obtained (reported figures may be an underestimation). Increasingly courses attract non-Moroccan students (mainly from West Africa). Participation by non-Moroccan students (2014-2016) was 2% (SFSC); 15% (MH); 18% (ESP); 35% (GPS). ENSP has become a hub between the north and the south because it is increasingly being sought by international organizations to organize training and capacity building cycles for the benefit of health personnel in Morocco and other sub Saharan countries and the EMRO region. The setting up of PhD trainings was delayed, because of changed leadership at ENSP. However, the ENSP vison is still that it should become a trainer of PhDs in public health. Unfortunately, ITM support under FA4 has not continued.

Amongst others the project purpose was to strengthen **ESP's** training capacity. For the MSc in public health training it was planned to operationalise a health centre as centre of learning and research (CSART). Numbers of new outpatients, postnatal care and deliveries at CSART have increased significantly (between 4 to 7 times). Reportedly, the CSART works well and is useful for the training of MSc students. The centre is currently also involved in the RIPSEC research. The University of Lubumbashi satisfactorily completed an internal audit with a view for accreditation (MSc training). FA3-III financed 6 MSC scholarships (and another 14 in FA4). Limited availability of supportive technical resources at ITM ('Zuid Kader') and constraints in flight

connections have limited ITM support to the MSc training in FA3-III. ESP is however also supported by other Belgian and international partners.

The **CRUN** aims at becoming a major training centre in the field of clinical research by attracting junior scientists, not only from Africa but also from other continents, who learn by actively participating in ongoing research projects. The CRUN intends also to support African junior scientists in obtaining high education degrees (MSc, PhD) in collaboration with Southern and Northern academic institutions. Some of them will be retained as core staff. In addition, the CRUN strengthened its ongoing GCP/GCLP short courses program, continued in collaboration with the strategic network for Clinical Research (that provided significant extra support) and the Strategic Network on Laboratory Quality Management. 26 staff received PhD, MSc or short course trainings between 2014 and 2016.The CRUN sustained its investment in health care professionals training via PhD (6 PhD scholarships awarded) and MSc trainings (6 Master scholarships awarded and 7 Master degrees obtained). Staff from CRUN and CM participated in short courses, either directly through FA3-III or through DGD-scholarships.

Over 300 of **UoG / LRC** (Ethiopia) clinicians and researchers benefited from remote and on-site coaching and training in GCP, clinical decision making, evidence-based medicine, developing research proposals and protocols, data analysis and paper writing. In addition, seven UoG staff members attended a 5 weeks course at ITM on research methodology and four short research training visits. While it initially was foreseen to organize joint PhD training programs by African schools of Public Health (UoG, Western Cape, Makerere, Ethiopian public health institute), this was not successful, mainly related to the departure of the Ethiopian focal point to Australia, and the long-term absence (for medical reasons) of the ITM focal point. Consequently, PhD training focused on UoG. Reportedly, senior staffs of UoG have reached a good level of competence in PhD mentorship and MSc thesis guidance in clinical, biomedical/laboratory and public health sciences. Other south-south interactions were made: LRC provided GCLP training in Cambodia; learned about clinical trials from CRUN; and collaborated with Bangalore (India).

Training at **MakPHS** focused on the implementation of the work-based Fellowship Programme in Health Systems Management (FPHSM), jointly developed by Makerere (SP) and ITM. During 2014-2016, two cohorts of in total 17 fellows were recruited. Seven out of eight from the first cohort completed the Fellowship in 2015. The 9 fellows in cohort two progressed well. Additional funding through SPEED was secured in 2017 to finalise the process (as Uganda was no longer supported in FA4). Intensive mentoring of fellows was done regularly by highly experienced ('top') Ugandan experts. The course was compatible with continuing work at district level. While this work-based course was highly appreciated and led to change at the workplace, it was too expensive to maintain in the context of FA3-III (unit cost 40.000-50.000 USD per fellow trained). No alternative funding was secured to continue the course. Reportedly, this was a unique initiative and very promising. It led to capacity building of district staff, to practical health system research and many publications.

At **UWC** the programme's purpose was to increase the capacity of the School of Public Health (SOPH) to provide, and support others in providing, post graduate pharmaceutical public health training. The sub-programme was embedded in and built upon a broader set of partnerships between ITM and UWC (e.g. SA Research Chair; Emerging Voices). The Pharmaceutical Public Health team supported the Centre of Excellence in Supply Chain Management for East African countries at the University of Rwanda. UWC's specific role was curriculum and materials development (the centre in Kigali is the only one outside of UWC where teaching capacity was directly strengthened by UWC). Two new modules (Rational Medicines Use-RMU; and Supply Chain Management - SCM) were developed and offered, and a third (Pharmaceutical Policy and Practice) was in preparation (now finalised). Together, these various courses have reached more than 100 people, and have initiated research activities, publications and conference presentations, the start of a doctoral programme, and support for the development of curricula and training materials in other African centres. The SPH shifted all of its core post-graduate Diploma and MSc course offerings onto UWC's online Learning Management System, iKamva, (this transition was also supported with expertise from DVTD). Since

2016 about 70 final year pharmacy students have taken the SCM course and about 30 students have conducted their final year project. Similar figures apply to RMU attendance. UWC developed a Guide entitled 'Curriculum design and the process of transitioning from face-to-face to distance teaching and learning in the post-graduate public health field'[30]. UWC and DVTD organised jointly a conference for Emerging Voices. SOPH social network was strengthened and is currently very active.

A formal collaborative MSc (Tropical Animal Health) degree offered by both **DVTD** and ITM was successfully implemented in January 2016[31]. The modules (theory and skills-based) were developed in 2014/15. A total of 120 students from all over the world applied during 2015 to enrol; of these 24 students were selected to register in 2016 (13 at DVTD and 11 at ITM). The overall objective of the degree is to provide participants a multidisciplinary view (i.e. One Health) on integrated livestock and wildlife health and management in the tropics. The modular programme is structured in such a way that a learner can, by selecting the appropriate elective and skills modules, achieve a qualification that will support various career paths, including microbiology or parasitology, veterinary field services, or general veterinary practice in sub-Saharan Africa. The degree is offered as a blended programme of e-learning, face-to-face teaching and a compulsory collaborative induction/field-workshop hosted at the Mnisi One Health Platform. 50% of MSc students are from outside South Africa. In addition to the above, nine PhD, five MSc and 21 web-based MSc (Animal/Human/Ecosystem Health) students registered for their degrees and were active in their research projects in South Africa and other countries of the SADC Region (including Botswana, Kenya, Lesotho, Mozambique, Namibia, Nigeria, Zambia and Zimbabwe). The African Veterinary Information Portal (AfriVIP), an online Continuing Professional Development (CPD) platform was developed under FA2 and FA3 at DVTD and was successfully launched in 2014. It has been extensively used up to early 2020. This collaboration opened up DVTD to the region and increased its visibility and regional role. It is now a key player in one-health in the region.

The objective of the project at **IPH-PUCE** (Ecuador) was to establish a network of universities that jointly offered a PhD programme in public health. It was supposed to build on the success of the MSc programme established earlier at PUCE with support of ITM. However, PUCE did not have the personnel or the capacity to develop a PhD programme. No sufficient resources were available to build a PhD programme unless being supported by international grants for scholarships.

At **UMSS** (Bolivia) a new Master´s course in Public & International Health was developed together with ITM and the student profile broadened from medical doctors to other health professionals. This new MSc was approved by the UMSS and started its first edition in 2014. During the following years (2015-2016), emphasis was put on a continuous assessment and improvement of the teaching content of the modules and on quality improvement. Currently this is the most prestigious MSc programme offered by UMSS and became a model for the entire university in terms of quality. It has a rate of successful completion including thesis of more than 85%, compared to 15% overall completion rate of MSc courses at UMSS. Many of the graduates of the programme now teach at UMSS. For instance, the majority of teaching staff in the social medicine department has graduated from the master's course.

IPH Bangalore (India) managed to consolidate its e-learning portfolio of competency-based and pedagogically sound courses designed to improve knowledge and skills in public health. All along 2016, 110 students benefited from a total of three courses: the e-learning course on Public Health Management (44

[30] This was the result of a series of international workshops organised by UWC and attended by 53 educators from 16 public health institutions across 11 countries in Africa and Asia. (http://hpsa-africa.org/index.php/hpsr-blog/28-models-of-teaching-and-capacity-building/104-transitioning-from-face-to-face-to-distance-teaching-and-learning-where-does-one-begin-and-what-are-some-key-questions-to-consider).

[31] Early in FA3-III it was agreed to develop the web-based MSc (Animal/Human/Ecosystem Health) degree that was previously developed in conjunction with ITM and introduced in January 2012, into a formal collaborative MSc (Tropical Animal Health) degree offered by both DVTD and ITM. A MoU was officially signed in 2014.

participants), the e-learning course in Health Financing (26 participants) and the Emerging Voices course (40 participants). A face-to-face course on Good Health Research Practice (20 participants) as well as a course in Scientific Writing and Reference Management became e-learning courses in 2017. Reportedly, the e-learning environment developed at IPH also strengthened the capacity of ITM in terms of distance learning and teaching where India was already more developed than ITM.

ITM trained a number of permanent faculty of **BPKIHS** at the masters and PhD level. Many attended short courses supported by ITM. TIDC has been conducting a 5 weeks short term training on "tropical & infectious diseases to medical doctors working in rural primary health care facilities" since 2009. This 8th edition took place in October-November 2016 whereby 15 medical doctors participated, from 15 rural primary healthcare centres rural districts of Nepal. All participants received grants during the period of training. A feasibility survey of introducing telemedicine in the district hospitals was conducted and telemedicine/e-learning programme is operational in two district hospitals since 2016.

The 3 years of FA3-III did not allow to set up a PhD programme at **GMU** (Indonesia) as planned, as it was anticipated that support would continue in FA4. It took a lot longer to actually prepare the candidates for the PhD programme than initially foreseen.

4 SUPPORTING INFORMATION ON NETWORKS

Network dissemination objectives and achievements

Network	Dissemination objectives	Dissemination achievements
1.21 International Health Policy and Financing	Result 1: each CoP has an active online discussion forum with at least 500 messages exchanged each year. Result 4: 48 issues of English newsletters contributing to global sharing, discussion and dissemination of knowledge to 3,500 subscribers Result 5: Dissemination of the French IHP Newsletter (48 issues/year to 1,500 subscribers by 2016)	Result 1: The 3 COPs were active with between 85 and 457 messages exchanged across the 3 COPs. COPs reached a total of 4,500 members by the end of 2016. Result 4: 48 newsletters published each year to 3,640 subscribers by end of 2016 Result 5: On average 28 issues/year of French newsletter to 1,389 by end of 2016.
1.22 TB & Buruli	Result 2: Network members obtain grant from the to attend conference and present their research (grants only issued after acceptance of abstract)	19 grants were distributed for courses or conferences, allowing junior researchers to present their research.
1.23 Tropical and Neglected Diseases (incl. zoonoses)	No explicit objective in terms of dissemination but one of the activities includes joint participation in international scientific and policy forums	Two presentations at the One Health Congress in 2016. Participation in local organization committee for European One Health/Eco Health workshop in 2015 and 2016
1.24 Sexual and Reproductive Health (incl. HIV/aids)	Result 3: results have been obtained and adapted, translated for policy makers	Results of 7/12 research projects were communicated to and used by MoH (according to the logical framework)
1.25 Nutrition knowledge	Not explicitly included in logical framework but dissemination of research protocols and validated reports to administrators, decision-makers and community, as well as wide dissemination on website stated as an essential step of the research methods used.	Evident-network website was developed and functional. Research protocols for systematic reviews are listed and description of case studies is available, but no final outputs are available.
1.26 Laboratory Quality Management	Result 6: Knowledge aggregated and diffused through publications, reports and website	Total of 19 publications, website has not been active
1.27 Health Systems	Result 2: Reinforcement of the communication, dissemination and scientific support functions	Website has not been active and planned newsletter did not materialise
1.28 Clinical Research	Result 3: The data management working group (ADMIT) is consolidated and developed Act 1.1 Maintain distribution list of scientific literature on medical research methods and ethics	Result 3: 14 institutional partners participated and prepared 10 presentations, speeches and papers Act 1.1 99 scientific papers were shared with network members
1.29 QUAMED	Result 2: National and international dissemination of pilot action-research Result 3: promote the issue of poor-quality medicines and QUAMED's response in scientific fora and meetings	Result 2: An article on the QUARDC-study was written and published in 2018. Result 3: 4 workshops, 1 webinar, 1 seminar, 8 presentations in international fora, 5 publications, 1 master thesis
1.30 Antibiotic stewardship	Result 5: results will be disseminated at national, regional, and international conferences	Presentation of data at 3 national dissemination events and 2 international conferences
1.31 ITM Annual Colloquium and seminars	Result 1: Present the scientific and social state of affairs on a specific topic with equal contribution from North and South contributors Result 2: ensure dissemination and follow up on conclusions, strategies and recommendations	Result 1: 3 annual colloquia were held on 'the human factor', 'maternal and neonatal health' and 'Ebola'. Result 2: all information was electronically available on the internet and abstract book was disseminated and electronically available.

5 SOCIAL NETWORK ANALYSIS

5.1 INTRODUCTION

This Annex presents the findings of a social network analysis (SNA) of four strategic networks supported by ITM between 2014 and 2016 under the third phase of the third framework agreement with DGD. The aim of the SNA is to get a better understanding of how the institutions involved in the networks have collaborated and how this has contributed to the outcomes of the networks. Following a summary of the methodological approach (Section 1.2), general findings of the on-line survey are presented, including what organisations have generally contributed to the networks and their perspectives on the success of the network (Section 1.3). SNA is then applied to look at how the different institutions collaborated, what results were achieved, what the main contributing factors were, how frequently the network communicated and what the relative value was of each actor in the network (Section 1.4). The SNA is based on a review of key documentation, an on-line survey directed to the participants of four networks and interviews with at least two key informants from each network. Key informants consulted as part of this exercise are included in the overall list of key informants (Annex 3).

5.2 METHODS

SNA is defined as a "distinctive set of methods used for mapping, measuring and analysing the social relationships between people, groups and organisations."[32] SNA helps characterise relationships between organisations – including collaborations, resource exchange, information exchange, or memberships in a partnership. The nodes in the network are the organisations, while the links show relationships or flows between them. SNA provides a visual and a mathematical analysis of these relationships. One of the core assumptions is that the patterns of these relationships have important effects on individual and organisational behaviour, constraining or enabling access to resources and exposure to information and behaviour.

For this evaluation four networks were sampled to be included in the SNA. The sampling was done based on six criteria: (1) feasibility of SNA (fewer than 20 participants in the network), (2) geographic coverage, (3) focus of the network (thematic versus normative), (4) start of the network (before FA3-III or from FA3-III), (5) budget (<€400,000 or >€400,000) and (6) expenditure levels (>75% or <75%). The following four networks were selected:

Network	SNA feasibility (size of network)	Category	Geographic focus
Clinical Research (CR)	YES	Normative, before FA3-III, 450K, >100%	Africa, Asia, LAC
Laboratory Quality Management (LQM)	YES	Normative, before FA3-III, 450K, >100%	Africa & Cambodia
Health Systems (HS)	YES only for regional network coordinators	Normative, from FAIII, 300K, <75%	LAC & India
TB & Buruli (TB & BU)	YES	Thematic, before FAIII, 450K, >100%	Africa

Data for the SNA were collected by inviting 31 researchers of 21 institutions participating in the four strategic networks to complete an on-line questionnaire hosted by the SurveyGizmo[33] platform. The survey was

[32] Karl Blanchet, Philip James, How to do (or not to do) … a social network analysis in health systems research, Health Policy and Planning, Volume 27, Issue 5, August 2012, Pages 438–446, https://doi.org/10.1093/heapol/czr055

[33] www.surveygiwmo.eu

launched on July 27th, 2020 and remained on-line until September 10th. After three reminders, a total of 22 (71%) researchers from 15 institutions completed the survey.

The survey – available in English, French and Spanish – started by asking questions about the involvement of the researcher and institution in the network, to what extent the outcomes were achieved and what changes were observed because of the network. It then continued to ask about whether and how they collaborated with the other institutions in the network, what their relationship was prior to the network engagement, how often they engaged and through what method, how they perceived their respective involvement, contribution of resources, power and reliability.

For the analysis, the general questions are analysed for the four networks together in the next section (1.3). Responses to questions formulated in the form of Likert scales are presented in tables. Proportions are calculated from the tables where relevant are presented. Narrative responses and comments of survey participants were extracted into a separate file and analysed together with data from document reviews and KIIs using qualitative content analysis. They are summarised in this report.

For the second part of the questionnaire on the collaboration with other institutions, SNA was applied using the NodeXL pro software from the Social Media Research Foundation.[34] Section 1.4 starts with an overview of the concepts and definitions used for SNA, as well as the analysis for each of the four networks.

5.3 ANALYSIS OF SURVEY RESPONSES

5.3.1 SURVEY RESPONDENTS

A total of 31 individuals from 21 institutions were invited to participate in the on-line survey. The response rate for each of the networks is detailed below.

Network	# of participants	# of responses	Response Rate
Clinical Research	14	9	64%
Health Systems	4	4	100%
Laboratory Quality Management	6	5	83%
TB & Buruli	7	4	57%
Total	**31**	**22**	**71%**

Of the 22 participants, 18 were from Southern institutions and 4 from ITM. The number of participants was based on the institutions and individuals listed in the 2016 end of project report and includes the ITM promotor and one member of each institution in the South. The response rate was considered acceptable for performing the SNA as for each network more than half of participants contributed. The networks with fewer participants had in general the highest response rate.

