Report

DELTAS Africa Learning Research Programme:

Learning Report No.2 (Apr 2017 – Mar 2018)

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TABLE OF CONTENTS

ABBREVIATIONS

AESA	Accelerating Excellence in Science in Africa
AFIDEP	African Institute for Development Policy
CRU	Capacity Research Unit
DELTAS	Developing Excellence in Leadership, Training and Science
HEI	Higher Education Institute
HIC	High Income Country
HRCS	Health Research Capacity Strengthening
KT	Knowledge Translation
LMIC	Low- and Middle-Income Countries
LRP	Learning Research Programme
LSTM	Liverpool School of Tropical Medicine
MoH	Ministry of Health
RCS	Research Capacity Strengthening
SSA	Sub Saharan Africa

1. Executive Summary

The DELTAS Learning Research Programme (LRP), embedded within the DELTAS Africa initiative, aims to produce research-based learning about how to train and develop world-class researchers, foster their careers and collaborations and promote research uptake. The LRP comprises four thematic research strands, three of which are completed within the frame of a PhD fellowship. The thematic strands include:

1. Equitable career pathways
2. Research training
3. Knowledge translation
4. Consortia management

The LRP is led by the Capacity Research Unit (CRU), Liverpool School of Tropical Medicine, in partnership with the Alliance for Accelerating Excellence in Science in Africa (AESA), the African Institute for Development Policy (AFIDEP) and the Institut Pasteur, Paris.

This report presents key outcomes (learnings) from the DELTAS LRP for the period 1 April 2017 to 31 March 2018, as well as additional material obtained from complementary (non-DELTAS) learning programmes or activities.

The report content is intended for use by DELTAS consortia and stakeholders. To guide uptake of the presented findings, each thematic sub-section concludes with a **'Learning Application'** text box. We encourage DELTAS fellows to consider this material and its potential application within the context of their respective consortia.

The presented findings may usefully inform decision-making in the following areas:

1. **Enhancing women's career advancement in academic and/or scientific institutions**
2. **Facilitating an equitable distribution of post-graduate training opportunities across sub Saharan Africa**
3. **Enhancing researchers' and/or research institutions' knowledge translation capacity**
4. **Enhancing consortia outcomes through effective programme management**

Key findings from six CRU-led literature reviews, along with links to full text articles, are also presented as are outlines of recent and current 'learning' projects (other than DELTAS LRP) led by the CRU. Specific lessons and tools that have emerged from these projects and how they have been (or may be) used are also outlined. This 'complementary learning' content may also be of use to DELTAS consortia and stakeholders.

CRU will continue to work in collaboration with AESA to support the dissemination and programme-level application of the presented findings

2. INTRODUCTION

The DELTAS Learning Research Programme (LRP)[1], embedded within the DELTAS Africa initiative[2], aims to produce research-based learning about how to train and develop world-class researchers, foster their careers and collaborations and promote research uptake. The LRP comprises four thematic research strands, three of which are completed within the frame of a PhD fellowship. The thematic strands and research leads Include:

5. **Equitable career pathways**
   Lead: Ms Millicent Liani (PhD fellow, LSTM).
   PhD title: "Examining barriers and enablers to gender equitable scientific career pathways in African research institutions".
   Supervisors: Dr. Rachel Tolhurst (LSTM) and Prof. Isaac K. Nyamongo (The Co-operative University of Kenya)

6. **Research training**
   Lead: Mr Pierre Abomo (Research assistant, LSTM)
   Projects (to date): "Developing a registry of postgraduate training programmes in Medical and Health Sciences provided by Higher Education Institutions in sub-Saharan Africa"; and "An online survey of sub-Saharan African researchers' professional development opportunities, needs and barriers"

7. **Knowledge translation**
   Lead: Ms Violet Murunga (PhD fellow, LSTM).
   PhD title: "Exploring the research uptake strategies used by African researchers to promote evidence-informed decision making".
   Supervisors: Dr Justin Pulford (LSTM), Prof. Imelda Bates (LSTM) and Dr Rose Oronje (AFIDEP)

8. **Consortia management**
   Lead: Ms Nadia Tagoe (PhD fellow, Open University)
   PhD title: "Examining the process of establishing and managing health research capacity strengthening consortia".
   Supervisors: Prof. Sassy Molyneux (KEMRI-Wellcome Trust), Dr Samson Kinyanjui (KEMRI-Wellcome Trust) and Dr Justin Pulford (LSTM).

This report presents key outcomes (learnings) from the DELTAS LRP for the period 1 April 2017 to 31 March 2018, as well as additional material obtained from complementary (non-DELTAS) learning programmes or activities. The report content is intended for use by DELTAS consortia and stakeholders. LSTM will continue to work in collaboration with AESA to support the dissemination and programme-level application of the presented findings.

[1] http://www.lstmed.ac.uk/research/centres-and-units/capacity-research-unit-cru/our-projects/deltas-learning-research
[2] https://aasciences.ac.ke/aesa/en/programmes/deltas/

To guide uptake of the presented DELTAS LRP findings, each thematic sub-section concludes with a **'Learning Application'** text box. We encourage DELTAS fellows to consider this material (even if much of it remains preliminary) and its potential application within the context of their respective consortia.

3. DELTAS LRP LEARNING

3.1. THEME 1: EQUITABLE CAREER PATHWAYS

Ms Millicent Liani has completed a review of existing literature pertaining to 'barriers and enablers to gender equitable scientific career pathways in African research institutions'. The review is mainly based on studies examining gender inequities in academic career progression within higher education institutions in sub-Saharan Africa (SSA). Based on the review, a manuscript provisionally titled ***'Towards an integrated conceptual framework for understanding intersecting gender inequities in scientific career progression in higher education institutions in sub-Saharan Africa'*** has been developed, and is currently under internal review by the PhD supervisors, awaiting submission for peer-review publication.

Selected findings from the draft manuscript are presented below:

Integrated conceptual framework: To inform action for change towards enhancing gender equitable progression in science careers, there is a need to go beyond numbers to understand and document the underlying social, cultural and institutional drivers and processes that produce gender inequities. Such an endeavour requires a theoretically rigorous gender analysis framework/theory that is relevant to SSA contexts and sufficiently accounts for variations among both women and men. No such framework is currently available. Based on the review, we propose a new conceptual framework (see Figure 1) combining the 'systems of career influences' model of the interplay between individual and organizational factors influencing career progression [1], with a social relations approach as an institutional gender analysis framework [2, 3] and an intersectional perspective [4, 5]. We applied this framework to the available empirical findings from SSA to test it for 'fit' and to develop a preliminary explanation of observed inequities.

At the centre of the framework is *the scientific career pathway,* which typically progresses from Bachelors through Masters and PhD programmes, to post-doctoral positions, senior research or lecturer positions and finally professorships, although the process may not be linear, especially in SSA. Women are typically increasingly under-represented along the pathway as levels of seniority increase; they may 'leak' out of the pathway by leaving academia or 'get stuck' in junior positions. Empirical evidence generally demonstrates that

women and men's (lack of) progression is shaped by *intersections between social relations of gender in the family, wider society and academic institutions themselves* (Fig. 1, left and right).

