Agricultural Innovation in Sub-Saharan Africa and South Asia

Scoping Study

May 2013

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May 2013

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The information in this report is believed to be correct at the time of writing. This report has been produced subject to the qualifications, limitations and assumptions set out within the report, and it should be read in the context of those qualifications, limitations and assumptions.
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# Acronyms and Abbreviations

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<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>3ie</td>
<td>International Initiative for Impact Evaluation</td>
</tr>
<tr>
<td>AGRA</td>
<td>Alliance for a Green Revolution in Africa</td>
</tr>
<tr>
<td>AI</td>
<td>Agricultural innovation</td>
</tr>
<tr>
<td>BMGF</td>
<td>Bill and Melinda Gates Foundation</td>
</tr>
<tr>
<td>CGIAR</td>
<td>Consultative Group on International Agricultural Research</td>
</tr>
<tr>
<td>DIME</td>
<td>Development Impact Evaluation Initiative</td>
</tr>
<tr>
<td>DFID</td>
<td>UK Department for International Development (United Kingdom)</td>
</tr>
<tr>
<td>FOSCA</td>
<td>Farmer Organisation Support Centre in Africa (an AGRA programme)</td>
</tr>
<tr>
<td>J-PAL</td>
<td>The Abdul Lateef Jamil Poverty Action Lab</td>
</tr>
<tr>
<td>IE</td>
<td>Impact Evaluation</td>
</tr>
<tr>
<td>IEG</td>
<td>Independent Evaluation Group (of the World Bank)</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
</tr>
<tr>
<td>MCC</td>
<td>Millennium Challenge Corporation</td>
</tr>
<tr>
<td>SPIA</td>
<td>Standing Panel of Impact Assessment</td>
</tr>
<tr>
<td>SR</td>
<td>Systematic Review</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
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</table>
Executive Summary
This study was carried out between January to March 2013 for the International Initiative for Impact Evaluation (3ie), an international NGO and a programme of the Global Development Network (GDN), New Delhi. The purpose of the study was to support the preparation of a thematic window on agricultural innovation (AI). It is intended that forty IEs will be funded through the window: thirty for the International Fund for Agricultural Development (IFAD) and ten for the Alliance for a Green Revolution in Africa (AGRA). The study was carried under the guidance of a steering committee comprised of representatives of 3ie, AGRA, IFAD, the UK Department for International Development (DFID) and the Bill and Melinda Gates Foundation (BMGF). Having a common interest in IE of AI these organisations have a collaborative agreement for this study and henceforth are referred to as “the Partners”.

Study process involved five iterative components. First an earlier partial 3ie inventory of IEs of AI projects was elaborated, drawing on IEs carried out, or being carried out, by 3ie, the CGIAR, the World Bank, USAID and J-PAL. Second a gap map was drawn up indicating what specific intervention areas and outcomes each IE focused on. Third, a review of agricultural innovation priority areas of selected major agencies including those on the steering committee, USAID, the CGIAR and the World Bank was carried out. Fourth, interviews were carried out with steering committee members, advisory committee members and key informants in USAID and the World Bank. Fifth, a survey was designed and implemented, drawing on findings from the literature review and interviews, and sent to selected agricultural experts in and beyond Sub Saharan Africa (SSA) and Asia. The study documents findings from each of these five components. It then consolidates findings in a discussion and, based on this, makes recommendations on the thematic areas that the window may focus on.

In all 183 IEs were identified falling across ten AI categories. All were either experimental or quasi-experimental in design. The gap map indicates that the areas of Finance and of Agricultural service provision have the most IE coverage, and the areas of Nutrition, Resilience and adaptation to climate change have the least IE coverage. The gap map also indicates differing degrees of variation across the range of specific intervention areas within each broad category. The ten categories and the specific intervention areas within each were identified through the literature review and the interviews. In addition to the four categories listed above, the six remaining are Research and development; Adopting more productive technologies; Agriculture Service Provision, Producer organisations; Markets and value chains; and Gender equality and women’s empowerment.

Survey findings indicated that respondents considered the areas of Markets and value chains; Policy; Resilience and climate change; Adopting more productive technologies and; Research and development as those that are most priority and at the same time lacking in IE.

Cross-comparison, in the discussion chapter, between high priority areas identified in the surveys compared to those from the interviews, and areas lacking IE according to the gap map compared with the survey, enabled the identification of specific intervention areas within each of the ten categories that are both high priority and requiring more IE. This synthesis of findings enabled identification of recommendations. Three key, and two more specific, intervention categories are recommended for funding through the thematic window. The first three relate to specific intervention areas within each of Markets and value chains; Resilience & climate change and Research & development combined and; Adopting more productive technologies. The last two relate to specific intervention areas within each of Finance and Nutrition.
1 INTRODUCTION

This chapter outlines the purpose, background, logic, scope and structure of the scoping study.

1.1 PURPOSE OF THE SCOPING STUDY

This study was commissioned by the International Initiative for Impact Evaluation (3ie), an international NGO and a program of the Global Development Network (GDN) in New Delhi, India. The purpose of the study was to support the preparation of a Thematic Window on Agricultural innovation. As such it will inform the design of the GDN-3ie agricultural innovation thematic call for proposals to conduct rigorous impact evaluation of projects involving agricultural innovation.

1.2 BACKGROUND, LOGIC AND SCOPE

GDN-3ie’s thematic windows are grant-making mechanisms which allow GDN-3ie to increase the body of evidence in specific sectors to maximise policy relevance and impact. The agricultural innovation (AI) window is the fourth window to be established by GDN-3ie. The first window focused on Social Protection and through it just under $5million was made available for a total of ten impact evaluations. The second and third were smaller windows that focused on HIV self-testing and male circumcision.

The process of setting up this agricultural innovation thematic window started with the interest of the Alliance for a Green Revolution in Africa (AGRA) and the International Fund for Agricultural Development (IFAD) to rigorously evaluate the impact of their efforts. Further, the UK’s Department of International Development (DFID), the Bill and Melinda Gates Foundation (BMGF) and 3ie are all interested in furthering the understanding of what works in agricultural innovation, why and under what circumstances. To this end these five organisations together formed a collaborative agreement to implement the thematic call for research proposals in IE of AI. The group are referred to as “the Partners” in this scoping study.

The AI thematic window will support the production of forty impact evaluations (IEs) – ten of AGRA projects and thirty of IFAD projects. The logic behind the study was that it is critical to have evidence of impact but at the same time conducting IEs is a costly business. Thus it is important to identify first what the key priority agricultural intervention areas are that practitioners are working in at present, and second which of these particularly lack impact evaluation. The study involved the development of a gap map which indicates precisely this information and helps narrow down the areas within agricultural innovation that can be prioritised for IE funding through the GDN-3ie window.

The scope of the study included a review of major AI donor and agency websites, interviews with key informants, development and implementation of a survey regarding agricultural innovation and its impact evaluation and the development of an inventory of both impact evaluations and systemic reviews of AI projects. These all then informed the development of a gap map and, on the basis of that, draft recommendations regarding particular aspects of AI that should be prioritised for IE through the window. These are to be discussed in a consultative workshop in June 2013 after which the design of the thematic window will be finalised.
1.3  STRUCTURE OF SCOPING STUDY

Though the process followed during the scoping study was iterative, for convenience the study is structured around the different steps which together helped inform the final recommendations. Chapter 2 outlines the overall methodology as well as that for each stage. Chapter 3 presents the findings. Findings from the impact evaluation inventory are discussed first, followed by the gap map. Thereafter the findings from the literature reviews, interviews and survey are presented. Chapter 4 provides a discussion of the findings and then makes recommendations regarding the critical AI areas that the thematic window should provide IE funding for.
2 METHODOLOGY
This chapter outlines briefly the methodology used. The approach taken to this study was iterative in that each component fed into the other. However for clarity methods used for each step are described separately starting with information about the development of the inventory of impact evaluations and the gap map, then the literature review, interviews and finally the survey development and management.

2.1 INVENTORY DEVELOPMENT
An Excel inventory of completed and planned IEs and systematic reviews (SRs) of AI projects was built, starting from a draft developed by 3ie. The general literature review and interviews informed the inventory, as did focused searches of databases on each of the 3ie, USAID, World Bank Development Impact Initiative (DIME) and Independent Evaluation Group (IEG); CGIAR Standard Panel for Impact Assessment (SPIA); Abdul Lateef Jamil Poverty Action Lab (J-PAL) and Millennium Challenge Corporation (MCC) databases. 183 IEs and 16 SRs were identified.

Impact evaluations, in the context of this scoping study, are evaluations that make quantitative estimates which attribute changes in outcomes to interventions. Sources drawn upon in developing the inventory are those which understand and interpret impact evaluation in this way. Whilst there was no scope to read each IE, each was scanned to ensure that it was indeed experimental or quasi-experimental. Time limitations prevented a wider search of other potential sources of impact evaluations such as the Asian Development Bank and African Development Bank. However, the range of sources and IEs found on these was considered sufficiently broad to inform the scoping study exercise.

2.2 DEVELOPMENT OF GAP MAP
The gap map is an Excel sheet which indicates the numbers of IEs identified for each intervention area (both broad and specific) against a range of outcomes. Critical IE gaps are clearly seen through the absence, or low numbers, of IEs for certain interventions and outcomes. The broad and specific intervention areas were identified through the literature review (2.3) and interviews (2.4) and the outcomes were provided by 3ie.

Each Impact Evaluation was given a reference number which is consistent with the row number in the excel inventory (when sorted by country name.) These reference numbers were then inserted into a matrix which contained the broad and specific intervention categories in list format on the y axis and the outcome categories on the x axis.

Once each IE reference had been included, a second matrix was created which logged the total number of incidences of IEs in each intervention/outcome nexus. This enabled us to visualise areas where more IEs had taken place and areas where there had been no IEs as yet – the 'gaps.'

The incidence data was then further analysed in chart form. The SRs were omitted from the gap map as it appeared that they did not correlate accurately to the categories available and there was the possibility of duplicating information through including SRs that had incorporated one or more of the IEs in their analysis. However the SR inventory was provided to 3ie.
2.3 LITERATURE REVIEW

The purpose of the literature review was to identify what the key areas of AI are that major agencies are focusing on and second the extent to which impact evaluations have been carried out in these areas.

The literature review was not, therefore, an academic exercise looking into the definition, nature and type of agricultural innovation across the value chain, nor was it a conceptual exercise to seek to place different work being done within an innovation systems context. Rather it was a practical exercise limited to review of websites and documents of the following agencies: AGRA, BMGF, CGIAR, DFID, IFAD, IFPRI, J-PAL, MCC, USAID and the World Bank. Whilst AGRA, BMGF, DFID and IFAD are all represented on the steering committee of the scoping study, the CGIAR, IFPRI, J-PAL, MCC, USAID and World Bank sites were reviewed as these are large agencies that are more likely to have engaged in IE of AI, or planning this for the future. The review informed both the checklists for interviews with key informants, and the design of the survey. A listing of key websites and literature reviewed is provided in Annex A.

It should be noted that the review was not comprehensive but rather provided a broad overview of the key documents of major agencies. Time limitations prevented a more thorough review. In addition the scope of the TORs for the assignment, being a scoping study, did not include review of individual IEs or SRs. A review of the SRs, in particular, could have informed the discussion and analysis in this report. Nevertheless the authors are confident that the review identified the key areas clearly enough to inform interview and survey design effectively and to achieve what was required.

2.4 INTERVIEWS WITH KEY INFORMANTS

The purpose of key informant interviews was to ensure greater understanding of the AI and IE work either in progress or planned by each agency. These helped inform the identification of key agricultural intervention categories, the development of the survey and inventory and the final recommendations. Interviews with key informants were informed by the literature review. Steering committee members, representing the Partners (each of 3ie, AGRA, BMGF, DFID and IFAD) were interviewed first. Thereafter a combination of advisory committee members, and AI experts in each of USAID and the World Bank were interviewed. The list of interviewees is provided in Annex B and Annex C provides examples of generic checklists that were developed for use with steering committee and advisory committee members.

2.5 SURVEY DEVELOPMENT AND MANAGEMENT

An on-line survey was developed and fielded to selected implementing agencies and agricultural innovation experts to capture the emerging research priorities and research questions being asked by these stakeholders. The literature review and early interviews informed the survey content, particularly the identification of ten broad thematic agricultural intervention areas and 4-7 specific intervention areas within each thematic area.

Priority intervention areas of all agencies reviewed were clustered and sorted to arrive at the final ten intervention areas and specific ones under each of these. The draft survey content and structure was reviewed by steering committee members and finalised in line with their feedback. An online survey creation and management program, ‘PollDaddy’ was used to gather responses in both French and English. The survey was open for a period of 16 days. Once the survey was finalised both language versions were then combined for analysis. Charts were
automatically generated for each question and we were able to review our findings using various filters. The data was then exported to excel to allow for further specific analysis. Annex D provides an outline of the survey. As will be seen in section 3.5, there were 560 responses, 72% of whom were from the south/developing countries. 67% of the respondent’s primary work and experience was in Africa. This emphasis could be due to the fact that the mailing lists to whom the survey were sent were derived mainly from IFAD and AGRA. Whilst IFAD works in both Africa and Asia, AGRA focuses on Africa. Analysis did not distinguish between voices from the global south/developing countries and those of the north.
3 FINDINGS
This is the main chapter in the report. Findings are presented for each of the inventory, gap map, literature review, interviews and survey,

3.1 INVENTORY OF AGRICULTURAL INNOVATION IMPACT EVALUATIONS
The study researched, and added to, an existing database of agricultural innovation impact evaluations provided by 3ie. The full database is in Excel format and may be made available through GDN-3ie in due course.