5.3.2 CONTRIBUTION TO THE NETWORK

Respondents were asked to indicate what their institution has contributed to the network between 2014 and 2016. The majority of respondents confirmed that they contributed with technical expertise (18/22), information and/or feedback (17/22), training facilitation (16/22), data resources (15/22) and in-kind resources such as meeting space, etc. (12/22). Much fewer participants contributed paid staff, IT or web resources and funding. Other contributions mentioned included advice on future, logistical support and receipt of laboratory equipment.

[34] www.smrfoundation.org/nodexl/

For this analysis we have separated the responses from ITM promotors from the South participants. In the case of ITM, all four networks indicated that they contributed with paid staff, technical expertise, information and/or feedback and training facilitation. Three networks provided in-kind support whereas only two networks provided funding, data sources and IT/web resources, according to the ITM promotors.

What has your institution contributed to the network?	South participants	ITM promotors	Total
Technical expertise	14	4	18/22 (82%)
Data resources including data sets, collection and analysis	13	2	15/22 (68%)
Information and/or feedback	13	4	17/22 (77%)
Training facilitation	12	4	16/22 (73%)
In-kind resources (meeting space, etc.)	9	3	12/22 (55%)
Paid staff	4	4	8/22 (36%)
IT/web resources	3	2	5/22 (23%)
Funding	2	2	4/22 (18%)

When asked about what their most important contribution was to the network, data resources received the highest score (8/22), followed by technical expertise (4/22), information and feedback (3/22), training facilitation (2/88), paid staff (1/22), in-kind resources (1/22) and funding (1/22). One participant was not able to answer the question. For the ITM promotors, paid staff, in-kind resources, and technical expertise where considered as most important contributions.

5.3.3 RESULT OF PARTICIPATION IN THE NETWORK

Respondents were asked to indicate what the result has been of the participation in the network. The majority of respondents confirmed that it contributed to improved capacity of the institution (18/22), improved individual capacity (16/22), improved services or support (16/22), exchange or resources (14/22) and new programme development (10/22). Only few participants indicated that participation in the network had contributed to any systems change (4/22) or that the participation had only been informative (2/22). Other results mentioned included increased research capacity, technical support and counselling.

In the case of ITM, three networks considered that participation in the network had contributed to improved services or support, new programme development and an exchange of resources. Two networks also observed improvements in terms of individual capacity, while on one network observed improvements at institutional level.

Participation in this network has	South participants	ITM promotors	Total
Improved institutional capacity	17	1	18/22 (82%)
Improved individual capacity	14	2	16/22 (73%)
Led to improved services or support	13	3	16/22 (73%)
Led to an exchange of resources	11	3	14/22 (64%)
Led to new programme development	7	3	10/22 (45%)
Resulted in systems´ change	4	0	4/22 (18%)
Been informative only	2	0	2/22 (9%)

5.3.4 SUCCES OF THE NETWORK

Asked about how successful the networks were at achieving their goal, respondents were generally positive with 20/22 respondents indicating that it was successful, very successful or completely successful. Only two respondents from two different networks believed the networks were only somewhat successful in reaching its goals.

Achievement of goals	Clinical research	Health systems	laboratory qual mngt	TB & Buruli	Total
Completely successful		1		1	2
Very successful	7		3	2	12
Successful	1	2	2	1	6
Somewhat successful	1	1			2
Not successful					
Total	**9**	**4**	**5**	**4**	**22**

In qualitative responses to this question, respondents mentioned how participation in the network has contributed to the perceived success. For many, the focus on capacity building at individual and institutional level has contributed to its success:

- *The network has developed strong training programs conducted in many countries*.
- *Le réseau a surtout permis de renforcer les unités de data management des centres partenaires et de former des moniteurs cliniques locaux.*
- *The Health Systems Network succeeded in supporting the development of small scale research in Latin America, applied to relevant local health system/services issues. It also contributed to strengthening our scientific and research capacity*.
- *This networked was useful for skilled manpower development, research lab capacity building, improving the Good Clinical Laboratory Practice in our institute, share experiences with other partners and involve in trainings. Main challenge faced was manpower retention.*
- *Se tuvo la posibilidad de realizar un Diplomado en Politicas Públicas con resultados muy exitosos*.

Also, the exchange of information with other institutions has been beneficial:

- *I could say that engagement in the broader health systems network helped a great deal - through the sharing of experiences (related to health systems programs and policies in respective countries) and getting aware of the global policy/governance dynamics in health so that we make sense of some of the national reforms and also engage in those keeping the larger picture of what is happening globally*.
- *L'existence du réseau a permis des échanges d'expérience entre les institutions partenaires et l'amélioration du plateau technique de notre pays.*

Only one respondent was less positive and mentioned that 'usually the communication is between our institution and ITG but poor with other countries'.

5.3.5 CHANGE IN INDIVIDUAL OR INSTITUTIONAL BEHAVIOUR

One of the evaluation questions would like to understand whether participation in the networks has contributed to changes in terms of individual or institutional values, norms, or behaviour. According to 18/22 survey respondents, participation in the networks has contributed to such changes at individual level and for 17/22 respondents also at institutional level. Only one respondent did not believe participation in the networks had contributed to changes at individual level.

Change in values, norms or behaviour:	Clinical research	Health systems	laboratory qual mngt	TB & Buruli	Total
Individual changes					
Great deal	3	1	2	1	7
Fair amount	4	2	2	3	11
Small amount	2				2
Not at all			1		1
Do not know		1			1
Institutional changes					
Great deal	3	1	2	1	7
Fair amount	5	1	1	3	10
Small amount		1	1		2
Not at all					
Do not know	1	1	1		3

Qualitative comments detailed that individual and institutional changes in terms of values, norms and behaviour were mostly the result of the interchange with other institutions, which allowed them to listen to different viewpoints and learn how to work together. Also, the increased individual capacity was often mentioned as a change that impacted on the individual and in some cases also institutional values, norm or behaviour.

Examples of change in behaviour due to south-south collaboration:

- *The cooperation has strengthened our teamwork and allowed us to understand the value and potential of South-South collaboration. It also allowed operational people to participate in the international project. So, the international dimension was a relevant gain for very local stakeholders.*
- *Talking about myself as a member of the network, it helped me open up to plural and diverse views/partners. Also, made me acutely aware of the political economy of knowledge and global politics of health - helping introspect at national/local level of how to be truly an enabler...*
- *Subjective sense of increased ease at sharing expertise, data, effort, i.e. enhanced trust*
- *Les normes et valeurs comme la communication entre le personnel clinique et le personnel de laboratoire ont été renforcées ainsi que la bonne pratique de documentation.*
- *We learned our most values, and we start thinking within the group in scientific manner*

Examples of changes because of increased individual or institutional capacity:

- *Trained staff started institutional trainings and cascaded the experience they learned and lab improvement practices transferred to the other labs in the university. The working system was modified to follow GCLP.*
- *It improved my communication skills and also allowed meeting senior scientists. Skills gained from here drives me to an important course at ITM (SCREM) which at the end led me to a successful PhD grant*
- *A travers ce réseau notre data manager a acquis une grande compétence qui lui a permis par exemple d'être aujourd'hui de travailler pour l'IRD en France.*
- *Notre centre est devenu aujourd'hui une référence en Afrique pour la conduite des essais cliniques et il y a actuellement plus de 10 essais cliniques en cours*
- *Fundamentally, our participation in the HS network allowed us to boost the international dimension of our institution (regional network on NCDs), conferring the highest value to the opportunity of sharing local operational research at the international level.*
- *L'étroite collaboration entre la section clinique et la section laboratoire dans la prise en charge des sepsis.*
- *My institution became more flexible and open for scientific collaboration*

5.3.6 ADDED VALUE COMPARED TO INSTITUTIONAL COLLABORATION

Respondents were asked about what they consider the main added value of their participation in the networks compared to institutional collaboration (if they had any). Respondents could choose from a list of seven preidentified values or add any other ones.

Achievement of goals	Clinical research	Health systems	laboratory qual mngt	TB & Buruli	Total
Capacity building	4	1	2	2	9
Bringing together diverse stakeholders	3		1	1	5
Having a shared mission, goals		2		1	3
Building a network		1			1
Exchanging information/knowledge			1		1
Don't know or not applicable	2		1		3
Total	**9**	**4**	**5**	**4**	**22**

Just under half of the respondents (41%) considered capacity building to be an important added value of the networks in comparison to the institutional collaboration. Specifically, the opportunity for young researchers to increase their capacity was much appreciated. Also bringing together diverse stakeholders (23%) and having a shared mission (14%) received multiple votes. As in the words on one respondent: '*The network provides experience sharing opportunity with colleagues in a similar kind of setting (low resource). Success stories from a similar context situation are important motivating factors*'. The sharing of resources or collective decision making, on the other hand, were not considered as an important added value of the networks.

5.3.7 FINAL COMMENT

Participants were invited to provide final comments on how they appreciated the participation in the networks, which 13/22 respondents did. The comments were generally very positive confirming that participation in the network has been beneficial and an opportunity for both individual and institutional capacity strengthening and learning:

- *Having participated in the network for clinical research is a good opportunity for our institution to learn from each other, increase capacity building and share resources*
- *It was a great opportunity to strengthen our institution in the capability to conduct clinical trials*
- *I appreciate that the ITM was very very aware and keen to change the power dynamics between southern and northern partners. Their Switching the Poles motto had this at core. There were sincere attempts at being enabler for regional/country level networks.*
- *This was found to be very useful. It would be nice to have something similar in the future.*
- *ITM is an excellent collaborator in building capacity for laboratory quality network and the project outcomes were recognized by MoH, and other health partner in Cambodia, including WHO.*
- *A l'issue de cette évaluation que les résultats soient pris en compte dans le prochain cycle de collaboration. Plus de collaboration sud devra être encouragée.*

At least four respondents recommended that the network modality should be reconsidered: '*Ce réseau était très important et doit être absolument relancé dans le cadre du nouvel accord cadre à venir*', while one respondent mentioned that '*the network needs more activities through virtual connexion every month (…) in the meantime we only have small connection with Belgium*'.

5.4 SOCIAL NETWORK ANALYSIS

5.4.1 SNA CONCEPTS AND DEFINITIONS

The table below provides a glossary of terms used in SNA. In the application column, the meaning of the terms in the context of this analysis are summarised. Detailed values of the network metrics are presented in subsequent sections.

Table 5. Social Network Analysis glossary

Term	Meaning	Application
Network	The relationship that exists between actors.	There are four networks analysed, demonstrating different types of engagement.
Actors	Network members that are distinct individuals or institutions.	We identified 22 actors from 15 institutions.
Nodes	The nodes or vertices in the network represent the institutions. The colour of the nodes is based on their in-degree centrality, while the shape and size reflect the out-degree centrality (see below).	ITM, for example, has the same colour, shape and size in all networks, as the institution usually had the highest degree of in-degree and out-degree centrality.
Edge	The edge is the relationship between two nodes and drawn as a line. The edge can be directed representing the flow of the relationship by an arrow or undirected, disregarding any sense of direction between the nodes.	The edges in our graphs are directed as we asked participants to indicate with whom they collaborated within the network.

Term	Meaning	Application
Actor metrics		
In-degree centrality	The in-degree centrality of an actor is a count of the number of actors from whom it is on the receiving end. If an actor is on the receiving end of many relationships, they are said to be prominent, or to have high prestige. That is, many other actors seek to direct ties to them, and this may indicate their importance.	The ITM has usually received the highest in-degree centrality confirming its role as the central partner in the network. In the CR and TB&BU networks, several other institutions were considered important actors in the network based on their in-degree centrality.
Out-degree centrality	The out-degree centrality of an actor is a count of the number of actors it relates to. Actors who have unusually high out-degree centrality are actors who are able to exchange with many others or make many others aware of their views. Actors who display high out-degree centrality are often said to be influential actors.	The ITM had the highest level of out-degree centrality, as it liaised with all the network members. The CR and TB&BU included members with a high out-degree centrality, whereas in the LQM and HS network members related mostly only with ITM.
Betweenness centrality	Betweenness centrality measures the extent to which a vertex lies on paths between other vertices. Vertices with high betweenness may have considerable influence within a network by virtue of their control over information passing between others.	ITM also had the highest betweenness centrality in all networks. In the LQM and HS networks, ITM had a high betweenness centrality whereas the network members scored zero, highlighting they did not relate much to other members in the network.
Eigenvector centrality	Eigenvector centrality is a measure of the influence of a node in a network. It assigns relative scores to all nodes in the network based on the concept that connections to high-scoring nodes contribute more to the score of the node in question than equal connections to low-scoring nodes.	ITM had the highest level of eigenvector centrality across all networks. In the TB&BU and CR networks, members had a similar level of eigenvector centrality above 0.1 which means members were actively involved.

5.4.2 CLINICAL RESEARCH NETWORK

5.4.2.1 Overview of the network

The Switching the Poles Clinical Research Network was launched in 2008 to develop the capacity, tools and procedures to apply universal standards for clinical research in resource-poor settings. The purpose of the network between 2014 and 2016 was to strengthen the existing network of Southern partner institutions and develop their capacity to set-up, conduct, lead non-commercial clinical research programs, designed to address the priority health needs of their populations, according to the appropriate ethical and Good Clinical Practice (GCP) standards.

The network included partners from 14 different countries (see table below), five of which were considered co-promotors responsible for steering the network (Belgium, Burkina Faso, Ethiopia, Indonesia and The Gambia). The total budget for the three-year period was €450,000, including €210,000 for direct network

activities and €240,000 for ITM staff support. At the end of 2016, 111.85% of the budget had been spend on capacity building activities to benefit the implementation of clinical trials, as well as training, coaching and bringing together young researchers form the South, including data managers and laboratory staff. The network developed a theoretical and practice-based GCP training course, standardised data management procedures, set up a data managers e-platform for collaboration and peer review and publicly spoke out about ethical issues in low and middle income research settings.

Table 6. Clinical Research Network participants

Institution	Country	Label used for SNA
Institute of Tropical Medicine	Belgium	ITM Belgium
Clinical Research Unit of Nanoro	Burkina Faso	CRUN Burkina Faso
BP Koirala Institute of Health Sciences	Nepal	BPKIHS Nepal
Gadjah Mada University	Indonesia	GMU Indonesia
Medical Research Council	The Gambia	MRC Gambia
Centre de Recherches Entomologiques de Cotonou	Benin	CREC Benin
Institut National de Recherche Biomédicale	DRC	INRB DRC
Instituto Nacional de Higiene, Epidemiología y Microbiología	Cuba	INHEM Cuba
Banaras Hindu University	India	BHU India
Sihanouk Hospital Center of Hope	Cambodia	SHCH Cambodia
Gondar University	Ethiopia	GU Ethiopia
Instituto de Medicina Tropical Alexander von Humboldt	Peru	IMTAH Peru
National Institute for Malaria, Parasitology and Epidemiology	Vietnam	NA
Project Rinda Ubuzima	Rwanda	NA

5.4.2.2 Network outcomes

The participants were asked to identify what the main outcomes were of their participation in the network. These outcomes are ranked in the table below. All participants believed that their individual technical capacity was strengthened because of their participation, with the large majority also observing improved technical capacity of their institutions. The consolidation of the existing network, improved communication and increased support and sharing on urgent issues in international clinical research were also considered important outcomes by more than half of the participants. When asked about which of these outcomes is still visible today, the majority responded: 'increased technical capacity of the institution on Good Clinical Practice'.