Specifically, the framework (Fig. 1, left side) shows that the disproportionate allocation of reproductive labour[3] to women, regardless of their professional roles, constrains female scientists' ability to compete with their male counterparts by allocating time to activities that contribute to career progression such as grant and paper writing; this begins at post-graduate level and creates a cumulative disadvantage over time. A particular feature of the SSA context is the labour associated with the extended family, even for single women or those with no children. Nevertheless, the social costs of career progression for women may include divorce or strategic decisions not to have children. Reproductive responsibilities reduce many women's opportunities to take up international study or work, which can be an important source of academic capital and networks that support progression. Conversely, the social expectation to 'follow' a spouse as they develop their career can lead to postponement, 'fractures' or changes in direction in women's careers. In contrast, many women cite supportive family relationships, both in moral and practical terms (such as childcare) as critical to their resilience and career success.

The disadvantage of the reproductive labour burden is compounded by the *gender power relations within academic institutions* (Fig.1, right side*)*.

- In terms of '*activities*', neo-liberal labour relations in academic institutions increasingly focus on 'productivity measures' of scientific outputs such as peer-reviewed journal articles and grant income, which are often constructed as 'additional' to teaching loads, assuming time elasticity [6]. It is evident that women scientists in Africa publish less than their male counterparts [6, 7]. Low 'productivity' may lead to a vicious cycle of higher teaching, administration and pastoral loads [8], which are less well rewarded in promotions processes, further reducing time for 'productive' research outputs [6, 9, 10].
- Female scientists are also disadvantaged in access to *resources* such as research funding and knowledge networks [11], in addition to reported biases in allocation of office and laboratory supplies [6]. Lack of childcare facilities provision further compounds this [8, 11, 12].
- *Formal* institutional policies and *rules* are not only 'gender blind,' but contain hidden biases against women because they are implicitly based on a male scientist (with an assumed lack of reproductive responsibilities) in terms of their representation and decision-making procedures [10, 11].
- *Informal* institutional *rules,* practices and culture further constrain women. Male dominance in senior positions is self-reinforcing through informal decision making in male peer networks (such as during social activities) [8], in addition to unconscious bias and the importance of political patronage [11]. Female scientists are less likely than males to have senior female roles models or mentors with experience of career progression [9]. Promotions committees are frequently all male and may ask gender-biased questions

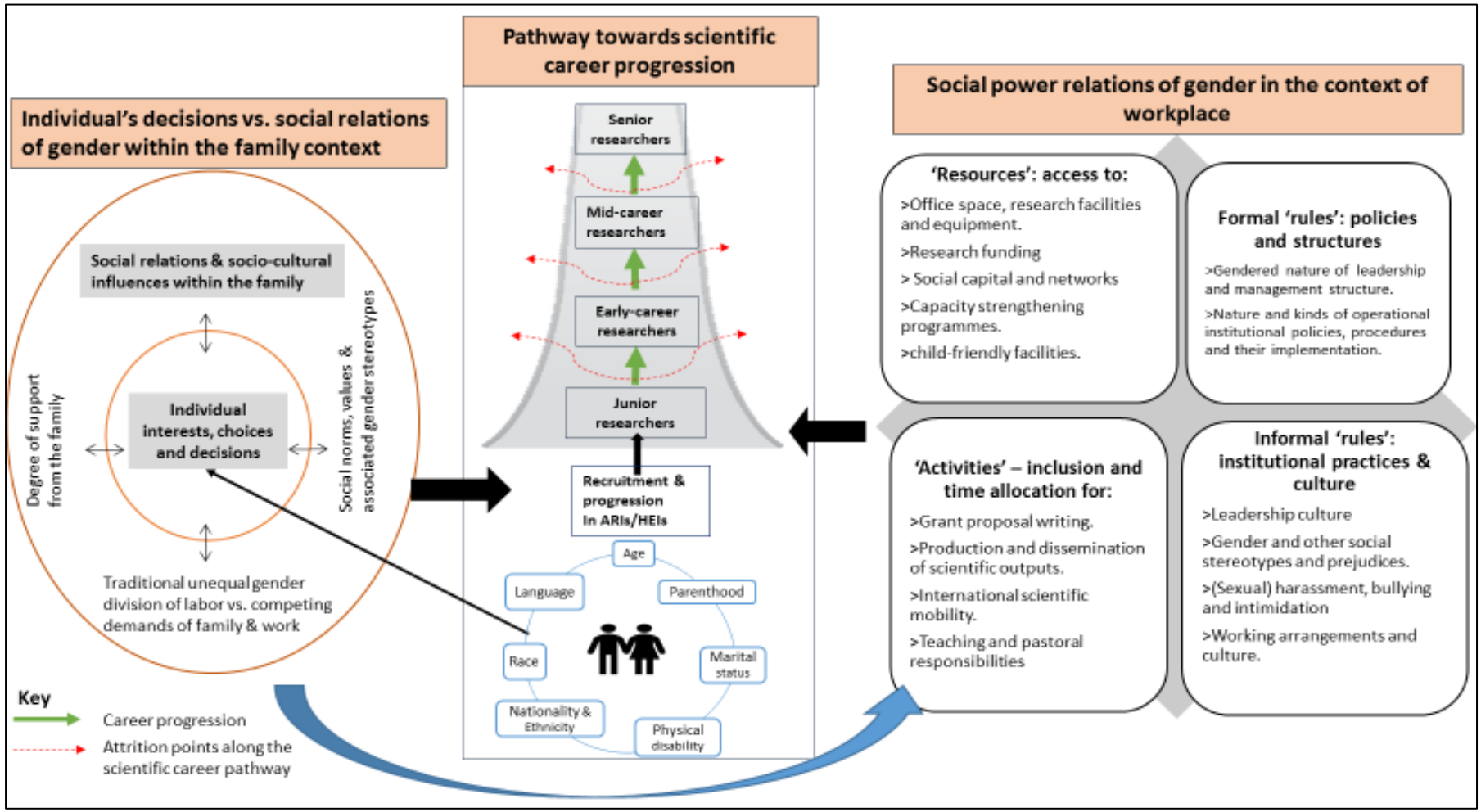
[3] This term encompasses the care and maintenance of the household and its members, such as cooking, cleaning, nursing, child bearing and caring. Although this work is necessary, it is normally unpaid and mostly allocated to and done by women.

[13]. Patriarchal societal norms shape gender stereotypes, such as assumptions that women are particularly suited to pastoral responsibilities and incapable of effective leadership, or that leadership positions are incompatible with women's assumed reproductive responsibilities [8, 13]. Organizational practices tend to marginalize "women's ways of knowing and doing" [9] and bullying behaviours such as interrupting or over-ruling women in meetings are common [10]. Sexual harassment and gender-based violence and the lack of effective sanctions against these further contribute towards a hostile environment for women [10, 12, 14, 15]. Scheduling meetings outside core working hours can further disadvantage female scientists with reproductive responsibilities [13].

Limitations and gaps in the existing evidence: A major gap in the existing empirical evidence is a lack of comparative accounts on scientific career progression barriers for men and women. In addition, there are limited studies that consider intersection with other axes of disadvantage such as ethnicity, social class or disability for women or men. Therefore, the available evidence has largely focused on women, who have generally been taken as a homogenous group. We did not identify any study that has investigated the issues of gender inequities in career progression for each step of the science pathway from junior researcher to senior researcher level within African research institutions/HEIs. Notably, the majority of existing research has paid attention to academic/scientific career progression challenges as opposed to enabling strategies, with the latter mainly appearing in the conclusion and recommendation sections. We were unable to identify any evaluations of interventions to address career progression barriers.