183 impact evaluations (IEs) of agricultural projects in SSA and Asia were identified. Of these 43 were experimental, 86 quasi experimental and 54 unspecified. The chart below shows the breakdown of the impact evaluations by design.

Figure 3-1: Breakdown of impact evaluations by specific design

Categories are titled according to how the source named them. In practice RCT and those labelled experimental are both experimental, and all others aside from unknown are quasi experimental.

The chart below indicates the numbers of IEs by source.
Figure 3-2: Number of IEs by source

It is also interesting to note the distribution of IEs geographically across SSA and Asia as indicated in the maps below. The maps indicate that in Africa highest numbers of IEs have been carried out in Kenya and Ethiopia whilst in Asia highest numbers have been in India.

Figure 3-3: Distribution of IEs across Africa and Asia
Figure 3-4: Distribution of IEs across Africa

Note that stronger shading means there are more IEs in those countries.

The survey and interviews did not explore further the distribution of IEs so the study cannot provide reasons as to the above variation.

As mentioned earlier the study identified just 16 SRs, mainly from DFID and 3ie. As these each analyse a number of IEs they are not represented in the maps above.
3.2 GAP MAP

The IEs in the inventory were mapped against ten intervention areas (and the sub-categories within each of these) and the outcomes. The intervention areas were derived from the literature review (Section 3.3) and the interview findings (Section 3.4) and are summarised in the Box below.

**Box 1 Agricultural innovation intervention areas identified through the literature review**

1. Policy
2. Research and development
3. Adopting more productive technologies
4. Agriculture service provision
5. Producer organisations
6. Markets and value chains
7. Resilience and adaptation to climate change
8. Finance
9. Gender equity and women’s empowerment
10. Nutrition

The specific intervention areas within each of these can be seen in the survey outline (Annex D).

The gap map was prepared in two forms. One included the numbers of each of the IEs in each excel cell (i.e. each intervention and outcome category) so that they can be traced back to the original studies. The second provided the total number of IEs that were found for each intervention and outcome category. This data along with the inventory has been provided to the client in the form of excel sheets whilst the key findings are reported here and illustrated through a number of charts drawn from the gap map.

The gap map is too big to reproduce here but the figure below replicates a portion of it. Intervention areas (the ten key ones and the specific areas within each) are listed down the left hand column. Outcomes are listed across the top. IEs have been mapped against these.
IEs were identified for all ten intervention categories. However as the chart below shows, the highest number of IEs were in the areas of Finance, followed by Agriculture Service Provision; Adopting More Productive Technologies and; Markets and Value Chains. (Note that many projects evaluated are multi-component so may be represented more than once in this chart). Those intervention areas particularly lacking in IE are Resilience and Adaptation to Climate Change, Nutrition and; Producer Organisations. Those areas that have been evaluated the most are longer-standing intervention areas and to some extent easier to measure (for example Finance). Meanwhile those that have least IEs are those that have come to the forefront more recently.
The chart below shows the distribution of impact evaluations in relation to outcome categories. Please note that some projects have several outcomes so numbers exceed numbers of evaluations. The outcomes that have been evaluated to the greatest extent are Increased Productivity, Reduced Poverty and Increased Adoption. This is understandable as these are so often key objectives of agricultural projects. There are far fewer studies that have evaluated Beliefs and Attitudes; Adaptive Capacity and; Production Diversification. These findings correspond with findings from interviews reported in Section 3.4. Furthermore there were fewer evaluations of outcomes related to Agricultural Expenditure, Profits and Assets.
As mentioned, each IE usually had several outcomes. Complete distribution of outcome categories across key areas of intervention can be seen in the gap map.

The remainder of this section reviews the distribution of IEs found across the sub-categories of each intervention category in turn. These sub-categories are specific interventions areas that were identified through the literature review and interview processes. They best summarise what were identified as key areas within each broad category (Policy, for example, or Research and Development). The team carried out a brainstorming and clustering exercise which reflected what came out from the literature review and interviews and the extent to which each area came up and in this way the specific intervention areas were defined. These specific intervention areas not only informed the survey but also the impact evaluation inventory and the gap map.
3.2.1 Distribution of impact evaluations related to Policy

Figure 3-9: Distribution of IEs related to Policy

61 impact evaluations were identified that covered policy areas. As can be seen policies related to land reform, property rights and large scale investments in commercial agriculture, and policies related to rural infrastructure, markets and trade have had significantly more impact evaluation than all the other policy areas. The survey did not distinguish between aspects of policy (formulation, quality, implementation, effectiveness etc).
3.2.2 Distribution of impact evaluations related to Research and Development

Figure 3-10: Distribution of IEs related to Research and Development

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>a</td>
<td>7</td>
</tr>
<tr>
<td>b</td>
<td>12</td>
</tr>
<tr>
<td>c</td>
<td>16</td>
</tr>
<tr>
<td>d</td>
<td>1</td>
</tr>
<tr>
<td>e</td>
<td>3</td>
</tr>
</tbody>
</table>

- a. Research into upstream crop and livestock breeding and/or biotechnology
- b. Research into varietal improvement at national level through farmer participatory breeding
- c. Research into soil fertility and trials including integrated soil fertility management research
- d. Research into sustainable intensification
- e. Research into “climate-smart” agriculture (policies, practices and financing for food security, adaptation and mitigation)

39 impact evaluations covering Research and Development were identified. Impact evaluation of Research and Development categories is more evenly spread than that of Policy. However, impact evaluations of Sustainable Intensification and Climate-Smart Agriculture were very limited. This differs somewhat from the survey findings in which relatively more Sustainable Intensification impact evaluations were reported as being carried out by respondents.
3.2.3 Distribution of impact evaluations related to Adopting More Productive Technologies

Agriculture technology (seed, inputs, equipment) innovation and development (including integrated soil fertility management and conservation agriculture)

Scaling up of technologies

Seed storage and processing and/or private sector engagement in bulking up seed supplies

Gender-differentiated fertilizer access models, mechanisms, policies and approaches

Input subsidy programmes

A higher number of impact evaluations were recorded for Adopting More Productive Technology than the preceding areas. Whilst there are 61 that concern Policy and 39 that concern Research and Development there are 90 concerning Adopting More Productive Technology.

Distribution of impact evaluations across the specific areas related to Adopting More Productive Technologies was highly skewed. Nearly all the impact evaluations identified focused on agriculture technology. A few focused on scaling up of technologies and input subsidy programmes. Gaps are education and capacity building of men and women scientists and technicians, seed storage and processing/private sector engagement in bulking up seed Supplies and gender-differentiated fertilizer access models, mechanisms, policies and approaches.
3.2.4 Distribution of impact evaluations related to Agriculture Service Provision

The second highest number of IEs was recorded in the area of Agriculture Service Provision area – 134. Despite this there are two critical gaps in terms of impact evaluation within this area: Input provision by agro dealers and/or producer organisations, and private sector agricultural extension provision. These two areas in fact overlap as agro-dealers and producer organisations often provide advice along with inputs. Input provision by agro dealers and/or producer organisations was also the area in which survey respondents had conducted the least IEs.

Whilst the highest number of IEs were of agriculture information services (including ICTS/mobile phones), interviewees still felt that there is a shortage of evidence regarding the use of ICTs (see section 3.4.4).
3.2.5 Distribution of impact evaluations related to Producer Organisations

Figure 3-13: Distribution of IEs related to Producer Organisations

There were just 35 IEs recorded related to Producer Organisations. The critical gap here concerns their involvement in agricultural service provision. This reinforces findings under Agriculture Service Provision above. The survey also revealed that though respondents had done IEs of Producer Organisations, there were fewest recorded for producer organisation involvement in providing agricultural services.
3.2.6 Distribution of impact evaluations related to Markets and Value Chains

Figure 3-14: Distribution of IEs related to Markets and Value Chains

<table>
<thead>
<tr>
<th>Subcategories</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Post production value addition</td>
<td>0</td>
</tr>
<tr>
<td>b. Commercialisation of smallholder farms and farming</td>
<td>19</td>
</tr>
<tr>
<td>c. Developing and supporting agro-dealers</td>
<td>0</td>
</tr>
<tr>
<td>d. Product standards &amp; quality control</td>
<td>3</td>
</tr>
<tr>
<td>e. Push mechanisms/incentives for smallholders to engage in the market (e.g. safety net payments, subsidies etc.)</td>
<td>34</td>
</tr>
<tr>
<td>f. Pull mechanisms to include smallholders in the market (e.g. facilitating their engagement in value chains, enhancing small scale access to output markets etc.)</td>
<td>12</td>
</tr>
<tr>
<td>g. Commercial arrangements (for example private sector partnerships, warehouse receipt systems, commodity exchanges)</td>
<td>10</td>
</tr>
</tbody>
</table>

78 IEs were identified focusing on Markets and Value Chains. Distribution was quite variable as can be seen in the chart above. None of the IEs focused on post-production value addition or developing and supporting agro-dealers, and only 3 concerned product standards and quality control.
3.2.7 Distribution of impact evaluations related to Resilience and Adaptation to Climate Change

**Figure 3-15: Distribution of IEs related to Resilience and Adaptation to Climate Change**

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Agricultural productivity interventions that improve household resilience to shocks and/or climate change</td>
<td>7</td>
</tr>
<tr>
<td>b. Breeding of seeds to reduce negative consequences of drought, floods and climate change threats</td>
<td>5</td>
</tr>
<tr>
<td>c. Sustainable intensification[6]</td>
<td>1</td>
</tr>
<tr>
<td>d. Economic growth strategies for resilience</td>
<td>0</td>
</tr>
<tr>
<td>e. Diversification of farming systems</td>
<td>0</td>
</tr>
<tr>
<td>f. Gender and equity concerns in relation to resilience and adaptation to climate change</td>
<td>0</td>
</tr>
</tbody>
</table>

Only 13 impact evaluations were found focusing on the area of Resilience and Adaptation to Climate Change, making this the area least evaluated of the ten categories. Again there is some variation, with breeding of seeds to reduce negative consequences of drought, floods and climate change threats, Diversification of farming systems and Gender and equity concerns in relation to resilience and adaptation to climate change not being covered. Furthermore there was only one IE in the area of Economic growth strategies for resilience.
3.2.8 Distribution of impact evaluations related to Finance

The most impact evaluations were found in the area of Finance: 166. Microfinance/credit was the most common area that has undergone impact evaluation. This corresponds with survey findings. Those areas with the least number of impact evaluations are longer term agricultural finance, and mobile money programmes, again corresponding with survey findings.
3.2.9 Distribution of impact evaluations related to Gender Equality and Women’s Empowerment

**Figure 3-17: Distribution of IEs related to Gender Equality and Women’s Empowerment**

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Building gender equality and women’s empowerment to enhance food security</td>
<td>24</td>
</tr>
<tr>
<td>b. Relative consequences of enhanced agricultural innovation/productivity for men versus women</td>
<td>7</td>
</tr>
<tr>
<td>c. Strengthening women’s access to assets</td>
<td>16</td>
</tr>
<tr>
<td>d. Gender impacts of increasing the commercialisation of agriculture</td>
<td>7</td>
</tr>
<tr>
<td>e. Effectiveness and impacts of training male versus female scientists</td>
<td>0</td>
</tr>
</tbody>
</table>

54 IEs were identified covering Gender Equality and Women’s Empowerment. The most common area covered was building gender equality and women’s empowerment to enhance food security. The one area in which no IE was found was the Effectiveness and impacts of training male versus female scientists. The survey produced similar results, with most numbers of IEs reported for building gender equality and women’s empowerment to enhance food security and least numbers for effectiveness and impacts of training male versus female scientists.
3.2.10 Distribution of impact evaluations related to Nutrition

**Figure 3-18: Distribution of IEs related to Nutrition**

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Technologies, products and/or approaches that lead to improved diet and nutritional outcomes</td>
<td>9</td>
</tr>
<tr>
<td>b. Integrated agriculture, nutrition and health programmes and policies</td>
<td>19</td>
</tr>
<tr>
<td>c. Biofortification</td>
<td>2</td>
</tr>
<tr>
<td>d. Relationship and impact of commercialisation of crops on nutrition</td>
<td>0</td>
</tr>
<tr>
<td>e. Agricultural pathways for better nutrition outcomes</td>
<td>2</td>
</tr>
</tbody>
</table>

32 IEs related to nutrition were identified. Whilst most concerned integrated agriculture, nutrition and health programmes and policies, the relationship and impact of commercialisation of crops on nutrition had not been covered by any IE. There are only two IEs of each of Agricultural pathways for better nutrition outcomes and Biofortification. The three areas with least IEs correspond with survey results.
3.3 LITERATURE REVIEW

Websites and documents reviewed were AGRA, BMGF, CGIAR, DFID, IFAD, IPRRI, USAID and World Bank websites and documents. (Several other sites were reviewed whilst working on the inventory of impact evaluations and systematic reviews; these were J-PAL, MCC, the SPIA site within CGIAR and the EIG and DIME sites within the World Bank). As explained in section 2.3 these particular agencies were selected as they are large agencies and agencies that are in a better position to carry out impact evaluations. In addition the Food Security Learning Dimensions from the M&E Harmonisation group initiated by IFAD, USAID, BMGF, MCC, FAO, WB and others were also taken into account.1

This section provides the findings of the literature review. These findings were supplemented in many cases through subsequent one to one interviews with key informants as discussed in 3.4 below. The findings informed the identification of broad categories of agricultural intervention and the specific sub-categories within each broad category which, in turn, were used in the survey and gap map.