Table 7. Clinical Research Network outcomes

Outcome	# votes	Proportion of participants
Increased individual technical capacity	9	100%
Increased technical capacity of the institution on Good Clinical Practice (GCP)	8	89%
Increased individual project management skills	7	78%
Consolidation of the existing network of clinical research networks	7	78%

Increased support and sharing on new and urgent issues in international clinical research	7	78%
Improved communication among partners	6	67%
Increased project management capacity of the institution	5	56%
Establishment of a working group of clinical monitors	3	33%
Consolidation of the data management working group (ADMIT)	2	22%

5.4.2.3 Network interactions

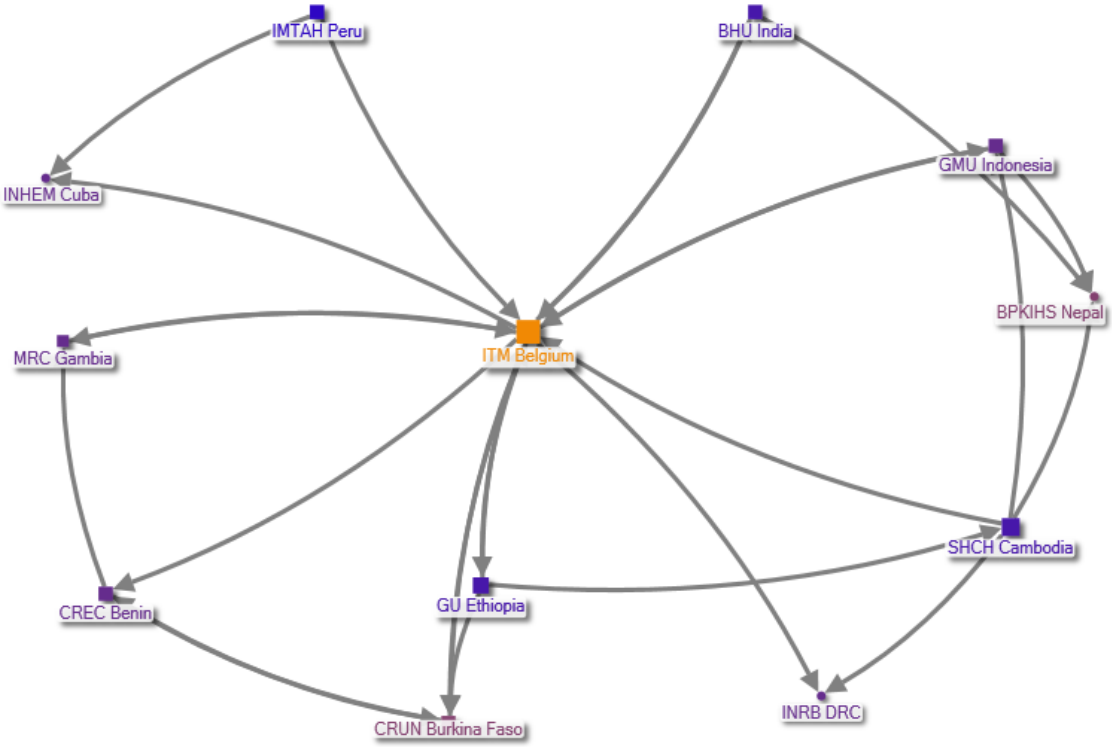
Nine of 14 network participants responded to the on-line survey documenting 26 relationships between 12 institutions. Three southern institutions who did not participate in the on-line survey were identified as important actors in the network (Nepal, DRC and Cuba). Eleven out of the 26 relationships (42%) already had a prior working relationship established, seven (27%) had an existing relationship but not at the professional level and eight (31%) did not have any relationship with the other institution prior to engaging in the network. The quality of the relationship was considered good for half of the connections, excellent for 35 percent of connections and fair for only four relationships. Most of the interaction happened on a yearly basis (50%), with six institutions interaction on a quarterly basis, four on a weekly basis and one daily (with the ITM). Email was the communication method most used (10/26), followed by virtual meetings, workshops, and face-to-face meetings.

Besides the ITM, who was on the receiving end of most of the relationships, the institution in Nepal and Burkina Faso were both on the receiving end of three relationships. In terms of power of the institutions to influence, act as a change agent or demonstrate leadership, besides the ITM, both the institutions in DRC and Indonesia were considered to have a 'great deal' of power by at least two different participants, but also Ethiopia, the Gambia, and Burkina Faso were said to have a great deal of influence by at least one other institution. These institutions are not surprisingly also the ones indicated as co-promotors of the network who participated in the network governance.

The institutions considered to be most strongly involved, besides the ITM, were those from Burkina Faso, DRC and the Gambia, followed by Indonesia, Ethiopia and Nepal. Two institutions, from Benin and Cuba, were said to only have been marginally involved. The institutions from Nepal, Burkina Faso and Indonesia were considered greatly reliable by at least two other institutions, meaning that would follow through on their commitments. In terms of contribution of resources, the institution in Indonesia was considered to have greatly contributed by at least two other institutions.

5.4.2.4 Visual representation and SNA metrices

Figure 2. Clinical Research Network visual



The ITM was the institution that had the highest in-degree and out-degree centrality and is therefore positioned at the centre of the network. Ethiopia and Cambodia indicated the highest number of engagements with other institutions and therefore have a higher out-degree centrality. Burkina Faso and Nepal had a high in-degree centrality, meaning they were at the receiving end of many connections. Peru, Gambia, Cuba and DRC had a low betweenness centrality meaning they were not positioned in between relationships of other institutions, whereas Cambodia, India and Indonesia had a high betweenness centrality and are therefore considered to have a higher degree of influence in the network. ITM, Cambodia and Ethiopia have the highest eigenvector centrality, meaning they are better connected to high-scoring nodes in the network. This, however, is also because they indicated more connections within the network.

Table 8. Clinical Research Network metrices

Label*	In-Degree	Out-Degree	Betweenness Centrality	Eigenvector Centrality
ITM Belgium	7	8	77.500	0.181
CRUN Burkina Faso	3	2	1.000	0.083
BPKIHS Nepal	3	0	2.000	0.062
GMU Indonesia	2	2	3.833	0.086
MRC Gambia	2	1	0.000	0.062
CREC Benin	2	2	1.000	0.078
INRB DRC	2	0	0.000	0.071
INHEM Cuba	2	0	0.000	0.057
BHU India	1	2	3.833	0.058
SHCH Cambodia	1	4	11.333	0.117
GU Ethiopia	1	3	1.500	0.091
IMTAH Peru	0	2	0.000	0.057

**Lines coloured in dark grey are organisations that did not participate in the on-line survey.*

5.4.2.5 Findings from the SNA

The SNA confirms that this was an active network with multiple interactions between different network members. This is also confirmed by the perspective of the participants in terms of the outcomes of the network, in which consolidation of the network, improved support and sharing and communication were considered important outcomes of the network. ITM occupies a central role in the network with almost all members confirming a strong relationship with ITM. The co-promotors also occupy a relatively strong position in the network, especially in terms of their power to influence and their involvement. Most of the interactions happened at presential annual events or workshops, while there were also quarterly governance meetings using virtual platforms. A geographical concentration of connections is also observed with connections among network participants remaining mostly within Africa, Asia or Latin America, except for two institutions reporting on cross-continental collaborations.

5.4.3 TB & BURULI NETWORK

5.4.3.1 Overview of the network

The TB Network was launched in 2011 to connect six partners already linked with ITM to work on TB. Since then the scope has broadened to include Mycobacterium ulcerans, the cause for Buruli and two other partners joined (Mali and Rwanda). The aim of the network is to bring together expertise on Tuberculosis (TB) and Buruli Ulcer (BU) in research institutions in West and Central Africa, for researchers to jointly develop, identify and implement priorities for research and capacity building. The network worked alongside the West African Node of Excellence for TB, AIDS and malaria (WANETAM) but focused more on capacity building in research and facilitation of individual exchanges.

The network included partners from 8 different countries (see table below). The total budget for the three-year period was €450,000, including €180,000 for direct network activities and €270,000 for ITM staff support. At the end of 2016, 109.96% of the budget had been spend, with a 124.19% overspend on activities. Network activities included participation in short courses organised by the network, organisation of training exchanges between partners, seed grants to support pilot studies, strengthen collaborative research or establish preliminary results for further grant application, support to young researchers for participation in conferences and peer-review for abstracts or grant proposals.

Table 9. TB & Buruli Network participants

Institution	Country	Label used for SNA
Institute of Tropical Medicine	Belgium	ITM Belgium
Laboratoire de Réference des Mycobactéries	Benin	LRM Benin
Centre Muraz	Burkina Faso	CM Burkina Faso
Medical Research Council	The Gambia	MRC Gambia
Institut National de Recherche Biomédicale	DRC	INRB DRC
Center for TB and AIDS research SEREFO	Mali	SEREFO Mali
National Reference Laboratory	Rwanda	NRL Rwanda

- Network outcomes

The participants were asked to identify what the main outcomes were of their participation in the network. These outcomes are ranked in the table below. All participants believed that both their institutional and individual technical and scientific capacity was strengthened because of their participation. Increased coalition building, improved communication and submission of collaborative research proposals were also considered important outcomes by more than half of the participants. When asked about which of these outcomes is still visible today, half of them responded: 'increased submission of collaborative research proposals', while the other half referred to the individual or institutional capacity built.

Table 10. TB & Buruli Network outcomes

Outcome	# votes	Proportion of participants
Increased technical and/or scientific capacity of the institution	4	100%
Increased individual technical or scientific capacity	4	100%
Increased submission of collaborative research proposals	3	75%
Increased coalition building	3	75%
Improved communication among partners	3	75%
Increased sharing of protocols	2	50%
Increased sharing of trainees	2	50%

- Network interactions

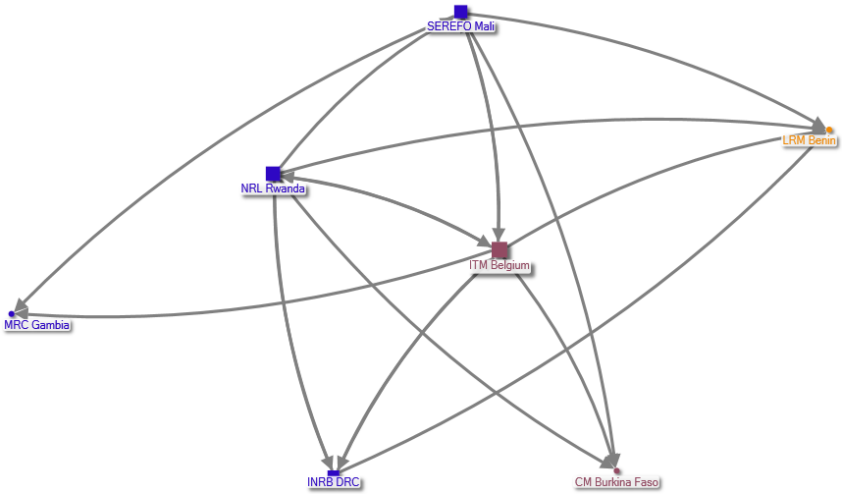
Four of the seven network participants responded to the on-line survey documenting 18 relationships between all 7 institutions. Three southern institutions who did not participate in the on-line survey were identified as important actors in the network (Gambia, Burkina Faso and Benin). Seven out of the 18 relationships (39%) already had a prior working relationship established, two (10%) had an existing relationship but not at the professional level and nine (50%) did not have any relationship with the other institution prior to engaging in the network. The quality of the relationship was considered mostly good (39%) or excellent (33%). However, five relationships were considered less strong, two of which even poor. Most of the interaction happened on a weekly or monthly basis (44%), with five institutions interacting on a quarterly basis, and another five on a yearly basis. Email was the communication method most used (56%), followed by workshops, virtual meetings and face-to-face meetings.

Interestingly, two of the institutions that did not participate in the on-line survey (Benin and Burkina Faso) were on the receiving end of respectively four and three relationships. In terms of power to influence, act as a change agent or demonstrate leadership, besides the ITM, the institution in Benin was considered to have a 'great deal' of power by at least two different participants, but also, the Gambia, Rwanda and Mali were said to have a great deal of influence by at least one other institution.

The institutions considered to be most strongly involved, besides the ITM, were also those from Benin, Burkina Faso, Rwanda, Mali, and the Gambia, followed by the DRC. The institutions from Benin, Burkina Faso and Rwanda were considered greatly reliable by at least two other institutions, meaning that they would follow through on their commitments. In terms of contribution of resources, the institution in Benin was considered to have greatly contributed by at least two other institutions.

- Visual representation and SNA metrices

Figure 3. Figure 1. TB & Buruli Network visual



While ITM was the one institution that had the highest out-degree centrality, the institution in Benin received the highest in-degree centrality, meaning that they were at the receiving end of all institutions that participated in the on-line survey. The ITM continues to be positioned at the centre of the network, however, because unfortunately the institution in Benin did not participate in the exercise.[35] All institutions in the network had at least one other engagement with other institutions in the network. Burkina Faso and Nepal had a high in-degree centrality, meaning they were at the receiving end of many connections. The ITM, Mali and Rwanda had a high betweenness centrality meaning they are positioned in between relationships of other institutions, and therefore have a likelihood to have a higher degree of influence in the network. All actors in the network had a relatively high eigenvector centrality, meaning they are well connected to high-scoring nodes in the network. This is interesting, especially as only four actors out of seven participated. If all had participated, we had probably seen an even more active representation of the network.

Table 11. TB and Buruli Network metrices

Label*	In-Degree	Out-Degree	Betweenness Centrality	Eigenvector Centrality
SEREFO Mali	2	4	3.667	0.143
NRL Rwanda	2	5	2.333	0.143
INRB DRC	2	3	0.000	0.111
ITM Belgium	3	6	7.333	0.167
LRM Benin	4	0	0.667	0.125
CM Burkina Faso	3	0	0.000	0.111
MRC Gambia	2	0	0.000	0.100

**Lines coloured in dark grey are organisations that did not participate in the on-line survey.*

- Findings from the SNA

The SNA confirms that this was a very active network with at least two interactions between different network members. This is also confirmed by the perspective of the participants in terms of the outcomes of the network, in which increased coalition building, improved communication and increased submission of collaborative research proposals were considered important outcomes of the network. ITM still occupies a central role in the network, however, the institution in Benin was also considered a leading actor in the network. This leadership is confirmed in the relative power, involvement, and contribution of resources that this actor contributed to the network. Other actors, such as Burkina Faso and the Gambia were also considered strong players in the network. There were frequent interactions, weekly or monthly using email, as well as workshops, virtual or face-to-face meetings on a quarterly or annual basis.

LABORATORY QUALITY MANAGEMENT NETWORK

- Overview of the network

The Laboratory Quality Management Network was launched in 2008 to support partnering laboratories in the South to implement standardised quality measures to ensure high level laboratory work and a standardised output. Stakeholders would act as hubs to disseminate concepts and standardised procedures within their local area of influence. The network started with five members across three continents and was gradually expanded to eight members. Following a mid-term evaluation, however, which observed that the heterogeneity in needs, activities, organisation, languages and cultural context of the partners was seen as an obstacle to function as a network, in FA3 the network was redesigned to function only in two regions: Africa and South-East Asia with strong existing regional networks. The purpose of the network between 2014

[35] Notwithstanding various requests and invitations to participate.

and 2016 was to strengthen and expand existing regional networks of diagnostic and research laboratories in the objectives of capacity strengthening in laboratory quality from bench-side topics to regulatory issues

The network included partners from 5 different countries (see table below), two of which were considered co-promotors or regional network hubs (DRC and Cambodia). The total budget for the three-year period was €450,000, including €180,000 for direct network activities and €270,000 for ITM staff support. At the end of 2016, 142.44% of the budget had been spend, with a 110.57% overspend on network activities and a 163.68% overspend on ITM staff costs. The network conducted two external quality assessments in diagnostic laboratory medicine in DRC, and encouraged active participation in regional professional societies in DRC and Cambodia. New sites for diagnostic trials were identified and selected for international research collaborations. A 3-day national workshop on diagnostic microbiology was organised in Cambodia and two other workshops were organised with additional funding and including institutions outside of the network. Various studies on appropriate diagnostic microbiology were conducted. A website for sharing SOPs, tools, guidelines and background documents had been developed prior to 2014 but suffered technical issues in the period under review.

Table 12. LQM Network participants

Institution	Country	Label used for SNA
Institute of Tropical Medicine	Belgium	ITM Belgium
Clinical Research Unit of Nanoro	Burkina Faso	CRUN Burkina Faso
Medical Research Council	The Gambia	MRC Gambia
Institut National de Recherche Biomédicale	DRC	INRB DRC
Sihanouk Hospital Center of Hope	Cambodia	SHCH Cambodia
Gondar University	Ethiopia	GU Ethiopia

- Network outcomes

The participants were asked to identify what the main outcomes were of their participation in the network. These outcomes are ranked in the table below. All participants believed that their individual technical capacity was strengthened because of their participation, with the large majority also having been able to conduct studies on appropriate diagnostic trials. The network has also been useful for identifying field study sites, increasing collaborations for field studies, bringing together knowledge on appropriate standards and procedures, dissemination of publications and reports and strengthening the institutional capacity. Fewer network members believed that the network had improved communication among partners and led to more active participation in regional professional societies. When asked about which of these outcomes is still visible today, all participants responded differently with the main results rested on either the strengthening of their institutional or individual capacity.

