



## **CAPACITY IN AFRICA:**

The results of a survey on support for and production of evidence maps and evidence syntheses, including systematic reviews.

MAY 2017





## ACKNOWLEDGEMENTS

With thanks to all our Network members who took time to respond to our survey and to encourage others to do so, and specifically to Karen Daniels, Harsha Dayal, Beryl Leach, Ekwaro Obuku, and Sandy Oliver who reviewed a draft of this report.

---

### SUGGESTED CITATION

**Stewart R, Nduku P, Langer L (2017).**

*Capacity in Africa: The results of a survey on support for and production of evidence maps and evidence syntheses, including systematic reviews.* Johannesburg: Africa Centre for Evidence as secretariat to the Africa Evidence Network, University of Johannesburg.

# CONTENTS

<b>Executive summary</b>	<b>01</b>
<b>Section 1: The purpose of the survey and description of the respondents</b>	<b>02</b>
1.1 The purpose of the survey	02
1.2 The design, dissemination, and analysis of the survey	02
1.3 Respondents to the survey	03
<b>Section 2: Experience of conducting evidence maps and evidence syntheses</b>	<b>04</b>
2.1 Experience in Africa of conducting evidence maps and evidence syntheses	04
2.2 The organisations in Africa that produce evidence maps or evidence syntheses	07
2.3 Factors that aid and hinder the production of evidence maps and evidence syntheses	09
<b>Section 3: Training, mentoring, and financial support within Africa</b>	<b>12</b>
3.1 Training, mentoring, and financial support received by respondents in Africa to help produce evidence maps and evidence syntheses	12
3.2 Training and mentoring offered by respondents in Africa to help others produce evidence maps and evidence syntheses	13
3.3 Factors that aid and hinder respondents in accessing or offering training in evidence maps and evidence syntheses	14
<b>Section 4: Additional comments</b>	<b>16</b>
<b>Section 5: Discussion and recommendations</b>	<b>17</b>
5.1 Discussion	17
5.2 Recommendations	19
<b>Appendix: Key network parameters on cohesion from the overall social network analysis</b>	<b>20</b>
<b>References</b>	<b>21</b>





# EXECUTIVE SUMMARY

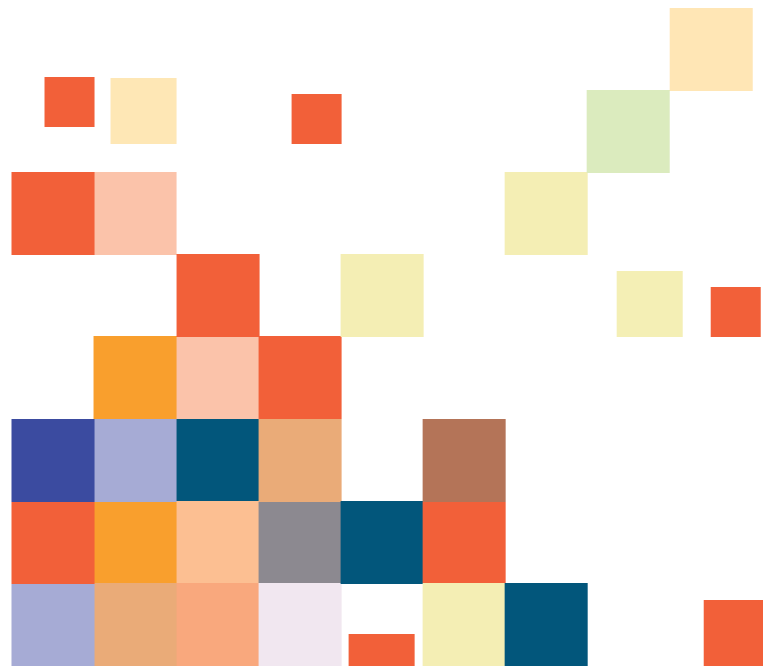
This survey arose from awareness amongst members of the Africa Evidence Network of a growing interest in, and capacity to conduct, evidence maps and evidence syntheses across Africa.

Examples of this growing interest and capacity include new reviews being published by African authors, commissioning of evidence maps by government departments in Africa, and training being offered by collaborations between African universities. Not only does the current best available research about systematic review capacity in low- and middle-income countries need updating (Oliver et al. 2015), but there are also many northern-based initiatives discussing developing global capacity in evidence synthesis (GESI 2015; ESI 2017). It is against this background that a desire arose within the Network to document the growing evidence synthesis capacity already in place within Africa, and to explore the existing needs and support from the bottom up.

This survey was sent to almost 1000 people from across 32 countries in Africa. In total 176 people from 26 countries responded; 90% of these were based in Africa across 18 different countries. We learnt of 100 people with experience in conducting evidence maps and evidence syntheses from across these 18 countries. Whilst the largest number of respondents were from South Africa, capacity clearly extends across the continent. Seven organisations stand out as well-connected hubs for supporting or conducting these methodologies: five of these seven are working in the health sector. Six of these seven organisations are based in South Africa. Respondents cited capacity-building – including collaboration, networking, and mentoring – as the greatest help in taking part in evidence maps and evidence syntheses, with funding cited much less frequently.

A total of 87 people out of the 176 respondents reported receiving training and mentoring in evidence maps and evidence syntheses. They named over 100 different organisations that had provided them with this support, the majority of which were African institutions. People also described the training and mentoring that they provided: 40% of respondents offer support to others within Africa, most commonly in systematic reviewing. A lack of funding was cited as an important factor that acted as a barrier to African capacity to access and offer evidence synthesis training. However, it is important to note that funding was considered more prohibitive with regards to accessing capacity support than with regards to conducting evidence maps and evidence syntheses. Twenty-one percent of respondents told us that their organisations (a total of 30 organisations within Africa) provide some financial support for evidence maps and syntheses in the forms of staff time, publication costs, and funds for training. One organisation at which respondents are based had been involved in tendering for international funding for systematic reviews.

While the interpretation and implication of these survey data is an ongoing and collaborative exercise, these findings in themselves represent a significant shift in our understanding of African capacity for evidence syntheses. The findings here inform concrete proposals for how capacity might be supported in the future: for instance, there is a need to fund capacity development as opposed to funding systematic maps and reviews themselves, and investment at the team and institutional levels rather than funding individuals might provide greater returns. Our results highlight the small but growing capacity across the continent, as well as identify the hubs of expertise in a number of countries. They also suggest that future capacity support offered at the team and organisational level would strengthen and build upon existing capacity. We highlight potentially influential organisations that might play pivotal roles in the future of these approaches across the continent. Further research is needed to understand how best these organisations might be enabled to help meet the capacity, training, and support needs of organisations that have more limited experience in evidence syntheses and weaker networks.



# SECTION 1: THE PURPOSE OF THE SURVEY AND DESCRIPTION OF THE RESPONDENTS

## 1.1 THE PURPOSE OF THE SURVEY

Evidence synthesis capacity has become a concern for many organisations across the globe as synthesising research evidence becomes recognised as a gold standard. For instance, there are many northern-based initiatives currently discussing developing global capacity in evidence synthesis (GESI 2015; ESI 2017). Additionally, the current best available research about systematic review capacity in low- and middle-income counties by Oliver and her colleagues (2015) needs updating. It is in this context that a desire within the Africa Evidence Network (AEN) arose to document the growing evidence synthesis capacity already in place within Africa as part of exploring the existing needs for support from the bottom up. As such, this survey arose from awareness amongst members of the AEN of the growing interest in, and capacity to conduct, evidence maps and evidence syntheses across Africa. Examples of this capacity include new reviews being published by African authors, commissioning of evidence maps by government departments within Africa, and training being offered by collaborations between African universities.

The survey was designed and conducted by the secretariat of the AEN ([www.africaevidencenetwork.org](http://www.africaevidencenetwork.org)) based at the Africa Centre for Evidence at the University of Johannesburg. For the purpose of the survey, the following evidence synthesis methodologies were considered and specified for respondents in the introduction to the survey: systematic reviews (with or without meta-analysis), reviews of systematic reviews, rapid evidence assessments, and evidence maps. These could be: conducted by any type of organisation, published or unpublished, funded or unfunded, by traditional research producers (e.g. in universities), by those who make decisions (e.g. in government), or by any other authors.

As well as asking survey respondents to share with us their experience of using these methodologies, we also invited those who had not conducted this kind of research before but would like to – or indeed were more interested in how systematic reviews, evidence maps, and syntheses might be useful as part of research frameworks or decision-making frameworks – to share their views with us.

## 1.2 THE DESIGN, DISSEMINATION, AND ANALYSIS OF THE SURVEY

The survey was designed by the AEN secretariat and promoted through the AEN. It was piloted on three Network members, and additional feedback was elicited from Network advisors. In addition to initial questions that collected demographics about the respondents, the survey asked ten questions and took approximately ten minutes to complete. Network members were able to access the survey for a four-week period from 3 February 2017 to 4 March 2017. It was circulated to the then 969 AEN members via email, as well as through Twitter to 1469 followers of the AEN<sup>1</sup>.