This section presents the findings of the literature review thematically, making reference to particular agencies where relevant.

The review revealed commonality between agencies in terms of their priority areas for agricultural intervention. Ten intervention areas were identified as being ones that most, if not all, agencies were prioritising as indicated in Box 1 (from Section 3.2 but included again here for convenience).

Box 2 Agricultural innovation intervention areas identified through the literature review

| 1.  | Policy                        |
| 2.  | Research and development       |
| 3.  | Adopting more productive technologies |
| 4.  | Agriculture service provision  |
| 5.  | Producer organisations         |
| 6.  | Markets and value chains       |
| 7.  | Resilience and adaptation to climate change |
| 8.  | Finance                       |
| 9.  | Gender equity and women’s empowerment |
| 10. | Nutrition                     |

Whilst several of the above intervention areas could be seen as crosscutting (such as Policy and Gender) a decision was made to keep them as separate areas so that they could be better addressed, particularly in the survey.

Within these ten areas there were also some common specific sub-areas that were being focused on by several of the agencies. The ten areas are discussed in the following sections. Please note that these are not listed in any order of priority.

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1 The M&E Harmonisation group was convened by IFAD in close collaboration with USAID in early 2012. Over time other interested agencies have joined the group. The group have developed a Food Security Learning Agenda which identifies critical gaps in evidence in relation to eight thematic areas. They have also jointly identified appropriate indicators to use in IEs of these areas.
3.3.1 Policy

Working in the policy area was explicitly mentioned as a key area by six of the eight agencies, whilst some policy work was referred to in relation to specific interventions by all the others. Improved policies, institutions and enabling environment is also one of the M&E Harmonisation’s group’s eight food security learning dimensions. The CGIAR has a Policies, Institutions and Markets research programme and both the BMGF and AGRA have explicit programmes regarding policy. USAID’s Expanding Markets and Trade work includes supporting development of sound policy environments that enable open markets, private sector investment, and gender equitable access to factors of production, products and income. IFPRI provides practical principles for African policy makers to consider. IFAD’s strategic framework 2011-2015 has an objective “Enabling institutional and policy environments to support agricultural production and the full range of related non-farm activities”. Common policy intervention areas amongst the agencies reviewed were in the areas of agricultural inputs, markets & trade, land tenure, food security and building resilience to climate change. In addition, a few of the agencies focus on the public sector’s regulatory role and IFPRI recommends taking a regional approach in terms of agricultural growth and poverty reduction strategies. Ensuring gender equitable access to inputs, services and markets was also a key area that several agencies raise. Finally several agencies aim to support effective policy making in the areas of agriculture and growth and, in DFID’s case, agriculture and conflict.

3.3.2 Research and development

Research and development continue to be key areas of agricultural intervention amongst the agencies reviewed. Whilst upstream breeding for genetic diversity is a core business of the CGIAR, in addition USAID, BMGF, AGRA and DFID also refer to this. Further downstream, participatory farmer research is gaining attention particularly from AGRA as part of its Programme for African Seed Systems. Several agencies, and notably AGRA, are also funding the training of soil and crop breeders and technicians.

Research interest is not confined to crops – the CGIAR covers fisheries and livestock also, and several other agencies refer to livestock breeding, health and improvement (BMGF, DFID) and farming systems generally (DFID). Meanwhile AGRA has a programme solely focused on soil health within which integrated soil fertility management is a key component. USAID is also supporting research related to improving food safety and nutrition by enhancing dietary diversity, understanding household decision making, improving access to and availability of nutritious foods and reducing post-harvest losses and contamination. The M&E Harmonisation Group’s Food Security Learning Agenda also identifies a learning dimension on Improved Research, Innovation and Commercialisation for Agriculture and Nutrition.

Two related areas of agricultural innovation are increasingly gaining attention: sustainable intensification and climate smart agriculture. The sustainable intensification approach works on integrating advances in soil fertility, agronomy, animal science, water management, market access, policies and nutrition and is an area that several agencies, including USAID and DFID are focusing on. Climate smart agriculture – agriculture that sustainably increases productivity, resilience (adaptation), reduces greenhouse gases (mitigation), and enhances

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achievement of national food security and development goals\(^3\), is also an area of focus for, for example, the CGIAR and DFID.

### 3.3.3 Adopting more productive technologies

Adopting more productive technologies is a priority intervention area for all agencies reviewed and this is reflected in the FSLA through their identifying Improved Livelihoods and Agricultural Production as a key food security learning dimension. All agencies are supporting agricultural technology innovation and development and seeking ways to accelerate agricultural growth. Whilst DFID seeks to increase investment in uptake of research and technological innovation, IFAD and USAID seek to scale up access to agricultural technologies. Most agencies support crop and, to a lesser extent, livestock and fisheries improvement and management, whilst some are supporting scaling out of integrated soil fertility management and introduction of sustainable intensification and climate smart agriculture.

Seed systems are a key focus, from the better training of scientists and technicians, and farmer participatory research discussed under Research and Development above, through to bulking up of seed by local seed companies and strengthening of agro-dealers. Other areas of focus at present include: input subsidy programmes, fertilizer access models and mechanisms, post-harvest issues, and, from the World Bank, facilitating exit and entry into agriculture and enhancing opportunities for rural non-farm income generation.

USAID’s learning agenda identifies several key questions related to agricultural productivity and also a number of areas where more knowledge could potentially lead to increased agricultural productivity\(^4\). Also IFPRI’s policy conclusions include recommendations that agricultural growth can best be attained by focusing on several, large, agricultural sub sectors whilst also keeping market opportunities in mind.

### 3.3.4 Agriculture service provision

Findings on this area were a little more fragmented than in the preceding areas. In general, agencies are interested in supporting mechanisms that enhance technology innovation, adoption and scaling up. This includes farmer field schools though this did not come out strongly in the literature review. USAID seeks to promote effective agricultural extension institutions as does DFID. One of IFAD's areas of thematic focus in its 2011-2015 Strategic Framework is technical and vocational skills development.

Some agencies like AGRA are building up private sector capacity to provide extension advice alongside inputs. Several agencies see an increasing role for producer or farmer organisations in service provision (see the next section). One of the BMGF grant making priorities, within their Access and Market Systems focal area is knowledge exchange: “Finding new ways to share information and knowledge that help small farmers improve their farming techniques through information and communications technology, such as mobile phones”\(^5\).

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\(^3\) [http://www.fao.org/docrep/013/i1881e/i1881e00.pdf](http://www.fao.org/docrep/013/i1881e/i1881e00.pdf)


Priority areas within agriculture service provision came out more clearly from the interviews with key informants as can be seen in section 3.4.

3.3.5 Producer organisations

Fewer agencies referred to producer organisations than to policy, research and development, and adopting more productive technologies. USAID is looking to strengthen rural producer and other rural organisations to help them participate in markets, reduce transaction costs, acquire productivity enhancing technologies and make use of information on markets. Meanwhile IFAD’s 2011-2015 Strategic Framework lists support to rural producer organisations as one of its eight areas of thematic focus, with an anticipated outcome of strengthened and more inclusive rural producers’ organisations. The World Bank Group Action Plan 2010-2012 includes a section on linking farmers to markets and strengthening value chains. Within this section the strengthening of producer organisations to ensure scale in sales and purchases and attractiveness to private trade and industry is mentioned.

An agency which has a very clear programme on supporting producer organisations is AGRA through its Farmer Organisation Support Centre in Africa (FOSCA). Through this AGRA is working with farmer organizations to provide demand-driven, income-enhancing services to their members. This involves identifying a network of producer organisations and their income-enhancing needs; increasing the supply of relevant services available to producer organisations and; linking these organisations with service providers and private sector players to deliver income gains for their members.

3.3.6 Markets and value chains

The literature review revealed that of the ten intervention areas, markets and value chains are being given particular attention. Access and Market systems is one of BMGF’s three priority areas, and USAID’s Feed the Future New Alliance also places significant emphasis on expanding markets and trade. AGRA have a specific programme on market access, looking at reducing transaction costs, adding value to farmers crops, increasing demand for commodities and promoting an enabling environment. Other donors such as the World Bank refer to linking farmers to the market. This high level of attention is reflected in the FSLAs identification of Expanded Markets and Value Chains as one of the eight key food security learning dimensions. Integration of poor rural people within value chains is also an area of thematic focus for IFAD.

There are a range of lines of activity within the overall area of markets and value chains. Emphases within value chains were on post-production value addition, building up the private sector’s role in value chains, particularly that of agro-dealers; push and pull mechanisms to engage farmers in the market, and product standards & quality control. USAID’s New Alliance for Food Security and Nutrition Feed the Future programme has secured signed letters of intent to support African agricultural development through responsible public private partnerships to a value of over $3 billion.

References to commercial arrangements were fewer. They included arrangements such as warehouse receipting systems, use of commodity exchanges, public private partnerships. Whilst many agencies discuss the commercialisation of smallholder farms and farming, bringing smallholders and the poor into the value chain more, there was relatively little in the literature regarding institutional mechanisms such as innovation platforms bringing together all value chain players. Also there was very little regarding commercialisation of agriculture at

[6 http://transition.usaid.gov/press/factsheets/2012/fs120518_1.html]
a national level including issues related to “land grab” by external and internal investors, or conflict between small holders and large scale agricultural operators.

### 3.3.7 Resilience and adaptation to climate change

Most of the agencies reviewed have programmes or thematic areas related to resilience and adaptation to climate change. This is reflected by the M&E Harmonisation’s group recognition of Increased Resilience of Vulnerable Populations, Improved Livelihoods, and Enhanced Management of Natural Resources and Adaptation to Climate Change as key learning dimensions. Furthermore USAIDs Feed the Future Learning Agenda also has Improved Resilience of Vulnerable Populations as one of its six key items.

Climate change adaptation and mitigation is one of IFADs eight areas of thematic focus. The World Bank Group Agriculture Action Plan 2010-2012 outlines how the Group will reduce risk and vulnerability through a range of measures including short term budget support, social protection and agricultural supply response. DFID is seeking to integrate climate change considerations across its portfolio and the CGIAR’s research programme on Climate Change, Agriculture and Food Security “brings together the world’s best researchers in agricultural science, climate science, environmental and social sciences to identify and address the most important interactions, synergies and trade-offs between climate change and agriculture”.

Agencies are carrying out a range of interventions to enhance resilience and climate change adaptation. These include agricultural productivity interventions that improve household resilience to climate change; plant breeding to increase varietal ability to handle floods, droughts and other climate change threats; introduction of sustainable intensification or climate-smart agriculture and; diversification of farming systems.

### 3.3.8 Finance

The review of materials on finance was less encompassing than that for other areas. This is because innovative or inclusive finance measures relate to areas beyond agricultural innovation and the review could not extend to material beyond that related directly to agricultural innovation. Nevertheless finance featured in one way or another in a number of the sites reviewed.

Provision of a broad range of inclusive financial services is one of IFADs eight areas of thematic focus. Meanwhile USAIDs Feed the Future Learning Agenda includes increased investment alongside expanded markets and value chains. And USAIDs Feed the Future’s New Alliance programme supports mobile banking systems in Africa.

The most explicit focus on finance was that of AGRA’s Innovative Finance programme. In this programme AGRA and other partners assemble "loan guarantee funds" that leverage much larger loans from commercial banks. The loan guarantee funds are available to insure against a proportion of loan defaults. The countries in which programs have been launched so far are Mozambique, Ghana, Tanzania and Uganda. Standard Bank and AGRA have signed an agreement under which Standard Bank will offer $100 million in loans to smallholder farmers and small agricultural business-$25 million each in Tanzania, Mozambique, Ghana and Uganda.

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Areas that did not come out strongly in the literature review, perhaps because of the focus on AI, but which are nevertheless important, are risk insurance, subsidies, microfinance/credit; new forms of innovative finance such as use of venture capital or social impact bonds) and longer term agricultural finance to support structural transformation and the establishment of large commercial farms. Some of these areas were raised during interviews (see Section 3.2) and microfinance/credit had the most number of IEAs as indicated in Figure 3-16.

3.3.9 Gender equity and women’s empowerment

Each of the USAID Feed the Future’s Learning Agenda and the M&E Harmonisation group’s Food Security Learning Dimensions refer to gender. The former has Improved Gender Integration and Women’s Empowerment as one of its six agenda items. The latter has Improved Gender Equality and Women’s Empowerment as one of its eight dimensions.