Practical implications and future directions: We have proposed an integrated framework (Figure 1), which is based on a review of literature, that provides a scientific foundation upon which critical thinking and analysis of the problem of inequitable career progression with a gender and social inclusion lens can be founded. From such an analysis, a theory of change for gender transformation can be developed, with specific strategies based on a thorough and respectful understanding of SSA realities. This framework could be used by institutional research leaders and policy makers in considering how to drive change towards enhancing equity in career progression of its researchers and promoting diversity. Nonetheless, we encourage other researchers to test it for 'fit', even as we embark on a (PhD) study that will test it within the DELTAS Africa research consortia and further revise the model based on empirical evidence from SSA.

Figure 1: An integrated conceptual framework for understanding intersecting gender inequities in scientific career progression in HEIs in SSA



Source: Liani et al. (upcoming)

LEARNING APPLICATION: THEME ONE

Enhancing women's career advancement in academic and/or scientific institutions

There is to date insufficient evidence on strategies for overcoming barriers to women's career progression in the existing literature from sub-Saharan Africa. However, our analysis and many existing studies point to a range of potential approaches and interventions which could be pursued to improve gender equity, which would need to be implemented in combination, given the multiple and interconnected barriers currently faced:

- Develop equal opportunities policies and practices in recruitment, including paying attention to the gender balance on recruitment panels and 'unconscious bias' training for such panels.
- Improve transparency in promotions processes and include pastoral and teaching responsibilities in merit criteria.
- Conduct equal pay audits to improve transparency of remuneration and develop clear role descriptions that equitably remunerate the full range of academic tasks.
- Develop creative and transparent approaches to equitably supporting all scientists with balancing teaching, administration and pastoral workloads with research expectations.
- Consider making (subsidized) child-care facilities available at or near the workplace, and at scientific conferences and workshops and/or provide budget to support alternative carers for young children, to alleviate barriers to professional travel.
- Establish flexible working policies for scientists with young children.
- Establish core working hours within which important meetings are scheduled.
- Build research capacity especially among women researchers on how to secure research funding.
- Facilitate women's access to formal and informal professional networks for exposure and visibility through provision of sponsorships.
- Establish career mentoring programmes for women academics, with consideration of both psycho-social and career development aspects, which may require more than one mentor.
- Establish and implement concrete clear policies and practices that recognize and effectively address sensitive issues such as (sexual) harassment and gender based violence, bullying and intimidation in the workplace.
- Foster institutional collaborative science research programs in Africa through flexible joint training programs that are supportive to scholars who cannot be away from their families for long period.
- Consider explicit promotion of opportunities for and specific mentoring of girls and in science as part of school liaison programmes.

3.2. THEME 2: RESEARCH TRAINING

The DELTAS LRP team recently released an Excel spreadsheet listing all postgraduate training programmes in Medical and Health Sciences provided by Higher Education Institutions (HEI) in sub-Saharan Africa (SSA). The spreadsheet and a brief summary report (in both French and English) can be obtained at the following link: http://www.lstmed.ac.uk/research/centres-and-units/capacity-research-unit-cru/our-projects/deltas-learning-research

Selected outcomes from this mapping exercise, based on a systematic search of published and grey literature, HEI and government websites and extensive consultation, include:

At least one HEI providing postgraduate, health-related training was identified in 85% (34/40) of Anglophone or Francophone countries in SSA. Across these 34 countries, a total of 163 HEIs collectively provide 1599 postgraduate training programmes in a health-related discipline. Table 1 presents the number and type of postgraduate training programmes overall, by region and by language group.

Table 1. The number and type of health-related, postgraduate training programmes provided by SSA HEI by region and language group

Programme		African Region				Linguistic Group		Overall
		West N=400 n (%)	Central N=115 n (%)	East N=428 n (%)	Southern N=655 n (%)	Anglo N=1314 n (%)	Franco N=284 n (%)	N=1599 n (%)
Status	Public	374 (94)	89 (77)	368 (86)	651 (99)	1229 (94)	253 (89)	1482 (93)
	Private	26 (7)	26 (23)	60(14)	4 (1)	85 (6)	31 (11)	116 (7)
Discipline	Med. Sci	179 (45)	59 (51)	242 (56)	458 (70)	830 (63)	108 (38)	938 (59)
	Bio. Sci	105 (26)	21 (18)	41 (10)	35 (5)	138 (10)	65 (23)	203 (13)
	Pub. Hlth	97 (24)	27 (24)	116 (27)	106 (16)	260 (20)	86 (30)	346 (21)
	Other	19 (5)	8 (7)	28 (7)	56 (9)	86 (7)	25 (9)	111 (7)
Award	PhD	191 (48)	61 (53)	94 (22)	125 (19)	356 (27)	115 (41)	471 (29)
	Masters	178 (45)	52 (45)	295 (69)	527 (80)	918 (70)	134 (47)	1052 (66)
	Other	31 (7)	2 (2)	39 (9)	3 (1)	40 (3)	35 (12)	75 (5)

As shown in Table 1, the vast majority (93%) of training programmes are provided through publicly-funded HEIs and a majority of courses are in the medical sciences (58.7%) and awarded at a maximum of Masters level (65.8%). In terms of regional distribution, 41% of programmes were provided by HEIs located in the Southern Africa region, 27% East Africa, 25% (400/1599) West Africa and 7% Central Africa. 82% of available postgraduate training programmes were provided by HEIs located in Anglophone countries.

Overall, 68% of the postgraduate training programmes were provided by HEIs located in four countries (Figure 2). South Africa alone accounts for 36% of the postgraduate training

programmes in health-related sciences. These four countries account for 34% of the identified HEIs (Figure 3), suggesting a relatively small proportion of HEIs are providing the majority of health-related postgraduate training programmes in SSA.

Figure 2. % programmes per country

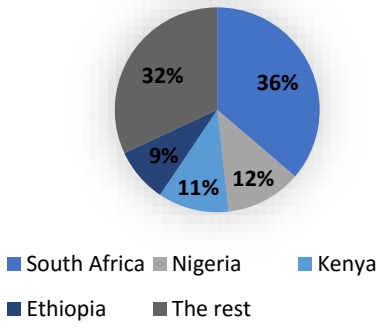
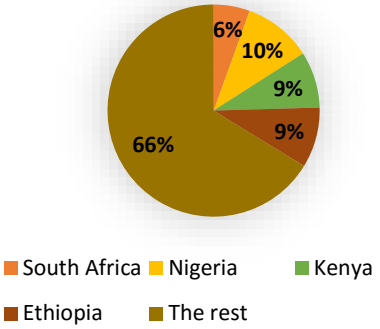


Figure 3: % of HEI per countries



Overall, 58% of HEIs provided at least one health-related training programme at the level of PhD, 91% at least one programme at the level of Masters and 10% provided a postgraduate award below Masters level (Figure 4). 77% of HEIs provided at least one programme in medical sciences, 41% in Biomedical sciences, 67% in public health and 28% in some other form of health-related programme (Figure 5).