Ninety-one percent of our members are based in Africa across 22 African countries. The remaining membership from outside Africa also received the survey and circulated it amongst their networks. Twenty six percent of the Network membership work in government while 29 percent work in research; the remainder of the membership come from non-governmental organisations, civil society organisations, private sector organisations, or described themselves as evidence-informed decision-making (EIDM) practitioners across sectors. As members of the AEN have an interest in evidence and its production and/or use, we anticipated that respondents would include early adopters of evidence synthesis methodologies and that enthusiasts of these approaches would be more likely to respond than sceptics. Recipients of the survey included researchers, members of systematic review organisations, as well as decision-makers with an interest in EIDM.

Data were exported into Excel and analysed using descriptive statistics. In order to provide an overview of experience and capacity within Africa we excluded data from respondents outside of Africa when they were describing their own evidence synthesis experience and capacity. A formal social network analysis was also conducted to determine which organisations that support and conduct evidence maps and evidence syntheses know of one another. Preliminary findings were discussed within the AEN project team, and an initial version of this report was drafted and shared with our Network advisors before being finalised.

<sup>1</sup> Membership numbers and Twitter followers as of February 2017.

## 1.3 RESPONDENTS TO THE SURVEY

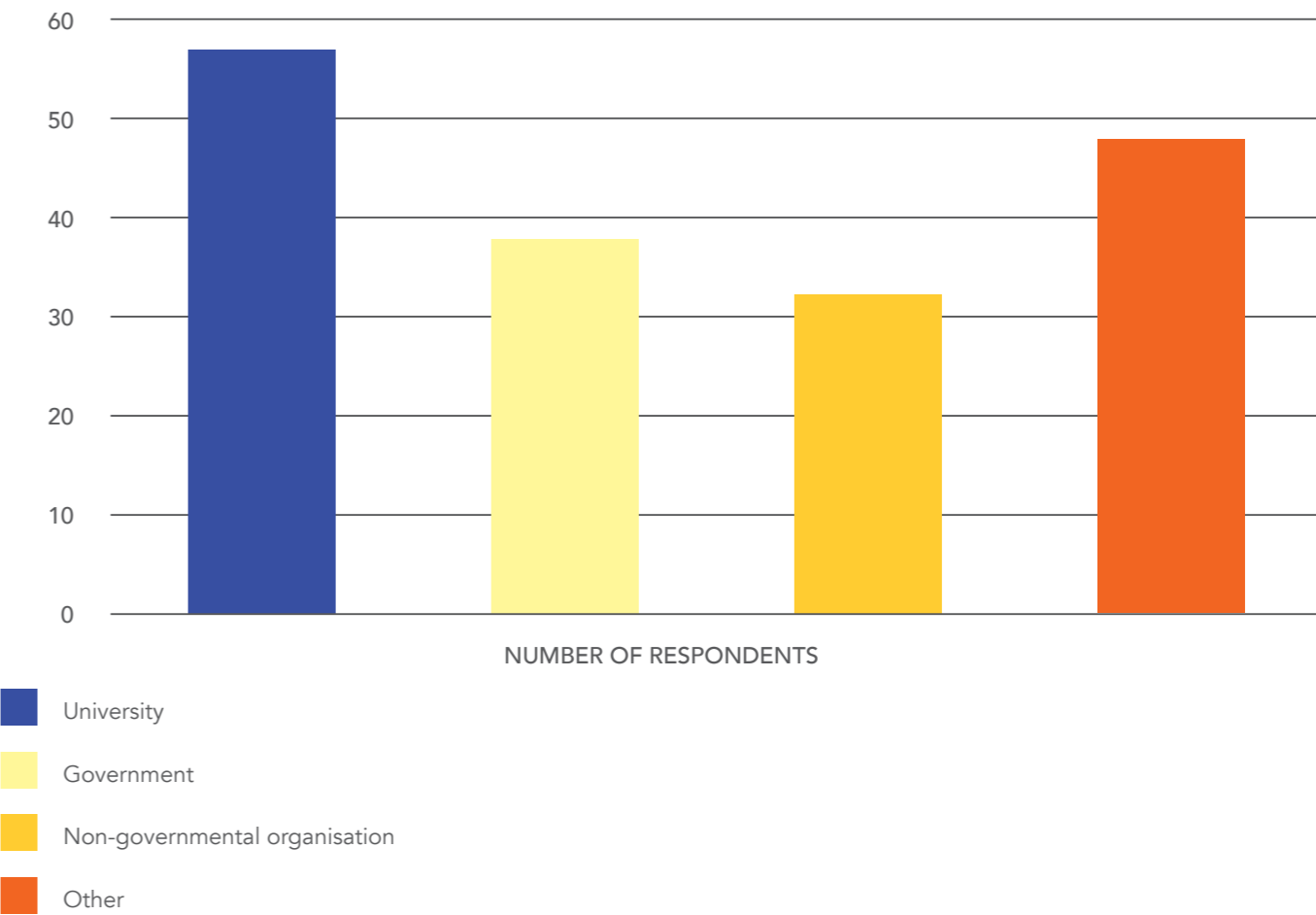
A total of 176 people responded to our survey, although not everyone responded to all questions. Respondents came from a range of different organisations with details provided by 173 people (see Figure 1). Thirty-three percent (57/173) of respondents were from universities; with 27 percent (37/173) based within government departments. The minority of respondents at 19 percent (33/173) were from non-governmental organisations (NGO) with almost a third of respondents at 27 percent (46/173) indicating that they were based at 'other' organisations. Seventy percent of respondents stated that they were completing the survey on behalf of their organisations; the remainder shared only their individual experiences. Other organisations include non-university based research organisations, think tanks, consultancies, and professional bodies.

Of the respondents, 171 told us in which country they were based: 90 percent (154/171) of the respondents worked within Africa across 18 different African countries. The largest groups of African respondents were based in:

- South Africa: 42% (64/154)
- Ghana: 14% (21/154)
- Kenya: 8% (12/154)
- Malawi: 8% (12/154)
- Uganda: 6% (9/154)
- Ethiopia: 5% (8/154)
- Tanzania: 5% (7/154)
- Zimbabwe: 3% (5/154)

All other African countries had between one and three respondents. These include: Benin, Cameroon, the Democratic Republic of the Congo, Liberia, Madagascar, Mozambique, Nigeria, Rwanda, Swaziland, and Zambia.

FIGURE 1: RESPONSE RATE ACCORDING TO TYPE OF ORGANISATION (N = 173)