Gender and women’s empowerment has good coverage by most of the agencies reviewed. The BMGF Agricultural Strategy has a section all about why they focus on women farmers. Similarly the AGRA website has a section dedicated to Gender and Agriculture. The CGIAR has a long history of analysing gender issues to identify innovations that benefit poor rural women. Over time the International Rice Research Institute, IFPRI and the CGIAR Participatory Research and Gender Analysis programme have all sought to mainstream gender in the CGIARs programmes.

The CGIAR now has a Gender Strategy which commits all CGIAR research programmes to developing agricultural technologies, farming systems and policies to support rural women in improving agricultural productivity and their livelihoods. Each research programme in the CG system is developing a four-year strategy for delivering measurable benefits to women farmers in target areas.

Specific areas related to gender and agricultural innovation that came out of the literature review included building gender equality to enhance food security; strengthening women’s access to assets; the gender impacts of agricultural commercialisation; the relative consequences of enhanced agricultural innovation/productivity for men versus women and the effectiveness and impacts of training male versus female scientists.

3.3.10 Nutrition

Nutrition and improved dietary quality features in both the USAID Feed the Future’s learning agenda and the M&E Harmonisation group concerning the Food Security Learning Dimensions. USAIDs Feed the Future New Alliance seeks to improve food safety and nutrition by enhancing dietary diversity, understanding household decision making, improving access to and availability of nutritious foods and reducing post-harvest losses and contamination. The BMGF provides grants that optimize environmental, welfare and nutritional benefits. And the CGIAR has a research programme on Agriculture for Nutrition and Health which brings together research and development professionals across the agriculture, nutrition and health sectors to jointly tackle key challenges and design joint solutions.

Agriculture and nutrition intervention areas that arose from the literature review included general technologies, products or approaches that lead to improved diet and nutritional outcomes; integrated agriculture, nutrition and health programmes and policies as discussed above; biofortification; the relationship and impact of commercialisation of crops on nutrition and; agricultural pathways for better nutrition outcomes.
3.4 INTERVIEWS

Nineteen in-depth interviews were held in total; ten with Steering Committee members from 3ie, AGRA, BMGF, DFID and IFAD, five with Advisory Committee members and four with Key Informants from the World Bank and USAID (see Annex B for the list of interviewees). Interview findings are presented in this section and also referred to in the discussion of the survey and gap map. Interviews were guided by interview checklists (see Annex C for the generic checklists developed for each of the Steering Committee and Advisory Committee members). Tailored checklists were developed for each interview from these.

3.4.1 Key agricultural innovation areas being focused on presently

To a large extent the key agricultural innovation areas being focused on by the agencies covered in the interviews corresponded with what was found from review of their websites (in which case the information is not repeated here). However, interviewing people helped draw out what was uppermost in their/their organisations’ thinking – often the cutting edge or most topical intervention areas – and these are summarised in this section.

The transformation of the smallholder sector was referred to by 3ie, IFAD, DFID, the World Bank and two advisory committee members. Work on increasing smallholder productivity, engaging smallholders in large value chains, sustainable intensification of agriculture versus the need for diversification, and strengthening innovation systems were all raised.

Institutional perspectives were raised by DFID, the World Bank and an advisory committee member. Institutional models for getting research into use at scale; strengthening innovation systems through taking a wider institutional perspective and supporting institutional learning were all raised.

Use of ICTs was raised by DFID, the BMGF, USAID and an advisory committee member. Their use in mobile banking, SMS messaging re market information, provision of agricultural knowledge and advisory services and use of ICTs for getting feedback from farmers were all mentioned.

Technological innovation was referred to by USAID and the BMGF, including innovation in plant breeding to bring in useful traits like stress-tolerance; innovation in livestock through development of new technologies of breeding, and also storing, transporting and health and safety of milk and other dairy products; urea deep placements and; more generally, seed systems.

Strengthening farmers position in agricultural markets and strengthening Farmer Organisations was raised by the World Bank, USAID and an advisory committee member.

Related to this was work in value chains, raised by the World Bank, USAID and IFAD with IFAD also prioritising ways to keep young people in the agriculture sector by looking at the entire value chain.

Financial innovations were raised by the World Bank, USAID and DFID, in particular in relation to risk management and also the use of social impact bonds to finance and upscale initiatives and the use of pull mechanisms like prizes and payment for results.

Other priority areas referred to by just one or two respondents were agriculture and nutrition; trade-offs between higher value products and nutritional outcomes; and climate change.
3.4.2 Pressing issues in agriculture that need innovation

Interviewees were asked what they felt were pressing issues in agriculture that need innovation but that are not being addressed to any great extent. **Understanding the adaptive capacities of smallholders in relation to the transformation agenda** i.e. seeing agriculture as business, was raised from various perspectives by IFAD, the World Bank, USAID, and two advisory committee members. There is a need to focus on innovations for increasing behavioural change and **adoption** – what triggers this, what tips the balance? How constraints to adoption can be overcome is not yet understood. **Innovation systems** thinking and approaches have informed value chain programmes related to high value crops in but there is more to do to bring this thinking to staple food crops and to bring the smallholder farmers into these value chains. The question was raised: “Agriculture remains critical in any sustainable development drive. It is critical that we develop agriculture in a way that brings smallholder farmers in, but their productivity is very low. How can we link them to large commercial enterprises?” Concerns were raised about competition between commercial and smallholder farmers for land, water, inputs and other resources and about the low labour requirements of much commercial agriculture.

Very much related to the above point is a point raised both by IFAD, the World Bank and an advisory committee member regarding **food prices**. Food prices have gone up and agriculture is now a profitable business attracting **increasing private sector investment**. But how governments and donors are working with the private sector needs to be explored – is the private sector being seen as a service provider or a partner? And how can smallholder farmers benefit from this increased private sector engagement. Furthermore, what are the implications of increased food prices for farmers who are consumers as well as producers? The advisory committee member stated: “We need to understand what the balance between production and consumption means for the farmers themselves. If we improve farmers abilities to boost their incomes through higher production can we track the extent to which they become consumers of services in a more efficient and effective way?”

**Gender** was an area that DFID, the World Bank and USAID raised. Mainstreaming gender and youth in the application of the innovation systems approach to agriculture still needs attention according to the latter, whilst DFID noted that a more gendered approach to innovation is required and more effective ways of linking women’s empowerment and agricultural innovation. Understanding the relative impacts of new technologies on men versus women was raised as an issue by IFAD.

Related to this were concerns about **nutrition**. USAID noted that “We haven’t really figured out how to look at agricultural growth and nutrition at the household level. Agricultural growth doesn’t lead to nutrition improvements and without looking at the role of women it won’t. Programme design must make the link between agriculture and nutritional improvements”. The World Bank also noted that an area that needs more attention is food quality; “it is easier to produce food than balanced diets”.

**Increasing resilience** was a point made by both IFAD and USAID. Whilst IFAD are interested in promoting agriculture as a pathway out of poverty they need to ensure that their targeting helps them to really reach the poor. USAID are looking at how resilience can be enhanced, asking “how can we move from providing assistance to the poor to increasing the resilience of individuals, households and communities?”

The **transition of conventional farming systems to a more green agriculture** was raised by one respondent. Questions asked were what is the role of innovation, what, if any are the trade-offs with food security and biodiversity, and where is more investment needed?
Other areas that were seen to be important but not getting much attention included post-harvest storage and processing; learning about how Farmer Organisations can best play a role in value chains; innovation in the ways in which agricultural universities and college impart information and; getting information to users including through ICTs.

3.4.3 Over prioritised agricultural intervention areas

Respondents were asked if they felt any agricultural intervention areas are being over-emphasised at present. Most respondents did not feel strongly that areas were being over prioritised and there was no area that was raised by more than one respondent. The few areas that were mentioned were as follows:

- Value chain and market access empirical frameworks are being prioritised to such an extent that the farming system dimension is easily lost, according to an advisory committee member.
- A World Bank respondent noted that “Research has had more attention than extension over the last fifty years. In the seventies we needed to increase production, but we are hanging in that comfort zone and haven’t looked in the same depth at the technology transfer area. Extension is a gap, as are pathways to commercialisation”.
- The same respondent observed that crops have been prioritised over livestock and fisheries.
- Credit was seen as being over-prioritised by one advisory committee member who noted that it is not the silver bullet for farmers: “Responsiveness of the key outcome indicators hasn’t been great with credit. There is a lot more that goes into the decision as to whether a farmer will invest more than just availability of credit. Credit is an easy policy to pursue, a populist one and an easy fix”.

3.4.4 Agricultural intervention areas lacking evidence of effectiveness

Some interviewees noted that there has been little IE in the area of agriculture compared to, for example, infrastructure, health and education. An advisory committee member observed that at least in SSA, national statistical data regarding agriculture is lacking, insufficient or of poor quality and this hinders availability and reliability of base lines. The member recommended that one should think more systematically about how farm level data can be collected through a strong national sampling frame including use of spatial frames.

Generally respondents commented that rigorous impact evaluation of agriculture is lagging behind that of other sectors. They also noted that such IEs need to be able to inform practice in the short and medium term, and that it would be good to identify a balance of evaluation approaches.

Areas that respondents considered particularly lack evidence of effectiveness were:

- Subsidies
- Use of ICTs
- Adoption
- Understanding change at the beneficiary level – what the drivers of change are
- Rural roads
- Micro-insurance
Agricultural Innovation in Sub-Saharan Africa and South Asia

- Irrigation
- Improved seeds.

3.4.5 Views on thematic window priority agriculture innovation areas
Respondents mentioned the following priority areas ranging from broader to more specific topics as indicated below:

- Smallholder dimensions of agriculture
- Adaptive and transformative potential of smallholders
- Understanding the specificity of the smallholder situation
- Understanding the drivers of agricultural production at the grassroots level
- NRM and complexities of property rights
- Women’s access to resources, and gender issues in scaling up
- Agricultural growth and investing in models and interventions that are effective for smallholder farmers
- Seed systems
- Extension
- Rural roads
- Access to markets
- Irrigation
- Micro-insurance
- Soil Health
- Policy.
3.5 Survey

Each of AGRA, IFAD and GDN-3ie sent the survey (Annex D) to their mailing lists. There were 560 responses, 72% of whom were from the south/developing countries. 67% of the respondent’s primary work and expertise was in Africa, 15% South Asia, 10% East Asia and the Pacific and 8% other regions.

Respondents were largely from research bodies, government ministries and NGOs, with a much smaller number from private consultancy companies and donor agencies. Areas of expertise were wide ranging. They included many aspects of agronomy and plant breeding, livestock, public policy research, management, commodity exchanges, research and communication, post-harvest handling, M&E, capacity building, ICTs, impact evaluation, gender, food security, and water management among other areas.

Annex D outlines the survey. Respondents were asked questions concerning:

1. Agricultural Interventions they work in or support
2. Agricultural interventions that they think need innovation but are not being sufficiently addressed
3. Agricultural intervention areas that have been given/are being given too much emphasis
4. Agricultural intervention areas that lack evidence of effectiveness
5. Whether they or their organisation has conducted impact evaluations and if so in what areas

The ten intervention categories are those listed in Box 1, Section 3.1. They were derived from the literature review and interviews. Wherever a response was made the respondent was led to another question related to the broad intervention area which laid out 4-7 specific intervention areas within that particular category. These specific intervention areas were also derived from the literature review and interviews and approved by the study’s steering committee. Annex D also outlines the specific intervention categories.

This section provides the answers to each of the five questions above first. Thereafter the section takes each intervention category and summarises the findings regarding the specific intervention areas therein, again against the five questions above. For each intervention area a chart is drawn from the survey indicating the extent to which each respondent is working in or supporting each specific area of intervention. Key findings regarding questions 2-5 above are then provided. By including the responses to questions 1 above in chart form (areas respondents work in or support) it is possible to identify trends in terms of their responses to questions 2-5. The derivation of the specific intervention areas is discussed in Section 3.2 following on from Figure 3-8.

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8 The charts have been taken directly from the online survey tool used. The main point to note in each chart is the relative ranking of responses in relation to each of the broad or specific areas listed. Count indicates how many actual responses there were for each line and Percent is the equivalent in percentage. The question number relates back to the positioning of the question in the survey.
3.5.1 Findings on the agricultural intervention areas respondents either work in or support

The chart below indicates the relative extent to which survey respondents are working in (or supporting) the ten key agricultural intervention areas. It should be pointed out that respondents selected all those that apply hence any one respondent may have indicated that they work in several of the areas.