Figure 4. % of HEI per type of degree offered

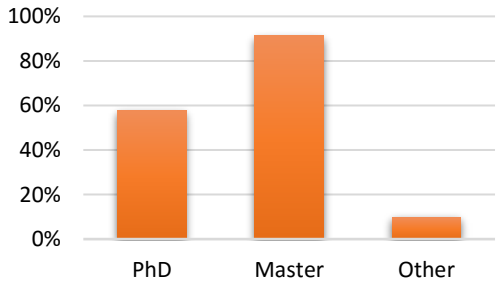
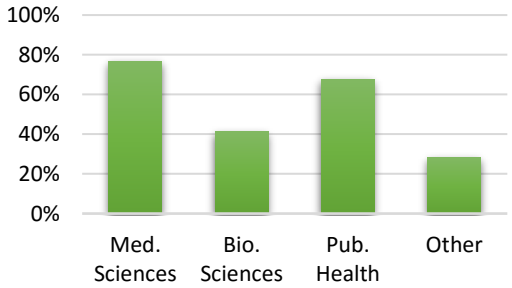


Figure 5. % of HEI per disciplines taught



LEARNING APPLICATION: THEME TWO

Facilitating an equitable distribution of post-graduate training opportunities across SSA

The registry primarily serves as a reference document with a myriad of potential uses. However, the summary report clearly highlights that most postgraduate training programmes are concentrated in a small number of SSA countries and that a large proportion of SSA HEIs do not offer PhD level programmes. The opportunities for certificate or diploma level postgraduate awards are also particularly scarce across all SSA regions. These findings indicate local access to postgraduate training is highly inequitable across SSA. Extending DELTAS postgraduate training opportunities into 'low' access countries therefore presents as a worthwhile endeavour and, with the application of appropriate indicators, may serve as a measure of programme success (in a research capacity strengthening context).

3.3. THEME 3: RESEARCH UPTAKE

Ms Violet Murunga is completing a review of existing literature pertaining to researcher-centred KT in a LMIC context. A manuscript provisionally titled **'Knowledge translation capacity, practice and support among researchers in low- and middle-income countries: A structured review of the published literature'** has been developed, and is currently under internal review by her PhD supervisors awaiting submission for peer-review publication.

The literature review was based on a systematic search of the Pubmed and Scopus databases. The focus was on identifying publications pertaining to: 1) the knowledge translation capacity of LMIC researchers; 2) LMIC researchers' knowledge translation practices or experiences; and 3) support provided to improve LMIC researchers' knowledge translation capacity or practice. The search was limited to English language publications. A total of 34 papers met the stated inclusion criteria, of which 29 presented original research, 4 commentaries and 1 systematic review. Eight of these 34 papers presented data/comment relevant to KT Capacity, 24 to KT Practice and 2 to KT Support.

Selected findings from the draft manuscript are presented below.

Knowledge Translation (KT) Capacity

Three studies [16, 18, 19] employed a 5-point Likert scale to measure perceived KT capacity across a range of issues. A further study used scores out of 100 to assess KT capacity [17], which we (report authors) transformed into 5-point Likert scales by dividing each score by 20. Table 2 presents the mean scores, out of 5 (1= lowest capacity, 5= highest), reported on a range of research institution and researcher KT capacities across these four publications. All reported studies were examining KT capacity within a health research context. The tabulated data highlight the types of research institution and researcher capacities that may promote more effective KT (in the 'Capacity Type' column) as well as the mean scores of the respective participants (all LMIC research institutions or LMIC researchers) against each capacity type. **The mean ratings may be considered indicative of research institution/researcher KT capacity in an LMIC context.**

Knowledge Translation Practice

Tables 3 and 4 present the most frequently reported barriers and enablers to good KT practice in a LMIC research context. In order to be included on a table, the listed barrier or enabler had to be reported in at least three publications[4]. **The tabulated data may be considered indicative of the range of barriers and enablers to effective, research-led KT practice in a LMIC context and highlight potential opportunities for KT capacity strengthening.**

[4] The wording may have varied between publications, although a common meaning was identifiable.

Table 2. Mean scores (out of 5) on specified KT capacities in a LMIC context

Capacity Type	Cited In			
	16	17	18	19
Research Institution Capacity				
Allocated budget to support KT activities (other than journal publication/ conference presentation)	2.4			2.2
Strong institutional links to the MOH/units within the MOH exist			3.6	
Strong institutional linkages to health facilities and health staff exist			3.1	
Strong institutional linkages to media organizations exist	1.9		2.5	2.4
Regular meetings held with the targeted decision-makers (collaboration networks)	2.6			2.2
Staff incentives to engage in KT exist	1.8			1.7
An institutional research repository accessible to policymakers exists	2.2	1.5		2.7
Researcher Capacity				
KT skills	2.4	1.5	3.2	2.8
Time to conduct KT	2.4		3.2	2.7
Capacity to interact and communicate with decision makers/policy makers	2.3	1.5	3.2	3.4
Communication skills	2.3		2.8	2.6
Research users involved in the design of the research and/or its implementation	2.5	1.5		2.4
Capacity to generate systematic reviews and clinical guidelines	2.0			2.2

Results presented as a mean rating out of 5 (1=lowest capacity, 5=highest capacity)

Table 3. The most frequently reported barriers to good KT practice among LMIC researchers

Reported barriers	Cited In
1. Limited funding for systematic reviews, KT activities and implementation of recommended policy and programme actions	17, 18, 20-24
2. Policymakers rarely consider evidence in their decisions and decisions are driven by other factors	17, 21, 22, 25-27
3. Lack of clear policies, strategic leadership and technical capacity in policy institutions	17, 18, 22, 25, 28
4. High turnover of government officials and politicians	17, 21, 27
5. Research institutions lack incentives to promote conduct of KT	21, 25, 23
6. Researchers have inadequate time for conducting SR and KT activities	18, 21, 22
7. Difficult for policymakers and communities to understand complex research findings and/or for researchers to communicate them to policymakers and communities	17, 21, 29
8. Researchers fear misrepresentation of their research by policymakers or media	21, 22, 26, 30

Table 4. The most frequently reported enablers to good KT practice among LMIC researchers

Reported facilitators	Cited In*
1. Researchers working and collaborating with policymakers and other stakeholders during research, KT and policymaking	17,1 8, 20, 21, 23, 24, 26, 27, 30-35
2. Research funding criteria for KT activities and/or increased funding for KT and systematic reviews	17-24
3. Sensitisation and training of researchers on how to conduct systematic reviews or KT	17, 18, 20-22, 24,28, 30, 31
4. Sensitisation, training and mentorship of policymakers and other stakeholders on benefits of research, research process and application of research findings	17-20, 22, 25, 28, 30, 31
5. Researchers' interaction with policy actors through existing formal and informal networks and personal relationships	17,21, 22, 25-27, 30-34
6. Targeted dissemination of research findings to policymakers and other stakeholders including policy dialogues and structured discussions with community members	20, 22, 23, 27, 30-32, 34
7. Collaboration promoting mutual learning between researchers, policymakers and communities and building capacity of policymakers and communities to use research	18, 21, 23, 30, 31, 35
8. Trust of researchers by policymakers facilitates uptake of research into policy and practice	17, 21, 27, 30, 31
9. Relevance and credibility of research evidence	21, 27, 32-34, 36
10. Tailor messages for various audiences	21, 23, 24, 33
11. Providing research users with research summaries or information packs	23, 27, 29, 30
12. Identify and seize windows of opportunity to engage in KT activity	21, 27, 32-34
13. Focusing on improving conceptual understanding and attitudes about controversial and highly emotive issues	21, 27, 33

Knowledge Translation Support

Only 2 publications described some form of support provided to LMIC researchers to improve their KT capacity or practice, none of which included a formal evaluation. **This suggests an urgent need to trial and publish KT capacity strengthening interventions for LMIC researchers/research institutions.**

The first study assessed the feasibility of a rapid response mechanism implemented by researchers, dedicated to the timely development of evidence briefs to support health systems policy and planning decision-making [20]. The service was based at Makerere University, Kampala, Uganda and targeted decision-makers involved in making urgent health systems policy decisions. It was staffed by researchers hired to coordinate the service, trained in writing and policy analysis skills, and a general understanding of the health system and policy formulation process and supported by a wide network of researchers in and outside the region. For eligible questions, the staff searched for relevant research evidence, appraised, contextualised and summarised it and subjected it to review by local and international subject

experts. Thereafter, a four-page brief, with clear key messages was developed and submitted to the policymaker. The process generally took less than 28 days to complete.