Table 13. LQM Network outcomes

Outcome	# votes	Proportion of participants
Increased individual technical capacity	5	100%
Conduct of studies on appropriate diagnostic microbiology (including bench related topics and use of diagnostics)	4	80%
Identification of field study sites capable of conducting diagnostic trials	3	60%
Increased collaborations for field studies	3	60%
Aggregation of knowledge on appropriate diagnostic microbiology techniques	3	60%

Outcome	# votes	Proportion of participants
Increased dissemination of publications, reports and website	3	60%
Increased institutional technical capacity	3	60%
Extension of the network and activities of External Quality Assessment (geographical coverage, topics, vertical programmes, etc.)	2	40%
Improved communication among partners	2	40%
Active participation of partners in regional professional societies in laboratory medicine	1	20%

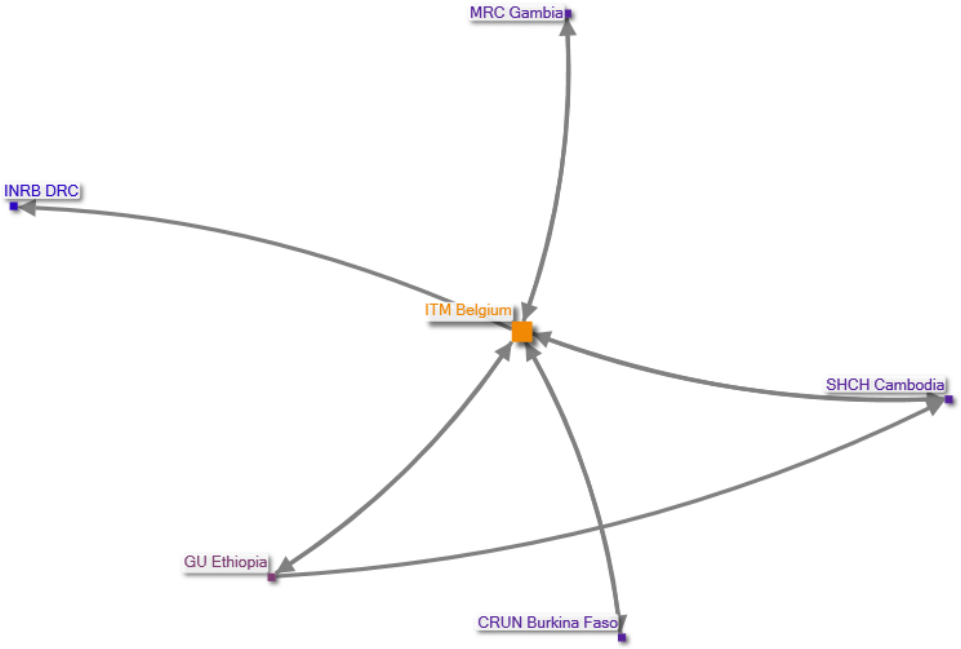
- Network interactions

Five of 6 network participants responded to the on-line survey documenting 10 relationships between 6 institutions. One southern institution who did not participate in the on-line survey was identified an actor in the network (DRC). Nine out of the 10 relationships (90%) already had a prior working relationship established, only one (10%) did not have any relationship with the other institution prior to engaging in the network. The quality of the relationship was considered either good or excellent. The ITM did not indicate their perception on level of quality for the other network members. Most of the interaction with ITM happened on a quarterly basis (50%), but for one institution it was even on a weekly basis. Communication across members was reported only by one institution and this only happened as a result of a workshop. Email was the communication method most used, followed by virtual meetings, workshops, and face-to-face meetings.

The ITM was on the receiving end of most of the relationships. Only one cross-member connection was reported because of the participation in a workshop. In terms of power, the ITM was considered to have a fair amount of power to influence, act as a change agent or demonstrate leadership. They were also considered to be greatly involved and a reliable partner, providing a great deal of resources.

- Visual representation and SNA metrices

Figure 4. LQM Network visual



The ITM was the one institution that had the highest in-degree and out-degree centrality and is therefore positioned at the centre of the network. Only Ethiopia reported on an engagement with another member of the network. ITM has the highest betweenness centrality and is therefore considered to have a high degree of influence in the network. ITM, Cambodia and Ethiopia have the highest eigenvector centrality, meaning they are better connected to high-scoring nodes in the network. This, however, is also because they indicated more connections within the network.

Table 14. LQM Network metrices

Label*	In-Degree	Out-Degree	Betweenness Centrality	Eigenvector Centrality
ITM Belgium	4	5	18.000	0.200
MRC Gambia	1	1	0.000	0.111
SHCH Cambodia	2	1	0.000	0.125
CRUN Burkina Faso	1	1	0.000	0.111
GU Ethiopia	1	2	0.000	0.125
INRB DRC	1	0	0.000	0.111

**Lines coloured in dark grey are organisations that did not participate in the on-line survey.*

- Findings from the SNA

The SNA confirms previous findings from the 2010 Mid-term review that the LQM network is not necessarily a network promoting South-South collaborations, but rather a multi-country project in which the ITM manages the project with partners in different countries. This is also reflected in the perspectives of the participants regarding the outcomes of the networks. The outcomes considered most important relate to strengthening of individual or institutional capacity related to what the institution was working on, whereas outcomes on improved communication or participation in regional societies received a lower score. ITM occupies a central role in the partnership with all members confirming a strong relationship with ITM. The regional hubs were rather promotors for their own national networks and not for collaboration with other network members. Most of the interactions were directly with ITM using email communication, virtual platforms or face-to-face meetings. One network member confirmed they collaborated with another member at a presential workshop.

HEALTH SYSTEMS NETWORK

- Overview of the network

The Health Systems Network had been part of the Switching International Health Policies & Health Systems (SWIHPS) network prior to 2014. In 2014 it was decided to split the SWIHPS network into two, one focusing on Health Systems and another one on Health Policy and Financing. The purpose of the Health Systems network was to strengthen the strategic capacity of regional health system-oriented networks to allow them to play a stronger role at national, regional and international level. The rationale of this network was that by providing modest but 'unconditional' funding, the regional networks could invest in key activities for which they could not otherwise find funding. The leverage of the HS Network's funding would thus allow them to strengthen critical functions and was expected to contribute to improved capacity at country level for management, policymaking and research for integrated health systems.

The network included three regional hubs, one in India and two in Latin America (see table below). Together these networks reached over 2,000 members. The total budget for the three-year period was €283,011.36, including €103,011.36 for direct network activities and €180,000 for ITM staff support. At the end of 2016, 96.93% of the network activities budget had been spend, while only 4.3% of budget available for ITM staff

were used. During the period under review the two Latin American networks were strengthened by having expanded their networks, developed, and organised courses, and carried out research on chronic conditions. The Indian hub, however, dropped out at the end of 2014. Several planned activities were not implemented because of personnel and IT issues.

Table 15. Health System Network participants

Institution	Country	Label used for SNA
Institute of Tropical Medicine	Belgium	ITM Belgium
Indian Hub on Health Systems	India	IHHS India
Red de Investigación Docencia y Extensión en Salud en América Latina	Colombia	IDESAL Colombia
LatinChronic	Colombia	LatinChronic Colombia

- Network outcomes

The participants were asked to identify what the main outcomes were of their participation in the network. These outcomes are ranked in the table below. This network is different from the other networks because it supports sub-regional networks and the outcomes therefore refer to the partners of their sub-regional networks. The four network promotors believed that scientific support to partners improved as a result of the Health System's network, similarly the regional networks were able to improve their communication and dissemination among partners, as well as improved capacity at country level for managing, researching and making policies for integrated health systems. Members were less convinced about whether they managed to improve their strategy for leveraging partners and hubs at national and international level. When asked about which of these outcomes is still visible today, the majority responded: 'increased technical capacity of the institution on Good Clinical Practice'.

Table 16. Health Systems Network outcomes

Outcome	# votes	Proportion of participants
Improved scientific support to partners	4	100%
Improved communication among partners	3	75%
Improved dissemination among partners	3	75%
Improved capacity at country level for management, policymaking and research for integrated health systems	3	75%
Improved strategies for leveraging partners and hubs at national and international level	1	25%

- Network interactions

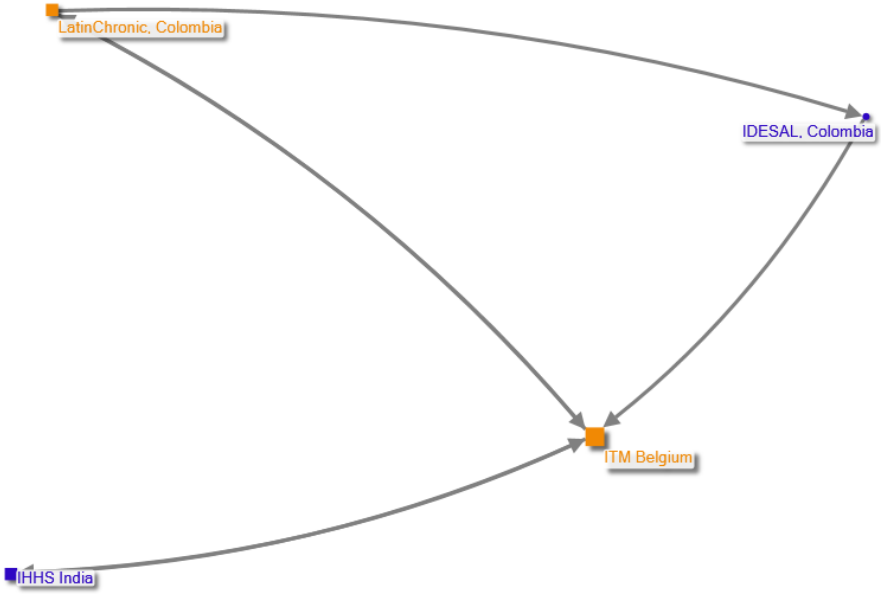
All four main network participants responded to the on-line survey documenting 6 relationships between 4 institutions. Four out of the 6 relationships (70%) already had a prior working relationship established, two (30%) had an existing relationship but not at the professional level. The quality of the relationship was considered of good quality by all and even excellent for three of the connections in the network. Most of the interaction happened on a quarterly basis (50%), with two institutions interacting monthly and another two on a weekly basis. Email was the preferred communication method most used (83%), while one institution mentioned that it also used virtual meetings for interacting with the ITM.

The ITM was on the receiving end of all relationships, while the regional hubs were on the receiving end of only one relationship. ITM did not report on their relationship with IDESAL. According to the regional hubs, the ITM had a great deal of power to influence, act as a change agent or demonstrate leadership. ITM did not provide a response on this question, so we can therefore not report on the power of the regional hubs.

All institutions were involved in the network and considered a reliable partner. Besides the ITM, only IDESAL was considered to have contributed in terms of resources (human, financial or data sources).

- Visual representation and SNA metrices

Figure 5. Health System Network visual



The ITM was the institution that had the highest in-degree centrality and is therefore positioned at the centre of the network. LatinChronic and ITM both had the highest number of engagements with other institutions and therefore have a higher out-degree centrality. ITM did not report on their relationship with IDESAL. ITM had a high betweenness centrality and is therefore considered to have a high degree of influence in the network. ITM has the highest eigenvector centrality, meaning they are better connected to high-scoring nodes in the network, closely followed by LatinChronic and IDESAL.

Table 17. Health System Network metrices

Label*	In-Degree	Out-Degree	Betweenness Centrality	Eigenvector Centrality
LatinChronic, Colombia	1	2	0.000	0.270
IHHS India	1	1	0.000	0.145
ITM Belgium	3	2	4.000	0.315
IDESAL, Colombia	1	1	0.000	0.270

- Findings from the SNA

The analysis conducted is only a 'partial' SNA as it only invited the promotors of the regional networks and not the members of those sub-networks. The SNA does not provide a lot of insights in terms of the collaboration among network members. As also seen in the networks, the outcomes were related more to the partners of the sub-regional networks rather than the Health System Network as such. Most of the connections were directly with ITM, except for LatinChronic who also reported on their relationship with IDESAL, while ITM did not report on their relationship with IDESAL. Most of the interactions happened virtually using email or virtual platforms on a quarterly, monthly, or weekly basis. No interactions were reported across continents, most likely because the IHHS did not continue to participate after the end of 2014.

5.5 APPLYING THE ESSENCE FRAMEWORK TO COUNTRY STUDIES

ESSENCE on Health Research is an initiative of funding agencies to improve the coordination and harmonisation of research capacity investments. In 2016, ESSENCE published an updated planning, monitoring and evaluation (PM&E) framework for research capacity strengthening programmes that aim at either (a) enhancing the capacity of individuals and organisations to carry out, manage, share and apply research; and (b) promoting national and sub-national research systems that support research and the linkage between research, policy and practice. We have adapted the framework by enlarging its scope and applicability to all FA3-III projects, including to those aimed at strengthening research capacity, training capacity, service delivery capacity (including advocacy). While the framework was not applied in planning the country- and global programme interventions of FA3-III, we have adapted the matrix of results and indicators for a post-hoc evaluation of programme outcomes in three categories:

- Contribution of FA3-III (2014-2016) to increased individual capacity of participating researchers / scientists / academics;
- Contribution of FA3-III (2014-2016) to increased capacity of participating organisations (research, training, service delivery);
- Contribution of FA3-III (2014-2016) to improved national research and training systems.

The fourth category of the Essence framework (research networks) is not directly applicable to the evaluation of country-level programming. However, strengthened networking capacity of institutional development partners will be assessed under the category of organisational capacity.

The focus of assessments under the three categories was on the outcome level. Depending on the specific goals and objectives of the institutional cooperation project(s) in the country, outcome indicators may be modified to better reflect the project. Project outputs from annual reports and other documentation were used to validate outcomes reported by key informants.

We refer to the country case studies (Benin, India, Peru) where we applied the framework and to Vol I, section 8.2 for the results of the assessment and proposal for future indicators to measure capacity strengthening.

Table 18. M&E framework for capacity strengthening in case study countries

Outcome	Indicators	Means of verification
Strengthened individual capacity *(among southern partners who were FA3-III grantees in 2014-16)*		
Increased individual research capacity	• Peer reviewed publications with first or second authorship • Conference presentations • Awards / prizes • Effect on career development • Competitive grants won since 2016 (compared to prior to 2014) • Total value of research grants won since 2016 (compared to prior to 2014) • Publications of policy briefs and other documents aimed at knowledge users (not scientific papers) • Participation in technical fora, policy advisory groups, and implementation programmes	Interviews Publications
Increased individual training capacity	• Training courses developed/conducted (in which position) • Professional certifications & academic titles • Academic appointments	Interviews

Outcome	Indicators	Means of verification
Increased individual capacity to deliver services	• Professional certifications • Professional career achievements • National/regional/international recognition of expertise	Interviews
Strengthened institutional capacity		
Increased institutional capacity	• Development of infrastructure, major equipment and staffing of the institution • Accreditations or certifications achieved • Other forms of national/regional/international recognition	Annual reports Accreditation reports
Research capacity	• Total research funds contracted by year • Total number of research proposals submitted by year • Total number of research proposals won by year • Total number of publications in peer reviewed journals by year • Partnerships established with other research organisations • Joint research proposals submitted / won with other research organisations • Joint publications with other research organisations • Ethics Committee established / operational • Local, national, regional or global policy influenced	Contracts / memoranda of understanding / accounts / publications / policy documents
Training capacity	• Number and type of courses and curricula developed • Number and type of e-learning courses established • Number and type of joint courses established • Annual number of PhD scholarships awarded and PhDs graduated, disaggregated by gender and, if relevant, by nationality • Annual number of Master's level students trained /graduated, by course, disaggregated by gender and, if relevant, by nationality • Annual number of postgraduate students trained, by course, disaggregated by gender and, if relevant, by nationality	Annual reports
Service capacity	• Scope and annual volume / coverage of services provided (trends), disaggregated by gender (when relevant) • Scope and annual volume of laboratory tests provided (trends) • New laboratory test introduced • Local referral network established / strengthened • Local quality assurance system established / strengthened • Regional referral system established	Annual reports
Strengthened national systems for research, training or service delivery		
Strengthened national standards and regulatory frameworks for accreditation, ethics and quality assurance in research	• National changes of ethics, accreditation and quality assurance standards for research	Policy documents

Outcome	Indicators	Means of verification
Strengthened national policies, systems, guidelines for service delivery	• New national programme developed • National policy updated • New prevention / treatment / control guidelines developed, or existing ones updated • National referral network established • National quality assurance network established • Other changes in health system organisation	Policy documents Guidelines National / district annual reports Project reports
Strengthened national systems for training MSc, PhDs and other postgraduate training	• National capacity for PhD training developed • New MSc course established • New postgraduate training established • National curricula adapted • National education policy updated	

5.6 APPLYING THE ESSENCE FRAMEWORK TO NETWORK EVALUATION

The fourth component of the ESSENCE capacity building PM&E framework provides a template for monitoring capacity building of research networks. Outcomes of the FA3-III Global Programme network strengthening was assessed in the three country studies at the level of in-country network partners. However, the framework for network evaluation can only be applied across entire networks. It was therefore applied it to the four sampled networks. Proposals for measuring network performance and specific outcome and output indicators are proposed in Vol I, section 8.2.2.

Table 19. M&E Framework for network capacity strengthening

Outcome	Indicators	Means of verification
Increased capacity of strategic networks to get projects funded	Number of proposals jointly developed by network partners and number of them funded	Interviews Programme documents
Increased capacity of strategic networks to produce new knowledge, conduct research	Number of joint peer-reviewed publications by network partners Quality and impact of publications	Interviews Publications Citation counts
Increased capacity of strategic networks to disseminate knowledge	Level of external visibility and through social media and internet presence; conferences; workshops; webinars; other knowledge sharing events; other platforms; advocacy.	Interviews Internet searches Social media analytics
Output	**Indicators**	**Means of verification**
New strategic networks formed	Number of new strategic networks formed	Annual reports Contracts/memoranda of understanding Interviews
Strategic network members adequately use their resources to contribute to the network functioning	Existence of adequate means for regular communication and exchange	
Strategic network members have the knowledge and skills for networking	Existence of joint documents such as terms of reference, joint action plans, rules around competition, collaboration, etc.	
Existing strategic networks maintained	Duration of network maintenance	

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IMPACT EVALUATION OF THE THIRD FRAMEWORK AGREEMENT (FA3-III) BETWEEN DGD AND ITM

ITM FA3 Evaluation 2020

Inception Report

July 2020

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Cover page image: Getty Image

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ABBREVIATIONS & ACRONYMS

COS	Commission Development Cooperation
DGD	Directorate General for Development
ESSENCE	Planning, Monitoring and Evaluation Framework of Research Capacity Strengthening
FA3	Third Framework Agreement
GBV	Gender Based Violence
GE	Gender Equality
ITM	Institute of Tropical Medicine (Antwerp)
KII	Key Informant Interviews
LF	Logical Framework
MAXQDA	Content analysis software
Mo(P)H	Ministry of (Public) Health
PCM	Project Cycle Management
QUAMED	Quality Assured Medicines
RAcE	Summative Evaluation of the Rapid Access Initiative
RQ+	Research Quality Plus
SNA	Social Network Analysis
SRHR	Sexual and Reproductive Health & Rights

1 INTRODUCTION

1.1 BACKGROUND

The third framework agreement (FA3) between ITM and DGD, "Switching the poles" 2008-2013 (covering two periods of three years – FA3-I and FA3-II) was extended for another three years (FA3-III) up to 2016. FA3-III is the subject of the current evaluation.

1.2 THIRD FRAMEWORK AGREEMENT PHASE III (FA3-III)

As indicated in the Terms of Reference (ToR), the overall objective of the programme is to strengthen the rational basis and the country ownership of health care systems and policies in developing countries, in order to improve the health status of the populations and thereby contribute to the reduction of poverty and inequity. The specific programme purpose is to build, reinforce and support appropriate and sustainable capacity in developing countries to conduct research, training and delivery of reference services in order to meet the overall objective.

The target groups of the programme are a) the leaders, scientists and experts in the partner institutions in developing countries; b) the health professionals and policy makers that can implement the improved practices and policies resulting from the programme; and c) the communities and individuals that should benefit from the improved practices and policies and are therefore indirect beneficiaries for most institutional collaboration projects.

FA3-III covered five programme components. The first component, including country programmes (1A: 24 organisations in 18 countries) and a 'global' programme (1B. ten thematic networks and the annual colloquium/ seminars) is the focus of the current evaluation. It covers about 59% of the FA3-III budget[1]. Components 2 (international scholarships and training) and 3 (policy support) have been evaluated before.

1.3 SCOPE AND PURPOSE OF THE EVALUATION

The evaluation should contribute to learning, building deeper partnerships, and provide accountability to ITM beneficiaries and DGD.

Learning refers to the formative aspects of evaluation, informing current and future interventions (content, stakeholder engagement, modalities). Building partnerships refers to strengthen existing partnerships with a view to building true local ownership.

While the evaluation focuses on FA3-III, it will, where possible and relevant, take into account findings and experiences from the whole FA3 programme (2008-2016) related to country and global programmes. This will be mainly based on the FA3-I and FA3-II end of project reports as no evaluation reports are available for phase I and II of FA3. Final reports of FA1 (1998-2002) and FA2 (2003-2007) will only be consulted to better comprehend longer-term partnerships with selected countries / institutions (e.g. for the country case study of Benin).

[1] Including the PNLTHA project in DRC (which budget was added later). Without this additional budget, component one covered 51% of the total budget of 45,25 M €.

2 EVALUATION PROCESS

The below calendar is as per contract signed between ITM and hera.

Table 1. Implementation calendar

Deliverable	Date
Inception report	End of June 2020
Follow-up meeting	Early July 2020
Field visits & desk review	July- August/ September 2020
Follow-up meeting / feedback	Late August / early September 2020
Draft final synthesis report	End of September 2020
Final report	Mid October 2020
Presentation of the final report to the peer review group	TBC
Presentation of the final report to other ITM staff or at colloquium	TBC

The external evaluation will be supervised by the Commission Development Cooperation (COS) of the ITM and implemented by **hera**. It will be conducted in three phases.

- An inception phase of approximately three weeks during which the evaluation questions were formulated, the data sources finalised, and the data collection instruments developed. The social analysis questionnaire is a standardised tool, used in previous evaluations. The KII and other interview guides have been used and tested in previous evaluations by hera, and are adapted to the current project. The draft inception report (current report) will be submitted to the COS for approval.
- After approval, a data collection phase of about two months will follow during which time documents will be reviewed and one on-line survey (social network analysis), key informant interviews, and three case studies of research projects will be conducted.
- Following data collection, a period of about one month is foreseen for analysis, triangulation of findings and reporting. A draft evaluation report will be prepared and submitted to COS by the end of September. Following feedback by COS/ITM the evaluation report will be finalised by mid-October.

Given the evolution of the Covid-19 pandemic across the globe, it is highly unlikely that safe international travel to Benin, India and Peru will be possible in July-August. We therefore have developed the proposal based on the option (c)[2] discussed with ITM. The modalities of data collection at country level and collaboration between national and international experts are discussed in SECTION 3.1.5 AND ANNEX 7.6.

[2] See hera technical proposal. "Country case studies are maintained for July-August in countries where local travel restrictions do not interfere with the planned evaluation activities by the national expert. Choice of country programmes may have to be reviewed based on international and local travel restrictions. If international travel is not allowed (and/or the expert needs to go into quarantine upon arrival), the international expert participates in group discussions and / or some key informant interviews over Skype or MS Teams. Short films are shared by the national expert to inform about local conditions and / or investments".

3 APPROACH/METHODOLOGY

The evaluation will use a mixed methods approach that is based on matrices of evaluation questions that were developed for the overall programme (country projects and networks) including the three case studies. (see **TABLE 3**) The questions were structured according to the OECD-DAC evaluation parameters. For each evaluation question, data sources were identified. OECD-DAC evaluation criteria, as indicated in the ToR, will apply. Coherence (the latest OECD-DAC criterium) was not included as it was not mentioned in the TOR and was not part of the OECD-DAC criteria yet during the programme period.

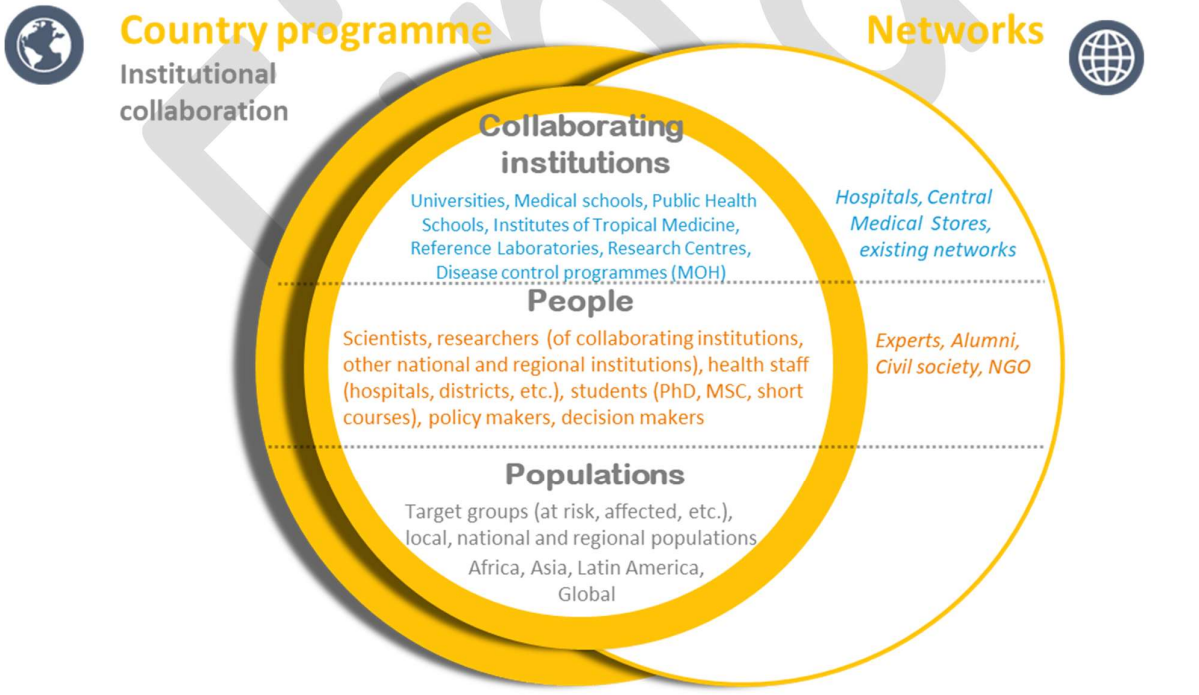
3.1 DATA SOURCES AND COLLECTION TOOLS

The evaluation will collect and triangulate data from five main sources: Document reviews, on-line surveys, key informant interviews, country visits / case studies, and a social network analysis. Field visits by national experts to project sites of the three country programmes (including their involvement in networks if applicable) are foreseen.

3.1.1 STAKEHOLDER MAPPING

A stakeholder map summarising the universe of institutions, organisations and structures that influenced the FA3 III Programme, worked in partnership with the Programme or are affected by the Programme's activities was prepared as an organising framework. (**FIGURE 1)** It provides a sampling frame from which selections will be made for interviews and surveys.

Figure 1. Stakeholder map



Stakeholders for institutional collaboration / country programmes (FA3-III 1A) and for networking (FA3-III 1B) overlap to a large extent, but not completely. We list them in figure 1 for both programme components based on a scan of the 24 institutional collaboration projects and 11 networks (including the colloquium).

Network stakeholders that are complementary to those listed for institutional collaboration are presented in italic in figure 1.

3.1.2 DOCUMENT REVIEWS

A document library for the evaluation was assembled with documents obtained from ITM and through internet searches during the inception phase. It will be expanded throughout the evaluation with additional documents from ITM, from programme stakeholders including other collaborating organisations and network participants, and further internet searches. Programme related documents such as the FA3-III programme document Annex III describing the project related results for each country project and network will serve as starting points to answer a number of evaluation questions related to specific projects and networks. In addition, we received a copy of project proposals submitted by each FA3-III stakeholder (2014); we will collect, with the help of ITM and promotors, evidence of project outputs (e.g. publications; people/courses; other products)[3] and achieved outcomes[4] during the programme period (2014-16) and thereafter.

We will review and analyse documents related to governance and administration of FA3-III, such as minutes of COS meetings, administration meetings (e.g. on budget allocation / reallocation), DGD-ITM steering group meeting reports; Joint Partner Meeting minutes; ITM Policy Plans; FA3 – I, II and III programmes and end of cycle reports (including outputs such as Scientific Publications (bibliographic references), updated logical framework, narrative reporting); other programme component evaluation reports; FA1 and FA2 reports.

Relevant documents will be coded according to their contribution to answering specific evaluation questions and analysed using the content analysis software MAXQDA which is designed to analyse qualitative and mixed data and allows to import, organise and visualise data from various file formats.[5] We will use this software to triangulate information from different sources for the overall programme evaluation questions (not for the specific projects).

3.1.3 ON-LINE SURVEYS

Contrary to the approach proposed in hera's technical proposal, we will focus on key informant interviews (KII) (see 3.1.4) rather than e-surveys for the country programmes / institutional collaborations. The main reason is that it will be very difficult to ensure that survey respondents provide relevant information related to the 2014-2016 period. Most institutional collaborations are based on long-term partnerships that started many years before FA3-III and most have continued beyond 2016. KIIs allow the interviewer to focus on the period 2014-2016 and ensure (as much as possible) that interviewees provide information related to this period. Recall bias is likely to be also a problem for KIIs but can be better managed during individual interviews. The above applies for both the 24 institutional collaboration projects and six networks not sampled for the social network analysis (see below).

[3] We use the classification used by ITM of 'people, publications, products'.

[4] Outcomes are not often documented in project progress reports. We will limit the assessment of project related outcomes (unless documented) to the three country case studies.

[5] www.maxqda.com/

For the evaluation of the network component (1B), four individualised on-line surveys will be developed as part of the social network analysis (SNA) (see SECTION 3.2.2). The surveys will ask each of the institutional participants questions about the perceived outcomes and behaviour change, the existing power relations, the perceived levels of engagement of different institutions as well as the extent to which capacities of the actors have changed as a result of their engagement in the network. The on-line surveys will be launched on the SurveyGizmo[6] platform which provides real-time analysis of frequencies.

For sampling of the networks for the SNA, we used the following criteria:

1. **Number of participants**: for SNA to be meaningful, it is important that the majority, if not all, actors that participated in the strategic network, also participate in the online survey for the SNA. Hence, it is more difficult to apply SNA on larger networks, particularly as we are addressing their performance in the past. For this evaluation, we have set the limit to networks with maximum 20 active participants. For three networks (Network for scientific support in the field of SRHR, Tropical and Neglected diseases, and ITM annual colloquium) performing SNA is not feasible due to their size and for another two networks (International Health Policy and Financing and Health Systems Network) a restricted form of SNA can be applied (i.e. only involving the promotors, co-promotors and coordinators and excluding the actual members).
2. **Category:** we grouped the eight networks on which SNA (either full or restricted) can be applied into four groups as per their focus (normative or thematic), time of establishment (before FA3-III or from FA3-III), budget (<€400,000 or >€400,000) and expenditure levels (>75% or <75%):
    - **Normative, established before FA3-III, budget >€400,000, expenditure >75%**: Clinical Research Network, International Health Policy and Financing, Laboratory Quality Management, Quality Assured Medicines (QUAMED)
    - **Normative, established from FA3-III, budget <€400,000, expenditure <75%**: Health Systems Network, Strategic Network on Antibiotic stewardship
    - **Thematic, established before FA3-III, budget >€400,000, expenditure >75%**:: TB and Buruli Network
    - **Thematic, established from FA3-III, budget <€400,000, expenditure >75%**: International knowledge network for Nutrition (EVIDENT)
3. **Geographic spread**: we also looked at where the networks operated in terms of geographical location to ensure the selection looked at different locations.

These criteria are summarised in table 2 below. Based on this exercise, we propose to sample the four networks highlighted in **bold** in the table below:

Table 2. Sampling of networks for social network analysis

Network	SNA feasibility (size of network)	Category	Geographic focus
Clinical Research Network	**YES**	**Normative, before FA3-III, 450K, >100%**	**Africa, Asia, LAC**
International Health Policy and Financing	Restricted	Normative, before FA3-III, 450K, >100%	Global

[6] www.surveygizmo.com

Network	SNA feasibility (size of network)	Category	Geographic focus
Laboratory Quality Management	**YES**	**Normative, before FA3-III, 450K, >100%**	**Africa & Cambodia**
QUAMED	YES	Normative, before FA3-III, 450K, >75%	Africa
ITM Annual Colloquium & seminars	NO	Normative, before FAIII, 400K, >75%	Global
Health Systems Network	**Restricted**	**Normative, from FAIII, 300K, <75%**	**LAC & India**
Strategic Network on Antibiotic stewardships	YES	Normative, from FAIII, 300K, <75%	Africa, Asia, LAC
TB & Buruli	**YES**	**Thematic, before FAIII, 450K, >100%**	**Africa**
Tropical and Neglected Diseases (incl. zoonoses / OneHealth)	NO	Thematic, before FAIII, 450K, >75%	Africa, Asia, LAC
Network for Scientific Support in the field of Sexual and Reproductive Health (NetSRH)	YES	Thematic, from FAIII, 300K, <75%	Africa
International knowledge network for Nutrition (EVIDENT)[7]	YES	Thematic, from FAIII, 300K, >100%	Africa

For each of these networks, the main participants will be invited to participate in an on-line survey (see **ANNEX 7.2** for example of on-line survey questionnaire).

3.1.4 KEY INFORMANT INTERVIEWS (KII)

Stakeholder views on the performance, structure and collaboration modalities of FA3-III are an essential data source for the evaluation. Stakeholder groups have been defined (see **FIGURE.1**).

Key informant interviews (KIIs) will be held with stakeholders who have been identified as particularly knowledgeable on all or some of the evaluation questions. KIIs are particularly indicated for exploring complex topics and evaluating large-scale programmes as they allow a structured but free flow of ideas and information. The interviews will be semi-structured using scripts prepared for each stakeholder group and further individualised for the respondent. The scripts will be shared prior to the interview and, with explicit permission by the respondent, the interview is recorded for transcription. A consent note is read to the participant, to which s/he explicitly needs to agree. This note includes the aim of the interview, and information about privacy and further rights of the participant. The interviews will be fully confidential, permission will be sought for any quotes, and access to the recordings and transcripts will be restricted to the evaluation team. The recordings and transcripts will be deleted after the evaluation has been finalised.

We will work with four sets of KII scripts: (1) for North and South promotors of institutional collaboration projects (see **ANNEX 7.4**), (2) for network organisers (North) (see **ANNEX 7.5**), (3) for stakeholders involved in the Programme's governance, management and financing (DGD, ITM) (*script to be developed during desk*

[7] The EVIDENT network is also a possible candidate for SNA, but preference was given by ITM to the Laboratory Quality Management network.

review), (4) for additional stakeholders and beneficiaries to be interviewed in country case studies (e.g. staff of the participating institution(s), researchers who completed PhD, policymakers, networking institutions) (*script to be developed during desk review*). The scripts are based on the evaluation questions (Evaluation Matrix, **SECTION 4**) and the category of interviewees.

KIIs for the 21 IC projects (not part of the country case studies) will be scheduled after completing the document review assuring that the interviewer is familiar with the project. This will avoid duplication of questions, allow focusing the interview on change management (What changed? What did not? How? What could have been done differently?) and keep the interview time manageable (max 1 to 1.5 hour).

For the IC projects, key informant interviews will be held with all South-based and ITM promotors or co-promotors, who are still in post. If they are no longer in post, we will attempt to obtain new contact information or replace them with another senior staff who was involved at the time of the FA3-III programme.

For the networks, KIIs will be scheduled with the ITM promotor for each network, following the desk review and for those networks that will be used for social network analysis, ideally after the closure of the on-line survey.

The KIIs will drill down on some specific aspects such as, for example, on perceived strengths and weaknesses of collaboration with ITM, of South-South and Triangular collaboration; on how (individual / organisational) capacity was developed; on how capacity development could be done differently or could be optimised; on how the main aim of "switching the poles" was achieved or could be achieved better; and whether projects have resulted in policy changes or improved practices (that reach the beneficiaries), also beyond 2016; on perceived added value of networking; on how networking could be optimised; etc.

Given the long recall period (questions relate to the period 2014-2016 and to further impact beyond 2016) indirect beneficiaries will not be included in the KIIs.

The list of interviewees is provided in **Annexes 7.9 and 7.10**. Interviews will be conducted by three members of the evaluation team on an internet communications platform of the respondent's choice. To the extent possible, ITM and DGD staff will be interviewed in face-to-face meetings in Antwerp/Brussels or, if not possible, via Skype/MS Teams. During field visits individual face-to-face or group interviews will be held (see **SECTION 3.1.5**).

3.1.5 COUNTRY CASE STUDIES

Three case studies will be conducted (Benin, India and Peru). According to the programme document each country programme worked with a single local / national institution. The case studies will cover the institutional collaboration with ITM and, where relevant, the involvement of the local institution in one or more of the ITM networks. The modalities for the case studies are discussed in **ANNEX 7.6.** They will review the partnership between ITM and the local institution in a historic and continued process perspective, including the support and collaboration before 2014 and beyond 2016. The review will be guided by the application of a modified ESSENCE Planning, Monitoring and Evaluation Framework of Research Capacity Strengthening.[8] (see **ANNEX 7.7**) . The framework has been adapted, amongst others, to capture other aspects of capacity strengthening targeted by ITM support, including training and service delivery.

A senior national expert in each of the three countries will partner with the international expert responsible for the country study. After the review of the programme documents, the team will drill down on

[8] www.who.int/tdr/publications/essence-framework-2016/en/

programme implementation aspects that are not yet documented or require a deeper assessment. Contingent on local regulations for limiting the spread of SARS-CoV2 at the time of data collection, the national consultant will organise a workshop, group meetings and individual discussions with key stakeholders in the institutional collaboration with ITM to discuss and document which changes happened (and which not), how they happened, why they happened (or why not) and what effect they had / what they resulted in (impact). All aspects of capacity strengthening (individual and organisational) will be explored, how participatory was the needs analysis and implementation, which processes were used, how effectively and efficiently these processes were implemented, what capacity development resulted in, how sustainable it was / is and how this could be optimised. Whenever possible, the international expert will participate in workshops and group meetings via the most suitable internet communication platform.

Depending on the type of collaboration, key informants for the country studies may include, in addition to the local partners team, policy makers, health professionals and other beneficiaries of the institutional collaboration. They will be included in interviews or group discussions as appropriate and feasible. The national consultants will also visit the premises of the collaborating institutions and, where possible, organise joint virtual discussions with the promotors and co-promotors of the institutional collaboration projects based in Antwerp and the respective country. A debriefing of national stakeholders will be organised for each country study.

3.1.6 ADDRESSING SPECIFIC TOR ISSUES

GENDER

Gender mainstreaming is a strategy for integrating women's and men's concerns and experiences in all stages of project cycle management in a way that decreases gender inequality. It implies that girls', boys', women's and men's needs and interests are integrated in all programme policies and interventions. Gender equality (GE) entails that behaviours and needs of girls, boys, women and men are valued and favoured equally. It is based on the concept that women, men, girls and boys are entitled to develop their individual abilities and to exert their own choices without being held back by stereotypes, discrimination, gender based violence, prescribed gender roles or prejudices. To explore the gender responsiveness of the FA3-III, we included two evaluation questions. The first focuses on gender mainstreaming in the institutional collaboration between ITM and country partners, meaning we look at how gender is included in ITM and partner policies. The second question investigates gender mainstreaming during project design, implementation and reporting (see evaluation questions 4 and 5 in the evaluation matrix). For each question, a set of sub-questions has been developed.

INDICATORS FOR CAPACITY DEVELOPMENT

During desk review, we will review which indicators FA3-III has used to guide, monitor and evaluate individual and organisational capacity development. We have adapted the Essence Framework (Planning, Monitoring and Evaluation Framework for Research Capacity Strengthening; version 2016[9]) to review three selected country cases. The original framework covers individual, institutional and national research capacity strengthening as well as research networks. We adapted the framework to capture other capacity strengthening aspects targeted by ITM support such as training and service delivery (health and development, including advocacy and policy support. Based on the evaluation findings a set of indicators will be proposed for future use.

[9] https://www.who.int/tdr/publications/essence-framework-2016/en/

THE OVERALL FA3 PROGRAMME

Many of the institutional collaborations have covered a six- or nine-year period. It is logic that capacity developed over the whole collaboration period needs to be considered, where relevant. Through document review (FA3 I and FA3 II) and KIIs we will consider most important achievements over the whole programme period (especially related to capacity building, networking and ownership / leadership by the south partner institution).

3.2 DATA ANALYSIS

3.2.1 QUALITATIVE ANALYSIS

Qualitative data will be explored through content analysis. To organise the large amount of available qualitative data we will make use of the qualitative data analysis software MAXQDA. The software is designed to analyse qualitative, mixed and quantitative data and allows to import, organise and visualise data from various forms of files (including MS Word, MS Excel, PDF, pictures, videos etc.).

We will develop a system of codes and sub-codes for the data analysis using both deductive and inductive coding. Main codes will be established based on the evaluation questions (deductive coding). Further sub-codes will be developed while data are being read (inductive coding). In a next step, we will import all data to MAXQDA. After the developments of a coding matrix and the data import, the response elements of the collected data will be attributed to suitable codes. During the coding process, we will regularly update the coding matrix to improve its relevance progressively. Once all data are coded, we will explore the response patterns and frequencies, conduct comparisons and establish mappings and relationships. This approach will allow us to quantify response types and similarity of responses, experiences and reactions, and to generate the evidence to answer the evaluation questions.

3.2.2 SOCIAL NETWORK ANALYSIS

Network projects will be assessed through document reviews, KIIs and social network analysis (SNA). The combination of these methods will help to assess the contribution of the networks established as part of the global programme towards the overall objectives of the FA3-III programme.

Social network analysis (SNA) can be defined as a "distinctive set of methods used for mapping, measuring and analysing the social relationships between people, groups and organizations"[10]. SNA helps to characterise relationships between organisations that are part of the network – including relationships such as collaborations, resource exchange, information exchange, or memberships in a partnership. One of the core assumptions of SNA is that the patterns of these relationships can have important effects on individual and organisational behaviour, constraining or enabling access to resources, and exposure to information and behaviour. SNA can be a powerful tool for researching phenomena such as the flow of information in a social network and the coordination, cooperation, or trust among groups of people.

The results of the on-line survey of the four selected networks (3.1.3) will be analysed using NodeXL Pro[11], a specialised software to map and measure the relationships and communications between individuals,

[10] Karl Blanchet, Philip James, How to do (or not to do) … a social network analysis in health systems research, Health Policy and Planning, Volume 27, Issue 5, August 2012, Pages 438–446, https://doi.org/10.1093/heapol/czr055

[11] https://www.smrfoundation.org/nodexl/

groups and organisations. The 'nodes' in the network are the organisations while the links show relationships or flows between them. SNA provides both a visual and a mathematical analysis of organisational relationships. To understand networks and their participants, the location of actors in the network are examined to provide insight into roles, groupings, levels of power, engagement and trust.

The results of the social network analysis will be complemented with information obtained from KII (see SECTION 3.1.4) and desk review of existing secondary data (see SECTION 3.1.2). Together this information will allow the evaluation to assess to what extent the networks have contributed to 'switching the poles' and have contributed to policy changes either in the respective countries or for the global health community.

3.2.3 EXPENDITURE REVIEW

During the document review and in KIIs with ITM administrative staff and S/N promotors, we will conduct a brief expenditure analysis by project and across the whole programme. The analysis will focus on the following aspects: a) absorption capacity per project (% spent), for the whole component (1A and 1B) and for the whole programme; b) re-allocation of budgets within each project (if relevant) and between projects or components; c) efficiency (timely access to resources from ITM; resource management) by project and for the whole programme (timely access to resources from DGCD); d) other (in)efficiencies. See the guides for desk review and KIIs (ANNEX 7.3 AND 7.4).

4 EVALUATION MATRIX

Table 3. Evaluation matrix

EVALUATION QUESTIONS	EVALUATION SUB-QUESTIONS	DATA SOURCES
Switching the poles (Component 1A and 1B 2014-2016)		
1. To what extent were the objectives of the programme achieved? If they were not achieved, why not? Were there positive or negative unintended consequences? (per target group)	1.1 To what extent was appropriate and sustainable capacity built, reinforced and supported to conduct research, training and delivery of reference services? 1.2 To what extent has national (or international) policy and/or practice changed as a result of evidence generated by research conducted under the programme; through advocacy /policy support and/or training? 1.3 To what extent was south-south and/or triangular collaboration achieved? 1.4 To what extent was the overall objective of switching the poles achieved?	Key-informant interviews Document reviews Country case studies Network assessment Social network analysis
2. To what extent were financial resources used economically and in a timely manner?	-	Key-informant interviews Document review Country case studies
3. Which alternative programming approaches could be used to increase efficiency?	-	Key-informant interviews Country case studies Network assessment
4. To what extent was gender mainstreamed in the dialogue, agreements and practices of	4.1 To what extent has the capacity of partners to mainstream gender in their institutional policies, practices and programmes been analysed and strengthened, if needed?	Key-informant interviews Document review Country case studies Network assessment

EVALUATION QUESTIONS	EVALUATION SUB-QUESTIONS	DATA SOURCES
institutional collaboration between ITM and country partners?	4.2 To what extent have ITM capacity strengthening projects mainstreamed gender equality dimensions in (a) the selection of institutions and individuals as well as (b) the profile of participants and the content of capacity building?	
5. To what extent was gender mainstreamed during project design, implementation and reporting?	5.1 To what extent did country projects/ programmes mainstream gender during programme design, implementation and reporting? 5.2 To what extent was gender taken into account in planning, implementing and monitoring the network projects?	Key-informant interviews Document review Country case studies Network assessment
Country Programme (Component 1A 2014-2016)		
6. To what extent were the interventions and approaches suited to the priorities and policies of the people and institutions they were intended to benefit?	6.1 To what extent did the institutional collaboration (IC) projects respond to the priorities and policies of the south institution? 6.2 To what extent did the institutional collaboration projects aim at having national/regional impact?	Key-informant interviews Document review Country case studies Project proposals (2014) Project completion reports (2016)
7. Were partners sufficiently consulted during the development and implementation of the programme?	7.1 Were partners sufficiently consulted when developing the programme? 7.2 Were partners sufficiently involved during implementation of the programme? 7.3 How can partner engagement be improved in the different stages of the programme/project cycle?	Key-informant interviews Document review Country case studies
8. Were the programme results and lessons effectively disseminated and applied?	8.1 Were lessons disseminated among participating institutions and networks? 8.2 Were results and lessons effectively communicated to an external audience?	Key-informant interviews Document review Country case studies Key-informant interviews Document reviews Internet search
9. How well was the programme monitored?	9.1 Did the programme have an effective monitoring framework and plan, and was it implemented? 9.2 Were the monitoring indicators for individual and organisational capacity strengthening appropriate? 9.3 To what extent were partners engaged in M&E?	Document reviews Country case studies Essence framework
10. Has the institutional collaboration under FAIII-3 generated a sustained impact?	10.1 Which direct benefits of the institutional collaboration are still visible/useful to the target groups (institutions and people) today? 10.2 Have institutional or individual norms, values or behaviours changed as a result of the institutional collaboration, and how did these changes affect target groups?	Key-informant interviews Country case studies Document review
Global Programme (Component 1B 2014-2016)		
11. What was the added value of the networking component of FA3-III?	11.1 What was the added value of ITM-initiated networks in comparison to other (non-ITM) networks?	Key-informant interviews Country case studies

EVALUATION QUESTIONS	EVALUATION SUB-QUESTIONS	DATA SOURCES
	11.2 What value has the network programme added to country-based institutional collaboration projects?	Network assessment Social network analysis
12. What outcomes of the networking component of FA3-III have been sustained?	12.1 To what extent have networks continued to function after ITM/DGD funding stopped?	Key-informant interviews Network assessment Social network analysis
	12.2 What factors contributed to maintain or ending networks?	
	12.3 Which direct benefits of the networking are still visible/useful to the beneficiaries today ?	
	12.4 Have institutional or individual norms, values or behaviours changed as a result of the networking?	

5 WORKPLAN

Phases	Location	May				June				July				August				September					Oct	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase 1. Inception	***Location***																								
Start-up meeting hera-ITM	**Office**																								
Develop methodology, evaluation matrix, data collection tools, detailed planning																									
Develop gender and capacity development criteria																									
Stakeholder mapping																									
Develop social network analysis																									
Draft inception report																									
Submit inception report & finalise																									
Phase 2. Desk review & data collection	***Location***																								
	Office																								
Document review																									
Launching, follow-up and analysis of network e-survey																									
Key informant interviews																									
Network analysis																									
Phase 3. Country case studies	***Location***																								
Country visits & data analysis & country report	**Country**																								
Restitution of country findings at ITM																									
Phase 4. Final analysis & report writing	***Location***																								
Triangulation of findings / final analysis	**Office**																								
Draft Synthesis report																									
Submitting draft synthesis report																									
Integrating feedback & Submitting final report																									
Presentation of findings to Peer Review Group																									
Presentation of findings to ITM staff																									

Submission draft deliverable Submission final deliverable Date to be confirmed

6 ETHICS AND INTEGRITY

All data collected during the evaluation will be confidential, unless otherwise stipulated by the person providing the information. On-line surveys targeted at network stakeholders will be confidential (anonymous). KIIs with programme stakeholders on specific project aspects will be treated confidentially unless otherwise agreed with respondents.

Interviewees will be asked whether interviews may be recorded and a consent statement will be read to them prior to starting the interview. This consent will include information about the purpose of the evaluation, their rights as participants, privacy and how results will be communicated All records will be destroyed after completing the analysis.

The same consent statement will also be read at the beginning of in country workshop, including the question whether photographs can be taken. Participants always have the right to object, and their choice will be respected.

No primary data collection with indirect beneficiaries is organised in the current evaluation, so no ethical clearance of data collection tools is required.

In our evaluation work, as a standard, we ensure good ethical practices by applying two overarching ethical principles, which are particularly important when gathering data from marginalised or vulnerable groups: the 'do no harm' and 'protection and empowerment' principles.

To be GDPR compliant, ITM will contact respondents asking for their willingness to participate in the evaluation. Only after receiving a positive reply, ITM will pass on contact details to the evaluation team.

7 ANNEXES

7.1 TERMS OF REFERENCE

7.1.1 ABOUT ITM - MISSION AND VISION

Established in 1906 as a training institute, Institute of Tropical Medicine Antwerp (ITM) has evolved to be a modern, global oriented institute. ITM conducts and Promotes scientific research, professional and academic education as well as scientific and community services in the field of tropical diseases and global health care, with special attention to low and middle-income countries.

7.1.2 PROJECT BACKGROUND

In November 2007, agreement ITM signed a third framework (FA3) with the Belgian Directorate General for Development Cooperation and Humanitarian Assistance (DGD) under the motto "Switching the poles."

The agreement started 01/01/2008, and a planned end date was on 31/12/2013. This six year period were split into two consecutive terms (FA3-FA3 I and II) or three years for both operational (budget) and activity planning. Due to a comprehensive reform of the Belgian development sector starting in 2012, the plan to negotiate a fourth, more progressive framework agreement was temporally stalled. A transition period was installed, How many followers during FA3 was extended up to 2016; with another three year agreement (FA3-III - Volume IV in annex).

FA3-III was made up of the following components:

1. Country and Global Programs
    - A. Country Programs
    - B. Global Program (international thematic networks)
2. Scholarships and Training Program
    - A. Scholarships Program
    - B. Educational support and networking (training program)
3. Policy support
4. North program - Development Education
5. Management

1.A component included scientific capacity strengthening program Aimed to Increase local ownership and capacity of both Individuals and 24 partner institutes to conduct research, train indirect beneficiaries and deliver reference services in order to Improve health care systems and policies in 18 partner countries. To Achieve this aim we worked with experts in the partner institutions in developing countries; health professionals and policy makers responsible to implement the improved practices and policies resulting from the program; Individuals and the communities and bene fitting from the improved practices and policies.

Component 1.B included and tested a "global program" Consisting of 10 thematic network projects, and some ancillary activities as the annual symposium and smaller seminars. These thematic networks were not Meant to "verticalise" health problems, on the Contrary: They Brought together basic, clinical, operational and health systems scientists to develop comprehensive knowledge and strategies for disease control and healthcare, with a transnational and global perspective in a Rapidly evolving world. This program component

allowed to deal with topics That are underrepresented in the Country Programs, and to network with institutes outside Country Programs. South-South collaborations were strongly stimulated. The target groups and the dynamics of the various networks varied, partly due to specific requirements, partly to test and optimize different approaches. Following FA3, a new multi-year program started in 2017, internally known as FA4 (2017-2021). Based on new legal requirements donor, this Programs follows a country-based structure, without an overarching umbrella logic between countries. This new approach Decreased opportunities for international and regional networking amongst partners (South South) and ITM (South South North).

As component 2-5 are not part of the scope of the evaluation, we will not elaborate Further On Their content. More details can be found on synthesis components in 4: Third framework program agreement - between DGC and ITM (FA3, 2008-2013 / 2016) - FA3-III (2014-2016) - Volume IV - A. The evaluations will be made available to the selected tenderer upon request.

7.1.3 SCOPE OF THE EVALUATION

The evaluation Focuses on the implementation of the framework agreement from 2014-2016 (FA3-III), as due to changes in human resources and document management it can prove kettle to access information on the first two programming cycles. Where relevant However, the whole nine year period (FA3-I, II and III) How many followers during the framework agreement was Implemented can be taken into account.

The evaluation shouldering focus on the whole of component 1 - Country and Global Programs - 1.A and 1.B. Previous evaluations already covered components 2 and 3; interventions under 4 are too limited for a stand-alone evaluation. We will make results from thesis evaluations available to the contracted team.

Where Phase 1 - desk review should consider all partner countries, Phase 2 - case studies can be limited to several at in-depth analysis. For a more detailed explanation please see below the chapter - methodology .

7.1.4 EVALUATION FOCUS

7.1.4.1 Purpose of the Evaluation

With this evaluation we intending to reach a triple aim:

1. **Learning** - to inform decision making on how to Improve current and future interventions both in terms of content, as in terms of stakeholder engagement and project modalities (fi networking)

2. **Build deeper partnerships** - Through this evaluation, we want to give voice to our partners, strengthening on existing working relationships, to increasement mutual understanding, trust and open communication - in the future we want to move beyond 'switching the poles' to true local ownership. This evaluation can help pave the way.

3. **Accountability** - towards our beneficiaries and donors

7.1.4.2 Evaluation criteria and questions

As per donor requirement, all DAC criteria need to be Evaluated. In Addition, specific attention should be given to the evaluation of the gender lens used (or lack of its use) in our interventions, and to the program design, especially the assessment of the use of the right indicators to measure capacity strengthening interventions.

The following evaluation questions have been Discussed with partner Organizations during the Joint Partner Meeting Partner[12] of 2017 at the COS (commission on development cooperation) and are approved by DGD.

1. Relevance:

- To what extend were the interventions and approaches suited to the priorities and policies of the people and institutions they were Intended to benefit?
- Were partners sufficiently consulted during the drafting/implementation of the program? How can we improve their engagement in the different stages of the program / project cycle?
- Did we disseminate and use learning from the program in a sufficient is manner?
- For component 1.B - Global Program: To what extent does the programmatic network approach have an added advantage in comparison to Existing networks and / or country projects?

2. Effectiveness:

- To what extent did we achieve our objectives? (End line assessment of goals, objectives and indicators for all countries based on the information from previous reports)
- What are the reasons, both internal and external, we did (not) reach our objectives?
- Which unintended (positive or negative) consequences for anybody involved or affected by the interventions did our (not) reaching these objectives have (differentiate by different target groups).

3. Efficiency[13]:

- To what extend were financial resources used economically and in a timely manner?
- Which alternative programming approaches could be used to increase efficiency?

4. Sustainability:

- Which direct benefits from the intervention are still visible / useful to the beneficiaries today?

  O Note: ITM collaborations in partner countries vary between 3 to 20 years. The tenderer needs to take this into consideration when proposing a methodology. Focus should remain on FA3-III, but can take into account the longer programming history.

- For component 1.B - Global Program: Axis network projects were no longer Implemented under FA4, we want to explore factors which contribute to the sustainability of networks, as some of them continued while others perished.

5. Impact:

- Which positive and negative, primary and secondary, Intended and unintended long-term, higher level effects can be observed? Have norms, values or behaviours of people within institutions or changed? If yes, did this have positive or negative effects on different target groups?

Besides the DAC criteria, considering learning and future programming, we want to receive answers to the following questions:

[12] The Joint Partner Meeting is a bi-annual meeting during which ITM partners and staff come together to exchange on topics of common interest such as innovation, knowledge management etc.

[13] Note: Efficiency should not look strictly at lowest possible cost / benefit, but take into account the approaches used, our specific target groups and the mission and vision of ITM as a scientific institute.

- Quality of the program design: were the indicators used appropriate to assess individual and organizational capacity strengthening? Can other indicators be proposed for future, similar interventions?
- Gender: To what extent did the projects / program take into account gender-sensitive approaches in all different stages of the PMC? (Planning, formulation of indicators, implementation etc.) Did the program explicitly aim for results That Improve gender equality? How can this be improved in the future?

We recognize that criteria often influence one another and should (*not?*)[14] be seen as isolated pillars. Therefore, the final appraisal of the intervention should include clear reflection on positive versus negative consequences.

7.1.5 USERS OF THE EVALUATION

Different users will benefit from the findings of the evaluation:

1. **At ITM**:

a. The **(co) promoters**[15] of the projects will use the findings to Improve Future collaborations
b. The Commission on Development Cooperation (**COS**)[16] at ITM and, by extension, the Academic Council of the COS is part, and the Director's office will be informed of findings, to ensure informed decision making on development interventions
c. The **Development office**[17] at ITM will use the findings to inform future interventions

2. **Our partners**: Through this evaluation, we aim to give voice to our partner institutions, to ensure they are listened to, and to increasement our understanding on how to transfer ownership even more in future interventions. We want our partners to use this evaluation as a starting point for discussion on future interventions. This can happen for instance at a next Joint Partner Meeting.

3. **DGD** will use the findings for accountability purposes, to inform its policy, and evaluate ITM as a development actor

7.1.6 METHODOLOGY

We expect the final evaluation to include three phases:

1. Phase 1

A **desk review** of all program / project documents for general appraisal of the evaluation questions and to gain an in-depth understanding of the program and its various components - a list of available documents can be found in annex. This desk review shouldering include key informant interviews with promoters and co-promoters and other relevant staff to ITM ensure all documents are well understood.

A report of the desk review is expected, which will be discussed during a meeting in Antwerp before the start of the second phase. This meeting will help (re) orient phase 2 and appraise findings from the desk review.

[14] Added by the evaluation team
[15] Every country project is run by an ITM academic staff member (supervisor), assisted by a number of co-promotors. In addition, the project is managed on site by their counterparts, the local promoters.
[16] The COS is a sub commission of the Academic Council, Which has the mandate to give non-binding advise to the management committee on development cooperation.
[17] The Development Office gives policy support to ITMs management committee on development cooperation, and is the liaison office between DGD and ITM.

2. Phase 2

A number of case studies to help define factors which enable impact and sustainability, and help gain insights on how to transfer ownership to implementing partners - a report and presentation of findings in the country will be expected after each of the visits. A presentation in Belgium can be done after the visits. In addition to key informant interviews, we encourage consultants to propose participatory evaluation methods for the field visits. Please note that the visit may be joined by ITM staff acting as resource persons and / or observers. Based on a number of criteria (availability of staff who worked on the project, mix of locations and types of collaborations, duration or collaboration) ITM preselected India, Benin, Peru and Burkina Faso[18] as options for field visits. These locations can be discussed with the contracted tenderer.

3. Phase 3

A synthesis of the above, including a final report and restitution - the synthesis should combine findings from the desk review with those from the field visits.

However tenderers are free to propose other methodologies if deemed suitable to answer the evaluation questions asked. A source of inspiration to Evaluate University Development Cooperation initiatives can be the impact evaluation commissioned by the Special Service for Evaluation -

https://diplomatie.belgium.be/sites/default/files/downloads/evaluation_belgian_udc_en.pdf

7.1.7 ETHICS AND INTEGRITY

Ethics and integrity are of key concern is all ITM's work. A paragraph shouldering be included in the proposal on how ethics will be taken into account during the evaluation.

[18] If security allows, please note tenderers are responsible for their own risk assessment.

7.2 E-SURVEY SOCIAL NETWORK ANALYSIS

Note: this questionnaire was developed as an example for the TB and Buruli network and will be adapted for the other three networks as and when the sample has been agreed. Specifically, the sections highlighted in **orange** will be updated for each network.

The questionnaire will be launched using the hera SurveyGizmo account.

Introduction:

As per the email on XXX, you are invited to participate in the online survey as part of the impact evaluation of the third framework agreement (FA3-III) between DGD and ITM which is being conducted by hera (www.hera.eu).

This online survey focuses specifically on the **Scientific Support and Networking on Mycobacteriology** which was supported by ITM between 2014 and 2016 during the third phase of the FA3-III. The evaluation will apply the method of Social Network Analysis (SNA)(for further information on this method, please read here) to understand how different institutions in this network have collaborated and how this has contributed to its success.

Consent:

By starting the survey, you are agreeing to participate. Your participation is voluntary, and you can stop at any time. There are no known risks to participate in this survey. All responses will remain anonymous and the information will be saved in a password protected database to be used only for the purpose of the FA3-III evaluation. If you have questions about your participation in the survey, please reply to the email invitation you received, or contact the administrator Marieke Devillé at Marieke@hera.eu

Instructions:

Thank you for taking this survey, which should not take more than 30 minutes to complete. The survey is available in English or French. To begin, you will be asked to answer several questions about your own institution. You will then be asked to answer questions about other institutions in the network. Please, answer all questions from the perspective of your institution, rather than from your own individual perspective and please respond the questions reflecting on the performance of the network between 2014 and 2016. Questions marked with an * are mandatory.

At any time, you can save the responses and continue the survey later. When complete, you can review your responses and modify them if required. Please complete the survey as soon as possible and no later than XXX.

Q#	Question Text	Question Response options
Page 1: IDENTIFICATION		
1*	**Please identify your institution from the list below.** If your institution is not listed, kindly contact the administrator (see introduction).	The respondent will select their organisation from a predefined list. **[single choice]** • **ITM** • **Laboratoire de Référence des Mycobactéries, Cotonou, Benin** • **Centre Muraz, Bobo-Dioulasso, Burkina Faso** • **Institut National de Recherche Biomédicale, Kinshasa, DRC** • **MRC Unit The Gambia** • **Center for TB and AIDS research SEREFO, Bamako, Mali** • **National Reference Laboratory, Kigali, Rwanda**
Page 2: TB AND BURULI NETWORK		
2*	**Please indicate what your institution has contributed to the network from 2014 to 2016** (choose as many as apply).	**[multiple choice]** • Funding • In-Kind Resources (e.g., meeting space) • Paid Staff • Data Resources including data sets, collection and analysis • Information and/or Feedback • Technical Expertise • Training Facilitation • IT/web resources (e.g. server space, web site development, social media) • Other, please specify • Don't know or not applicable
3*	**What has been your institution's most important contribution to the network?** (only 1 option possible)	The selected choices in Q4 will populate possible responses for Q5. **[single choice]**
4*	**Participation in this network has:**	**[multiple choice]** • Been informative only (we only exchange information, knowledge about resources, etc.) • Improved my institution's capacity • Improved my individual capacity • Led to an exchange of resources • Led to improved services or support • Led to new program development • Has not resulted in any systems change • Has not yet resulted in any systems change, but we anticipate that it will • Other, please clarify in the comment box Don't know or not applicable **[comment – not mandatory]**

5*	**Outcomes of this network include:** (choose all that apply).	**[multiple choice]** • **Increased technical and/or scientific capacity of the institution** • **Increased individual technical or scientific capacity** • **Increased submission of collaborative research proposals** • **Increased sharing of protocols** • **Increased sharing of trainees** • **Increased coalition building** • **Improved communication among partners** • **Other, please specify** • **Don't know or not applicable**
6*	**Which of these outcomes are still visible or useful for your institution today?**	The choices in Q7 will populate possible responses for Q8. **[multiple choice]**
7*	**How successful has the network been at reaching its goal of bringing together expertise on TB in research institutions in West and Central Africa to allow scientists to jointly develop and implement priorities for research and capacity building?** Please elaborate your response in the comment box – comment box is not mandatory.	**[single choice]** • Not Successful • Somewhat Successful • Successful • Very Successful • Completely Successful • Don't know or not applicable **[comment – not mandatory]**
8*	**Have individual norms, values and behaviours (of people participating in the network) changed because of the networking?** Please clarify your response with an example in the comment box	**[single choice]** • Not at all • A small amount • A fair amount • A great deal • Don't know or not applicable **[comment – not mandatory]**
9*	**Have institutional norms, values and behaviours changed because of the networking? Please clarify your response with an example in the comment box**	**[single choice]** • **Not at all** • **A small amount** • **A fair amount** • **A great deal** • **Don't know or not applicable** **[comment – not mandatory]**
10*	**If you are working in an institution which also received support through an institution collaboration project, what is the key added value of participating in the network compared to country-based support?** Please elaborate your response in the comment box – comment box will not be mandatory.	**[single choice]** • Bringing together diverse stakeholders • Exchanging information/knowledge • Sharing resources • Building a network • Capacity building • Collective decision-making • Having a shared mission, goals • Other, please specify • Don't know or not applicable **[comment – not mandatory]**
Page 3: COLLABORATION WITHIN THE NETWORK SPECIFIC ORGANISATIONS		

10*	**From the list, select the institutions with which you have an established relationship. In subsequent questions you will be asked about your relationships with these institutions in the context of this network.** NOTE: Please do not select your own organisation from this list.	Respondents choose from the uploaded bounded list. **[multiple choice]** • **ITM** • **Laboratoire de Référence des Mycobactéries, Cotonou, Benin** • **Centre Muraz, Bobo-Dioulasso, Burkina Faso** • **Institut National de Recherche Biomédicale, Kinshasa, DRC** • **MRC Unit, The Gambia** • **Center for TB and AIDS research SEREFO, Bamako, Mali** • **National Reference Laboratory, Kigali, Rwanda** • **Other organisations (please list name)**
11	**How was the relationship with this institution prior to engaging in the network?** *Note: Questions 11-19 are relational questions, meaning that the respondent will answer each question about the organisations they selected in Q10.*	**[single choice]** • We already had a working relationship • We have engaged but not at a professional level • We never engaged before
12*	**How do you rate the relationship with this specific institution?**	**[single choice]** • Excellent • Good • Fair • Poor • Very poor • Don't know/Not applicable **[comment – not mandatory]**
13*	**How frequently does/did your institution work with this institution on issues related to the goals of the TB and Buruli network?**	**[single choice]** • Never/we only interact on issues unrelated to the network • Once a year or less • About once a quarter • About once a month • Every week • Every day • Don't know
14*	**What was/is the main way of interaction?**	**[single choice]** • Phone call • Face-to-face meeting • Email • Workshop • Virtual meetings (Zoom, Teams, Skype etc) • Don't know
15*	**To what extent does this institution have power and influence to influence on the overall goal of the network?**	**[single choice]** • Not at all • A small amount • A fair amount • A great deal

	**Power/Influence: The institution holds a prominent position by being powerful, having influence, success as a change agent, and showing leadership.*	• Don't know
16*	**What has been this <u>institution's</u> level of involvement?** **Level of Involvement: The institution is strongly committed and active in the partnership and get things done.*	**[single choice]** • Not at all • A small amount • A fair amount • A great deal • Don't know
17*	**To what extent does this <u>institution</u> contribute resources?** *******Contributing Resources: The institution brings resources to the activity like funding, information, or other resources.*	**[single choice]** • Not at all • A small amount • A fair amount • A great deal • Don't know
18*	**How reliable is the <u>institution?</u>** **Reliable: This institution is reliable in terms of following through on commitments.*	**[single choice]** • Not at all • A small amount • A fair amount • A great deal • Don't know
19	**Is there anything else you would like to highlight about the contribution of this institution or their representatives to the network?**	**[comment – not mandatory]**
Page 4: END OF THE SURVEY		
20	**Thank you for participating in the survey. Do you have any final question or comment?**	**Open-ended**

7.3 GUIDE FOR DESK REVIEW INSTITUTIONAL COLLABORATION

Note: the guide for desk review will be applied to all 24 institutional collaboration projects

Alignment

- To what extent was the IC aligned with / responsive to the institutional policies and priorities (6.1)[19]
- Any evidence on engagement of partners at various stages of the programme cycle (overall programme)
- Does the project proposal (or logframe) explicitly refer to national / regional impact (6.2.)
- Does the end-of-project report document national / regional impact as a result? (6.2)

Dissemination of research results

- Evidence of dissemination of research results through ITM specific[20] and other networks (8.1)
- Evidence of dissemination of research results through ITM fora (such as colloquia), national/regional/global fora and south-south collaboration (8.2)
- # of peer reviewed publications generated by the institutional collaboration projects (2014 to 2016) (8.2)
- # of presentations and abstracts at international conferences (2014 to 2016)(8.2)
- # of presentations at national fora (2014 to 2016)(8.2)

Changes in policy and practice

- Evidence of changes in (inter)national policy and practice as a result of the project through research, advocacy /policy support and/or training (1.2)
- Documented evidence on changed policy and practice (1.2)

Efficiency

- Documented evidence on economical and timely use of funds (absorptive capacity across programme component and per research / network project) (2):
    - What percentage of funds were used by the end of the project?
    - Any evidence of reallocation of funds within the project?
    - Any evidence of reallocation of project funds to other FA 3-III projects?
    - Any evidence of issues with procurement (e.g. reagents), providing equipment, building infrastructure
    - Any evidence on efficiencies (eg. cost savings; collaboration; use of networks; etc.) and inefficiencies in project implementation

Capacity strengthening

- Number of PhDs completed in 2014-2016
- Documented evidence of use of specific indicators to measure individual and organisational capacity strengthening (9.1. & 9.2)
- Comparison of indicators used with indicators proposed by the adapted ESSENCE framework for research capacity strengthening[21] (9.1 & 9.2)

[19] Number refers to the respective evaluation question in the Evaluation Matrix
[20] The ten networks supported by ITM in FA3-III.
[21] https://www.who.int/tdr/publications/essence-framework-2016/en/ (pages 12 to 15)

- Apply the adapted ESSENCE framework criteria to the three country case studies (9.2)

Gender

Gender equality

- Evidence of institutional gender analysis of country partners (institutions) and corresponding actions plans in project proposal and end-of-project report (4.1)
- Female/male ratio in institutional / research / project teams and at management levels documented in end-of-project report (4.2)
- Percentage of first authors who are female/ who work at a south institution (sample of publications over the 3 year period) (4.2)
- Evidence for specific initiatives to tackle gender inequality in the workplace (4.1)
- Evidence for gender equality considerations during the selection of partners, the profile of participants and in the content of capacity building initiatives as documented in the project proposal (4.2)
- Percentage of women participants in capacity building initiatives as documented in the progress reports (4.2)

Gender mainstreaming

- Evidence of gender analysis and aligned interventions in proposals for institutional collaboration / country programmes (5.1)
- Evidence of application of gender analysis framework during research / project proposal development (5.1)
- Evidence of gender mainstreaming in research / project products (5.1.)
- Evidence of gender responsiveness of annual reporting (5.1)
- Presentation of age- and sex-disaggregated data in annual reports (where relevant) (5.1)
- Description of gender related barriers and mitigating strategies (5.1)
- Evidence of reference to gender equality in project proposals, logframes (presence of key results and project performance indicators on GE) (5.1)
- Progress reports on key results on GE (5.1)

Switching the poles

- Information / evidence on switching the poles (in the lead of conducting research, training and delivery of reference services)

7.4 GUIDE FOR KII INSTITUTIONAL COLLABORATION

Note: This guide will be tailored to each key informant and shared with the interviewee prior to the interview along with the 2016 end-of-project report. We will make sure that the interviewee is reminded to respond to the questions bearing in mind FA3-III and the period 2014 to 2016, unless indicated otherwise.

Introduction:

As per the email on XXX, you are invited to participate in this interview as part of the impact evaluation of the third framework agreement (FA3-III) between DGD and ITM which is being conducted by hera (www.hera.eu).

This interview focuses specifically on the institutional collaboration project XX, which was supported by ITM **between 2014 and 2016** during the third phase of the FA3-III.

Consent: (to be read out at the start of the interview)

This interview focuses specifically on the institutional collaboration project XX, which was supported by ITM **between 2014 and 2016** during the third phase of the FA3-III.

By starting the interview, you are agreeing to participate. Your participation is voluntary, and you can stop at any time. There are no known risks to participate in this interview. All responses will remain anonymous and the information will be saved in a password protected database to be used only for the purpose of the FA3-III evaluation. All records will be destroyed after completing the analysis.

Organisation	
Person(s) interviewed	
Position	
Date	
Place	
Type	

Position

- Please tell me about your involvement and role in the institutional collaboration project, especially during FA3-III (between 2014 and 2016).

Alignment

- To what extent was the collaboration / support aligned with / responsive to the institutional policies and priorities of your institution (6.1) How come it was/ not (info on process)

South leadership / involvement

- To what extent was the South promotor/ South institution involved in drafting/preparing the institutional collaboration project; and in implementing the project (7.1; 7.2)
- How did this involvement change/evolve between FA3 I/II and III (both drafting/preparing and implementation) (7.2 & 7.3) (and FA4 if applicable?)
- To what extent was the South institution in the lead of conducting research, training and delivery of reference services (moto: “switching the poles”) (1.4)
- How can engagement by the South institution in drafting, implementation, monitoring and evaluation, and publication / sharing of results be improved, if necessary? (7.3)

Impact

- Any impact beyond 2016, (up to 2019)[22]:
    - PhDs completed (that were not yet completed by 2016) (Source: year reports FA4 / database PhD research office)
    - Publications (that were under preparation or submitted; but not yet published in 2016)(8.2)
    - Presentations in national /international conferences, abstracts, articles in national journals after 2016 (8.2; 8.3; 8.4)
    - *Any continued direct benefits from the institutional collaboration that are visible today*? (1.1)
    - *Evidence of changes in (inter)national policy and practice as a result of research, training or advocacy* (1.2)
    - Documented evidence on changed policy and practice (1.2)
    - Documented evidence of new knowledge that was generated by the institutional collaboration project (10.1)
    - *Evidence of continued direct benefits from networking* (10.2)
    - *Did the project result in new south-south or triangular collaboration* (TrC)(10.2 & 1.3)
    - *Did any individual and institutional changes in norms, values or behaviours occur as a result of the institutional collaboration* (10.2)
    - *Did any individual and institutional changes in norms, values or behaviours occur as a result of networking* (12.4).
    - *Did changes on target groups / beneficiaries lead to any positive or negative effects*? (10.2)

Capacity strengthening

- How do you appreciate the individual and institutional capacity built for conducting research, training and/or delivery of reference services? What could be done differently? (1.1)
- What has been the longer-term effect of individual and organisational capacity built in 2014-2016? (1.1)
- What were the reasons for success and failure in sustainable capacity built (individual and organisational)? (1.1)
- Were there any positive or negative unintended consequences? (1.1)
- To what extent is partnering with ITM different from partnering with other North scientific institutions and / or funding agencies? Which good practices can ITM learn from others? What does ITM do well? (1.1)

Efficiency

- Did the project have timely and sufficient access to ITM funds (2). How were project funds managed by ITM and the South institution? Did the south institution manage all relevant funds that can be managed locally (e.g. full project; research funds; service funds; training funds; minor operational funds)?
- How could efficiency be improved for programming and implementing research / training /service delivery collaboration and networking (alternative programming approaches) (2 & 3)

Gender

Gender equality

- Evidence of institutional gender analysis of country partners (institutions) and corresponding actions plans (4.1)
- Female/male ratio in institutional / research / project teams and at management levels (4.2)

[22] Part of this information may have to be completed / provided by the South promotor after the interview as it will require some documentation. Questions in italic should be discussed during the interview.

- Working culture compatible with family life (4.1)
- Evidence on budget and technical expertise for gender equality questions in the institution (4.1)
- Evidence for specific initiatives to tackle gender inequality in the workplace (4.1)
- Evidence for gender mainstreaming considerations during the selection of partners, the profile of participants and in the content of capacity building initiatives (4.2)
- Percentage of women participants in capacity building initiatives (4.2)

Gender mainstreaming

- Evidence of application of gender analysis framework during research / project proposal development 5.1)
- Suggestions to improve?

7.5 GUIDE FOR KII NETWORK PROMOTORS (NORTH) AND PARTICIPANTS (SOUTH)

Note: This guide will be tailored to each key informant prior to the interview and tailored interview guides will be shared with the interviewee prior to the interview along with the 2016 end-of-project report. We will make sure that the interviewee is reminded to respond to the questions bearing in mind FA3-III and the period 2014 to 2016.

Introduction:

As per the email on XXX, you are invited to participate in this interview as part of the impact evaluation of the third framework agreement (FA3-III) between DGD and ITM which is being conducted by hera (www.hera.eu).

This interview focuses specifically on the strategic network XX, which was supported by ITM **between 2014 and 2016** during the third phase of the FA3-III.

Consent: (to be read out at the start of the interview)

This interview focuses specifically on the strategic network XX, which was supported by ITM **between 2014 and 2016** during the third phase of the FA3-III.

By starting the interview, you are agreeing to participate. Your participation is voluntary, and you can stop at any time. There are no known risks to participate in this interview. All responses will remain anonymous and the information will be saved in a password protected database to be used only for the purpose of the FA3-III evaluation. All records will be destroyed after completing the analysis.

Organisation	
Person(s) interviewed	
Position	
Date	
Place	
Type	

ROLE IN NETWORK BETWEEN 2014 AND 2016

1 Briefly explain how and since when you have been involved in the network.

2 Briefly explain the work of your institution as part of the network collaboration

CAPACITY STRENGTHENING

3 How do you appreciate the individual and institutional capacity that was built because of the participation in the network from 2014 and 2016? (4.1.1)

4 What were the reasons for success or failure (in individual and institutional capacity building)? What could be done differently? (4.2.1)

5 Were there any positive or negative unintended consequences of participating in the network both at the individual and institutional level? (4.3.1)

6 To what extent is partnering with ITM different from partnering with other Northern scientific institutions and / or funding agencies?

7 To what extent were the Southern partners of the network in the lead of conducting research, training and delivery of reference services ; in the lead of managing the network, agenda setting, secretariat etc (moto: “switching the poles”) (4.6.1)

GENDER

8 To what extent did the network check for gender obstacles or difficulties and were measures taken to address these?

9 Was attention given to men/women equality in the network?

IMPACT

10 (if applicable) How often were research / project results disseminated through the network? Please provide examples. (3.1.1)

11 (if applicable/relevant) Where research / project results disseminated through other fora (ITM colloquium, national fora, etc?) (3.1.2)

12 What benefits from the networking are still visible and useful to your institution today? Were there any disadvantages of participating in the network? (7.2.1)

13 Did the networking contribute to changes in terms of institutional or individual norms, values or behaviour? How? What were the positive or negative effects of these changes? (8.3.1 & 8.4.1)

EFFICIENCY

14 Did the network have timely and sufficient access to ITM funds (5.1.3).

15 Did other network members manage funds? If so, how were network funds managed by ITM and other network members?

16 How could efficiency be improved for programming and implementing institutional collaboration and networking (alternative programming approaches) (6.1.1)

NETWORK APPROACH

17 Was your engagement in the network from an institutional perspective or rather an individual interest/commitment? Was it most valuable to you as an individual or to the institution you work for?

18 What are the dis/advantages of the ITM initiated networks compared to other existing networks? (12.1)

19 What is the added value of participating in networks? (12.2)

20 Has the network continued after ITM/DGD funding ended in 2016? (13.1)

21 What factor contributed to the maintaining or ending of the network? (13.2)

7.6 GUIDE FOR COUNTRY CASE STUDY

Prior to engaging at country level

The international expert completes the desk review as for the other institutional collaboration projects, using the same guide. S/he also interviews (KII) the North promotor prior to starting data collection at country level. Based on the review and KII s/he documents the responses on the evaluation questions (as per desk review), identifies gaps of information to be collected and updates the guide for KIIs (by type of stakeholder).

The international expert, based on the document review, completes the (adapted) Essence Framework (see **ANNEX 7.7**), identifies gaps / strengths and weaknesses for discussion with local stakeholders in-country.

The international expert completes the stakeholder analysis and, based on the analysis, proposes people to meet and data collection modalities (meetings, working groups, visits, etc.). Jointly with the national consultant and with input from the South promoter, s/he develops a plan for consultations and data collection at country level.

Country-level data collection

The national expert completes the data collection in-country. The international expert participates in group and individual interviews and working meetings wherever possible over an internet communications link. Interviews and workshop sessions will be recorded after receiving agreement by the participants. The national expert will share visuals of project visits / infrastructure / equipment with the international expert (pictures or short movies by multimedia phone).

The national and international expert will meet (virtually) on a daily basis to share information, agree on gaps of information still to be collected, details still to be confirmed, opportunities for furthering the analysis, as needed. Minutes of meetings and working sessions are prepared by the national consultant and shared with the international expert. Relevant information is inserted in MAXQDA for cross-project analysis. The country case study reports will be prepared by the international expert with input by the national expert.

After data collection is completed, the national consultants will organise a meeting of national stakeholders in the institutional collaboration projects to debrief them on preliminary results of the country studies and to validate the findings. Findings of the three country case studies will be shared with ITM prior to finalising the draft synthesis report (September).

7.7 APPLYING THE ESSENCE FRAMEWORK TO COUNTRY STUDIES

ESSENCE on Health Research is an initiative of funding agencies to improve the coordination and harmonisation of research capacity investments. In 2016, ESSENCE published an updated planning, monitoring and evaluation (PM&E) framework for research capacity strengthening programmes that aim at either (a) enhancing the capacity of individuals and organisations to carry out, manage, share and apply research; and (b) promoting national and sub-national research systems that support research and the linkage between research, policy and practice. We have adapted the framework by enlarging its scope and applicability to all FA3-III projects, including to those aimed at strengthening research capacity, training capacity, service delivery capacity (including advocacy and policy support). While the framework was not applied in planning the country- and global programme interventions of FA3-III, we have adapted the matrix of results and indicators for a post-hoc evaluation of programme outcomes in three categories:

- Contribution of FA3-III (2014-2016) to increased individual capacity of participating researchers / scientists / academics (research, training, service delivery);
- Contribution of FA3-III (2014-2016) to increased capacity of participating organisations (research, training, service delivery);
- Contribution of FA3-III (2014-2016) to improved national research and training systems.

The fourth category of the Essence framework (research networks) is not directly applicable to the evaluation of country-level programming. However, strengthened networking capacity of institutional development partners will be assessed under the category of organisational capacity.

The focus of assessments under the three categories will be on the outcome level. Depending on the specific goals and objectives of the institutional cooperation project(s) in the country, outcome indicators may be modified to better reflect the project. Project outputs from annual reports and other documentation will be used to validate outcomes reported by key informants.

Table 4. M&E framework for capacity strengthening in case study countries

OUTCOME	INDICATORS	MEANS OF VERIFICATION
Strengthened individual capacity *(among southern partners who were FA3-III grantees in 2014-16)*		
Increased individual research capacity	• Peer reviewed publications with first or second authorship • Conference presentations • Awards / prizes • Effect on career development • Competitive grants won since 2016 (compared to prior to 2014) • Total value of research grants won since 2016 (compared to prior to 2014) • Publications of policy briefs and other documents aimed at knowledge users (not scientific papers) • Participation in technical fora, policy advisory groups, and implementation programmes	Interviews Publications
Increased individual training capacity	• Training courses developed/conducted (in which position) • Professional certifications & academic titles • Academic appointments	Interviews
Increased individual capacity to deliver services	• Professional certifications • Professional career achievements • National/regional/international recognition of expertise	Interviews

Outcome	Indicators	Means of verification
Strengthened institutional capacity *(among southern institutions that were FA3-III grantees in 2014-16)*		
Increased institutional capacity	• Development of infrastructure and staffing of the institution since 2014 • Accreditations or certifications achieved since 2014 • Other forms of national/regional/international recognition	Annual reports Site visits Interviews Accreditation reports
Research capacity	• Partnerships, joint activities, joint publications with other research organisations – development since 2014 • Collaboration with implementing organisations (public, private, NGO)	Contracts / memoranda of understanding
Training capacity	• Number of courses and curricula developed since 2014 • Number of PhD and Master's level students since 2014	Annual reports
Service capacity	• Scope and volume of services provided since 2014 as compared to before 2014	Interviews
Strengthened national systems for research, training or service delivery (*contribution of FA3-III institutional cooperation in 2014-2016*)		
Strengthened national standards and regulatory frameworks for accreditation and quality assurance in research, training or service delivery	National changes of ethics, accreditation and quality assurance standards (with plausible contribution of FA3-III)	Interviews Policy documents

7.8 APPLYING THE ESSENCE FRAMEWORK TO NETWORK EVALUATION

The fourth component of the ESSENCE capacity building PM&E framework provides a template for monitoring capacity building of research networks. Outcomes of the FA3-III Global Programme network strengthening will be assessed in the three country studies at the level of in-country network partners. However, the framework for network evaluation can only be applied across entire networks. We will therefore apply it to the four sampled networks (see SECTION 3.1.3). For each of them, we will adapt the generic ESSENCE indicators. The framework has been adapted to take into account wider capacity strengthening efforts (e.g. joint project proposals developed, research carried out, knowledge built, advocacy done, platforms developed etc.)

Table 5. M&E Framework for network capacity strengthening

OUTCOME	INDICATORS	MEANS OF VERIFICATION
Increased capacity of strategic networks to get projects funded	Number of proposals jointly developed by network partners and number of them funded	Interviews Programme documents
Increased capacity of strategic networks to produce new knowledge, conduct research	Number of joint peer-reviewed publications by network partners Quality and impact of publications	Interviews Publications Citation counts
Increased capacity of strategic networks to disseminate knowledge	Level of external visibility and through social media and internet presence; conferences; workshops; webinars; other knowledge sharing events; other platforms; advocacy.	Interviews Internet searches Social media analytics
OUTPUT	**INDICATORS**	**MEANS OF VERIFICATION**
New strategic networks formed	Number of new strategic networks formed	Annual reports Contracts/memoranda of understanding Interviews
Strategic network members adequately use their resources to contribute to the network functioning	Existence of adequate means for regular communication and exchange	
Strategic network members have the knowledge and skills for networking	Existence of joint documents such as terms of reference, joint action plans, rules around competition, collaboration, etc.	
Existing strategic networks maintained	Duration of network maintenance	

7.9 LIST OF INTERVIEWEES FOR INSTITUTIONAL COLLABORATION

ITM has provided an updated list with names, function, skype and email addresses for list of promotors / co-promoters at ITM and the south institution(s). Staff that are no longer responsible, have left the institution and/or cannot be approached will be replaced by an alternative. We refer to the updated Excel Database Clean Contact Details (version 090720), which was updated with information provided by ITM.

7.10 LIST OF INTERVIEWEES FOR NETWORKING

ITM has provided an updated list with names, function, skype and email addresses for list of network organisers at ITM and south participant(s). Staff that are no longer responsible, have left the institution and/or cannot be approached will be replaced by an alternative. We refer to the updated Excel Database Clean Contact Details (version 090720), which was updated with information provided by ITM.