Figure 3-19: Areas survey respondents work in or support

<table>
<thead>
<tr>
<th>Area</th>
<th>Respondents (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
<td>346</td>
</tr>
<tr>
<td>Research and Development</td>
<td>295</td>
</tr>
<tr>
<td>Adopting more Productive Technologies</td>
<td>259</td>
</tr>
<tr>
<td>Agriculture Service Provision</td>
<td>244</td>
</tr>
<tr>
<td>Resilience and CCA</td>
<td>247</td>
</tr>
<tr>
<td>Markets and Value Chains</td>
<td>143</td>
</tr>
<tr>
<td>Finance</td>
<td>194</td>
</tr>
<tr>
<td>Gender Equality &amp; Women’s Empowerment</td>
<td>284</td>
</tr>
<tr>
<td>Nutrition</td>
<td>278</td>
</tr>
</tbody>
</table>

It can be seen that, relatively, Market and Value Chains, and Adopting More Productive Technologies, were areas that are being worked on the most, followed by Research and Development. Gender Equality & Women’s Empowerment and Policy followed. That these were given more prominence than Agriculture Service Provision and others below could be because people may work in these areas in their own right but may also mainstream these in their work in other areas. The emphasis in the chart corresponds well with the findings from the literature review.

3.5.2 Findings on agricultural intervention areas that are important but have not been addressed sufficiently

The chart below presents the survey findings regarding the most pressing issues in agriculture that need innovation but have not been addressed.
Interestingly Markets and Value Chains come out top – perhaps because this area is so topical at present and respondents felt that though they are working in it; it still requires more attention. Three areas that follow in equal place are Resilience and Adaptation to Climate Change, Policy, and Adopting More Productive Technologies. That Adopting More Productive Technologies has been given this degree of emphasis may be for the same reason as Markets and Value Chains. This would certainly be borne out by the interview results which indicated that adoption remains a big challenge. Resilience and Adaptation to Climate Change is an area that has been growing in urgency in recent years and one which it is becoming increasingly clear requires critical attention.

Two other points to note from the chart above are a) that Finance, which ranked lowest in areas people worked in, ranks fifth out of the ten interventions in relation to respondents views that it needs more attention and b) that nutrition is an area fewer people are working in but is also an area fewest people felt needed more attention. Higher emphasis was placed on Nutrition in interviews and agency websites.

### 3.5.3 Findings on agricultural intervention areas that have been over-prioritised

Intervention areas which respondents thought are given too much emphasis are presented below.
This chart indicates that respondents think that Resilience & Adaptation to Climate Change, and Markets and Value Chains remain important. It also indicates that, relatively, both Nutrition and Finance remain important. On the other hand, areas that are seen as over-prioritised are Gender Equality & Women’s Empowerment, and Policy. Perhaps this is due to these being topics that need to be mainstreamed in/integral to other areas of work as well as topics in their own right as noted earlier.

It should also be noted that whilst 456 respondents answered this question, 104 skipped it. This implies that a significant number of respondents felt that no areas have been over-prioritised. This finding corresponds with findings from interviews in which most respondents did not feel that any areas were-over prioritised.

3.5.4 Findings on agricultural intervention areas that particularly lack evidence of effectiveness

The chart below presents findings on the intervention areas that respondents thought particularly lack evidence of effectiveness.
It is clear from responses to preceding questions that Resilience and Adaptation to Climate Change may rank high in terms of lacking evidence of effectiveness. This area was ranked lowest in terms of whether it has been over-prioritised, and ranked second highest in terms of being a pressing issue requiring more attention. However, it is not so clear why Policy, and Markets and Value Chains were seen as topmost in terms of lacking evidence of effectiveness.

### 3.5.5 Findings on agricultural intervention areas that respondents have carried out impact evaluations of

The chart below indicates the extent to which respondents had conducted impact evaluations.
This will be compared later (in Section 4.1.1) with the impact evaluation inventory findings. In general the chart corresponds with findings from the literature review and interviews in that the top two areas are ones which are, and remain, key agricultural intervention areas, whilst the bottom four are ones for which literature review and interview findings were a little more fragmented. It should also be noted here that whilst there were 404 responses to this question, 156 respondents skipped the question, presumably because they had not carried out any impact evaluations.

### 3.5.6 Key findings from responses regarding Policy

Figure 3-19 in Section 3.5.1 indicates that policy ranked fifth out of the ten areas in terms of areas respondents are working in/supporting. The chart below provides the breakdown of the specific policy areas respondents are working in or supporting.
Figure 3-24: Specific policy areas respondents are working in or supporting

A. Policies regarding land reform, property rights and large scale investments in commercial agriculture
B. Policy regarding food security and/or nutrition
C. Policy regarding agricultural inputs
D. Policy regarding climate change and adaptation
E. Policy regarding rural infrastructure, markets and trade
F. Policy on public investment in agricultural research, development and value chains
G. Policy to ensure gender equitable access to inputs, services and markets
H. Other options

Reviewing the detailed responses for Questions 2-5 in relation to policy there are three key findings.

First, Policy Regarding Rural infrastructure, Markets & Trade, which is the second top most policy area respondents are working in, is seen as the top most one which needs more attention (and conversely fifth out of seven areas that are being over-prioritised).

Second, Policies Regarding Land Reform, Property Rights and Large Scale Investments in Commercial Agriculture is the area in which fewest respondents are working in/supporting. They rank this as second highest in terms of areas that need attention but are lacking it, and rank it as topmost in terms of lacking evidence of effectiveness. Nevertheless 12% (63) respondents had conducted impact evaluations in this area.

Third, Policy Regarding Gender Equitable Access to Inputs, Services and Markets was ranked second lowest in terms of areas respondents were working in/supporting. It was ranked lowest as a pressing issue, lowest in terms of lacking evidence of effectiveness but also lowest in terms of impact evaluations conducted.
3.5.7 **Key findings from responses regarding Research and Development**

The chart below shows the breakdown of areas within Research and Development that respondents are working in or supporting. Fewest were working in Dairy & Small Livestock, and in Upstream Crop and Livestock Breeding/Biotechnology. Most were working in Sustainable Intensification and Climate-Smart Agriculture followed by Research into Varietal Improvement at National Level through Farmer Participatory Breeding.

**Figure 3-25: Specific Research and Development areas respondents are working in or supporting**

- **Research into upstream crop and livestock breeding and/or biotechnology**
- **Research into varietal improvement at national level through farmer participatory breeding**
- **Research into soil fertility and trials including integrated soil fertility management research**
- **Research into sustainable intensification**
- **Research into “climate-smart” agriculture (policies, practices and financing for food security, adaptation and mitigation)**
- **Research into dairy and small livestock.**
- **Other option**

From examining detailed responses, three findings are of particular note. First, whilst Research into Climate Smart Agriculture was ranked second highest of the areas that respondents are working in/supporting, they also ranked it second highest as a pressing issue that requires more attention. Conversely they ranked it lowest in terms of lacking evidence of effectiveness and second lowest in the ranking of whether respondents had conducted impact evaluations in this area. These findings could be due to Climate Smart Agriculture being a relatively recent framework through which to conceptualise, and practically address, agricultural innovation.

Second, whilst Varietal Improvement at National Level through Farmer Participatory Breeding was ranked mid-way in terms of whether the respondent was working/supporting this area,
whether it is a pressing issue or over-emphasised, and whether it lacks evidence, it actually came top most of the specific intervention areas in terms of having undergone impact evaluation.

Third, the area that fewest respondents were working in was Research into Dairy and Small Livestock. Perhaps the other findings in this area reflect the fact that most respondents were not working in it. It was rated last in terms of being seen as a pressing area needing intervention, but also second last in terms of being over-prioritised. Whilst it was ranked last in terms of lacking evidence, the respondents had conducted the fewest impact evaluations of this area.

### 3.5.8 Key findings from responses regarding Adopting More Productive Technologies

The chart below present survey responses regarding the areas of work related to adopting more productive technologies that respondents are working in or supporting.

![Figure 3-26: Specific areas related to Adopting More Productive Technologies respondents are working in or supporting](image)

- a. Education and capacity building of men and women scientists and technicians
- b. Agriculture technology (seed, inputs, equipment) innovation and development (including integrated soil fertility management and conservation agriculture)
- c. Scaling up of technologies
- d. Seed storage and processing and/or private sector engagement in bulking up seed supplies
- e. Gender-differentiated fertilizer access models, mechanisms, policies and approaches
- f. Input subsidy programmes
- g. Other options

Reviewing detailed responses to questions 2-5 concerning which areas need more attention, are over-prioritised, lack evidence of effectiveness and which areas respondents had conducted IEs, it was found that the Agriculture technology and development (b) and Scaling
up (c) above were also seen as needing more intervention than other areas and most lacking in evidence of effectiveness. However, in contrast, respondents had actually done more impact evaluations in these two areas than any of the others.

On Input Subsidies (f), respondents did not consider this to be an area that needs more intervention; rather they ranked it as first out of the six areas in terms of being over-prioritised. Only 7% of the respondents had done impact evaluations of Input Subsidies.

Data on areas respondents had done impact evaluations was very similar to the above chart except that fewest had done IEs on input subsidy programmes, with that ranking sixth and the Gender area ranking fifth (discounting the “other” option).

### 3.5.9 Key findings from responses regarding Agriculture Service Provision

The chart below presents the areas that respondents are working in or supporting in relation to specific aspects of Agriculture Service Provision.

#### Figure 3-27: Specific Agriculture Service Provision areas respondents are working in or supporting

<table>
<thead>
<tr>
<th>Service Provision Area</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Agriculture information services (including ICTs/mobile phones)</td>
<td>191</td>
</tr>
<tr>
<td>b. Public sector agricultural extension provision</td>
<td>193</td>
</tr>
<tr>
<td>c. Private sector agricultural extension provision</td>
<td>181</td>
</tr>
<tr>
<td>d. Mechanisms to enhance technology innovation, adoption and scaling up</td>
<td>243</td>
</tr>
<tr>
<td>e. Input provision by agro dealers and/or producer organisations</td>
<td>189</td>
</tr>
<tr>
<td>f. Gender issues in and impacts of various agriculture service provision approaches and mechanisms</td>
<td>199</td>
</tr>
<tr>
<td>g. Other options</td>
<td>28</td>
</tr>
</tbody>
</table>

It can be seen that there is a fairly even distribution of work across the six sub-categories. Looking at responses across the five questions, one point that is evidenced is that whilst 20% are working on Mechanisms to Enhance Technology Innovation, Adoption and Scaling up, respondents still considered this to be the most pressing area requiring more interventions. They also stated that it lacks evidence of effectiveness, but on the other hand this was the area that had had the most impact evaluations. It should be noted however that just as there was a fairly even distribution of work across the categories, so the distribution of IEs was fairly even.
also. The areas that had undergone impact evaluation least were Input Provision by Agro Dealers and/or Producer Organisations, and Gender Issues in and Impacts of Various Agriculture Service Provision Mechanisms and Approaches.

3.5.10 Key findings from responses regarding Producer Organisations
The chart below presents the specific areas related to Producer Organisations that respondents are working in/supporting.

**Figure 3-28: Specific intervention areas related to Producer Organisation respondents are working in or supporting**

![Bar Chart]

- a. Developing new institutional arrangements for/with/of producer organisations
- b. Building technical and vocational skills of producers/producer organisations
- c. Producer organisation involvement in providing agriculture service provision
- d. Enhancing producer organisation roles in value chains and markets
- e. Other options

Producer Organisations ranked third lowest of the ten categories in which respondents are working. As can be seen above, most work is being done in the area of Enhancing Producer Organisations Roles in Value Chains and Markets and least in Producer Organisation Involvement in Agriculture Service Provision. Respondents still thought that Enhancing Producer Organisation Roles in Value Chains and Markets is the most pressing area for further interventions and most lacking in evidence of effectiveness.

3.5.11 Key findings from responses regarding Markets and Value Chains
The chart below presents the areas related to Markets and Value Chains that respondents are working in or supporting.
Figure 3-29: Specific intervention areas related to Markets and Value Chains respondents are working in or supporting

<table>
<thead>
<tr>
<th>a. Post production value addition</th>
<th>b. Commercialisation of smallholder farms and farming</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Developing and supporting agro-dealers</td>
<td>d. Product standards &amp; quality control</td>
</tr>
<tr>
<td>e. Push mechanisms/incentives for smallholders to engage in the market (e.g. safety net payments, subsidies etc.)</td>
<td>f. Pull mechanisms to include smallholders in the market (e.g. facilitating their engagement in value chains, enhancing small scale access to output markets etc.)</td>
</tr>
<tr>
<td>g. Commercial arrangements (for example private sector partnerships, warehouse receipt systems, commodity exchanges)</td>
<td>h. Other options</td>
</tr>
</tbody>
</table>

Of the ten intervention areas the largest percentage of respondents are working in or supporting Markets and Value Chains with Commercialisation of Smallholder Farms and Farming ranking highest within this category as indicated in the chart above. Responses to questions 2-5 (page 34) indicate that respondents also think that Commercialisation of Smallholder Farms and Farmers is the most pressing issue requiring further intervention and the area most lacking in evidence. Despite this 20% of respondents had conducted IEs of this area, with only one other area which had received more IEs (post production value addition).

One survey respondent added a note to say “Smallholders will never be productive to commercialise their crops. Small areas of land will physically not produce the yield. They are too far from warehouse; they are taken advantage of by commercial middlemen. Cash crop outgrower schemes where farmers have limited access to selling their crops, which necessitates co-operation, will improve farmer’s livelihoods”. The emphasis given by respondents to Commercialisation was reflected in interview findings.
A second finding of interest concerns Developing and Supporting Agro-Dealers. Fewer respondents (173 or 12%) were working in this area and they ranked it highest amongst those being over prioritised. It was not seen as an area particularly lacking in evidence, but it came fifth out of the seven areas in terms of extent to which respondents had conducted impact evaluations.