The second study described the activities, materials, outputs and evaluation results of a two-day training workshop in Cameroon aimed at improving researchers' knowledge and skills of designing and implementing 'pragmatic knowledge translation trials' [37]. Participants were expected to achieve specified competencies at the end of the workshop, including: distinguish pragmatic trials from other types of trials; understand key concepts in knowledge translation; describe important steps in clinical trial design and; participate in the design of a pragmatic knowledge translation trial. The training was organised by the Centre for Development of Best Practices in Health (CDBPH) based in Cameroon and targeted academia in medicine and biomedical sciences, staff from the Ministry of Health and other researchers affiliated with the CDBPH.

LEARNING APPLICATION: THEME THREE

Enhancing researchers' and/or research institutions' knowledge translation capacity

Preliminary findings from the literature review suggest the following opportunities to enhance KT capacity among LMIC research institutions/researchers:

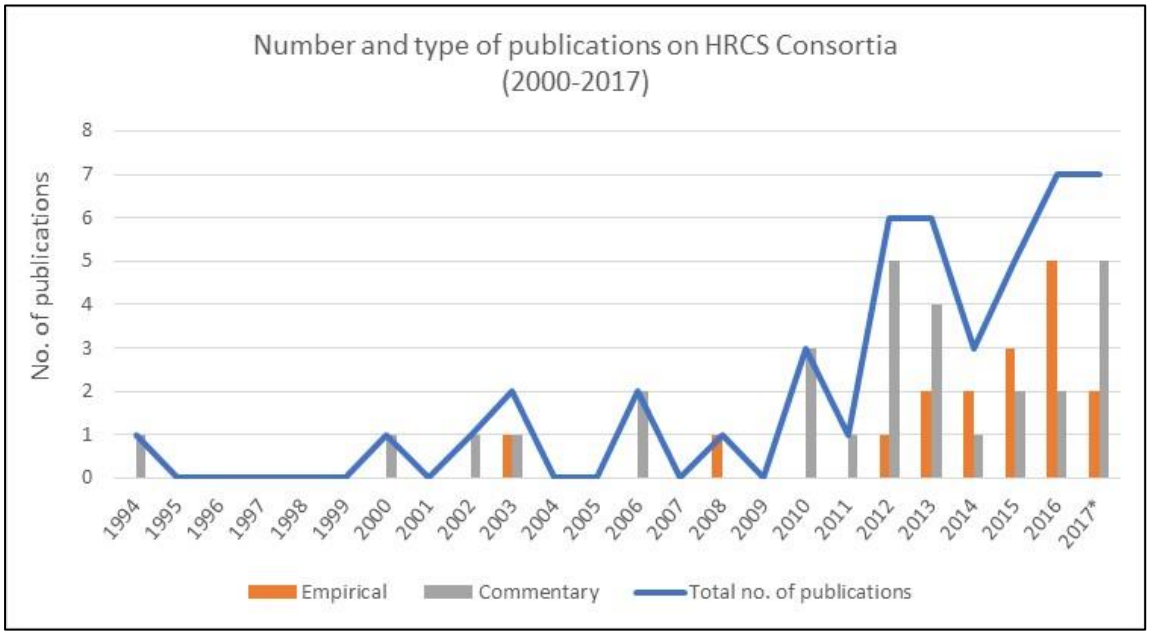
- Establish a recurrent budget allocation to support KT activities/training (other than publication in peer-reviewed journals and/or conference attendance) at the departmental/institutional level. If funding sufficient, this may include specialist KT support positions.
- Map the full range of potential local and national research end-users for prominent research programmes/projects. Identify existing opportunities to engage with these end-users, establish formal institutional-level linkages where possible and/or develop communication pathways where required.
- Establish incentives for academic/research staff to engage in KT activities (other than publication in peer-reviewed journals and/or conference attendance).
- Establish publicly accessible research repositories (if not already in place) and support local/national research end-users to access and utilise it.
- Build KT and communication capacity among academic/research staff at all stages of the career pathway. Ideally incorporating KT/communication modules into institutional professional development programmes.
- Support KT capacity development among research end-users, especially in regard to the interpretation and application of research evidence.
- Explore opportunities to engage research end-users in the earliest stages of research formulation, e.g. problem identification and drafting research questions/hypotheses. This could potentially include collaboratively developing a priority research agenda for the local/national context in a specified subject area.

3.4. THEME 4: CONSORTIA MANAGEMENT

Ms Nadia Tagoe is completing a review of the published literature pertaining to the establishment and management of health research capacity strengthening consortia. A manuscript provisionally titled **'The process of establishing and managing health research capacity strengthening consortia: A systematized review'** is currently in development.

The literature review was based on a systematic search of the Pubmed and Scopus databases and sought to identify the range of published information pertaining to HRCS establishment and management processes in a LMIC context, the quality of the available data and the common findings. The search was limited to English language publications. A total of 46 papers met the specified inclusion criteria, of which 29 were commentaries and 17 original research. Figure 6 illustrates the number of publications per year. 35 publications referred to HRCS initiatives in an African context. Partnerships mostly constituted of one HIC partner collaborating with one LMIC partner, one HIC partner with multiple LMIC partners, or a collaboration of multiple HIC and multiple LMIC partners; and only three had multiple HIC partners collaborating with one LMIC partner.

Fig. 6: Number of publications per year



*For 2017, only papers published from January to October were included

Selected preliminary findings from the draft manuscript are presented below.

A little over a third of the papers (n=18) discussed criteria used in selecting consortia partners with many considering two or more factors. The most cited criterion was previous and existing working relationships on individual or institutional basis (13/18). None of the papers reported how the size, structure or diversities within consortia were determined.

Only one out of every five consortia reported having undergone an agenda setting or partnership development process. Stakeholder and consultation workshops and meetings, visits, e-mails and telephone calls were cited as means by which this process was executed.

Researchers and Principal Investigators frequently took the lead management role in consortia, with only two instances where an institutional and departmental head respectively played this role. The consortium management capacities of leaders and managers were not mentioned or discussed in any paper.

The importance of recognising consortia partner differences and attaining common understanding and leveraging on those differences when developing partnerships was noted as a learned lesson both by the presence or lack of deliberate processes to attain this. Only five papers described undergoing such a process, with three of them making use of a framework or tool. The three tools included: the 4D Appreciative Inquiry Framework [38], the International Participatory Research Framework [39] and the Partnership Assessment Tool (PAT) [40].

Previous working relationships tended to foster smoother consortia management processes due to familiarity with context and working styles. Inclusive participation of all partners in setting the agenda, decision-making, and activity coordination engendered ownership and commitment, thus facilitating coordination.

Challenges to performing consortia management functions highlighted included lack of clarity of roles and differences in partner context, working style, organisational culture, and language. This was exacerbated in large-sized consortia, where communication was especially difficult.