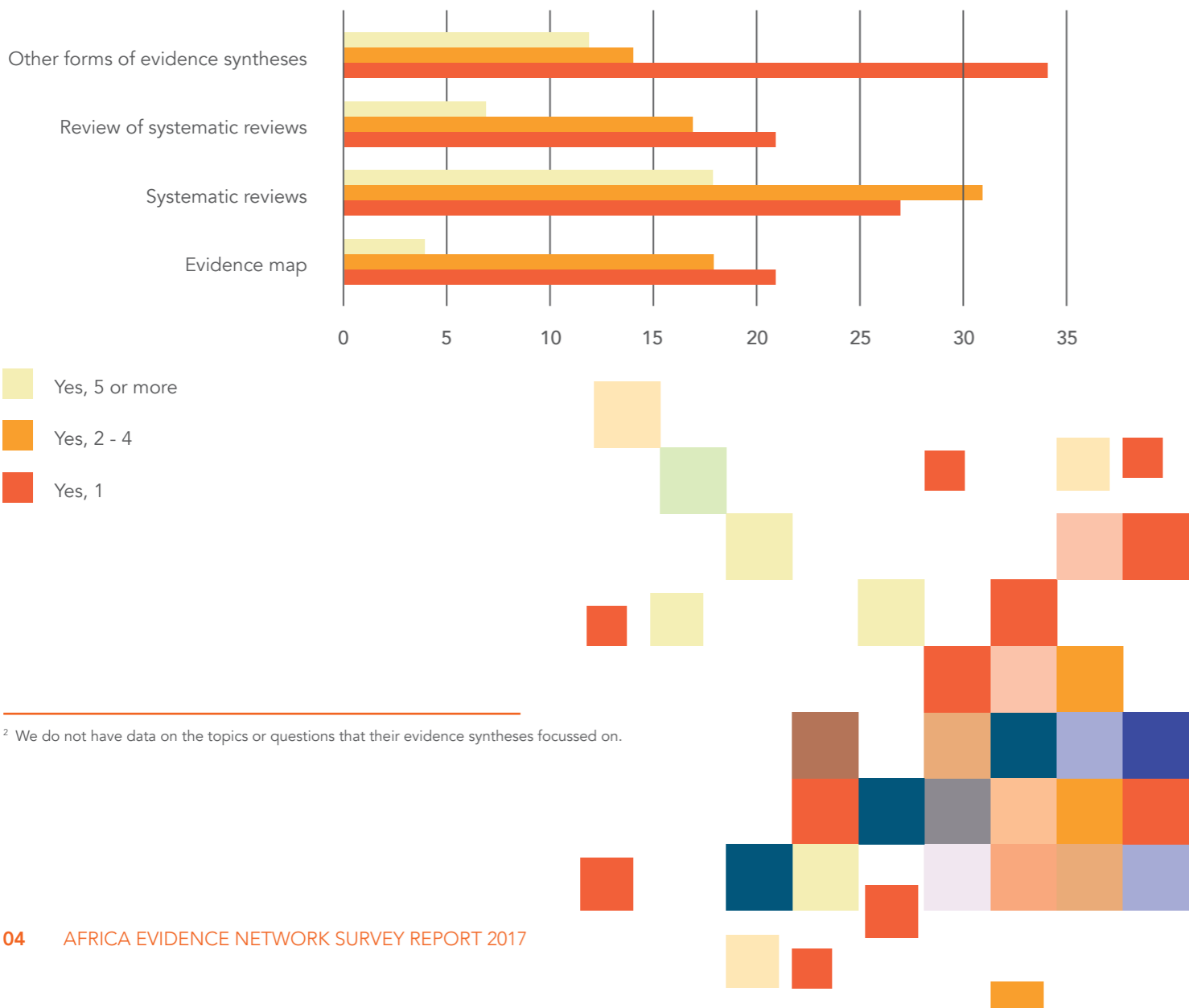
# SECTION 2: EXPERIENCE OF CONDUCTING EVIDENCE MAPS AND EVIDENCE SYNTHESSES

## 2.1 EXPERIENCE IN AFRICA OF CONDUCTING EVIDENCE MAPS AND EVIDENCE SYNTHESSES

Sixty-five percent (112/173) of respondents told us that they had participated in at least one evidence map, systematic review, review of systematic reviews, or other form of synthesis<sup>2</sup>. The findings reported below are based on data from only the African respondents to our survey (see Figure 2). Ninety percent (100/112) of these respondents were based in Africa. These 100 respondents were based in 18 different African countries including: Benin, Cameroon, the Democratic Republic of Congo, Ethiopia, Ghana,

Madagascar, Malawi, Mozambique, Nigeria, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe, Kenya, and Liberia. Whilst large numbers of our respondents from Africa might be considered ‘beginners’ with experience of conducting only one of these forms of research (the red bars below), a significant number could be called ‘experts’ having conducted five or more evidence syntheses or evidence maps (the purple bars below). It was not always clear how systematic the ‘other forms of synthesis’ conducted by respondents were. Some respondents provided details of this, describing these as ‘rapid systematic reviews’, ‘scoping reviews’, and ‘realist syntheses’.

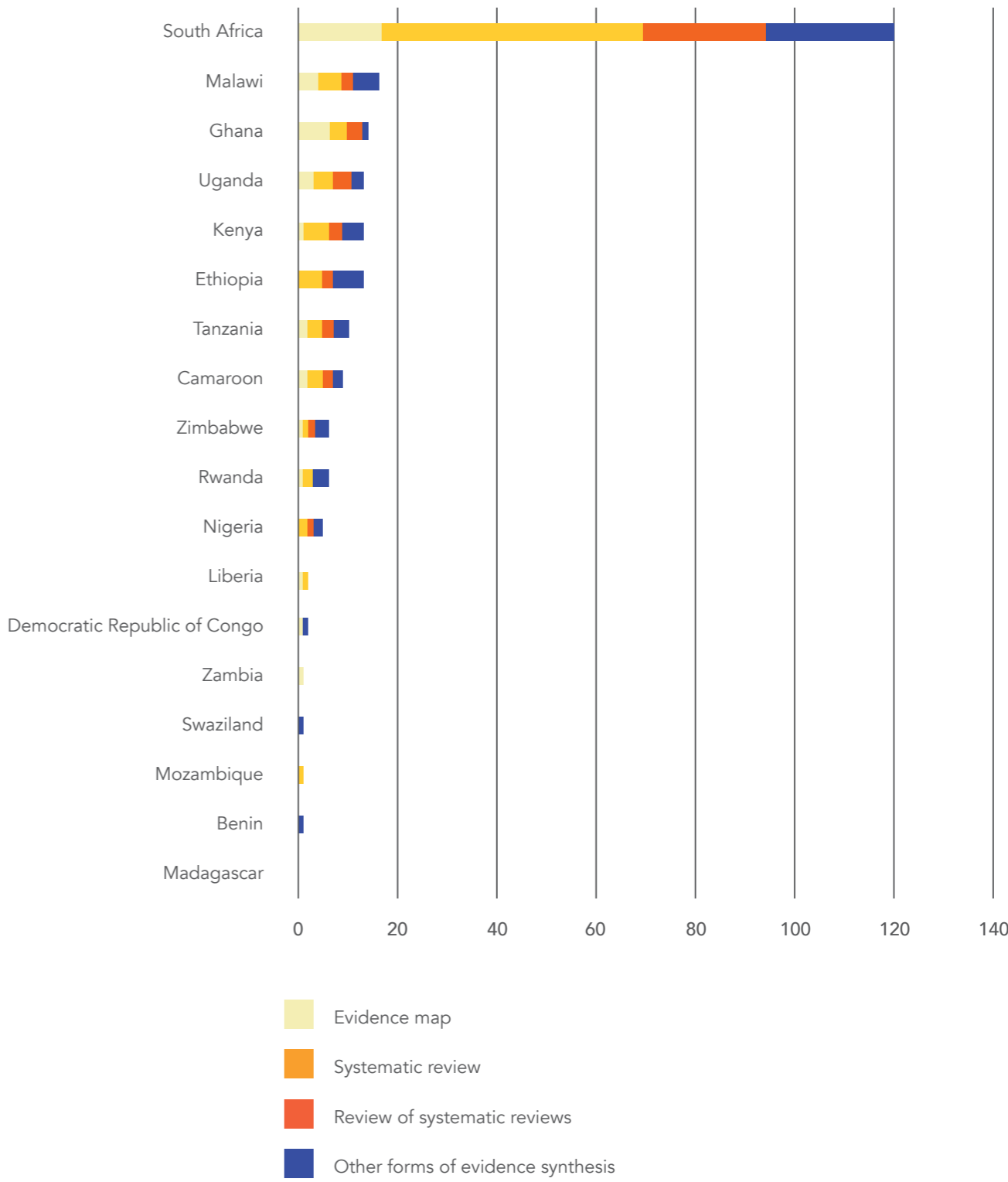
FIGURE 2: TYPES OF EVIDENCE SYNTHESSES IN WHICH AFRICAN RESPONDENTS HAVE PARTICIPATED (N = 100)



As Figure 3 below highlights, the cumulative expertise within South Africa in all four categories of research far outweighs the experience from across the rest of Africa.

This dominance is a feature of both the number of people who responded to tell us about their expertise, and the depth of expertise of those respondents.