Those areas that the respondents had carried out the least IEs in were Commercial Arrangements (ranked sixth) and Push Mechanisms/Incentives for Smallholders to Engage in the Market (ranked last in terms of areas in which IEs had been conducted).

3.5.12 Key findings from responses regarding Resilience and Adaption to Climate Change

The chart below presents the relative extent to which respondents are working within the specific categories within Resilience and Adaptation to Climate Change.

**Figure 3-30: Specific intervention areas related to Resilience and Adaption to Climate Change respondents are working in or supporting**

- a. Agricultural productivity interventions that improve household resilience to shocks and/or climate change
- b. Breeding of seeds to reduce negative consequences of drought, floods and climate change threats
- c. Sustainable intensification[6]
- d. Economic growth strategies for resilience
- e. Diversification of farming systems
- f. Gender and equity concerns in relation to resilience and adaptation to climate change
- g. Other options

As can be seen from the chart above the areas that most respondents are working in/supporting are Diversification of Farming Systems, and Agricultural Productivity Interventions that Improve Household Resilience, whilst Breeding and Economic Growth...
Strategies for Resilience are ranked lowest. The top two areas were also seen as the top two pressing areas for more interventions and the top two lacking evidence of effectiveness. Nevertheless, they also ranked top amongst impact evaluations conducted with 21% of respondents reporting that they have done or supported each of the two areas.

Areas which respondents had carried least impact evaluations of were Gender and Equity Concerns in Relation to Resilience and Adaptation to Climate Change, and Economic Growth Strategies and Resilience.

Whilst 16% of respondents were working on Gender and Equity concerns, this was not seen as a pressing area for further work despite it being the area in which the fewest impact evaluations had been conducted.

Sustainable Intensification was seen as the third most pressing area needing more work (and the least over-prioritised). It was also ranked as the third most important in lacking evidence, though 18% of respondents reported having conducted impact evaluations of this area.

### 3.5.13 Key findings from responses regarding Finance

The chart below indicates the relative extent to which respondents are working in or supporting Finance.

**Figure 3-31: Specific intervention areas related to Finance respondents are working in or supporting**

<table>
<thead>
<tr>
<th>Finance Area</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Insurance</td>
<td>84</td>
</tr>
<tr>
<td>b. Subsidies</td>
<td>76</td>
</tr>
<tr>
<td>c. Microfinance/credit</td>
<td>206</td>
</tr>
<tr>
<td>d. Mobile money programmes</td>
<td>61</td>
</tr>
<tr>
<td>e. New forms of innovative finance (e.g. loan guarantee funds, use of venture capital, social Impact bonds etc.)</td>
<td>114</td>
</tr>
<tr>
<td>f. Longer term agricultural finance (to support structural transformation and/or establishment of large commercial farms)</td>
<td>81</td>
</tr>
<tr>
<td>g. Other options</td>
<td>24</td>
</tr>
</tbody>
</table>
Finance was the area in which the least respondents were working in. The chart above shows marked variation between sub-sectors in which they are working with 206 (32%) working in relation to Microfinance/Credit, compared to just 76 (12%) in the area of subsidies and 61 (9%) in the area of mobile money programmes.

With regard to impact evaluations conducted by respondents, again by far the most were in the area of Microfinance/Credit (34%) followed by subsidies. Few respondents had carried out impact evaluations of longer term agricultural finance (ranked lowest) and mobile money programmes.

New Forms of Innovative Finance was seen as the most pressing area for further intervention and the one most lacking in evidence of effectiveness.

3.5.14 Key findings from responses regarding Gender Equity and Women’s Empowerment

The chart below indicates the extent to which respondents are working in or supporting Gender Equity and Women’s Empowerment.

Figure 3-32: Specific intervention areas related to Gender Equity and Women’s Empowerment respondents are working in or supporting

| a. Building gender equality and women’s empowerment to enhance food security |
| b. Relative consequences of enhanced agricultural innovation/productivity for men versus women |
| c. Strengthening women’s access to assets |
| d. Gender impacts of increasing the commercialisation of agriculture |
| e. Effectiveness and impacts of training male versus female scientists |
| f. Other options |
Whilst more respondents are engaged in Building Gender Equality and Women’s Empowerment to enhance Food Security, and Strengthening Women’s Access to Assets, much less are engaged in looking at the Relative Consequences of Enhanced Agricultural Innovation/Productivity for men versus women or Effectiveness and Impacts of Training Male versus Female Scientists. The same pattern was reflected within the impact evaluations conducted by respondents. Strengthening women’s access to assets, and Building gender equality and women’s empowerment to enhance food security were seen as the two most pressing areas requiring more attention. In terms of areas lacking evidence of effectiveness, Gender impacts of increasing the commercialisation of agriculture was ranked second highest.

3.5.15 Key findings from responses regarding Nutrition

The chart below shows the breakdown of areas within Nutrition that respondents are working in/supporting.

**Figure 3-33: Specific intervention areas related to Nutrition respondents are working in or supporting**

<table>
<thead>
<tr>
<th>Area Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Technologies, products and/or approaches that lead to improved diet and nutritional outcomes</td>
<td>173</td>
</tr>
<tr>
<td>b. Integrated agriculture, nutrition and health programmes and policies</td>
<td>173</td>
</tr>
<tr>
<td>c. Biofortification</td>
<td>74</td>
</tr>
<tr>
<td>d. Relationship and impact of commercialisation of crops on nutrition</td>
<td>101</td>
</tr>
<tr>
<td>e. Agricultural pathways for better nutrition outcomes</td>
<td>164</td>
</tr>
<tr>
<td>f. Other options</td>
<td>20</td>
</tr>
</tbody>
</table>

Nutrition ranked as second lowest in terms of the broad areas in which respondents are working. Whilst work in the first three areas above is fairly evenly distributed, fewer respondents are working on the Relationship and Impact of Commercialisation of Crops on Nutrition and on Biofortification. The same pattern was reflected in the impact evaluations.
conducted by respondents. Integrated agriculture, nutrition and health programmes and policies were seen as the area most in need of more attention.
4 DISCUSSION AND RECOMMENDATIONS

The discussion seeks to bring together the study findings. Information on priority areas for intervention and most pressing areas for further intervention is drawn from the literature review, interviews and surveys. Information on gaps in impact evaluations is drawn from the gap map and survey. The recommendations section draws on the discussion.

4.1 DISCUSSION

The discussion is structured in two parts. The first part seeks to present an overview of the findings at the level of the ten intervention categories. The second provides more detail on the specific priority areas for intervention, and the areas most lacking in IE within each of the ten broad categories. The section draws on information from the survey, interviews and gap map. It does not draw directly on the literature review. However the literature review (combined with the interviews) was the foundation of the study in that it informed the identification of the ten broad categories, and the specific categories within each broad category, as reflected in both the gap map and the survey design.

4.1.1 Overview of findings at the level of the ten intervention categories.

The two charts below contrast the distribution of IEs across the categories as identified in the gap map (this is replicated from section 3.2) with the distribution of IEs the survey respondents said they had done.

Figure 4-1: Distribution of IEs by intervention category
The chart above indicates that most IEs have been recorded in Finance, Agriculture Service Provision and Adopting More Productive Technologies. Least IEs are recorded in Resilience and Climate Change Adaptation, Nutrition, and Producer Organisations. This is also reflected in the bubble size in Figure 4-4.

The relative numbers of IEs recorded in the inventory and gap map contrast somewhat with the distribution of IEs that survey respondents said they had done as indicated in the chart below replicated from Figure 3-23.

**Figure 4-2: IES reported by survey respondents.**

This chart indicates that survey respondents had done most IEs in the areas of Adopting More Productive Technology, Markets and Value Chains, Gender Equality and Women’s Empowerment and Policy. These findings are discussed in more detail in Section 3.5.5.

Next, the chart below indicates the relative number of survey respondents who thought each intervention area was a) high priority and b) lacking in evidence. The size of each bubble reflects the number of respondents working in each area. Those interventions to the right and the top of the chart i.e. Markets and Value Chains; Policy; Resilience and Climate Change; Adopting More Productive Technologies and; Research and Development are those seen as high priority interventions that also require more evidence of effectiveness, according to a high number of respondents. Meanwhile Nutrition; Gender and; Producer Organisations were seen to be of lower priority and less in need of more evidence. More respondents are working in the areas of Markets and Value Chains, Adopting More Productive Technologies and Policy whereas fewer are working in the areas of Finance and Nutrition.
Figure 4-3: Priority interventions requiring more evaluation

This chart below retains the findings from survey respondents regarding top priority interventions and their need for more evaluation, but the bubble size now reflects the actual number of IEs identified in the inventory in each category (rather than the number of respondents working in each area).
This chart indicates that some of the top priority areas (in the top right hand part of the grid) have had fewer recorded IEs than other. Thus Resilience and Climate Change; Markets and Value Chains; Policy; and Adopting more Productive Technologies have in practice less IEs than Finance and Agriculture Service Provision. Nutrition, Producer Organisations and Gender have also have had less IE relatively but are not ranked high by respondents as priority areas that are in need of IE. Research and Development is hidden behind finance and agriculture service provision and is relatively small in size as fewer IEs were found in this area as is indicated in Figure 4.1 above.

From the charts above it can be concluded that there is particular scope for more IEs within the areas of Markets and Value Chains, Policy, Resilience and Climate Change, Adopting more Productive Technologies and; Research and Development, these being the areas seen as most critical by survey respondents. However there are specific intervention areas within all ten categories that lack IE as evidenced in section 3.2. Furthermore the overview above draws only on the gap map and survey results, whereas interviews revealed further priority areas than those seen as topmost priority by survey respondents.

The next section seeks to reflect the findings from the interviews as well as those from the survey and gap map. It brings together findings regarding the specific priority areas and needs for IE within each of the ten categories. This section forms the basis for the final section which covers recommendations.
4.1.2 Specific priority agricultural innovation and impact evaluation areas

Figure 4.5 below draws together, for each of the ten intervention categories, the following:

Column 1: Survey findings on specific high priority areas
Column 2: Interview findings on specific high priority areas
Column 3: Gap map findings on specific areas most lacking in IE
Column 4: Survey findings on specific areas lacking in IE

A fifth column indicates consistency. All specific areas that are listed in two or more columns are written in red, to make it clearer to the reader where there is higher agreement on specific areas that are high priority but lack IE. The fifth column provides an impression of the extent of agreement, or consistency, of findings, ranging from low to medium to high.

The ten intervention areas are listed in the same order that has been used throughout the study. For each one, information is provided on the relative extent of IE coverage according to the gap map and the relative priority ranking according to the survey.

Though section 4.1.1 indicated that, based on the survey, there is particular scope for more IEs within five of the ten intervention areas, finding for all ten intervention areas are listed due to their being important IE gaps within intervention areas given less priority by survey respondents.
**Figure 4-5: Priority AI and IE areas in each of the ten intervention categories.**

NB. Items in red are those which have been raised in two or more of the columns. Consistency is rated low, medium or high depending on the extent of consistency in findings across the four columns.

<table>
<thead>
<tr>
<th>Areas of high priority within each of the ten intervention areas, as indicated by survey findings</th>
<th>Areas of high priority within each of the ten intervention areas, as indicated by interview findings</th>
<th>Specific areas most lacking IE according to the impact evaluation gap map</th>
<th>Specific areas lacking IE according to survey respondents</th>
<th>Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>**1. **Policy (5th highest IE coverage, 3rd highest priority ranking in survey)</td>
<td></td>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Policies regarding Land Reform, Property Rights and Large Scale Investments in Commercial Agriculture</td>
<td>Interviewees did not raise policy issues in particular</td>
<td>Policy regarding public investment in agricultural research, development and value chains</td>
<td>Policies regarding Land Reform, Property Rights and Large Scale Investments in Commercial Agriculture</td>
<td></td>
</tr>
<tr>
<td>Policy regarding Rural Infrastructure, Markets &amp; Trade</td>
<td></td>
<td>Policy regarding Climate Change Adaptation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy to ensure gender equitable access to inputs, services and markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Research and Development (3rd lowest IE coverage, 4th lowest priority ranking in survey)</strong></td>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Sustainable Intensification</td>
<td>Sustainable intensification</td>
<td>Sustainable Intensification</td>
<td>Sustainable Intensification</td>
<td></td>
</tr>
<tr>
<td>Climate Smart Agriculture</td>
<td>Climate smart agriculture</td>
<td>Climate Smart Agriculture</td>
<td>Climate Smart Agriculture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research into soil fertility and trials (soil health)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3. Adopting more Productive Technologies (3\textsuperscript{rd} highest IE coverage. 4\textsuperscript{th} highest priority ranking in survey)

<table>
<thead>
<tr>
<th>Technology Innovation and Development</th>
<th>Agriculture Technology Innovation and Development</th>
<th>Scaling up</th>
<th>Agriculture Technology Innovation and Development</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaling up</td>
<td>Input subsidy programmes</td>
<td>Seed storage and processing and/or private sector engagement in bulking up seed supplies</td>
<td>Scaling up</td>
<td></td>
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<tr>
<td>Post-harvest storage and processing</td>
<td></td>
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</table>