Inequity and power imbalance was accentuated in many consortia, with about half explicitly sharing experiences and challenges encountered. Emanating from either pre-existing or consortium design factors, inequitable division of resources, roles, control, and benefits between partners was experienced across most consortia.

The importance of appropriate consortium structures that promoted equal division of resources, roles, control, decision-making capacity, and benefits, as well as negotiating these in advance and formalising in writing were noted. However, it was acknowledged that structures and documentation were not sufficient in themselves in addressing power differentials. Partners needed to commit to promoting equal partnerships, mutual respect,

trust, and reciprocity. It was also noted that the potential for equity increases with continued working relationships and experience in working with less-resourced partners.

To operationalise and ensure equitable partnerships, inclusive participation for all partners was widely promoted. This had to reflect in agenda setting as well as governance and management structures, and efforts made to identify strategies for sustained commitment and address any barriers to participation. Lack of inclusion especially during early stages was bemoaned by many consortia.

Consortia are dependent on relationships, and managing relational issues is as pivotal, if not more, than managing operational issues; and effective relationships are essential for achieving consortia goals and capacity building. This was demonstrated in the attention given across papers, as all empirical papers and most commentaries reported on findings related to the experiences, challenges or lessons learned on consortia relational issues.

Developing formal and informal, as well as institutional and individual relationships, promoted and sustained collaborative activities. In fact, individual relationships were found to be pivotal in consortium sustenance when institutional relationships faltered. Several principles and practices that fostered relationships were noted, including: openness, trust, mutual respect, transparency, shared commitment, and recognition.

Consortia acknowledged challenges in building relationships among partners such as: communication difficulties due to distance, time differences and cost; and amount of time required for such processes especially when partners have no prior history. Additionally, the potential for competition and conflict among partners exists and strategies for minimising and addressing these were deemed essential.

Outcome indicators based on objective deliverables such as persons trained and research conducted seems to persist, and consortia processes appear to be primarily understood as a means to that end. Thus, it is not evident that consortia establishment and management processes are perceived as capacity strengthening mechanisms in their own right. This may be a reflection on what is valued in determining consortia outcomes or a leaning towards what is easier to measure.

With the exception of one paper reporting a terminated consortium, all others reported successful collaborations, surmounting any challenges encountered. This brings to the fore the possible existence of publication or social desirability biases on the part of authors and study participants. Hence the experiences of unsuccessful consortia may exist but not been published, and authors and study participants of papers may have been cautious in their publication and responses respectively in order to avoid potential tensions and maintain relationships.

LEARNING APPLICATION: THEME FOUR

Enhancing consortia outcomes through effective programme management

Preliminary findings from the literature review suggest the following opportunities to enhance consortia outcomes through effective programme management:

- There are few published accounts of implementing health research capacity strengthening consortia from a management perspective. This suggests an opportunity for DELTAS consortia to contribute to the fledgling evidence-base by convening (and reporting on) reflective learning forums and/or conducting/commissioning programme/consortia level reviews/evaluations, all with an emphasis on project management practices that have enhanced or hindered the achievement of programme goals.
- Provide specialist project management training/support to Consortia leads with at least some emphasis on the 'relational' aspects of good programme management. In future, funders may consider requesting evidence of project management expertise in consortia leads and, where insufficient, provide necessary support to ensure 'good practice' management principles are adhered to from the outset.
- Consider the use of an existing tool, such as the Partnership Assessment Tool, to measure partnership capacities and/or level of engagement at the consortia level.
- Inequity can undermine consortia performance. Ensure formal mechanisms are in place to promote equitable participation and provide opportunities for critical reflection from all partners.
- Effective relationships are essential for achieving consortia goals and capacity strengthening. Develop a wide mix of formal and informal opportunities for consortia partners at all levels and across positions to interact in positive ways.
- The process of establishing and managing HRCS are capacity strengthening opportunities in their own right. Identifying, and reporting (ideally through a mix of reflective learning and quantitative indicators) capacity gains achieved and/or supported through good programme management practice will further contribute to the developing evidence-base in this area and highlight the broader benefits of seeking to strength research capacity via a consortia platform.

4. Complementary Learning

CRU works across several capacity-strengthening programmes and projects and is therefore uniquely positioned to be able to learn, disseminate and use lessons among those implementing, managing and funding these projects. This provides substantial added value for the DELTAS LRP. Learning that has been used in projects has also been derived from other sources including literature reviews. The type of lessons derived from projects or programmes, and their usefulness, are clearly dependent on the maturity of the project or programme since such lessons generally emerge only after the first 1-2 years of operation.

This means that some new CRU projects have potential to generate very useful lessons but these are not likely to start emerging until mid-late 2018.

This section of the report is divided into two sub-sections: The first presents a summary of literature review publications, along with their key lessons or learnings. The second outlines recent and current 'learning' projects (other than DELTAS LRP) led by the CRU as well as a description of specific lessons and tools that have emerged from these projects and how they have been (or may be) used by other projects.

4.1. Literature Reviews

Table 5 below presents a summary of literature review publications, along with their key lessons and learning.

Table 5: Learning from capacity strengthening-focused literature reviews

Literature review publication	Learning
Dean, L., Gregorius, S., Bates, I., & Pulford, J. (2017). Advancing the science of health research capacity strengthening in low-income and middle-income countries: a scoping review of the published literature, 2000–2016. *BMJ open*, *7*(12), e018718. **Accessible at:** http://bmjopen.bmj.com/content/bmjopen/7/12/e018718.full.pdf	HRCS publications increased exponentially between 2000 and 2016. Most were perspective, opinion or commentary pieces; original research publications were the primary publication type since 2013. Twenty-five different definitions of research capacity strengthening were identified, of which three aligned with current HRCS guidelines. An HRCS research field with a focus on implementation science is emerging
Bates, I., Boyd, A., Aslanyan, G., & Cole, D. C. (2014). Tackling the tensions in evaluating capacity strengthening for health research in low-and middle-income countries. *Health policy and planning*, *30*(3), 334-344.	Key tensions are around how much stakeholders should participate in an evaluation, the appropriate balance between measuring and learning and between a focus on short-term processes vs longer-term impact and sustainability. Suggested solutions to these tensions included early and ongoing stakeholder engagement in planning and evaluating health RCS, modelling of impact pathways and rapid assimilation of lessons learned for continuous improvement of decision making

Literature review publication	Learning
Accessible at: https://academic.oup.com/heapol/article/30/3/334/617608	and programming. The use of developmental approaches could improve health RCS evaluations by addressing common tensions and promoting sustainability. Sharing learning about how to do robust and useful health RCS evaluations should happen alongside, not after, health RCS efforts.
Cole, D. C., Aslanyan, G., Dunn, A., Boyd, A., & Bates, I. (2014). Dilemmas of evaluation: health research capacity initiatives. *Bulletin of the World Health Organization*, *92*, 920-921. **Accessible at:** https://www.scielosp.org/scielo.php?pid=S0042-96862014001200920&script=sci_abstract&tlng=es	Funders and policy-makers aiming to harmonize evaluation approaches for health research capacity strengthening initiatives must successfully manage underlying tensions to move forward. These include the degree of stakeholder participation, the right balance of quantitative and qualitative data, the promotion of learning while gathering information and an emphasis on long-term, as well as short-term, gains. A deeper analysis of health research capacity strengthening projects, using consistent and multiple methods would enable learning to be shared and transferred. It would also relieve funding recipients of the burden of multiple reporting, consistent with aid effectiveness principles, and potentially enable funders to better demonstrate impact and value for money.
Bates, I., Boyd, A., Smith, H., & Cole, D. C. (2014). A practical and systematic approach to organisational capacity strengthening for research in the health sector in Africa. *Health research policy and systems*, *12*(1), 11. **Accessible at:** https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-12-11	An evidence-based, novel five-step approach for RCS was shown to be flexible enough to generate and utilise ongoing learning. It includes setting a clear goal and objectives, and making explicit the capacity required to achieve the goal. Strategies for promoting sustainability are agreed with partners and incorporated from the outset. The approach focuses not only on technical, managerial, and financial processes within organisations, but also on the individuals within organisations and the wider system within which organisations are coordinated, financed, and managed.

Literature review publication	Learning
Cole, D. C., Boyd, A., Aslanyan, G., & Bates, I. (2014). Indicators for tracking programmes to strengthen health research capacity in lower-and middle-income countries: a qualitative synthesis. *Health research policy and systems*, *12*(1), 17. **Accessible at:** https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-12-17	Evaluations varied remarkably in the strengths of their evaluation designs. The validity of indicators, inter-relationships and potential biases are rarely documented. Individual level indicators tended to be more quantitative, comparable, and attentive to equity considerations. Institutional and national-international level indicators were extremely diverse. Although linkage of activities through outputs to outcomes within evaluations was limited, across the evaluations it is possible to construct potential pathways of change and assemble corresponding indicators. Opportunities for improving health RCS evaluations include work on indicator measurement properties and development of indicators which better encompass relationships with knowledge users. Greater attention to evaluation design, prospective indicator measurement, and systematic linkage of indicators in keeping with theories of change could provide more robust evidence on outcomes of health RCS.
Boyd, A., Cole, D. C., Cho, D. B., Aslanyan, G., & Bates, I. (2013). Frameworks for evaluating health research capacity strengthening: a qualitative study. *Health research policy and systems*, *11*(1), 46. **Accessible at:** https://health-policy-systems.biomedcentral.com/articles/10.1186/1478-4505-11-46	Frameworks for evaluating HRCS were oriented primarily towards funders' internal organisational performance requirements with limited reference to theories that specifically concern RCS. Generic devices, such as logical frameworks, were typically used to document activities, outputs and outcomes, but with little emphasis on exploring underlying assumptions or contextual constraints. There is scope for improving frameworks, and their harmonisation among funders, through the incorporation of more accessible information about how to do evaluation in practice; greater involvement of stakeholders, following evaluation capacity building principles; greater emphasis on explaining underlying rationales of frameworks; and structuring frameworks so that they separate generic and project-specific aspects of health RCS evaluation.

4.2. RELATED PROJECTS

Below is a summary of the current and recent projects which generated or will generate information of relevance to DELTAS Africa. These include:

- Support to the Malaria Capacity Development Consortium (MCDC) including the Strengthening Research Management Support Systems (RMSS) project – see publications: ref 6[5] and ref 7[6] in the footnotes; and see the overview report.
- MEL support to the Africa Capacity Building Initiative (ACBI) aiming to generate research-informed learning from the ACBI to improve the initiative within the project life span and to contribute to the global pool of evidence on the science of research capacity strengthening.
- Support to GlaxoSmithKline (GSK) Africa Non Communicable Diseases (NCD) Open Lab programme, laboratory support to the Centre for Neglected Tropical Diseases and to WHO for developing a global network of NTD laboratories (publication in press[7])
- GCRF 'Growing Capability' projects (PIIVeC, CEPHaS, HORN) – programme level RCS learning (see research questions below)
- NIHR IMPALA project – research on factors that promote and hinder multi-disciplinary research Laboratory strengthening projects (IVCC laboratory accreditation; DRC national trypanosomiasis programme capacity strengthening; Fleming Fund AMR projects)
- Health Research Capacity Strengthening (HRCS) intervention (see publication)[5]

Specific lessons and tools that have emerged from these projects and how they have been (or may be) used by other projects, are summarised in Table 6.

Table 6: Transferable tools and lessons learnt and their transferability and uptake

Project	Transferable tools and lessons learnt	Uptake by
Tools and lessons already used		
MCDC/RMSS	Process/tools for evaluating doctoral programmes (interview guides, corroborating documents, facilities review)	ACBI – informed baseline study tools

[5] Wallis, S., Cole, D. C., Gaye, O., Mmbaga, B. T., Mwapasa, V., Tagbor, H., & Bates, I. (2017). Qualitative study to develop processes and tools for the assessment and tracking of African institutions' capacity for operational health research. *BMJ open*, *7*(9), e016660.
Accessible at: http://bmjopen.bmj.com/content/7/9/e016660

[6] Bates, I., Phillips, R., Martin-Peprah, R., Kibiki, G., Gaye, O., Phiri, K., Tagbor, H., & Purnell, S. (2011). Assessing and strengthening African universities' capacity for doctoral programmes. *PLoS medicine*, *8*(9), e1001068.
Accessible at: http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001068

[7] Njelesani et al. (2017). Establishing an international laboratory network for neglected tropical diseases: Understanding existing capacity in five WHO regions. Received by *International Journal of Tropical Medicine and Public Health*. In press.

Project	Transferable tools and lessons learnt	Uptake by
		WHO/TDR for selection of regional research centres to train PhD students
	Lack of dedicated desk space for research students, and limited opportunities for developing critical thinking skills and peer support, hinder development of academic skills	ACBI – included in baseline study
	Handbooks and induction processes for research students are often not available to research students and/or staff which means that roles are not clear, and students are unclear about expectations, the availability of resources to support their studies, and timelines	ACBI – included in baseline study
	Training for generic research skills (e.g. academic writing; grant proposal writing) is often overlooked unless a systematic skills development programme is in place for research students	ACBI – all training is logged; some generic skills gaps filled by RS through, for example, sessions at annual meeting DELTAS – mapping of postgraduate training programmes in Medical and Health Sciences provided by Higher Education

Project	Transferable tools and lessons learnt	Uptake by
		Institutions in sub-Saharan Africa (draft completed) DELTAS – survey of Sub-Saharan African researchers' professional development opportunities, needs and barriers.
	External promotion of research and strategies for promotion of research uptake are neglected areas that institutions and individual find particularly difficult, so they need to be addressed early in the project planning	DELTAS – dedicated 'research uptake' PhD project (2017-21)
	A 'benchmark' against which all components of a university's research management systems and structures can be assessed	WHO/TDR for selection of regional research training centres
	Guidance on setting up and managing consortia is virtually non-existent and time and resources are wasted because there is no strategic analysis of how this done be done more effectively	DELTAS – dedicated 'consortium management' PhD project (2017-21)
ACBI and MCDC/RMSS	Women, non-English speakers and other marginalised groups (including religious minorities) face additional challenges in completed research programmes but ways to identify and overcome these issues early are not well described	DELTAS – dedicated 'PhD pathways' PhD project (2017-21)

Project	Transferable tools and lessons learnt	Uptake by
ACBI	Unless guidelines on weighting for capacity strengthening compared to scientific components are very clear, there is a risk that reviewers, funders and applications for grants may have different perceptions and expectations from a programme and/or project	GCRF applications (x7 in 2017) – helped applicants to clarify this in their proposals GCRF programme – presented at meeting of successful consortia 2017 UKCDS – included in agenda for capacity strengthening meetings
GSK Africa NCD Open Lab Programme WHO NTD Laboratory Network ACBI CRU previous research[8]	Laboratory capacity and inter-connectedness of laboratories' referral and QA systems are very weak in LMICs and this is a key bottleneck in generating high quality research in health and science. Conducting a systematic baseline assessment and developing a plan for filling capacity gaps, is helpful for demonstrating improvements	ACBI – laboratory checklist for baseline studies ACBI – phase 2 in-depth laboratory capacity project

[8] Njelesani, J., Dacombe, R., Palmer, T., Smith, H., Koudou, B., Bockarie, M., & Bates, I. (2014). A systematic approach to capacity strengthening of laboratory systems for control of neglected tropical diseases in Ghana, Kenya, Malawi and Sri Lanka. *PLoS neglected tropical diseases*, *8*(3), e2736.