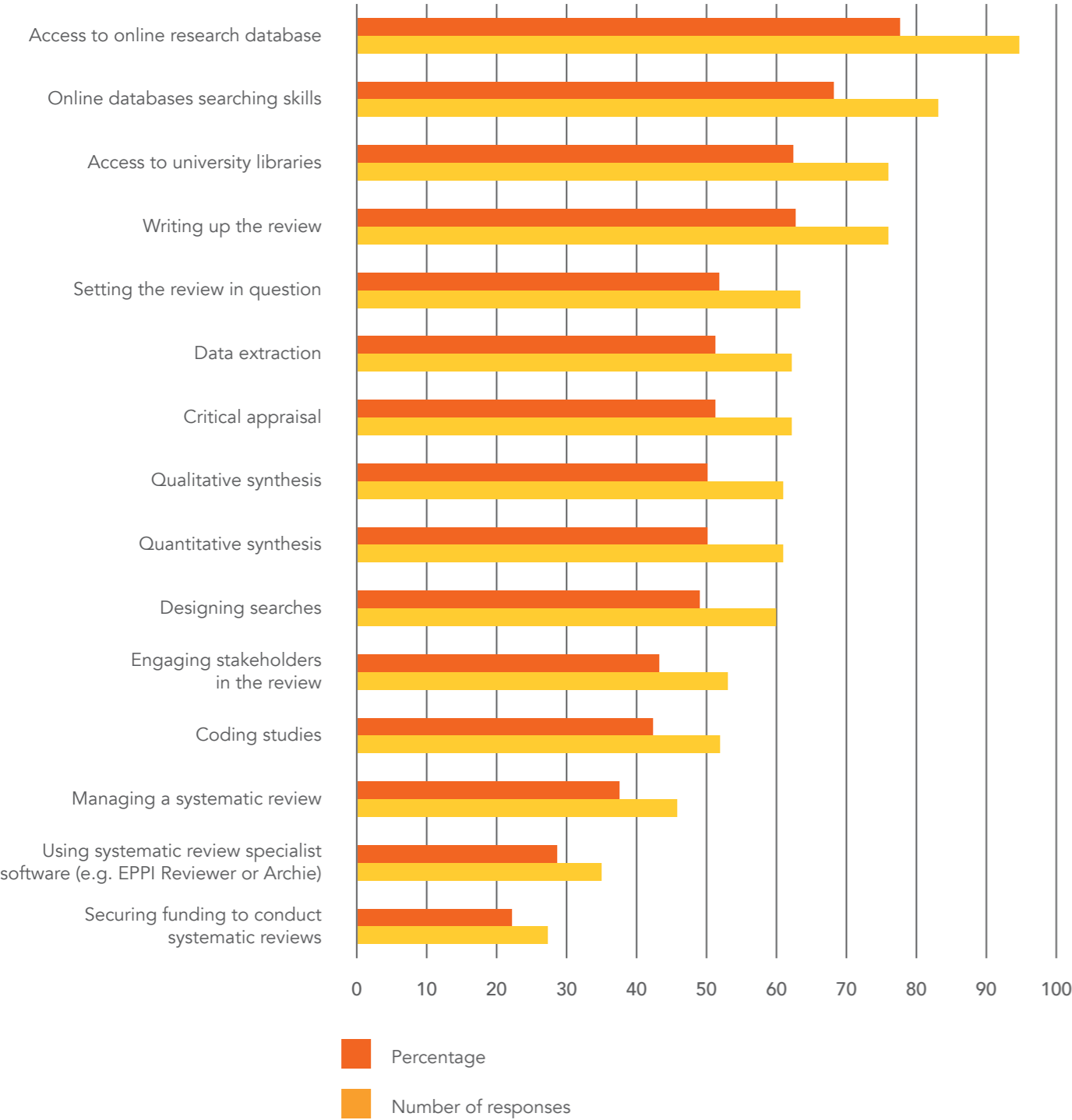
FIGURE 3: PARTICIPATION RATE IN AFRICA BY COUNTRY AND OUTPUT CATEGORY



We also asked people what aspects of evidence maps and evidence syntheses they had experience of and 136 respondents provided us with the following details about their experience (see Figure 4). The spread of evidence synthesis experience is impressive: 22 percent (27/122) of African respondents have been involved in the full

set of activities that constitute most evidence syntheses. Searching skills and access to online resources were cited most often by respondents, whilst experience in securing funding for evidence syntheses or in using specialist systematic review software were cited least often (see Figure 4).

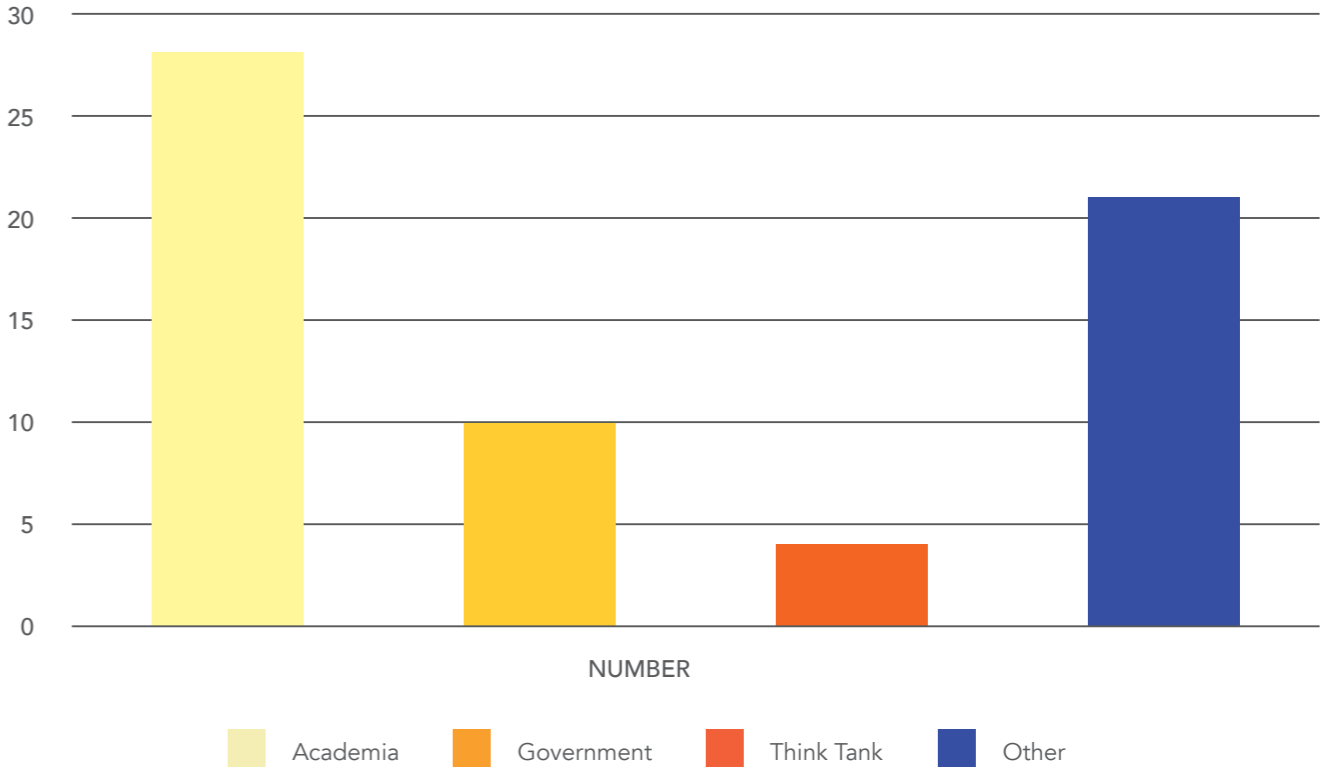
FIGURE 4: ASPECTS OF EVIDENCE SYNTHESIS EXPERIENCE IN AFRICA (N = 122)



Given that systematic mapping and reviews are methods that aim to produce policy-relevant summaries of research, it is particularly interesting to examine who has experience in setting review questions; a total of 63 respondents

reported having experience of this aspect of evidence synthesis. As illustrated in Figure 5, the vast majority of these respondents were from within academia and other research organisations.

FIGURE 5: ORGANISATIONAL ANALYSIS OF SETTING THE REVIEW QUESTION (N = 63)



## 2.2 THE ORGANISATIONS IN AFRICA THAT PRODUCE EVIDENCE MAPS OR EVIDENCE SYNTHESSES

Respondents themselves came from a wide range of organisations across Africa, as reported in Section 1, Figure 1 above. We asked respondents which other organisations in Africa they knew of that supported or conducted evidence maps or evidence syntheses. We conducted a social network analysis of the connections between organisations (see Appendix for key parameters of the overall network analysis).

One hundred and forty seven people from 106 organisations responded to our question about whether they knew of other organisations that support or undertake evidence maps or other forms of syntheses. Eighty respondents reported knowledge of one or more organisations within Africa. We conducted a social network analysis of the organisational level data (i.e. from 106 organisations); that is, respondents from the same organisation were considered as one unit. Duplicates were deleted. Given the relatively small sample available for this network analysis, the power of our analysis is limited with relation to the nature of the network and sub-networks in this field in Africa.



2.3 FACTORS THAT AID AND HINDER THE PRODUCTION OF EVIDENCE MAPS AND EVIDENCE SYNTHESSES

In response to the questions about what helped or hindered respondents in conducting evidence maps and evidence syntheses, 122 respondents reported on what aided them while 123 respondents commented on what hindered them. From their open text responses to both questions, we have identified five themes that recur throughout the data. The presence of factors related to these themes is quoted by participants as an aid in conducting evidence syntheses, while their absence is reported as a hindrance to conducting evidence syntheses. The factors that were cited as an aid were (in order of the most commonly mentioned first; see Figure 7): i) capacity, including experience, networking, and collaboration; ii) access to research literature and data<sup>4</sup>; iii) having a clear question and guidelines; iv) time availability; and lastly v) funding.

While most themes consisted of fairly clear mentions of “time availability”, “clear and articulated review question”, and “funding”, the description of the capacity and support theme was more sophisticated. Respondents described a wide range of capacity and support aids and hindrances: institutional structures, peer and team support, expert inputs, and technical skills. Being well-networked was also listed as an aid when conducting an evidence synthesis. Quotes from respondents in this theme refer to a “conducive environment with the right team”, “collaboration with specialists”, “competence in the research team”, and “receiving sound training”. Respondents did not only refer to their own capacity and experience but also that of their teams, particularly the team leaders. One respondent spoke of the specific benefit of experienced leadership, saying “We also have experienced leaders...which is very important at getting us unstuck and putting us into the right direction”.

As evidenced in Figures 8 and 9 capacity, collaboration, and support were seen as the greatest help cited by 48 percent (58/122) of respondents and – when lacking – was seen as the greatest hindrance as cited by 38 percent (47/123) of respondents. Access to literature and data was also viewed as a help by 33 percent of respondents (40/122) and, when lacking, reported as a hindrance by 30 percent (37/123) of respondents. Although time availability, having a clear question and guidelines, and funding were all listed as supporting factors when conducting an evidence synthesis, these factors were mentioned less often (see Figure 8). Perhaps most significant is that funding for conducting evidence syntheses was cited by only 7 percent (8/122) of respondents as a helpful factor.

When discussing hindrances, the same five issues were raised (in order of the most commonly mentioned first; see Figure 9): i) capacity, including experience, networking and collaboration, ii) access to research literature and data, iii) time availability, iv) funding, and lastly v) having a clear question and guidelines. Lack of time availability was considered a problem by 24 percent (30/123) of respondents, and a lack of funding cited by 15 percent (19/123) of respondents as hindering their capacity to undertake an evidence synthesis (see Figure 5)<sup>5</sup>. The lack of a clear question or guidelines was mentioned by only 7 percent (8/123) of respondents.

<sup>4</sup> The issue of access included challenges around internet connectivity that made accessing research literature and data difficult.  
<sup>5</sup> Note that the balance of concern around time availability and funding may be a function of how organisations manage their funds. For example some universities appoint staff who then have to find time to conduct research, but are not expected to bring in project-specific funding.

FIGURE 8: FACTORS THAT AID RESPONDENTS IN CONDUCTING EVIDENCE SYNTHESSES (N = 122)

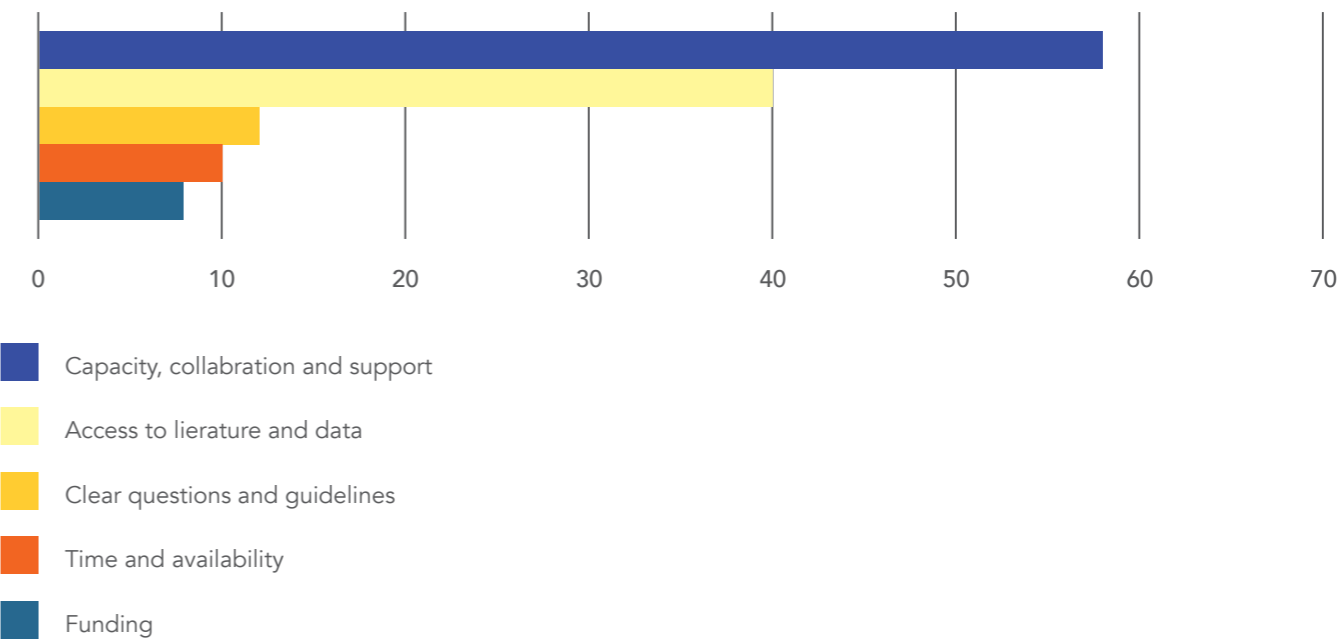
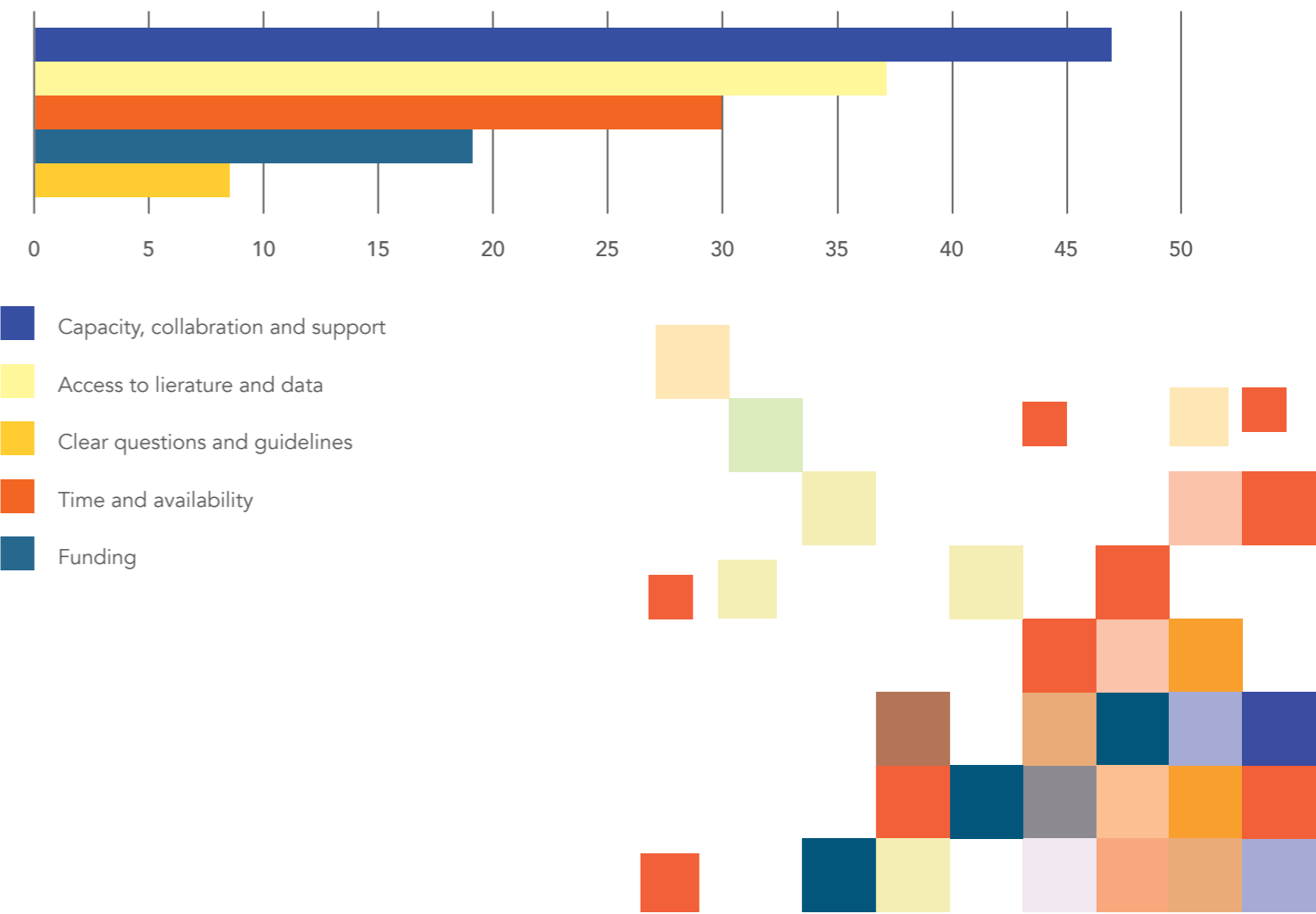


FIGURE 9: FACTORS THAT HINDER RESPONDENTS IN CONDUCTING EVIDENCE SYNTHESSES (N = 123)

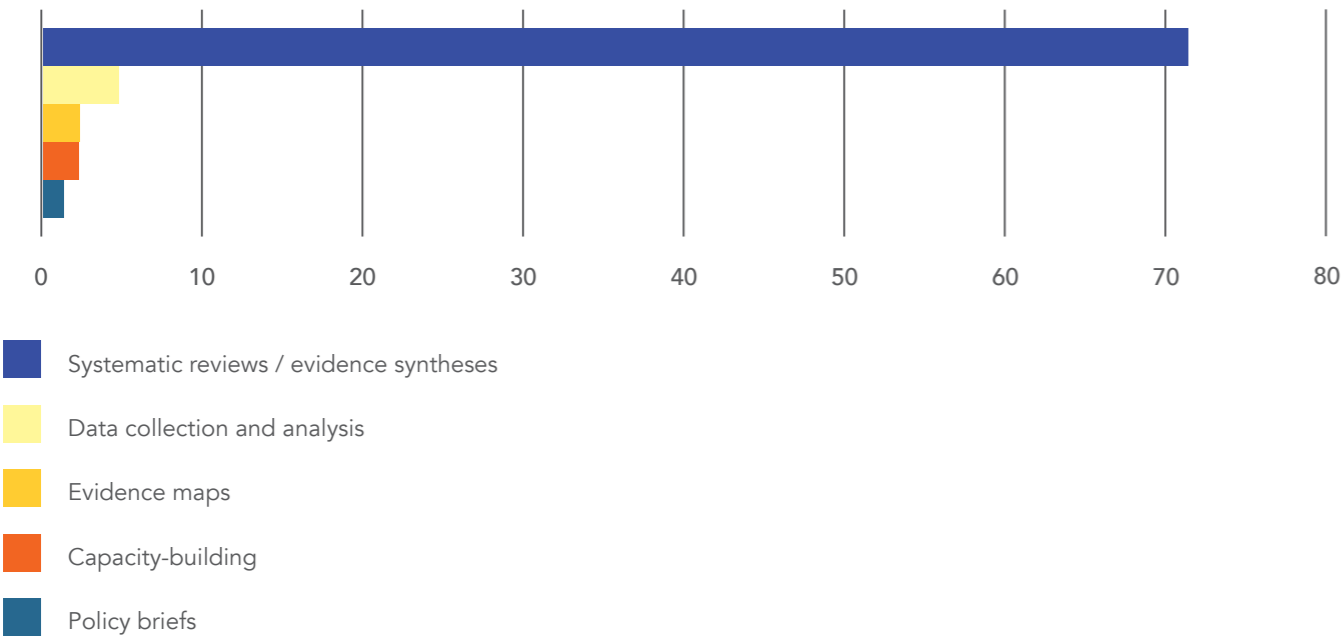


# SECTION 3: TRAINING, MENTORING, AND FINANCIAL SUPPORT WITHIN AFRICA

## 3.1 TRAINING, MENTORING, AND FINANCIAL SUPPORT RECEIVED BY RESPONDENTS IN AFRICA TO HELP PRODUCE EVIDENCE MAPS AND EVIDENCE SYNTHESSES

Over half of the 154 respondents based in Africa had received training or mentoring in producing evidence maps or evidence syntheses (55%, 85/154).

FIGURE 10: TYPES OF TRAINING RECEIVED BY RESPONDENTS (N = 85)



Respondents listed 103 organisations from which they had received training and support; over half of these were based within Africa. These organisations included universities within Africa, government departments, specialist systematic review organisations (such as the South African Cochrane Centre), and networks such as the Evidence-Informed Policy Network (EVIPNet) and the AEN. There is a mismatch between the number of African respondents who have received training (85/154), the

We know 100 respondents from across Africa have participated in producing evidence maps and/or evidence syntheses which means that not everyone who has been involved in doing so has received training (85%, 85/100)<sup>6</sup>. By far the most common training that respondents had received was in evidence synthesis and systematic reviews (see Figure 10). Six respondents specifically referred to training in data collection and analysis, while three mentioned only general ‘capacity-building’ training.

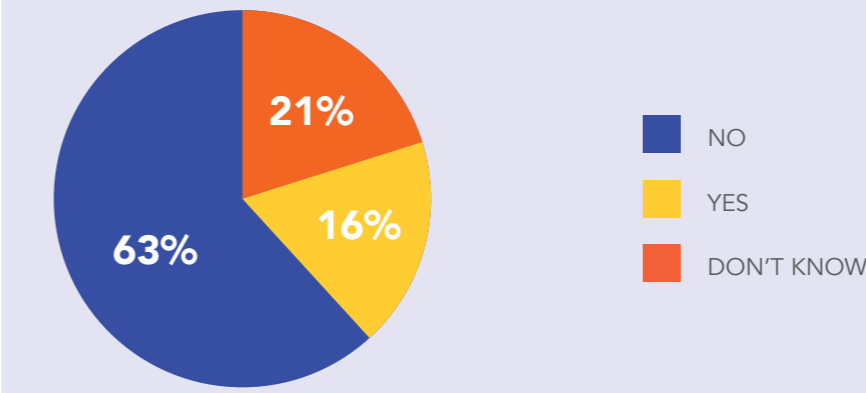
number of organisations from which they have received training (103), and the number of people who have produced maps and syntheses (100/154). Not everyone who has produced a map or synthesis has had training (100/154 producers, 85/154 trained). And not everyone who is providing training has experience of actually producing maps or syntheses (103 organisations training others, 100/154 individuals producing).

<sup>6</sup> This reflects our own experience at the Africa Centre for Evidence where many of our team have learnt about evidence syntheses on the job without formal training.

We asked whether respondents’ organisations offered financial support to complete evidence maps or evidence syntheses. Although not all respondents were certain of the answer, 21 percent or 34 of the 161 respondents did answer give a positive response (see Figure 11): 30 organisations within Africa that offer financial support for evidence syntheses and one from outside of Africa were named.

Some respondents told us that their institutions offered more than one form of financial support: 18 respondents mentioned salary support to provide funded time to work on evidence maps and syntheses; 14 people answered that their organisation covered publication costs; and seven respondents specified training and other capacity-building support.

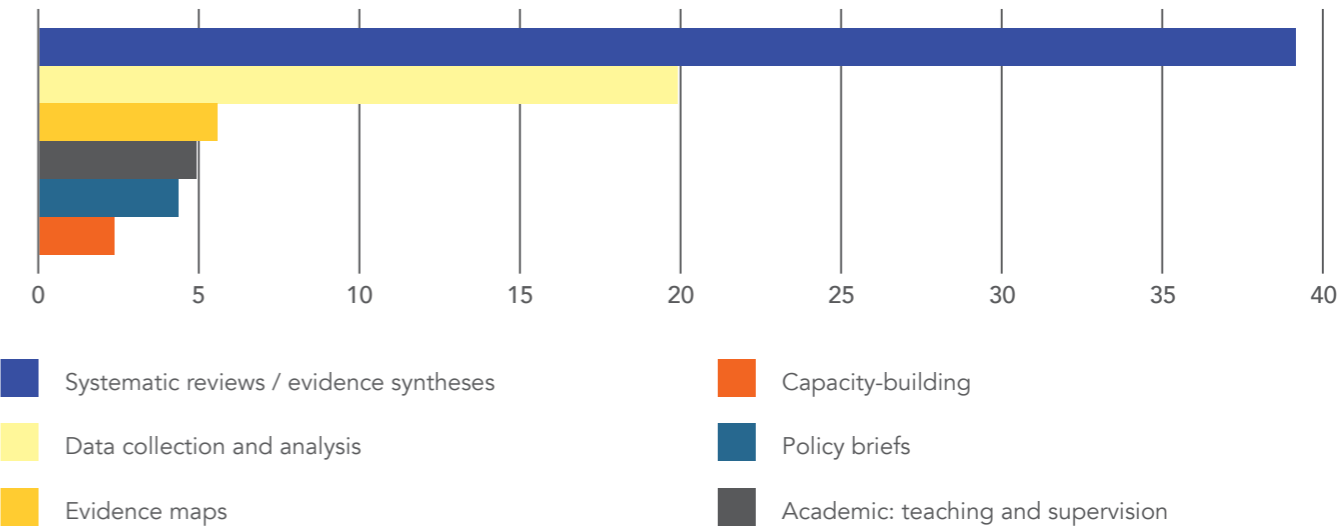
FIGURE 11: DOES YOUR ORGANISATION PROVIDE FINANCIAL ASSISTANCE? (N = 161)



## 3.2 TRAINING AND MENTORING OFFERED BY RESPONDENTS IN AFRICA TO HELP OTHERS PRODUCE EVIDENCE MAPS AND EVIDENCE SYNTHESSES

Forty-seven percent (77/163) of respondents had provided training or mentoring in producing evidence maps or evidence syntheses. Some respondents offered more than one kind of training support. The most common support offered (39%, 30/77) was training in systematic review methodology (see Figure 12).

FIGURE 12: TYPE OF TRAINING OFFERED BY RESPONDENTS IN AFRICA (N = 77)



Fifty-eight respondents elaborated further on their training. The main audiences for this training were students within learning institutions (40%, 23/58). Fourteen people of fifty-eight respondents (24%) also mentioned providing training within their teams and organisations, while ten respondents (17%, 10/58) reported providing training for government colleagues. All the training that was provided by various organisations was available for colleagues across Africa.

### 3.3 FACTORS THAT AID AND HINDER RESPONDENTS IN ACCESSING OR OFFERING TRAINING IN EVIDENCE MAPS AND EVIDENCE SYNTHESSES

In response to the question about what helped respondents access or offer training and mentoring in evidence maps and evidence syntheses, 118 respondents reported on what aided them while 126 commented on what hindered them. From their open text responses to both questions, themes were identified. There are five themes that recur throughout the data as facilitating factors and four themes that relate to barriers to offering training and mentoring in evidence maps and evidence syntheses.

The supporting factors are: i) capacity, including experience, mentoring, and collaboration; ii) funding; iii) access to research literature and data; iv) requests and references for training and mentoring; and lastly v) time availability. The barriers were similar and included: i) the lack of funding; ii) the lack of capacity including experience, mentoring, and collaboration; iii) the lack of time availability; and iv) challenges with accessing literature.

These themes clearly mirror the factors that aid and hinder conducting evidence syntheses. The only new theme here is the requests and references to training. One respondent, for example, referred to “contacts with funders who want rigorous and relevant studies done”, whilst another described “expression of interest from persons who want to do reviews; available funds for transport, allowance, and accommodation for training” as factors that hindered them from offering training in evidence maps and syntheses.

As evidenced in Figures 13 and 14 capacity, collaboration, and support were cited by 50 percent (59/118) of respondents as a great aid in offering evidence syntheses training and – when lacking – as the greatest hindrance by 38 percent (48/126) of respondents. This is in line with the aids and hindrances of conducting evidence maps and evidence syntheses in Figures 4 and 5, Section 3 of this report. What is notable in this training-offering data is

that funding is seen as a much more significant hindrance here: 28 percent (33/118) of respondents list funding as a help to accessing and providing training, and 42 percent (53/126) of respondents suggest that a lack of funding is a barrier to offering training. These findings contrast with those in Section 3 about aids and hindrances in conducting evidence maps and evidence syntheses, where funding is not cited as often.

FIGURE 13: FACTORS THAT AID RESPONDENTS IN OFFERING TRAINING (N = 118)

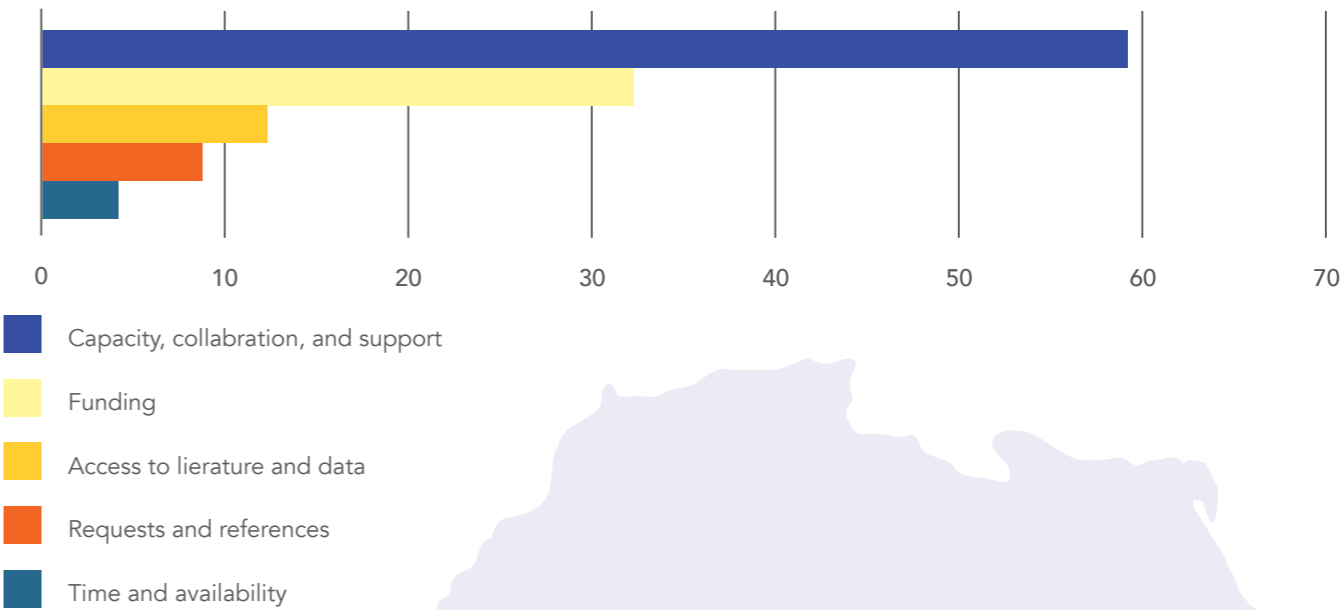
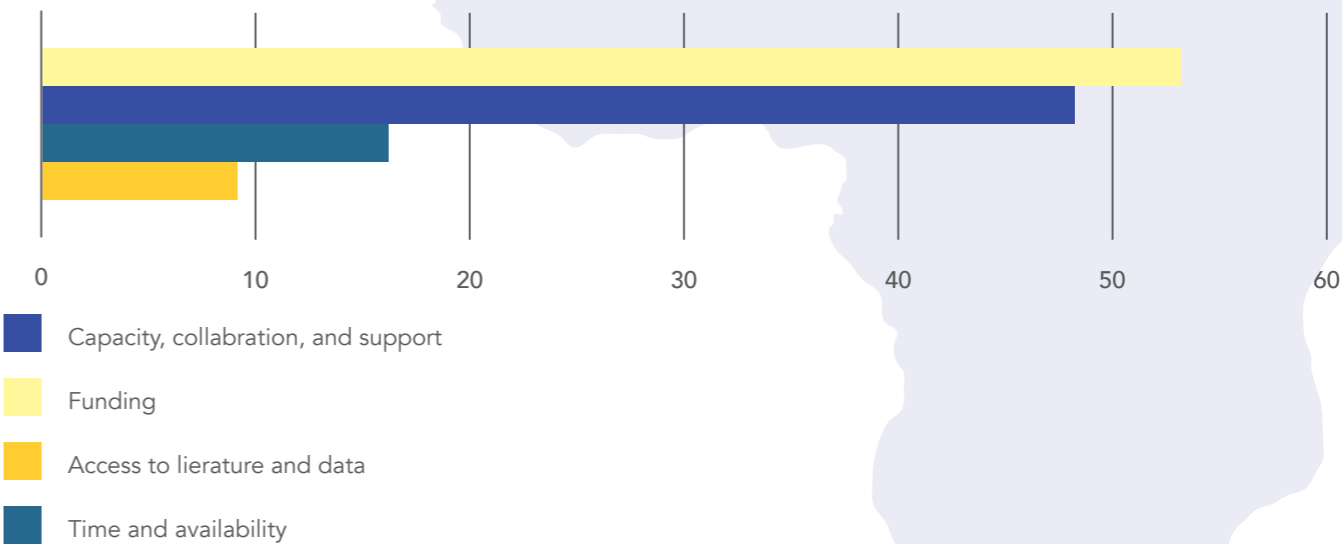


FIGURE 14: FACTORS THAT HINDER RESPONDENTS IN OFFERING TRAINING (N = 126)





## SECTION 4: ADDITIONAL COMMENTS

We provided respondents with an opportunity to share any additional comments on the subject of African capacity to conduct evidence maps and evidence syntheses, and for decision-makers interested in using these tools to share their views. Responses fall into three themes: i) acknowledging the importance of evidence maps and syntheses; ii) calling for more information, training, and mentoring; and iii) comments on the value of these approaches for decision-making<sup>7</sup>.

Respondents highlighted the importance of evidence mapping and evidence syntheses and thanked the AEN for raising its profile among those interested in EIDM in Africa. Respondents talked of the importance of the AEN working to bring together evidence producers and users. One respondent wrote: “Bringing together academics and policy-makers is really not easy but it is essential. Thank you and please continue the good work”. Some respondents offered assistance to the AEN in supporting the growth of evidence syntheses capacity across Africa by writing: “Happy to help the AEN in the promotion of systematic reviews”.

Individuals also asked for more information about the evidence syntheses methodologies and called for more training, support, and experience in using them. One respondent wrote: “I would like to upgrade my skills in systematic reviews and gain more practical experience”. Some asked specifically for more information on evidence maps. Others commented on how they had already had evidence syntheses training but now needed more support to put this training into practice.

Respondents also commented on the value of evidence syntheses approaches in making the most of what we already know and avoiding waste in research. One person said: “We need to know how to assess the literature so we can build on efforts, not keep duplicating them”. Other respondents discussed how these approaches might be integrated into decision-making. Specific aspects of evidence synthesis approaches, particularly the critique of research, were highlighted as key for decision-makers: respondents called for more work to integrate these approaches into government systems. One respondent wrote: “There is high demand for enhancing capacity for evidence mapping, systematic reviews, and syntheses. I hope sooner or later something will come out of this survey to help African governments develop better strategies [to] strengthen these skills”.

<sup>7</sup> There were also a number of specific requests for training by, collaboration with the AEN, and for access to this report: we will be following up on these requests separately.

## SECTION 5: DISCUSSION AND RECOMMENDATIONS

### 5.1 DISCUSSION

This survey represents the most comprehensive collection of information to date about capacity to produce evidence maps and evidence syntheses across Africa, updating and expanding on Oliver and colleagues’ work (2015). It also provides some useful indications of who is receiving and offering training and mentoring across the region, as well as the provision of financial support. It includes discussions of the factors that aid and hinder the production of evidence syntheses, as well as those factors that aid and hinder the access and provision of training and other support. It underlines the importance of evidence synthesis approaches to the researchers and decision-makers who responded.

This is only one survey, conducted without funding, open for four weeks in early 2017, with broad but still limited reach. The survey is dominated by South African respondents: possible reasons for this include 1) that the AEN secretariat operates out of South Africa, and 2) that this is a genuine reflection of the levels of expertise and experience of evidence syntheses in South Africa. The sampling strategy through AEN members and their networks is likely to have captured innovators and early adopters of these methodologies in Africa. As such the findings of this survey represent a very useful starting point upon which further research, and capacity-building activities, can be developed to serve the growing community across the continent.

It is extremely difficult to assess to what extent the levels of experience across Africa are higher or lower than South America or Asia. Direct comparison to Oliver and colleagues’ (2015) rapid appraisal of capacity in low- and middle-income countries is difficult due to different methods. We did however identify the influence of some of the same systematic review collaborations and networks at work, including the Cochrane Collaboration and the Alliance for Health Policy and Systems Research. Both the Campbell Collaboration and the Joanna Briggs Institute were rarely mentioned by respondents in our own survey, however.

This survey identified higher levels of experience in evidence maps and evidence synthesis across Africa than were expected. It also found a greater than anticipated spread in the organisations that respondents refer to when discussing the production of evidence maps and evidence syntheses, financial and other support for such activities, and providers of training and other capacity support. Whilst the spread of experience across 18 countries was broader than expected, we also identified particular hubs of experience in Ethiopia, Ghana, Kenya, Malawi, Tanzania, Uganda, Zimbabwe, and most markedly in South Africa. It is difficult to identify any particular pattern in where these hubs are based and further research is needed to follow up with these communities to identify how they have evolved and what might be done to strengthen them.

We found that six of the organisations with the largest and most well-connected networks are in South Africa, with just one other significant organisation in Uganda. Even if there is a bias in the respondents of the survey, our findings still highlight the levels of experience in South Africa in terms of a) the number of people with the skills to conduct evidence maps and syntheses, b) the number of maps and reviews that they have conducted, and c) how well-known and well-connected some South African organisations are. There is need for further research to understand why some individuals and organisations remain isolated with regards these methodologies, how the better-connected and potentially influential hubs can be enabled to support others, and what can be done to offer more opportunities for active engagement.

The number of organisations supporting and conducting evidence maps and syntheses, and their relationships and connections, are also still predominantly operating in the health sector (four of the top seven most well-connected organisations we identified work in the health sector). The remaining three organisations are cross-sectoral and all based in South Africa (ACE, HSRC, and DPME). Interestingly the seventh most well-connected organisation in this sector sits within the South African government (DPME), suggesting a huge potential for these methodologies to inform policy and practice in the country. The focus on health in our findings is in keeping with Oliver and colleagues’ (2015) report, although we are now perhaps seeing a small shift towards other sectors, particularly in South Africa. This small shift suggests that perhaps capacity within health has to reach a particular level before individuals and teams have the potential to start adapting and applying these approaches to new sectors.

The dominance of the Africa Centre for Evidence in our social network analysis may be a direct function of their role in this survey as the secretariat to the AEN. Indeed it is possible that our findings are a direct reflection of the growth of the AEN itself, its breadth, and the strength of connections within it. The network has doubled in size since 2015 when Oliver and colleagues' (2015) rapid appraisal was undertaken. This increase in the size of the AEN would suggest the potential role for the Network in building future capacity in evidence maps and evidence syntheses across the continent.

We found that the majority of people with experience of setting map and review scopes and questions were from within academia and other research organisations. While this is perhaps not surprising given the profile of respondents to our survey, it does suggest that the questions/foci of evidence maps and evidence syntheses being conducted in Africa are more supply-driven than demand-driven.

We identified higher than expected levels of support being offered within Africa by African institutions, both financially and in terms of capacity-building. We believe this finding is significant both in terms of Africa's position within this global community and in terms of how future capacity-building initiatives can contribute i.e. engaging with and building on what is already happening in Africa via African institutions. The high level of African institutions offering support to one another is in keeping with a trend towards 'made in Africa' initiatives across the continent, in which Africans are voicing support for activities originating in the continent, created to meet Africa's needs.

We found that funding for developing capacity (mentoring, training, and other support) was considered an important facilitator to producing evidence syntheses, while funding for conducting evidence maps and evidence syntheses was considered less important. This finding also indicates that while funding is important, it is not the biggest issue raised by respondents as either a barrier or a facilitator to conducting these kinds of research.

The finding that by far the most common training was in evidence synthesis and systematic reviews (see Figure 6) is perhaps not surprising given the history of evidence synthesis in the region: the Cochrane Collaboration – which conducts primarily systematic reviews – has been working in Africa for 25 years, whereas evidence maps are a relatively new product both globally and in the region. Given the findings that people are providing training to their own colleagues and institutions, and in light of requests for support in applying training already received, we suggest that there is a need for team and institutional-level support and investment.

This suggestion is further underlined by respondents' identifying the lack of access to data and databases as a barrier to conducting evidence maps and evidence syntheses, a challenge which can more easily be overcome at the institutional level through subscriptions to journals and online platforms. These findings together suggest the importance of teams, implying that investment in capacity should be aimed at the team level rather than at specific individuals. We identified a mismatch between the number of people who have received training (85/154), the number of organisations from which they have received training (103), and the number of people who have produced maps and syntheses (100/154). This suggests that it is not only training that is needed but support to put that learning into practice through for example ongoing mentorship.

Our respondents emphasised the importance of access to literature and data. Although this is only an issue for around 10 percent of our participants, it is so fundamental to conducting evidence maps and syntheses that we can only assume it is an even bigger issue for those audiences who did not reply to our survey: if 10 percent of early adopters of these methodologies are struggling with access to literature and data, then we cannot ignore that this will be a significant barrier (and probably a far greater one) for later adopters. One possible solution to this hindrance is to ensure that capacity is built at the organisation system level, where issues of access are more likely to be tackled through institutional subscriptions to online research databases and journals, for example.

While many respondents to our survey only have limited experience of producing maps, 40 percent of respondents have provided some training. It suggests that demand for training and mentoring is so high that even those with limited experience are being called on to train and support others. Although some suggest that those areas with considerable experience should not necessarily be the focus of future funding or activity, this finding actually suggests that these hubs of expertise should be supported to provide more advanced/in depth training based on their greater depth of experience in evidence syntheses. Recipients of support provided within Africa include students in learning institutions, and members of their own teams/colleagues in their institutions. Having said that we are fairly confident (see point above) that this training is not very advanced and as such suggest that a useful starting point for building future evidence synthesis capacity on the continent is to offer those already offering training greater support to develop their work. Our findings also suggest that mentoring (support to actually conduct evidence maps and syntheses) would add value, enabling those who have had training already to put into practice what they have learnt.

## 5.2 RECOMMENDATIONS

Below are eight recommendations for ways in which African capacity for evidence synthesis methodology may be enhanced:

1. Future efforts to support and build capacity in evidence maps and evidence syntheses in Africa should be focussed at team and organisational levels.
2. To celebrate existing capacity and enable learning in larger forums, African organisations with experience in these methodologies should be enabled to share their work and engage with the relevant international communities.
3. Funding should be focussed on support for capacity development and not only on the production of maps and syntheses.
4. The knowledge, experience, and networks of those organisations across the continent with more experience of conducting evidence maps and evidence syntheses should be leveraged to help strengthen the capacity of those with limited experience and networks.
5. Where those with less experience are providing training to others, support is needed from those with more experience in these methodologies. A mentorship or buddying system might allow those with more experience in evidence synthesis methodologies to provide support to trainers who are in demand but may also need to enhance their own capacity.
6. With capacity still largely dominated by South Africa and mostly resting in the health field, interventions should be designed to consider how to draw on these areas of strength to support organisations working outside of health and outside of South Africa.
7. Our findings also suggest that mentoring support to actually conduct evidence maps and syntheses would add value, enabling those who have had training already to put into practice what they have learnt.
8. There is a potential role for the AEN in building supportive networks for new and emerging pockets of experience, particularly for those whom we know are relatively isolated in engaging with these methodologies.

APPENDIX: KEY NETWORK PARAMETERS ON COHESION FROM THE OVERALL SOCIAL NETWORK ANALYSIS<sup>8</sup>

PARAMETER	RELATIONS/INTERACTION
Nodes	155
No Ties	272
1. Avg Degree	1.766
2. Indeg H-Index	8
3. Deg Centralization	0.121
4. Out-Central	0.12
5. In-Central	0.120
6. Density	0.012
7. Components	65
8. Component Ratio	0.418
9. Connectedness	0.231
10. Fragmentation	0.769
11. Closure	0.168
12. Avg Distance	3.627
13. SD Distance	1.592
14. Diameter	10
15. Wiener Index	19736
16. Dependency Sum	14294
17. Breadth	0.921
18. Compactness	0.079
19. Mutuals	0.012
20. Asymmetrics	0
21. Nulls	0.988
22. Arc Reciprocity	1
23. Dyad Reciprocity	1

<sup>8</sup> This table summarises the power of our overall network analysis. This survey aimed to understand capacity and not networks. The power of this network analysis is therefore limited by our sample size. Further surveys might focus more deliberately on networks within this community.



REFERENCES

ESI: Evidence Synthesis International. 2017. Website: <https://evidencesynthesis.org/>. Accessed March 2017.

GESI: Global Evidence Synthesis Initiative. 2015. Website: <http://www.gesiinitiative.com/home>. Accessed March 2017.

Hanneman R & Riddle M. 2005. *Introduction to social network methods*. Riverside, CA: University of California. Available at: [http://faculty.ucr.edu/~hanneman/nettext/Introduction\\_to\\_Social\\_Network\\_Methods.pdf](http://faculty.ucr.edu/~hanneman/nettext/Introduction_to_Social_Network_Methods.pdf). Accessed March 2017.

Oliver S, Bangapan M, Stansfield C, & Stewart R. 2015. Capacity for conducting systematic reviews in low- and middle-income countries: a rapid appraisal. *Health Research Policy and Systems*, 13:23. DOI: 10.1186/s12961-015-0012-0.



@Africa\_evidence



Africa Evidence Network



Africa Evidence Network



[www.africaevidencenetwork.org](http://www.africaevidencenetwork.org)