### 4. Agricultural Service Provision (2\textsuperscript{nd} highest IE coverage, 3\textsuperscript{rd} lowest priority ranking in survey)

<table>
<thead>
<tr>
<th>Service Provision</th>
<th>Mechanisms to enhance technology innovation, adoption and scaling up</th>
<th>Mechanisms to enhance technology innovation, adoption and scaling up</th>
<th>Mechanisms to enhance technology innovation, adoption and scaling up</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agricultural information services</td>
<td>Input provision by agro dealers/producer organisations</td>
<td>Public sector agricultural extension provision</td>
<td></td>
</tr>
</tbody>
</table>

### 5. Producer Organisations (3\textsuperscript{rd} lowest IE coverage. 2\textsuperscript{nd} lowest priority ranking in survey)

<table>
<thead>
<tr>
<th>Organisation Roles</th>
<th>Enhancing producer organisation roles in value chains and markets</th>
<th>Enhancing producer organisation roles in value chains and markets</th>
<th>Producer organisations involvement in providing agriculture service provision</th>
<th>High</th>
</tr>
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<tbody>
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</tbody>
</table>
### 6. Markets and Value Chains (4\textsuperscript{th} highest IE coverage. Highest priority ranking in survey)

| Commercialisation of Smallholder Farms and Farming | Commercialisation of smallholder farms and farming | Post production value addition | Developing and supporting agro-dealers | Product standards and quality control | Commercialisation of Smallholder Farms and Farming | High |

### 7. Resilience and Adaptation to Climate Change (Lowest IE coverage, 2\textsuperscript{nd} highest priority ranking in survey)

| Diversification of Farming Systems | General interest, including: | Diversification of Farming Systems | Agricultural Productivity Interventions that improve household resilience to shocks and/or Climate Change | Economic Growth Strategies for Resilience | Agricultural Productivity Interventions that improve household resilience to shocks and/or Climate Change | High |
| Diversification of Farming Systems | General interest, including: | Diversification of Farming Systems | Agricultural Productivity Interventions that improve household resilience to shocks and/or Climate Change | Economic Growth Strategies for Resilience | Agricultural Productivity Interventions that improve household resilience to shocks and/or Climate Change | High |

### 8. Finance (Highest IE coverage, 5\textsuperscript{th} highest priority ranking in survey)

| New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | High |
| New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | High |
| New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | New forms of innovative finance | High |

Mobile money programmes | Economic Growth Strategies for Resilience | Agricultural Productivity Interventions that improve household resilience to shocks and/or Climate Change | Higher term agricultural finance | Micro-finance/credit | Higher term agricultural finance | High |
### 9. Gender equity and women’s empowerment (4\textsuperscript{th} lowest IE coverage, 3\textsuperscript{rd} lowest priority ranking in survey)

| Strengthening women’s access to assets | Relative consequences of enhanced agricultural innovation/productivity for men versus women | Relative consequences of enhanced agricultural innovation/productivity for men versus women | Building gender equality and women’s empowerment to enhance food security | High |
| Building gender equality and women’s empowerment to enhance food security | Strengthening women’s access to assets | Effectiveness and impacts of training male versus female scientists | Gender impacts of commercialisation of agriculture | |
| Building gender equality and women’s empowerment to enhance food security | | Gender impacts of commercialisation of agriculture | | |

### 10. Nutrition (2\textsuperscript{nd} lowest IE coverage, lowest priority ranking in survey)

| Integrated agriculture, nutrition and health programmes and policies | Integrated agriculture, nutrition and health programmes and policies | Relationship and impact of commercialisation of crops on nutrition | Integrated agriculture, nutrition and health programmes and policies | High |
| Agricultural pathways for better nutrition outcomes | | Biofortification | Technologies, products and/or approaches that lead to improved diet and nutritional outcomes | |
| | Agricultural pathways for better nutrition outcomes | | | |
From the table above the following points can be observed

1. **Policy**

   The specific policy intervention area that appears twice here concerns *land reform, properly rights and large scale investments in commercial agriculture*. This point relates to a specific area that was rated high under Markets and Value Chains: The Commercialisation of smallholder farms and farming.

2. **Research and Development**

   There is strong consistency of findings here in that of the six specific intervention areas in this category, two features across all four columns. These are *climate smart agriculture* and *sustainable intensification*. To complement this, under the Policy category, Climate change adaptation was mentioned, and under the Resilience and Climate Change Adaptation category (no 7) sustainable intensification also features strongly.

3. **Adopting more productive technologies**

   Two specific intervention areas feature widely here: *Agriculture technology innovation and development*, and *Scaling up*, these being cited in all four, and three, columns respectively. A specific area that complements this, from within no 9 (Gender equity and women’s empowerment) is the relative consequences of enhanced agricultural innovation/productivity for men versus women. The *scaling up* component is also complemented by findings under Agriculture service provision (non 4) where mechanisms to enhance technology innovation, adoption and scaling up were seen as highest priority.

4. **Agricultural service provision**

   This area has the second highest IE coverage and is ranked third lowest in terms of priority according to survey respondents. Of the six specific intervention areas in this category, the same one features in all four columns: *Mechanisms to enhance technology innovation, adoption and scaling up*.

5. **Producer organisations**

   This area had fewer IEs according to the gap map where it ranked third lowest in IE coverage. But it was also ranked as second lowest priority by survey respondents. Nevertheless there is one specific area which came out both as high priority but lacking in evidence, featuring in three columns. This is *Enhancing producer organisation roles in value chains and markets*.

6. **Markets and value chains**

   Whilst this category has the fourth highest number of IEs according to the gap map, it was given the highest priority ranking by survey respondents. Again there is strong consistency in that out of the seven specific intervention areas, *Commercialisation of smallholder farms and farming* is raised in three of the four columns. This finding is complemented by Policy findings (no 1): Policy to ensure gender equitable access to inputs, services and markets, and by Gender equity and women’s empowerment findings (no 9) in which Gender impacts of commercialisation of agriculture is raised. It is further complemented by findings under
Producer organisations (no 5) which concern enhancing producer organisation roles in value chains and markets.

7. **Resilience and adaptation to climate change**

This area has the lowest IE coverage but is ranked as second highest priority according to survey respondents. Of the six specific intervention areas in this category, one area is referred two three times: *Agricultural productivity interventions that improve shocks and/or climate change*. Two other specific areas are referred to twice: *Diversification of farming systems*, and *Sustainable intensification*. These findings are complemented by those in 3: Research and Development, where sustainable intensification and climate smart agriculture were topmost. Climate change adaption policy is also raised in no 1 (Policy).

8. **Finance**

This area has the highest IE coverage and was ranked fifth highest priority by survey respondents. Despite the high IE coverage, one specific area within the six listed within finance is raised across all four columns: *New forms of innovative finance*.

9. **Gender equity and women’s empowerment**

Though survey respondents ranked this area as 3rd lowest in priority, it in fact has the 4th lowest IE coverage. Of the five specific intervention areas in this category, three are mentioned twice each: *Building gender equality and women’s empowerment to enhance food security; Relative consequences of enhanced agricultural innovation/productivity for men versus women* and; *Strengthening women’s access to assets*. The last two specific areas mentioned are relevant to Adopting more productive technologies (no 3).

10. **Nutrition**

Whilst survey respondents ranked nutrition lowest in priority it actually also has 2nd lowest IE coverage. Of the five specific areas listed in this category, one is referred to in three of the four columns: *Integrated agriculture, nutrition and health programmes and policies*. Further, *Agricultural pathways for better nutrition outcomes* is referred to twice.

The findings above indicate that for the purposes of the next section (recommendations) it is useful to

a) Mainstream specific policy areas under the related categories
b) Consider Research and Development, and Resilience and Climate Change, together due to the commonality of findings
c) Bring together all points related to Commercialisation of smallholder farming (under 6: Markets and Value Chains) together under this heading i.e. drawing related points from the other relevant categories
d) Mainstream gender issues under other key areas.
4.2 RECOMMENDATIONS

The purpose of this scoping study was to inform the design of the Partner’s agricultural thematic call for proposals to conduct IE. This section proposes three key, and two more specific, priority research areas for this design.

The priority research areas have been identified based on the findings of the inventory, gap map, literature review, interviews and survey. These findings are consolidated and discussed in section 4.2 above. These recommendations will inform a two day stakeholder consultation exercise to be held on 3rd to 4th June 2013 in Nairobi, Kenya. During the workshop it is anticipated that through participant’s group work contributions, emerging themes and clearly defined questions for the window will be agreed upon.

The three key priority areas identified relate to specific interventions within:

a) Markets and value chains
b) Resilience & climate change adaptation and Research & development
c) Adopting more productive technologies

The 2 more specific priority areas relate to specific interventions within

d) Finance
e) Nutrition

Each are outlined in turn below.

4.2.1 Markets and value chains

Commercialisation of smallholder farming was the highest priority area here and the area seen as most lacking in IE according to survey respondents. Drawing on findings from across figure 4-5 and from detail in earlier chapters, all the following areas related to this topic are important:

- Policies regarding large scale investments in commercial agriculture
- Gender impacts of commercialisation of agriculture
- Enhancing producer organisation roles in value chains and markets
- Enhanced role of agro-dealers
- Transformation of smallholder farming
- Adaptive and transformative potential of smallholders – understanding drivers of change
- Issues of land grab
- The relationship between smallholders and commercial farmers
- Post production value addition

4.2.2 Resilience & climate change, and Research and development

Though these were separate intervention categories, priority areas for intervention and IE requirements were similar. Drawing on findings from across figure 4-5, the following areas related to this topic could be considered for IE through the thematic window:
Agricultural Innovation in Sub-Saharan Africa and South Asia

- Agricultural productivity interventions that improve shocks and/or climate change
- Diversification of farming systems
- Sustainable intensification
- Climate smart agriculture
- Climate change adaptation policy
- Strengthening women’s access to assets

4.2.3 Adopting more productive technologies

Though higher numbers of IEs were recorded in this area (the gap map indicated that it came third highest in IE coverage) the area was ranked fourth highest by survey respondents. Drawing on the summary above, figure 4-5 and earlier more detailed findings, the following areas related to this topic could be considered for IE through the thematic window:

- Agriculture technology (seed, inputs, equipment) innovation and development (including integrated soil fertility management and conservation agriculture).
- Scaling up
- Institutional issues (in scaling up)
- Relative consequences of enhanced agricultural innovation/productivity for men versus women
- Understanding drivers of change in agricultural production
- Adoption
- Mechanisms to enhance technology innovation, adoption and scaling up
- Women’s access to resources
- Gender issues in scaling up
- Mainstreaming gender and youth in application of innovation systems approach
- Relative impact of new technologies on men and women
- Linking women’s empowerment and agricultural innovation

4.2.4 Finance

Though the most IEs were recorded in this area, a significant gap was IEs in the area of innovative finance. Though not as broad as the three areas outlined above, there could be scope for IE of the following areas through the thematic window:

- Risk-management
- Use of social impact bonds
- Use of prizes and/or payment for results as “pull” mechanisms to draw in private sector support
- Micro-insurance

4.2.5 Nutrition

Though this area was ranked lowest priority by survey respondents, it also had the second lowest IE coverage. Further it was an area that came out as particularly pressing during interviews. Drawing on figure 4-5 and the summary above, specific areas in which there could be scope for IE through the thematic window are:

- Integrated agriculture, nutrition and health programmes and policies
- Agricultural pathways for better nutrition outcomes
Annex E: Literature Review

AGRA website: http://www.agra.org


AGRA Program for Africa’s Seed Systems (PASS) Business Plan March 2007


AGRA’s Policy Programme http://www.agra.org/what-we-do/policy


Bill and Melinda Gates Foundation Agricultural Development Grant Overview http://www.slideshare.net/csisaproject/bmgf-agriculturaldevelopmentgrantoverview


CGIAR. The CGIAR at 40 and Beyond. Impacts that matter for the Poor and the Planet. http://www.cgiar.org/our-research

CGIAR Research Programmes http://www.cgiar.org/our-research/cgiar-research-programms

CGIAR Independent Science and Partnership Council. Recent advances in impact analysis for ex-post impact assessments of agricultural technology: options for the CGIAR (April 2011)

CGIAR Impact Assessment Website (Standing Panel on Impact Assessments or SPIA) http://impact.cgiar.org

DFID Agriculture Team Programme Review and Priorities Paper (DRAFT) March 2011
Agricultural Innovation in Sub-Saharan Africa and South Asia


DFID What we do: Agriculture www.dfid.gov.uk/What-do/Key-Issues/Food-and-nutrition/Agriculture


IFAD Food Security Monitoring & Evaluation Partnership. Principles to guide the M&E partnership. 21 June 2012

IFAD Food Security Learning Agenda Annex 1 of scoping study TORs


IFAD Meeting the 80 million target out of poverty: technical note


The Abdul Lateef Jamil Poverty Action Lab http://www.povertyactionlab.org


USAID Feed The Future http://feedthefuture.gov

USAID Feed the Future Learning Agenda http://feedthefuture.gov/resource/feed-future-learning-agenda


USAID What we do: Agriculture and Food Security (includes information on Increasing food Security through Feed the Future; Investing in agricultural research and development; expanding and enhancing agricultural markets and trade; supporting agricultural capacity
development; supporting global nutrition and; investing in sustainable agriculture).