Project	Transferable tools and lessons learnt	Uptake by
		IVCC laboratory accreditation DRC national trypanosomiasis programme capacity strengthening Fleming Fund AMR projects
Royal Society Leverhulme[5]	Key aspects of north-south partnership that promote success are the ability to influence 'research culture' and support junior and mid-career researchers to develop skills and confidence, previous working relationships, and equity within partnerships. Factors which may hinder long-term partnerships include imbalance in financial control and differing expectations when embarking on new partnerships	ACBI – used to guide questions in baseline studies GCRF projects x3 (PIIVeC, CEPHaS, HORN) – during application process and start up

5. References

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ANNEX 1: LRP ACTIVITIES & DELIVERABLES TIMELINE

Activities	Year 1	Year 2	Year 3	Year 4
Theme 1: Equitable Careers				
PhD registration				
Protocol development				
Ethics submissions				
Data collection				
Data analysis & writing				
Thesis first draft				
Thesis revision				
Thesis submission				
Theme 2: Training				
Protocol development				
Data collection				
Data analysis & writing				
Theme 3: Research Uptake				
PhD registration				
Protocol development				
Ethics submissions				
Data collection				
Data analysis & writing				
Thesis first draft				
Thesis revision				
Thesis submission				
Deliverables				
Quarterly newsletters				
Annual 'learning' report				
Interim 'aims & outcomes' rep				
DELTAS AGM presentation				
Conference presentation				
LRP Publications*				
Final report				

LRP timeline as presented in the DELTAS LRP 'Induction Phase' report. Start date=August 1st, 2016.

Work plan for LRP Theme four 'Consortia Management'

	2017										2018												2019												2020				
Activity	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
Proposal development																																							
Pre-registration assessment																																							
Protocol revision & Ethical approval process																																							
Literature review																																							
Phase 1: Tools development																																							
Phase 1: Data collection & analysis																																							
Phase 2: Tools development																																							
Phase 2: Data collection & analysis																																							
Phase 3: Tools development																																							
Phase 3: Data collection & analysis																																							
Thesis writing																																							

Legend: Completed Planned

Nb. This work plan was not included in the original LRP timeline (presented on previous page) as this thematic area was not included in the original study design and is funded from an alternative (non-LRP) source.

ANNEX 2: LRP PROGRESS UPDATE

Theme 1: Equitable Career Pathways

Ms Millicent Liani, in the context of her PhD project in support of DELTAS LRP Theme 1, has completed a review of existing literature pertaining to 'barriers and enablers to gender equitable scientific career pathways in African research institutions'. The review is mainly based on studies done on gender inequities in academic career progression within higher education institutions in sub-Saharan Africa. Based on the review, a manuscript provisionally titled ***'Towards an integrated conceptual framework for understanding intersecting gender inequities in scientific career progression in higher education institutions in sub-Saharan Africa'*** has been developed, and is currently under internal review by the PhD supervisors (Dr. Rachel Tolhurst - LSTM & Prof. Isaac Nyamongo - University of Nairobi, Kenya), awaiting submission for peer-review publication. We used insights from this draft manuscript towards contributing to a joint case study research paper in conjunction with the Research in Gender and Ethics (RiNGs) and Women in Global Health (WGH) research groups. The paper is titled *"How feminist analyses of human resources in health and science can deepen understanding and harness change*" and which was submitted to Lancet's call for papers on 'Women in science, medicine, and global health' on 1st March 2018. An abstract under the 'conceptual research' theme was also submitted to Fifth Health Systems Global Symposium's call for abstracts. Ms. Liani is expected to undertake data collection from 2018 until mid-2019. She was granted LSTM ERC ethical approval on 13th February 2018, and is currently waiting for in-country ethical approvals from Kenya (proposal submitted on 18th February 2018), S. Africa and Senegal (to be submitted) before commencement of her fieldwork.

Theme 2: Research Training

Work to date in this thematic area has centred on two ongoing research outputs. Output one, the list of all postgraduate training programmes in Medical and Health Sciences provided by Higher Education Institutions (HEI) in sub-Saharan Africa (SSA), has been compiled in a registry accompanied by a summary report (in both French and English) and circulated across the DELTAS network for verification and correction. This revision process is ongoing and expected to be completed by April 2018. Following this revision exercise, a final version of the registry will be published and made available to a wider audience. Output two, an online survey of sub-Saharan African researchers' professional development opportunities, needs and barriers, is approaching launch date (tentatively scheduled for May 2018). Ethics approval from LSTM has been obtained and we are currently awaiting ethical approval from a Kenyan ethical review committee (KEMRI). The piloting of the online survey content and format is currently underway. The questionnaire will be available in French and English versions. Preliminary findings and analysis should be available by June 2018. Findings from this survey will then inform the next research question to be addressed within this thematic area.

Theme 3: Research Uptake

Ms Violet Murunga is completing a review of existing literature pertaining to researcher-centred KT in a LMIC context. A manuscript provisionally titled **'Knowledge translation capacity, practice and support among researchers in low- and middle-income countries: A structured review of the published literature'** has been developed, and is currently under internal review by her PhD supervisors awaiting submission for peer-review publication. In addition, she has submitted an abstract of the same title to the forthcoming '5th Global Symposium on Health Systems Research, Liverpool, UK, 8-12 October, 2018. MS Murunga is expected to

undertake data collection, inclusive of intensive case studies of the KT capacity, practice and supports in 3 DELTAS consortia and an online survey across the wider DELTAS network, from mid 2018- mid 2019. She has successfully completed all LSTM PhD registration and progress monitoring requirements to date and is awaiting final approval to commence her research from both the LSTM Research Ethics Committee and the Strathmore University (Kenya) Institutional Review Board. Full ethical approvals are expected to be obtained in early April 2018.

Theme 4: Consortia Management

Ms Nadia Tagoe's PhD studentship is based on a partnership between the LRP and the DELTAS Africa Initiative to Develop African Research Leaders (IDeAL) programme. Her project is within the context of thematic area 4, and is titled: **"A systematic examination of the process and experience of establishing and managing health research capacity strengthening (HRCS) consortia".** She is supervised by Prof Sassy Molyneux (KEMRI-Wellcome Trust), Dr Samson Kinyanjui (KEMRI-Wellcome Trust), and Dr Justin Pulford (LSTM) and is based at KEMRI-Wellcome Trust, Kilifi, Kenya. Ms. Tagoe has completed her PhD proposal, pre-registration assessment, and her formal registration with the Open University UK in August 2017. She is also completing a review of the published literature pertaining to the management of HRCS consortia and developing a manuscript provisionally titled: **'The process of establishing and managing health research capacity strengthening consortia: A systematized review'.** Ms. Tagoe has received ethical approval for her study, and has commenced data collection.