### Annex B: List of people interviewed

<table>
<thead>
<tr>
<th>Name and position</th>
<th>Organisation</th>
</tr>
</thead>
</table>
| **Samuel Amanquah**  
Programme Officer, Monitoring and Evaluation  
3ie Agricultural Innovation Thematic Window Alternate Steering Committee member | AGRA Nairobi, Kenya  
http://www.agra.org |
| **David Ameyaw**  
Director, Strategy, Monitoring & Evaluation  
3ie Agricultural Innovation Thematic Window Steering Committee member | AGRA Nairobi, Kenya  
http://www.agra.org |
| **Richard Caldwell**  
Senior Programme Officer, Monitoring, Learning and Evaluation Office  
3ie Agricultural Innovation Thematic Window Alternate Steering Committee member | BMGF Seattle, USA  
http://www.gatesfoundation.org |
| **Thomas Elhaut**  
Director, Statistics and Studies for Development Division  
3ie Agricultural Innovation Thematic Window Advisory Committee member | IFAD Rome, Italy  
http://www.ifad.org |
| **Elvis Fraser**  
Senior Programme Officer, Evaluation  
3ie Agricultural Innovation Thematic Window Steering Committee member | BMGF Seattle, USA  
http://www.gatesfoundation.org |
| **Alessandra Garbero**  
Statistician  
Statistics and Studies for Development Division  
3ie Agricultural Innovation Thematic Window Alternate Steering Committee member | IFAD Rome, Italy  
http://www.ifad.org |
| **Emily Hogue**  
Monitoring and Evaluation, Bureau for Food Security Research  
Key Informant | USAID Washington DC, USA  
http://www.usaid.gov/ |
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Organization</th>
<th>Location</th>
<th>Website</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Key informant</td>
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<tr>
<td>Mercy Kamau</td>
<td>Senior Research Fellow</td>
<td>Tegemeo Institute of Agricultural Policy and Development</td>
<td>Nairobi, Kenya</td>
<td><a href="http://www@tegemeo.org">www@tegemeo.org</a></td>
</tr>
<tr>
<td></td>
<td>3ie Agricultural Innovation Thematic Window Advisory Committee member</td>
<td></td>
<td></td>
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<tr>
<td>Rachel Lambert</td>
<td>Senior Livelihoods Adviser, Agriculture Research</td>
<td>DFID</td>
<td>London, UK</td>
<td><a href="http://www.dfid.gov.uk">http://www.dfid.gov.uk</a></td>
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<td>3ie Agricultural Innovation Thematic Window Steering Committee member</td>
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<td>Key Informant</td>
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<tr>
<td>John Lynam</td>
<td>Independent Consultant</td>
<td></td>
<td>Nairobi, Kenya</td>
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<td></td>
<td>3ie Agricultural Innovation Thematic Window Advisory Committee member</td>
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<tr>
<td>Jane Kahaki Njuguna</td>
<td>Programme Officer-Economist, Monitoring and Evaluation</td>
<td>AGRA</td>
<td>Nairobi, Kenya</td>
<td><a href="http://www.agra.org">http://www.agra.org</a></td>
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<td></td>
<td>3ie Agricultural Innovation Thematic Window Alternate Steering Committee member</td>
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<tr>
<td>Markus Olapade</td>
<td>Evaluation Specialist</td>
<td>GDN-3ie</td>
<td>New Delhi, India</td>
<td><a href="http://www.3ieimpact.org">http://www.3ieimpact.org</a></td>
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<td>3ie Agricultural Innovation Thematic Window Steering Committee member</td>
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<td>Key informant</td>
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</table>
| **Marzia Perilli**  
M&E Consultant, Statistics and Studies for Development Division  
3ie Agricultural Innovation Thematic Window Steering Committee member | **IFAD**  
Rome, Italy  
[http://www.ifad.org](http://www.ifad.org) |
|---|---|
| **Yvonne Pinto**  
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3ie Agricultural Innovation Thematic Window Advisory Committee member | **ALINe**  
London, UK  
[http://www.aline.org.uk](http://www.aline.org.uk) |
| **Jyotsna Puri**  
Deputy Executive Director and Head of Evaluation  
3ie Agricultural Innovation Thematic Window Steering Committee member | **GDN-3ie**  
New Delhi, India  
[http://www.3ieimpact.org](http://www.3ieimpact.org) |
Annex C: Examples of generic interview checklists

Please note that these were subsequently tailored for each interview

**Generic Checklist for phone/Skype interviews with steering committee members**

1. Introductions of both/all included in the call
2. What is your organisation doing in relation to agricultural innovation?
3. Are you carrying out or planning any impact evaluations of any of the work that you are doing/supporting in agricultural innovation?
4. Is your organisation supporting impact evaluation of agricultural innovations through interventions not directly supported by your agency, e.g. through your research budget?
5. In your view what are the priority areas that the GDN-3ie Agricultural Innovation Thematic Window should focus on?

**Generic Checklist for phone/Skype interviews with advisory committee members**

1. Introductions
2. Background
3. What do you consider to be the “cutting edge” or critical aspects of agricultural innovation that are centre stage at present in relation to smallholders?
4. In your view what would you say are the pressing issues in agriculture that need innovation but have not yet been addressed?
5. What do you think are the key outcomes that are needed from such interventions?
6. What agricultural intervention areas particularly lack evidence of effectiveness?
7. Are there some types of agricultural interventions that may have been over prioritised?
8. Can you comment on which types of agricultural intervention are a) undergoing impact evaluation or b) lacking impact evaluations
9. What do you think should be the specific priority areas that should have impact evaluations funded through the 3ie thematic window?
10. Any other relevant information you may like to share

**Generic Checklist for phone/Skype interviews with other agencies**

1. Introductions
2. Background re 3ie agricultural innovation thematic window
3. What key areas is your agency focusing on in relation to agricultural innovation?

4. In your view what would you say are the pressing issues in agriculture that need innovation but have not yet been addressed?

5. What do you think are the key outcomes that are needed from such interventions?

6. What agricultural intervention areas particularly lack evidence of effectiveness?

7. Are there some types of agricultural interventions that may have been over prioritised?

8. Can you comment on which types of agricultural intervention are a) undergoing impact evaluation or b) be lacking impact evaluations?

9. What do you think should be the specific priority areas that should have impact evaluations funded through the 3ie thematic window?

10. AOB you think it would be useful to discuss
Annex D: The survey

Introduction and purpose of survey

This survey has been commissioned by the Global Development Network – International Initiative for Impact Evaluation (GDN-3ie). You are being contacted due to your expertise in either/both of agricultural innovation and impact evaluation. It should take you around ten minutes to complete the survey which has a deadline of Sunday 3rd March.

The survey will capture emerging research priorities questions related to agricultural innovation– what key areas are you working on, which need more - or less - attention, and the extent to which these interventions been subject to rigorous impact evaluation. Your responses will be used to identify priority intervention areas in agricultural innovation that still require impact evaluation. 3ie will be commissioning studies in these areas in partnership with AGRA, BMGF, DFID and IFAD.

Thank you very much for your response.

Respondent’s details (position, organization, country/region based in, country/region working in)

National of (select one)
- Developed Country
- Developing Country

Position:

Area of expertise:

Type of organisation (select one):
- Developing country government ministry or agency
- Agricultural research agency
- Other research body (including Universities and Think Tanks)
- NGO
- Developed country donor agency
- Private consultancy
- Other

Region of work or expertise (please select only one)
- Africa
- East Asia and Pacific
- Europe and Central Asia
- Latin America and Caribbean
- Middle East and North Africa
- South Asia

Agricultural interventions you are working on or supporting

1. Which of the following 10 types of agricultural intervention are you or your organisation working on/supporting (select those that apply)?
   a. Higher level intervention categories
   b. Specific interventions within each higher level intervention category
Agricultural interventions that are needed but not happening

2. In your view what would you say are the 3 most pressing issues in agriculture that need innovation but have not been addressed?
   a. Higher level intervention categories
   b. Choose the single most important specific intervention within each higher level intervention category you have selected

Agricultural intervention areas that lack evidence of effectiveness

3. In your view which 3 intervention areas particularly lack evidence of effectiveness?
   a. Higher level intervention categories
   b. Choose the single most important specific intervention within each higher level intervention category you have selected

Agricultural intervention areas that have been/are being given too much emphasis

4. Select any of these areas or agricultural intervention that you think have been over-emphasised and no longer need a high level of prioritization.
   a. Higher level intervention categories
   b. Specific interventions within each higher level intervention category you have selected

Impact evaluation/s of agricultural interventions

5. Have you or your organisation conducted any impact evaluations in the following areas?
   a. Higher level intervention categories
   b. Specific interventions within each higher level intervention

6. Comments/Feedback (up to 100 words in box)
Higher level intervention categories (priority agricultural innovation intervention areas)

1. Policy
2. Research and Development
3. Adopting more productive technologies
4. Agriculture Service Provision
5. Producer organisations
6. Markets and Value Chains
7. Resilience and Adaptation to Climate Change
8. Finance
9. Gender Equality and Women’s Empowerment
10. Nutrition

Specific interventions within each higher level intervention category

1. Policy
   a. Policies regarding land reform, property rights and large scale investments in commercial agriculture
   b. Policy regarding food security and/or nutrition
   c. Policy regarding agricultural inputs
   d. Policy regarding climate change and adaptation
   e. Policy regarding rural infrastructure, markets and trade
   f. Policy on public investment in agricultural research, development and value chains
   g. Policy to ensure gender equitable access to inputs, services and markets
   h. Other:

2. Research and Development
   a. Research into upstream crop and livestock breeding and/or biotechnology
   b. Research into varietal improvement at national level through farmer participatory breeding
   c. Research into soil fertility and trials including integrated soil fertility management research
   d. Research into sustainable intensification
   e. Research into “climate-smart” agriculture (policies, practices and financing for food security, adaptation and mitigation)
   f. Other:

3. Adopting more productive technologies
   a. Education and capacity building of men and women scientists and technicians
   b. Agriculture technology (seed, inputs, equipment) innovation and development (including integrated soil fertility management and conservation agriculture)
   c. Scaling up of technologies
   d. Seed storage and processing and/or private sector engagement in bulking up seed supplies
e. Gender-differentiated fertilizer access models, mechanisms, policies and approaches
f. Input subsidy programmes
g. Other:

4. **Agriculture Service Provision**
   a. Agriculture information services (including ICTs/mobile phones)
   b. Public sector agricultural extension provision
   c. Private sector agricultural extension provision
d. Mechanisms to enhance technology innovation, adoption and scaling up
e. Input provision by agro dealers and/or producer organisations
f. Gender issues in and impacts of various agriculture service provision approaches and mechanisms
g. Other:

5. **Producer organisations**
   a. Developing new institutional arrangements for/with/of producer organisations
   b. Building technical and vocational skills of producers/producer organisations
c. Producer organisation involvement in providing agriculture service provision
d. Enhancing producer organisation roles in value chains and markets
e. Other:

6. **Markets and Value Chains**
   a. Post production value addition
   b. Commercialisation of smallholder farms and farming
c. Developing and supporting agro-dealers
d. Product standards & quality control
e. Push mechanisms/incentives for smallholders to engage in the market (e.g. safety net payments, subsidies etc.)
f. Pull mechanisms to include smallholders in the market (e.g. facilitating their engagement in value chains, enhancing small scale access to output markets etc.)
g. Commercial arrangements (for example private sector partnerships, warehouse receipt systems, commodity exchanges)
h. Other:

7. **Resilience and Adaptation to Climate Change**
   a. Agricultural productivity interventions that improve household resilience to shocks and/or climate change
   b. Breeding of seeds to reduce negative consequences of drought, floods and climate change threats
c. Sustainable intensification
d. Economic growth strategies for resilience
e. Diversification of farming systems
f. Gender and equity concerns in relation to resilience and adaptation to climate change
g. Other:

8. **Finance**
   a. Insurance
   b. Subsidies
   c. Microfinance/credit
   d. Mobile money programmes
   e. New forms of innovative finance (e.g. loan guarantee funds, use of venture capital, social impact bonds etc.)
   f. Longer term agricultural finance (to support structural transformation and/or establishment of large commercial farms)
   g. Other:

9. **Gender Equality and Women’s Empowerment**
   a. Building gender equality and women’s empowerment to enhance food security
   b. Relative consequences of enhanced agricultural innovation/productivity for men versus women
   c. Strengthening women’s access to assets
   d. Gender impacts of increasing the commercialisation of agriculture
   e. Effectiveness and impacts of training male versus female scientists
   f. Other:

10. **Nutrition**
    a. Technologies, products and/or approaches that lead to improved diet and nutritional outcomes
    b. Integrated agriculture, nutrition and health programmes and policies
    c. Biofortification
    d. Relationship and impact of commercialisation of crops on nutrition
    e. Agricultural pathways for better nutrition outcomes
    f. Other: