

# **PROLINNOVA-GFAR INNOVATION SURVEY: Findings from a survey conducted amongst members of the Prolinnova network about their understanding of innovation**

**Submitted to:**



**Submitted by:**



**Institute of Natural Resources NPC  
Dr Brigid Letty & Wesley Evans**  
Email [bletty@inr.org.za](mailto:bletty@inr.org.za)  
Tel: +27 (0)33 346 0796  
Web: [www.inr.org.za](http://www.inr.org.za)  
Scottsville, Pietermaritzburg, South Africa  
A Proudly Level 1 BBBEE Contributor

Representing



in partnership with

Sharad Rai



INNOVATIONS DEVELOPMENT PARTNERS

**INR REPORT NUMBER 584/22**

**31 October 2022**

## Table of contents

Acronyms.....	4
Executive Summary .....	5
1 Background.....	12
2 Methodology .....	12
3 Results and discussion .....	13
3.1 Basic information about respondents .....	13
3.1.1 Countries represented .....	13
3.1.2 Gender.....	14
3.1.3 Type of organisation .....	14
3.2 What is innovation?.....	15
3.2.1 What respondents thought of as innovation .....	15
3.2.2 Statements about innovation.....	15
3.2.3 Terms associated with innovation .....	16
3.2.4 Whether innovation is always beneficial.....	17
3.2.5 Whether an innovation can be transferred effectively to another place .....	17
3.2.6 Whether an innovation must be new .....	18
3.2.7 Type of changes made during the innovation process .....	18
3.2.8 Impact of successful innovation .....	19
3.2.9 Relevant forms of knowledge for innovation.....	19
3.2.10 Importance of codified, scientific and technical knowledge.....	20
3.2.11 Importance of informal processes of learning and experience-based know-how	21
3.3 Why focus on innovation? .....	22
3.3.1 Importance of innovation for organisations supporting agricultural development	22
3.4 Innovation for sustainable agrifood systems.....	23
3.4.1 Area of the system where things need to be done differently .....	23
3.4.2 Most relevant innovation for building sustainable systems .....	24
3.4.3 Actors that play the most important role in the system .....	24
3.5 What allows for innovative organisations? .....	28
3.5.1 Organisational factors that make a context ripe for innovation .....	28
3.5.2 Factors that would help an organisation be more innovative .....	28
3.6 Future priorities: Best bets for innovations .....	31
3.7 Local innovation and farmer-led joint innovation .....	32
3.7.1 Factors that stimulate innovation by small-scale farmers .....	32

3.7.2	Roles of small-scale farmers in the innovation process.....	32
3.7.3	Support requirements for farmer-led innovation development .....	33
3.7.4	Key roles of external agents to support local innovation processes.....	35
3.7.5	Most important actors for supporting local innovation and joint experimentation 36	
3.7.6	Reasons why farmer-led joint experimentation or innovation is important .....	37
4	Comparison with FAO results.....	37
4.1	Commonalities .....	37
4.1.1	Understanding innovation .....	37
4.1.2	Innovation for sustainable agrifood systems .....	38
4.2	Divergence .....	40
4.2.1	Statements about innovation.....	40
4.2.2	Terms associated with innovation .....	40
4.2.3	Whether innovation is always beneficial.....	41
4.2.4	Importance of innovation for organisations supporting agricultural development 41	
4.2.5	Actors that play the most important role in innovation .....	42
4.2.6	Best bets for innovation .....	42
4.3	Synopsis of respondents' final thoughts .....	43
4.3.1	Understanding the concept of local and joint innovation.....	43
4.3.2	What is needed to support local innovation? .....	44
4.3.3	What is needed to drive policy change? .....	46
4.3.4	Survey process .....	47
5	Concluding remarks .....	48
5.1	Understanding the concept of (local) innovation.....	48
5.2	Innovation supports adaptation .....	48
5.3	Factors that make an organisation more innovative .....	49
5.4	General conclusions .....	49
5.5	Recommendations for different actors.....	49
	Annexure 1: Detailed recommendations related to local innovation and joint innovation .....	52
	Annexure 2: List of publications mentioned by respondents .....	56
	Annexure 3: Prolinnova-GFAR Innovation survey form .....	57
	Annexure 4: FAO Innovation survey form.....	64

## ACRONYMS

AIS	agricultural innovation system
CBO	community-based organisation
CP	Country Platform
FAO	Food and Agriculture Organization of the United Nations
FO	farmer organisation
GFAR	Global Forum on Agricultural Research and Innovation
INR	Institute of Natural Resources NPC
IP	Intellectual Property
IST	International Support Team
OIN	Office of Innovation
NGO	non-governmental organisation
PID	Participatory Innovation Development
POG	Prolinnova Oversight Group
PVT	private
SRC	Subregional Coordinator
UN	United Nations

## EXECUTIVE SUMMARY

### Background and methodology

The Institute of Natural Resources NPC (INR), representing the Global Prolinnova network, was appointed by the Global Forum on Agricultural Research and Innovation (GFAR) hosted by the Food and Agriculture Organization of the United Nations (FAO) to carry out a survey on local innovation.

Prolinnova is a global network that promotes local innovation in ecologically oriented agriculture and natural resource management. Besides supporting local innovation by farmers, the network encourages the use of various participatory approaches that involve farmers as contributors to the innovation process, rather than being passive recipients. Prolinnova is a multistakeholder network and its members represent the different actors and constituencies of agricultural innovation systems (AISs).

As a follow-up to the survey on innovation involving FAO staff and consultants in 2022, GFAR, in collaboration with Prolinnova and in agreement with the Office of Innovation in FAO (OIN), decided to administer a modified version of the same survey, broadening the respondent population beyond FAO staff and consultants, with two purposes: i) to better inform GFAR constituencies of the types of innovation (both processes and products ) that can emerge when farmers are squarely placed at the centre of the process, with a view to better understand the implications for providing appropriate support to them as a key contribution to pro-poor transformation of AISs; and ii) to offer to the FAO Science and Innovation Strategy (in the making) up-to-date and hands-on information on a particular, relevant area of farmer-centric innovation that may deserve adequate consideration in the document.

The original FAO questionnaire was adapted and was then circulated throughout the Prolinnova network using coordinators of Country Platforms, Subregional Coordinators and various email groups. The completed forms, which covered 27 countries, were then captured to allow for analysis of the results. From approximately 800 members of the Prolinnova network, a total of 106 responses were obtained.

### Results

#### The concept of innovation

In terms of characteristics of the respondents, 64% were men and the majority (42%) worked for NGOs. Regarding their understanding of the concept of innovation, 56% saw innovation as a process, rather than a product, an idea or an invention. The majority of respondents said that “innovation was driven by need” when presented with a number of statements about innovation to select from. When presented with terms that they associated with innovation, and allowed to make multiple selections, the one most frequently selected was “local knowledge and know-how”, selected by approximately 85% of respondents, followed by “adaptation” (selected by ~65%) and “science and technology” (selected by ~55%). Approximately two-thirds of the respondents believe that “innovations are always beneficial”, and 84% of respondents indicated that innovations cannot just be transferred from one context to another. Innovations are recognised as being novel, but only 2% of respondents thought they had to be “new in the world”, which could be called inventions. Most respondents (~80%) indicated that they should only be new to the context in which they are introduced, and approximately 40% said that the innovation was likely to bring about incremental changes,

while only 2% felt that it would bring about radical/disruptive changes. The majority (almost 60%) felt that it could include both types of changes.

#### Contribution of knowledge to innovation

Another element considered was the types of knowledge that contribute to innovation. Considering all responses provided, 44% of these were for “knowledge – being actionable information that aids decision-making”, rather than wisdom (25%), information (20%) or data (11%). To further explore perceptions about relevant knowledge sources for innovation, respondents were asked to score the importance of codified, scientific technical knowledge – the most frequently given score was a 4 out of 5. More than 50% of the respondents saw informal processes of learning and experience-based know-how as being highly important (giving it a score of 5).

#### The need for organisations to support innovation

When respondents were asked to select the statements that best reflected the importance of innovation for organisations supporting agricultural development, it became clear that this was certainly not because “there is interest in innovation amongst key funders and decision-making structures”, but rather because innovation is a way of addressing the challenge that solutions do not work everywhere and that capacity to innovate is key for local adaptation. When the responses were disaggregated by organisation, the most common response for those respondents from “education”, “government”, “private sector” and “NGOs” was that innovation is important because the same solution does not work everywhere and thus innovation allows for local adaptation. Interestingly, this option was not selected at all by the respondents from farmer associations and was less frequently selected by members of community-based organisations.

#### Innovation for sustainable agrifood systems

Considering different aspects of agrifood systems, respondents were asked to select the area where they felt there was the greatest need to innovate (i.e. do things differently). The area that was most frequently selected was “sustainable management of natural resources”. Given that Prolinnova promotes innovation related to ecologically oriented agriculture and natural resource management, this is reflective of network priorities. Respondents were also asked about the types of innovation that are most relevant for building sustainable agri-food system, and were allowed to select multiple responses. While technological innovation was selected by approximately 70% of respondents, institutional and social innovation were also strongly recognised as being the most relevant forms of innovation required for building sustainable agri-food systems, mentioned by approximately 60% and 50%, respectively. These are aspects that are often neglected by formal research organisations. When asked which actors play the most important role in innovation in agrifood systems, the option selected most frequently was “research organisations and universities”, which comprised almost 60% of all responses, followed by the farmer category (including farmers, fisherfolk, pastoralists, livestock herders, indigenous people and CBOs), which comprised only around 20% of all responses. This was an unexpected result, given the guiding principles of the network.

#### Innovation within development organisations

The respondents felt it was most important to “create safe spaces for staff to innovate and experiment” in order to support innovation within organisations. This is, in turn, the ethos that also provides a safe space within which farmers are encouraged to innovate and experiment. “Better coordination and collaboration across the organisation” is another factor that was recognised as important by respondents. Innovativeness within organisations that support

agricultural development was further explored by asking respondents to select factors (knowledge, people, rules & processes, ways of working, or other) that encourage or facilitate innovativeness. By far, there is a perception amongst the respondents that it is the people in the organisation that have the largest impact on achieving innovativeness within an organisation (specifically, how they are motivated within the organisational setting to explore new ideas and experiment with new approaches).

### Best bets for innovation

In terms of areas where respondents felt that change and innovation were required, the option most frequently selected was “to strengthen local and national capacities to innovate”, which comprised approximately 30% of responses. Another area where innovation was perceived to be necessary was in strengthening of markets (comprising ~18% of responses). Areas that received substantially less interest were “One Health” (with which many of the respondents may not be familiar) and “biotechnologies”, which may have been perceived by many as referring to genetically modified organisms.

### Local innovation and farmer-led joint innovation

This section was specific to the Prolinnova-GFAR survey, and the questions had not been included in the initial FAO survey. The questions relate to concepts that are strongly promoted by the Prolinnova network. There were varied perceptions regarding the factors that stimulate innovation, but that which ranked highest was “a need for food security”, followed by “a need for increased production”.

Respondents were asked to share their perceptions regarding the roles that small-scale farmers play in the innovation process. The responses reflected Prolinnova guiding principles clearly, with the two most prominent responses being to “develop their own innovations” and “to work with other actors to develop innovations”, with the option that received the least responses (other than “other”) being “evaluating externally-derived innovations”. This demonstrates that members of the Prolinnova network favour supporting local innovation processes rather than introducing ideas and technologies from outside.

When asked what support was required for farmer-led innovation development, the majority of respondents indicated that participatory multistakeholder or joint stakeholder approaches are the most important forms of support required, rather than financial or technical support. When looking at the responses disaggregated by organisation type, it is interesting to note that this was the case for all categories except “farmers association”, where financial support and technical inputs were identified as slightly higher needs. This could be because they are more conscious of their resource limitations.

### Roles of actors supporting local innovation processes

The survey explored the types of roles that external agents can play to support local innovation processes. The role most frequently selected was to “improve local innovations jointly with farmers”, which was selected as an option by more than 70% of respondents. Again, this reflects the priorities of the Prolinnova network.

Respondents were also asked to select which actors they thought were most important for supporting innovation and joint experimentation. There were three groups that were selected most frequently, namely (1) agricultural advisory services/development agents, (2) farmer organisation staff and members, and (3) researchers.

### Importance of farmer-led joint innovation

The respondents were also asked to select options that reflected why farmer-led joint experimentation or innovation is important. The two options most frequently selected were (1) to combine different sources of knowledge, and (2) to develop locally appropriate solutions to the challenges that farmers face.

### **Synopsis of respondents' final thoughts**

In the survey, there was an opportunity for respondents to share some final thoughts related to innovation. Some of the comments that clearly reflect the guiding principles of Prolinnova include: (1) "Innovations must be practical and driven by local needs, and their development requires sufficient funding"; (2) "Farmer-led joint experimentation, which involves multiple actors, is key to developing locally appropriate solutions, and critical to address systemic challenges in the agrifood systems"; (3) "Individual farmers' as well as communities' capacity to experiment, innovate and adapt to change should be developed. We need to give emphasis to the end products or results of supporting local innovation and demonstrate to farmers that it has tangible benefits"; (4) "Local financing mechanisms that absorb risk are needed to drive innovation in the face of uncertainty"; and (5) "We need evidence that innovations have contributed substantially to improving the means and living conditions of small-scale family farmers in a particular locality, as this will justify the collaboration of farmers with other actors".

### **Comparison with FAO results**

A comparison between the FAO and the Prolinnova-GFAR survey results shows that there exist both commonalities and divergence in the responses to the survey questions. For example, in both survey populations, most respondents perceived innovation as a process, with fewer perceiving innovation to be an idea or an invention, and almost all FAO and Prolinnova-GFAR respondents indicating that an innovation cannot be transferred effectively from one context to another.

In terms of knowledge types relevant for innovation, both groups of respondents valued "knowledge (actionable information that aids decision-making). However, while FAO respondents placed fairly equal values on other types of knowledge (data, information and wisdom), the Prolinnova-GFAR respondents also gave substantial value to "wisdom", which we can perhaps assume refers to the wisdom held within communities.

In terms of perceptions regarding areas where innovation is required (i.e. things need to be done differently), the majority of respondents in both groups selected "sustainable management of natural resources".

Divergence was noted regarding the selection of statements related to innovation, where the majority of Prolinnova-GFAR respondents chose "innovation is driven by need" (which was an added option in the P-GFAR survey), followed by "family farmers are the most important innovators in agriculture". There was very little selection of the option "innovation brings progress". With the FAO respondents, a few selected the statement that "family farmers are the most important innovators in agriculture", but the majority, approximately 60%, selected the statement "innovation brings progress".

Similarly, when considering the alignment of various terms with innovation, more than 80% of the Prolinnova-GFAR respondents selected "local knowledge and know-how" (see Figure 5), while this option was selected by only around 50% of FAO respondents. In contrast, more than 70% of the FAO respondents selected "science and technology", while this option was selected by only about 55% of Prolinnova-GFAR respondents. There were some options



where there was closer alignment between the perceptions of the Prolinnova-GFAR respondents and the FAO respondents, in particular “adaptation”, which was selected by approximately 50% of the FAO respondents and approximately 60% of the Prolinnova-GFAR respondents.

Regarding the importance of innovation for organisations that support agricultural development (and FAO in particular), while 55% of the Prolinnova-GFAR respondents selected the option that “in agrifood systems the same solution does not work everywhere so the capacity to innovate is key for local adaptation”, while the FAO respondents’ view was more spread across three options, of which “innovation is the key to creating sustainable agrifood systems and ending hunger” obtained the most (35%) of all responses. Once again, the results demonstrate that within the Prolinnova network, innovation is seen as a key mechanism to allow for adaptation.

## Conclusions

A number of clear conclusions could be drawn from the survey. Regarding their understanding of the concept of (local) innovation, most Prolinnova-GFAR respondents saw innovation as a process that has outcomes, which are the innovations. A key element of local innovation is that is not limited to technical solutions. Respondents clearly confirmed that social and institutional innovations are also important for building sustainable agrifood systems.

The results of the Prolinnova-GFAR survey support the perception that innovation by farmers allows them to adapt to change and to challenges that they encounter. When respondents were asked to select terms that they associate with innovation, “adaptation” was the second most frequently selected option. The role that innovation plays in supporting adaptation was also reflected in the options selected in terms of reasons why farmer-led joint experimentation / innovation is important, in particular, the option “to develop locally appropriate solutions to farmers’ challenges”.

Innovation is not something that relates only to the development context in which organisations work, it also relates to the organisations themselves. It allows them to adapt to changes that they encounter. Organisations also need to decide on the areas in which they wish to support innovation, where they think change is most needed to build sustainable agrifood systems. From the Prolinnova-GFAR survey, the area that respondents found to be most important was strengthening of local and national capacities to innovate, rather than focusing on a specific topic.

To conclude, what is very clear from the results of the Prolinnova-GFAR survey is that the principles and values that define the Prolinnova network are strongly reflected in perceptions expressed by the respondents. The respondents, who represent a range of stakeholders that play a role within AISs, clearly demonstrated that they recognise that innovativeness is necessary for adaptation to challenges, including climate change, and that external agents need to work with local innovators to find solutions to these challenges.

## Recommendations

Emerging from the outcomes of the survey, which are largely supported by the “final comments” that were provided by respondents, a set of recommendations has been derived for key stakeholder groups towards supporting local innovation and joint innovation processes.

Firstly, there are **recommendations related to advocacy**, which are aimed at organisations that influence the programmes and policies of government departments, donors and so on:

- Identify programmes and policies that need to be revised to accommodate and encourage local innovation and Participatory Innovation Development (PID).
- Encourage donors to allow for research agendas to be driven by what farmers are already trying to do to solve their challenges.
- Support participatory farmer-led multistakeholder / joint innovation approaches.
- Funding can be put in the hands of farmers to support local innovation, allowing them to define the agenda.
- Development policies and programmes of donors should not focus only on high-tech innovations, as many are not appropriate for small-scale family farmers.
- Donors need to consider how to reduce the risk of innovation, especially for small-scale farmers.
- NGOs need to take steps to draw in researchers and advisors into joint innovation processes towards mainstreaming the approaches.

A second set of recommendations is related to **encouraging innovativeness and recognising the contribution of different knowledge sources**, especially farmer knowledge:

- Promote the process / ethos of innovation and not just “innovations”.
- Recognise that farmers can be innovators, not just recipients of innovations/ technologies.
- Recognise that different sources and types of knowledge have a role to play in developing solutions to challenges.
- Encourage testing and adaptation of innovations and technologies by farmers and community members.
- Recognise innovations that are new to an area and not completely new inventions.
- Promote local innovation and farmer-led joint innovation as a way of improving livelihoods of family farmers.
- Create awareness about local innovation and participatory innovation development.
- Encourage/hold fairs and competitions to recognise and encourage local innovation.

**Evidence is required to influence policymakers, practitioners and any other actors**, which calls for the following recommendations:

- Documentation of innovation processes needs to include the roles that different actors have played (including external facilitators if they exist).
- Share experiences and outcomes of multistakeholder innovation processes to create awareness about the potential benefits of moving away from a technology-transfer model.
- Monitor the impacts of innovations and outcomes of joint innovation processes (including a measure of shared values between stakeholders towards a common objective or objectives).
- Monitor the impacts of engaging farmers in processes of innovation and experimentation.

A set of **recommendations applies to the implementation of programmes and projects** that support innovation:

- Do not assume that local innovations / joint innovation outcomes can be introduced to other locations just because of farmer involvement in their development.
- Encourage incremental changes to existing innovations and technologies to improve them.

- Recognise that not all innovations need to be externally validated, especially if other local farmers find them to be good.
- Do not limit innovation to technological developments, also consider social and institutional developments.
- Provide safe spaces for innovation and experimentation where failure is recognised as a possible outcome and a source of learning.
- Some local innovations can be shared but farmers should be encouraged to test and adapt them as required.
- Consider that innovation needs to be supported by other interventions such as supporting market access and value addition (which may provide scope for further local / joint innovation).
- Multistakeholder processes require strong facilitation to ensure that farmers' voices are heard.
- Introduce new instruments that support multistakeholder innovation, such as well facilitated innovation platforms that include farmers.

Some **recommendations were specifically targeting organisations that aim to mainstream these approaches** within their own work programmes:

- Integrate the concepts of local innovation and joint innovation processes into universities so that these concepts become recognised academically and so that students are exposed to alternative ways of agricultural development and research.
- Modify job descriptions of extension agents / advisors so that they can identify local innovations and support joint innovation processes.
- Bring about changes within organisations in terms of how they reward staff in order to foster an appreciation of local innovation and of engaging in joint innovation processes.

The last set of **recommendations** is related to **supporting local and joint innovation processes**, namely:

- Strengthen farmers' capacity to experiment.
- Strengthen researchers' capacity to engage in farmer-led joint innovation processes.
- Strengthen partnerships with actors that can play a role in multistakeholder innovation processes.
- Strengthen local and national capacities to innovate.
- Intellectual property (IP) rights of innovators need to be protected where there are innovations that can be 'stolen' and commercialised by other parties. IP can be protected passively by documenting it, or it can be formally protected with a patent.

The implementation of these recommendations will strengthen the support provided to local innovation as well as farmer-led joint innovation processes aimed at achieving sustainable agrifood systems.

## 1 BACKGROUND

The Institute of Natural Resources NPC (INR), representing the Global Prolinnova network, was appointed by the Global Forum on Agricultural Research and Innovation (GFAR) hosted by the Food and Agriculture Organization of the United Nations (FAO) to carry out a survey on local innovation.

Prolinnova is a global network that promotes local innovation in ecologically oriented agriculture and natural resource management. Besides supporting local innovation by farmers, the network encourages the use of various participatory approaches that involve farmers as contributors to the innovation process, rather than being passive recipients. Prolinnova is a multistakeholder network and its members represent the different actors and constituencies of agricultural innovation systems (AISs).

As a follow-up to the survey on innovation made among FAO staff and consultants in 2012, GFAR, in collaboration with Prolinnova and in agreement with the Office of Innovation in FAO (OIN), decided to field its own survey, with two purposes: i) to better inform GFAR constituencies of the types of innovation (both products and processes) that exist where farmers are squarely placed at the centre of the process, with a view to better understand the implications for providing appropriate support to them as a key contribution to pro-poor transformation of AISs; ii) to offer to the FAO Science and Innovation Strategy (in the making) up-to-date and hands-on information on a particular, relevant area of farmer-centric innovation that may deserve adequate consideration in the document.

The assignment will also contribute to the following organisational objective of the FAO, namely to *enable more inclusive and efficient agricultural and food systems* and in particular provide strategic information on how to better support farmer-led innovation (SO4).

The INR was contracted to undertake a survey on farmer-led innovation across several countries, based on the Prolinnova network, and to deliver a global report based on the findings.

## 2 METHODOLOGY

The questionnaire that was originally developed for the FAO Innovation Survey (See Annexure 3) was modified as follows for the Prolinnova-GFAR innovation survey. Firstly, the questions that related specifically to the FAO were removed because they were not relevant to respondents that are not employed by the FAO. Secondly, a section was added to the questionnaire that focused specifically on local innovation and farmer-led joint innovation processes, which are termed 'Participatory Innovation Development' (PID), by members of the Prolinnova network. The questionnaire was translated into French, for respondents from West and Central African countries, and Portuguese for respondents from Mozambique.

After consultation with members of the Prolinnova International Support Team (IST), the Subregional Coordinators (SRCs) responsible for West & Central Africa and Eastern & Southern Africa, and the Regional Coordinator for Asia, a decision was taken to circulate the questionnaire as an MS Word document rather than as an electronic survey form. The reason for this was that the Prolinnova network has a range of different stakeholders and this was seen to be the most accessible method. The MS Word version was, however, converted into an MS Forms version for capturing the responses, as it was found to be an efficient method that reduced the opportunity for introducing errors during capturing of data. Circulation of the questionnaire within the Prolinnova network made use of the following avenues:

- An email was circulated on the Prolinnova Google Group.
- Direct emails were sent to selected network members requesting them to complete the survey.
- Emails were sent by the SRCs to the Country Coordinators of the Country Platforms (CPs) within their subregion requesting them to circulate the survey form within their platforms.
- Email requests were sent to members of the Prolinnova Oversight Group (POG) and the list of 'Friends of Prolinnova'.

To encourage the completion of surveys, a decision was taken by the project team in consultation with the IST to offer four awards (two per region) for Asia and Africa for the CP that was able to generate the most responses. These awards were transferred to the host organisations of the CPs with the understanding that they would be used to support networking activities for the CPs.

From approximately 800 members of the Prolinnova network, a total of 106 responses were obtained. These were captured onto the electronic MS Form and this allowed for identification of some errors in the responses to questions (for example, providing too few or too many responses to questions with options). Emails were sent to all respondents where such issues were identified in an effort to ensure completeness/correctness of data.

### 3 RESULTS AND DISCUSSION

The results of the Prolinnova-GFAR survey are summarised in this section of the report.

#### 3.1 Basic information about respondents

##### 3.1.1 Countries represented

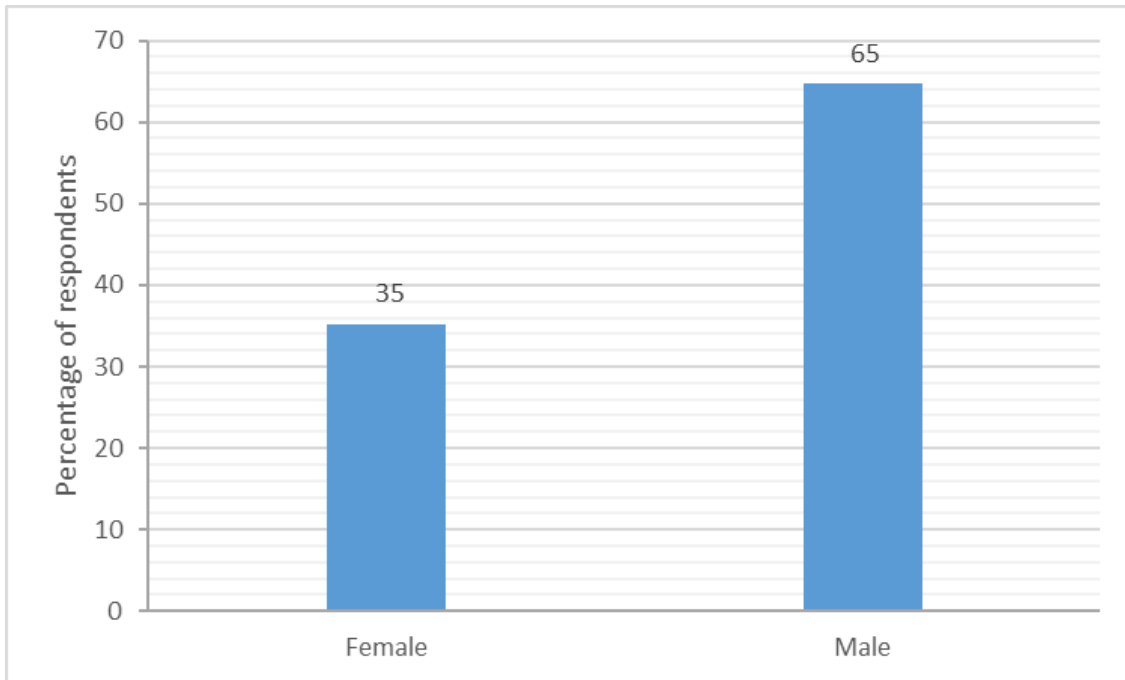
The respondents who completed the survey came mainly from countries in Africa and Asia, but there were also some respondents from South America, Central America and the Global North. This largely reflects the spread of Prolinnova Country Platforms.

**Table 1: Summary of countries represented by respondents**

<b>Africa</b>	<b>%</b>	<b>Asia</b>	<b>%</b>
Benin	1.90	Cambodia	2.86
Burkina Faso	1.90	India	0.95
Cameroon	1.90	Nepal	9.52
Ethiopia	2.86	Philippines	1.90
Ghana	2.86	<b>Latin America</b>	
Kenya	11.43	Argentina	0.95
Malawi	0.95	Costa Rica	0.95
Mali	1.90	Peru	0.95
Mozambique	11.43	<b>Global North</b>	
Senegal	9.52	Belgium	0.95
South Africa	5.71	Canada	1.90
South Sudan	5.71	Germany	2.86
Sudan	10.48	Netherlands	0.95
Tanzania	0.95	United Kingdom	1.90
Uganda	3.81		

### 3.1.2 Gender

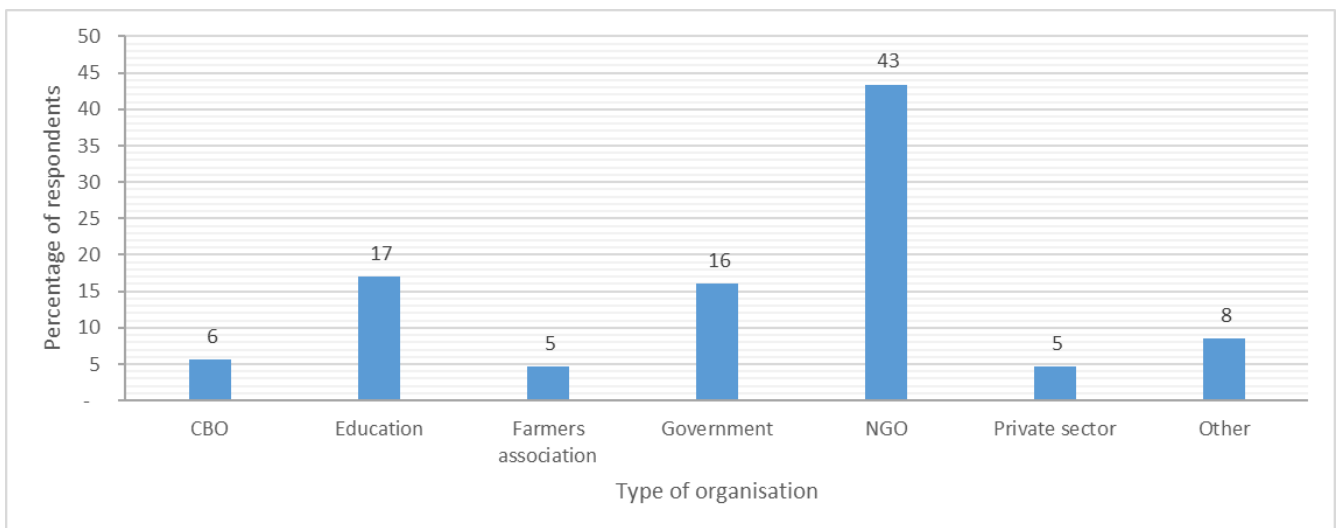
Despite efforts to address gender issues within Prolinnova, 65% of the respondents were men, which may suggest a need to continue seeking to achieve gender equity within the network. For some of the questions, when the data were disaggregated on the basis of gender, clear differences were noted, specifically in Figure 14, which shows respondents' views about the importance of informal processes of learning and experience-based know-how.



**Figure 1: Gender composition of the respondents (n=105)**

### 3.1.3 Type of organisation

From Figure 2 it is clear that almost half of the respondents work for non-governmental organisations (NGOs), which is reflective of the fact that Prolinnova is an NGO-led multistakeholder network. Education institutions and government made up another third of the respondents.



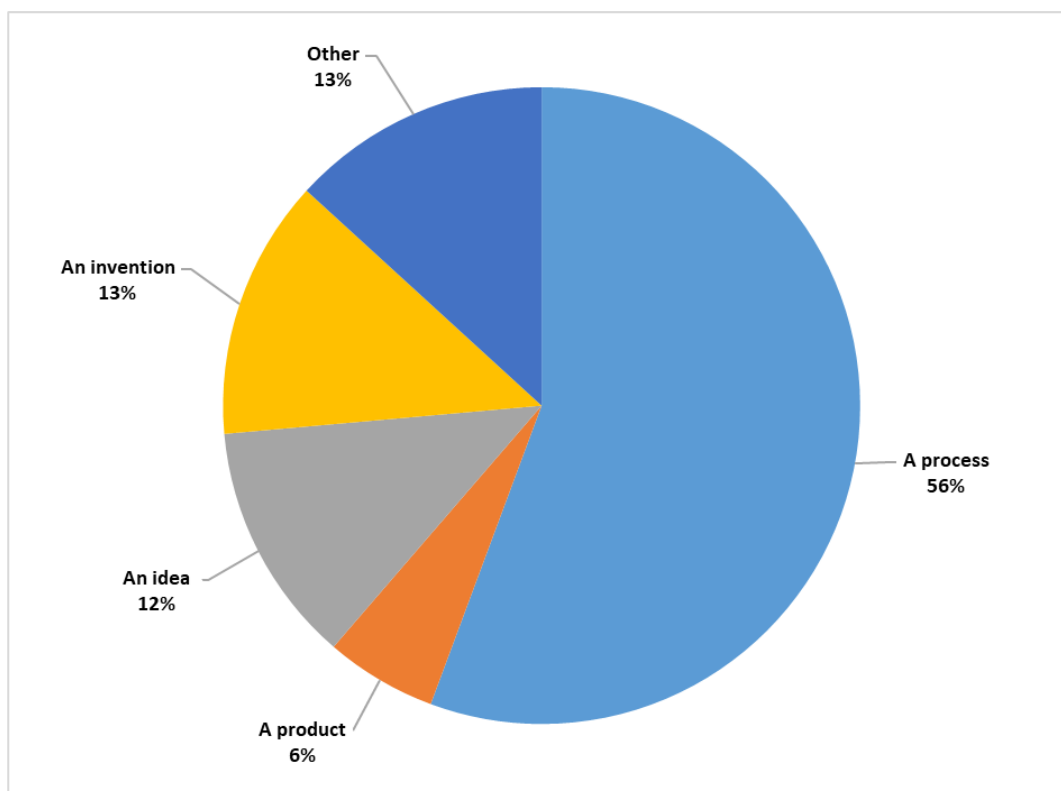
**Figure 2: Types of organisations for which respondents work (n=106)**

### 3.2 What is innovation?

The following sub-sections provide an indication of what respondents understand about the term 'innovation'.

#### 3.2.1 What respondents thought of as innovation

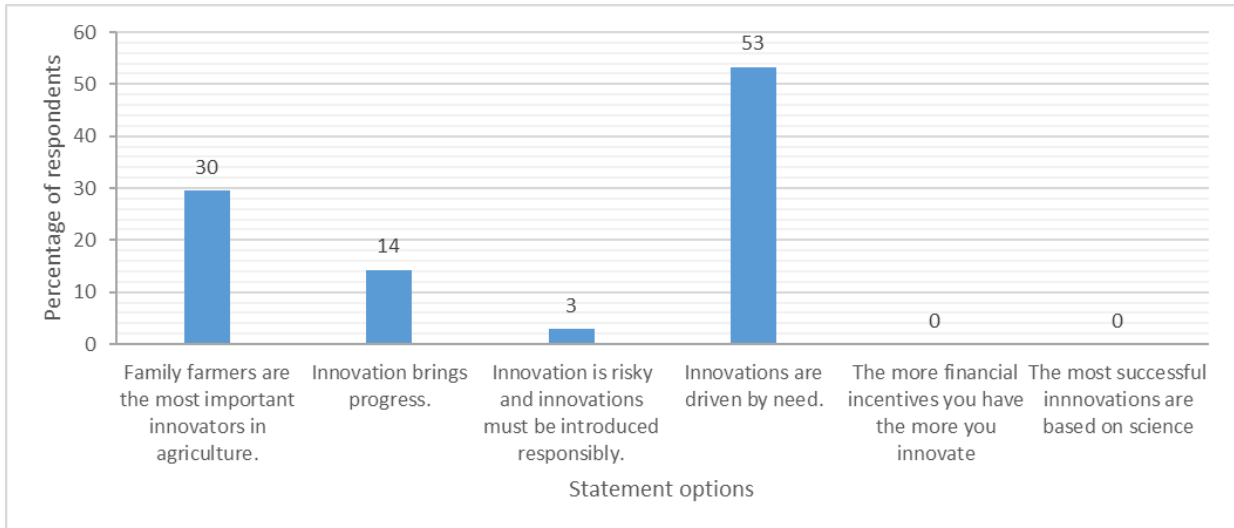
Almost 60% of respondents understand innovation to be a process. Prolinnova has long sought to encourage a focus on the process of innovating (also termed innovation), rather than a focus on the outcomes of the innovation process (which are termed innovations). Almost 30% of respondents saw innovation as an idea or invention, and only 6% saw innovation as a product.



**Figure 3: Respondents' basic understanding of the term 'innovation' (n=106)**

#### 3.2.2 Statements about innovation

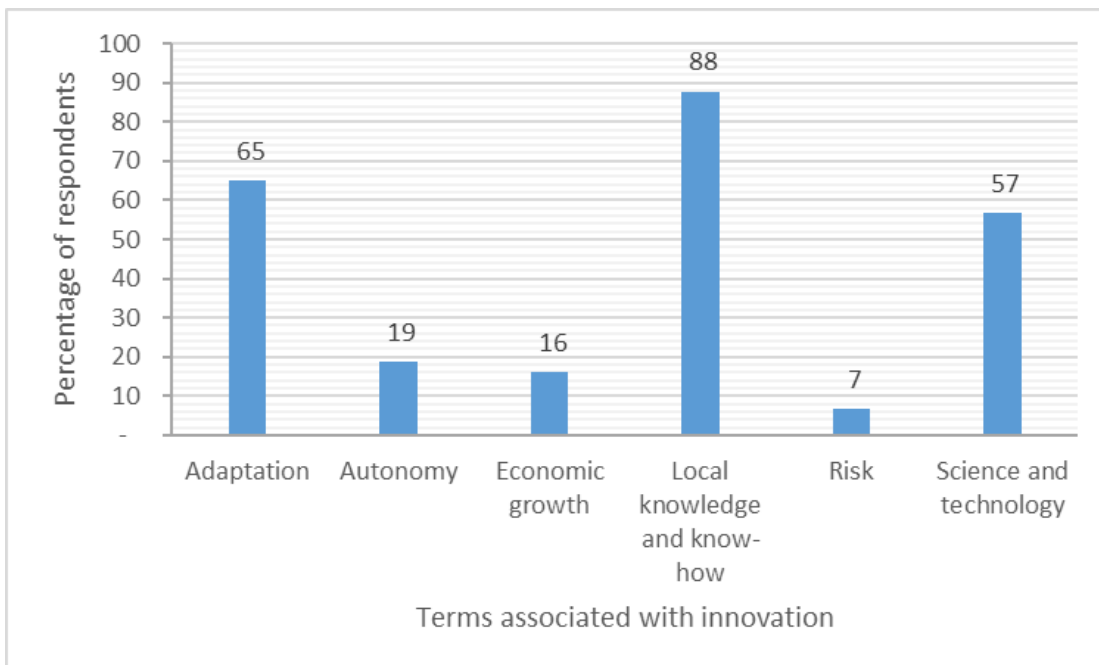
When respondents were asked to select from six options the statement related to innovation that they most strongly agreed with, as shown in Figure 4, slightly more than half selected the option that said that "innovations are driven by need." Many also felt that "family farmers are the most important innovators in agriculture."



**Figure 4: Statements about innovation with which respondents most strongly agreed (n=106)**

### 3.2.3 Terms associated with innovation

Respondents were asked to select, from a list of terms, those that they felt were most strongly associated with innovation. That which was most frequently mentioned (by 40% of respondents) was “local knowledge and know-how”, followed by “adaptation”. Again, this clearly reflects the principles of the ProInnova network. Interestingly, approximately 20% of respondents selected the term “science and technology”, which highlights that some ProInnova members are from government and formal research.

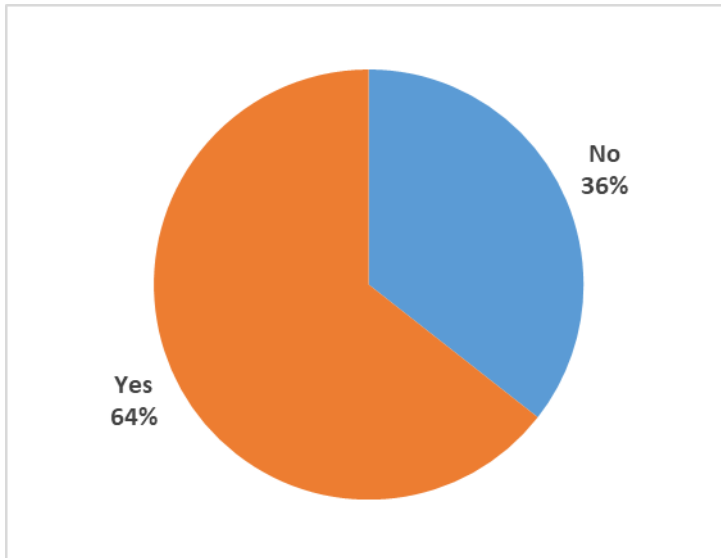


**Figure 5: Terms selected by respondents as being associated with innovation (multiple responses permitted)**



### 3.2.4 Whether innovation is always beneficial

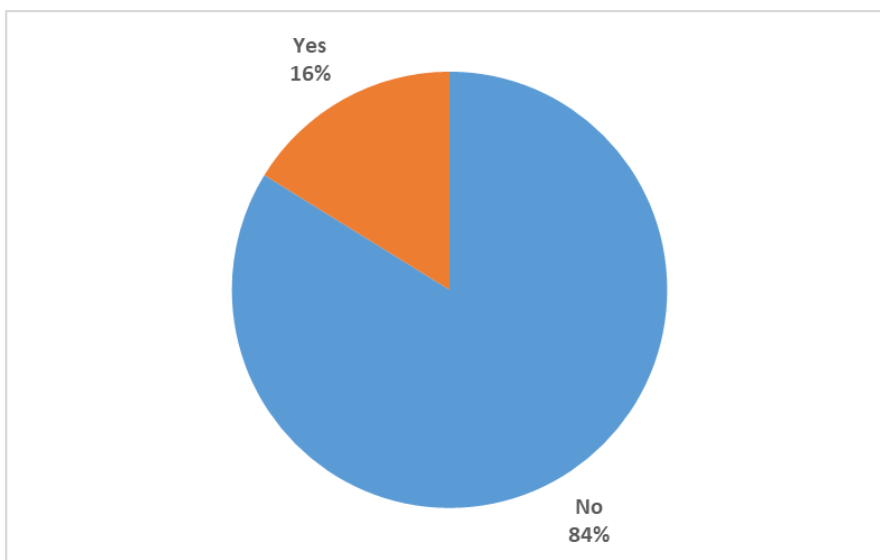
It is interesting to note that approximately two-thirds of the respondents believe that innovations are always beneficial, but a third did not agree with this. Many would see the definition of an innovation being something that improves the status quo, but perhaps there is concern that innovations might have some disadvantages.



**Figure 6: Perceptions regarding whether or not innovation is always beneficial (n=106)**

### 3.2.5 Whether an innovation can be transferred effectively to another place

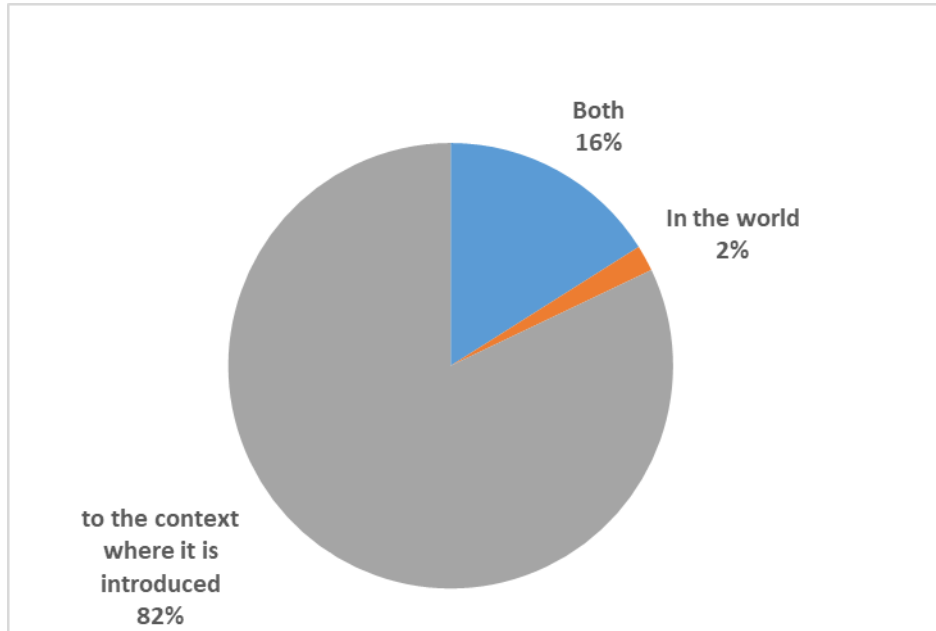
More than 80% of respondents said that an innovation that works in one place will not necessarily work in another. This perception strongly reflects the principle of Prolinnova that technologies need to be developed with farmers in a particular context in order to be appropriate. This is one of the main reasons why the network recognises the need for alternatives to the conventional transfer-of-technology process.



**Figure 7: The possibility of transferring an innovation from one context to another (n=106)**

### 3.2.6 Whether an innovation must be new

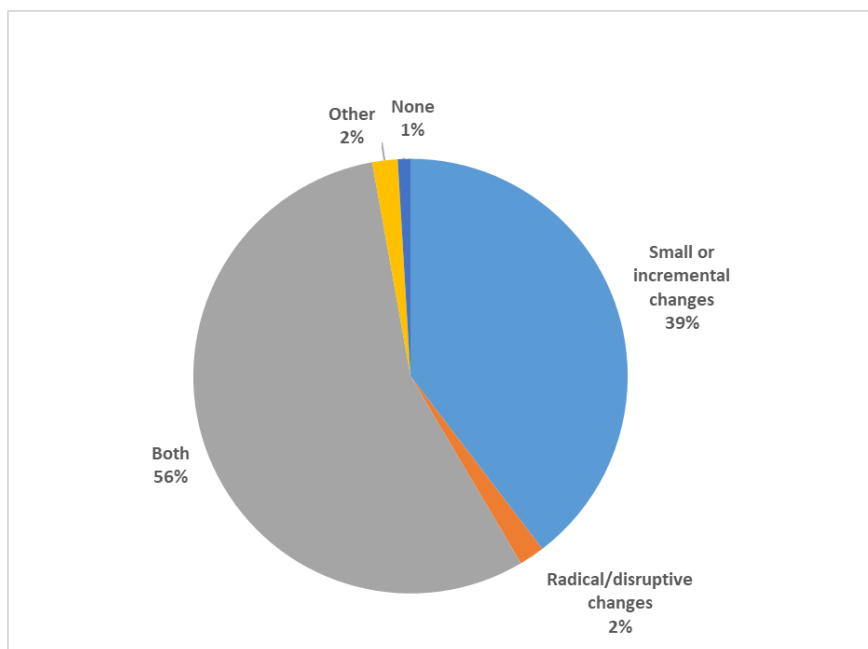
Innovations are recognised as being novel, but only 2% of respondents thought they had to be “new in the world”, which could be called inventions. Most respondents (~80%) indicated that they should only be new to the context in which they are introduced.



**Figure 8: Extent to which innovations must be novel (n=106)**

### 3.2.7 Type of changes made during the innovation process

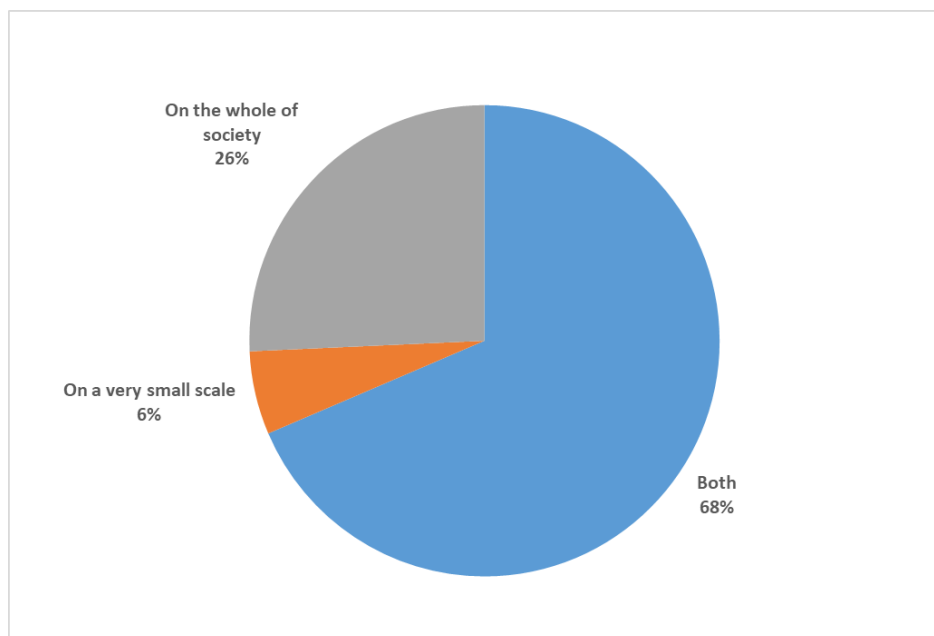
Respondents were asked to give thought to the amount of change that is brought about by the process of innovation. While approximately 40% said that it was likely to bring about incremental changes and only 2% felt that it would bring about radical/disruptive changes, the majority (almost 60%) felt that it could include both types of changes.



**Figure 9: Types of changes brought about by innovation (n=106)**

### 3.2.8 Impact of successful innovation

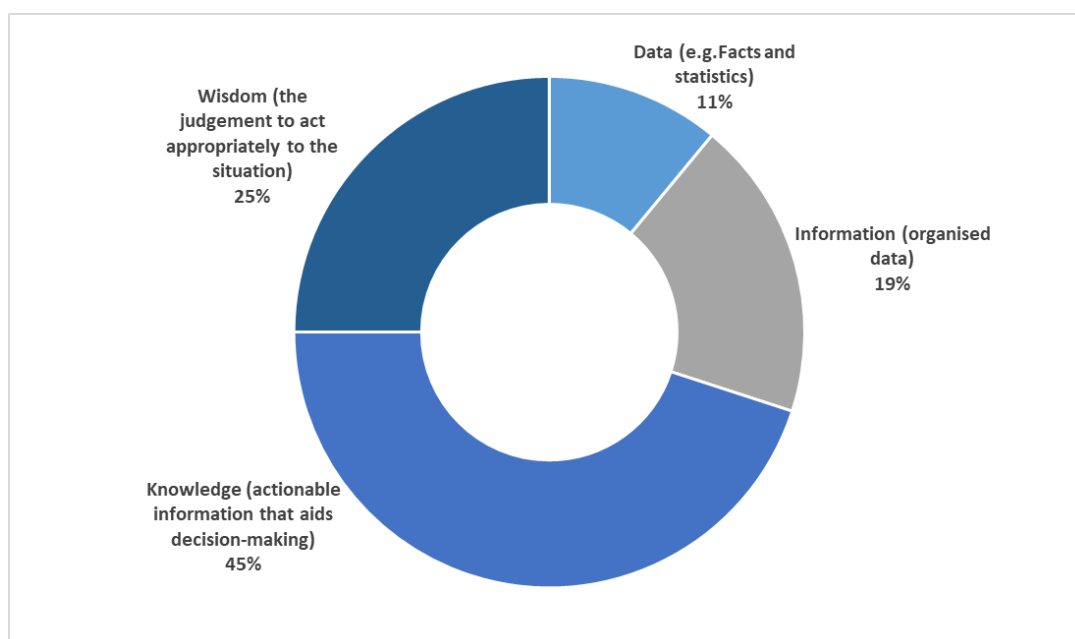
The survey also explored respondents' perceptions about the impact that a successful innovation should have. While 26% felt that it should have an impact on the whole of society and 6% believed it should have impact only on a very small scale, the majority felt that it should have impact at both levels, as shown in Figure 10.



**Figure 10: Scale of impact of successful innovations (n=106)**

### 3.2.9 Relevant forms of knowledge for innovation

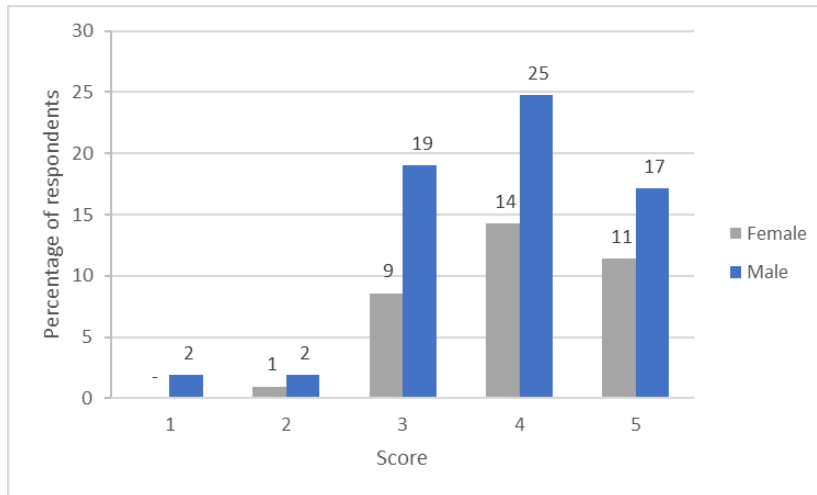
Respondents were requested to select two types of knowledge that they felt were important for innovation. While data and information were less frequently selected, a recognition of the importance of knowledge and wisdom was clearly demonstrated (Figure 11).



**Figure 11 Types of knowledge that are most relevant for innovation (given as percentages of total responses allowing comparison with FAO final report)**

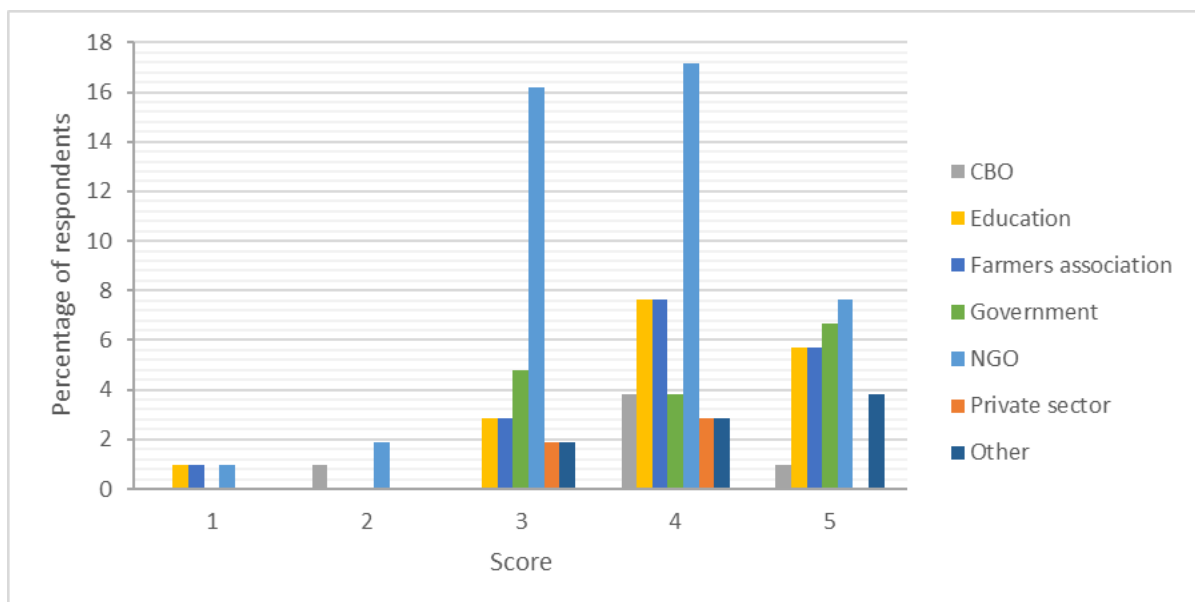
### 3.2.10 Importance of codified, scientific and technical knowledge

To further explore the perceptions about relevant knowledge sources for innovation, respondents were asked to score the importance of codified, scientific technical knowledge. The data was also disaggregated by gender for this question to explore any differences that might exist. As shown in Figure 12, very few respondents, considering both male and female, felt it was unimportant; the most frequently given score was a 4 out of 5.



**Figure 12: Scores given for the importance of codified, scientific technical knowledge on a scale of 1–5 (1 being low and 5 being high), disaggregated by gender (n=106)**

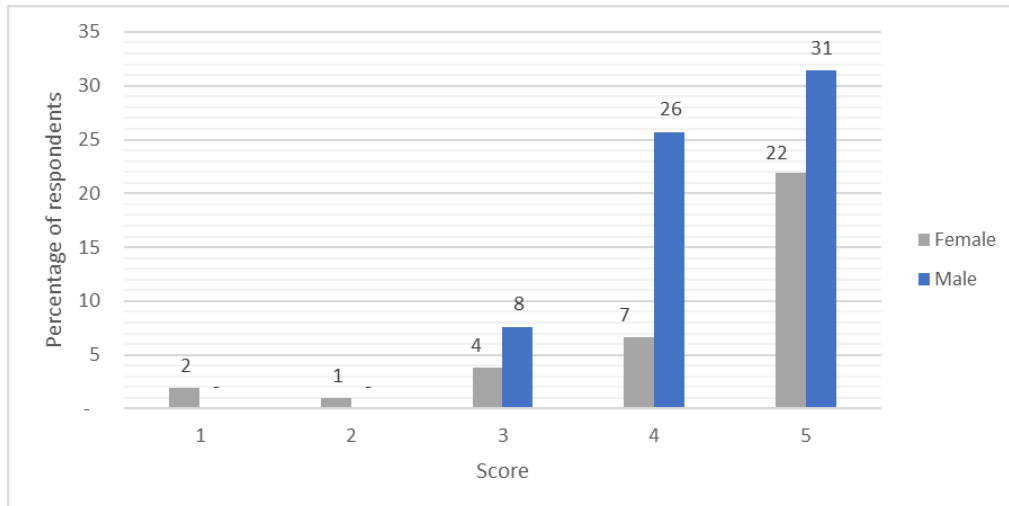
When the responses regarding the importance of “codified, scientific technical knowledge” were disaggregated by type of organisation (see Figure 13), it was clear that, for respondents from NGOs and education, responses ranged from 1 to 5. Interestingly, the only organisation type in which the most prevalent score was a 5 was “farmers association” and “other”. The NGO group was most represented and most gave this form of knowledge a 3 or a 4.



**Figure 13: Disaggregation by organisation of scores given by respondents for the importance of codified, scientific technical knowledge on a scale of 1–5 (1 being low and 5 being high)**

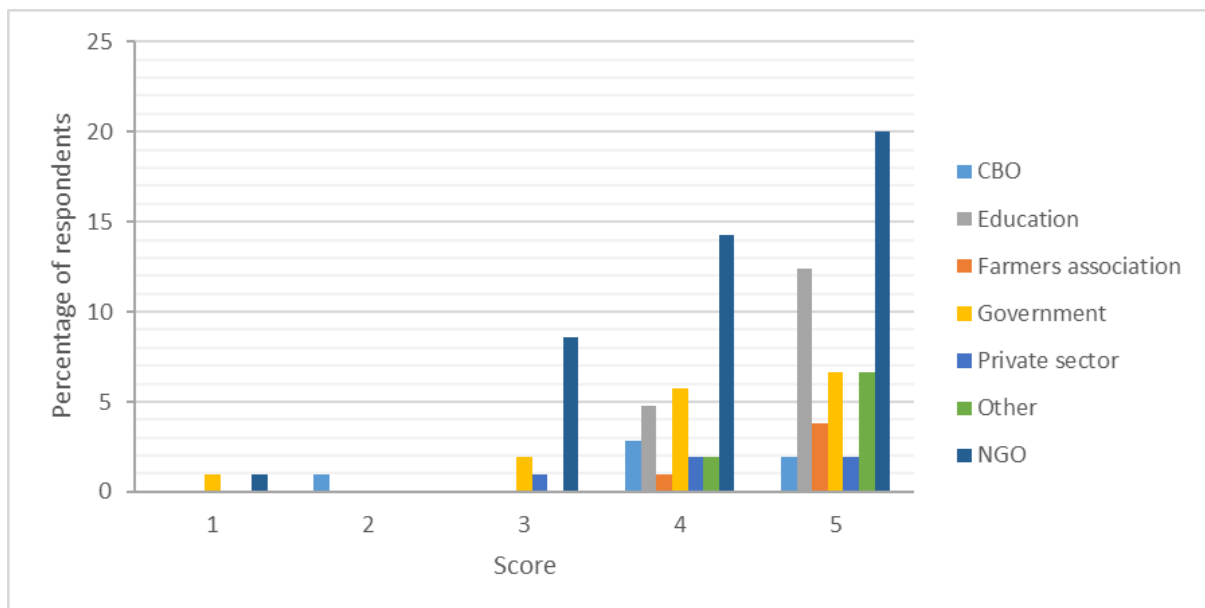
### 3.2.11 Importance of informal processes of learning and experience-based know-how

In comparison to perceptions about the importance of codified, scientific, technical knowledge, it was clear from the responses shown in Figure 14 that more than 50% of the respondents saw informal processes of learning and experience-based know-how as being highly important (scoring 5 out of 5), but this was more apparent for women than men (where 25% of men versus 7% of women gave this a score of 4).



**Figure 14: Scores given by respondents for the importance of informal processes of learning and experience-based know-how on a scale of 1–5 (1 being low and 5 being high), disaggregated by gender (n=106)**

Disaggregation of the responses according to organisation type showed that there was again a wide spread of responses for the respondents representing NGOs; the most prevalent response for this organisation type was a score of 5 (see Figure 15). This was the same for “education”, “farmers association”, “government” and “other”. This clearly shows the views of Prolinnova members regarding the importance of local knowledge.

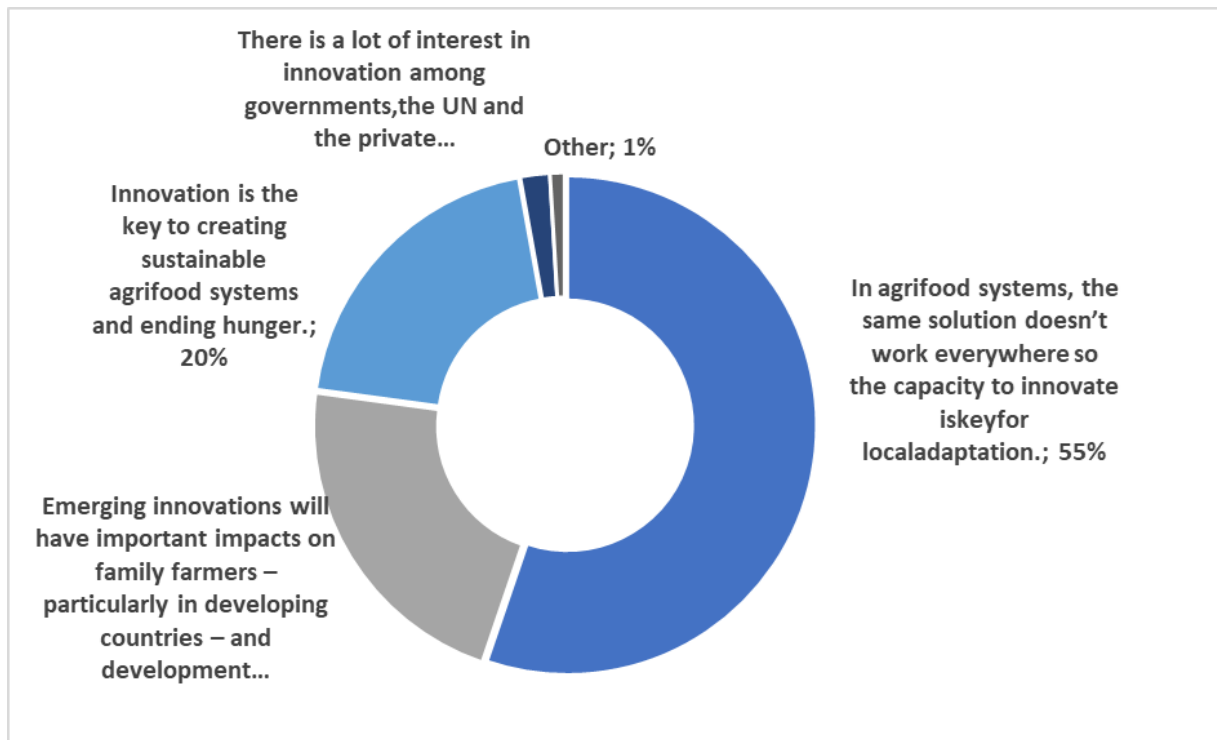


**Figure 15: Disaggregation by organisation of scores given by respondents for the importance of informal processes of learning and experience-based know-how on a scale of 1–5 (1 being low and 5 being high) (n=106)**

### 3.3 Why focus on innovation?

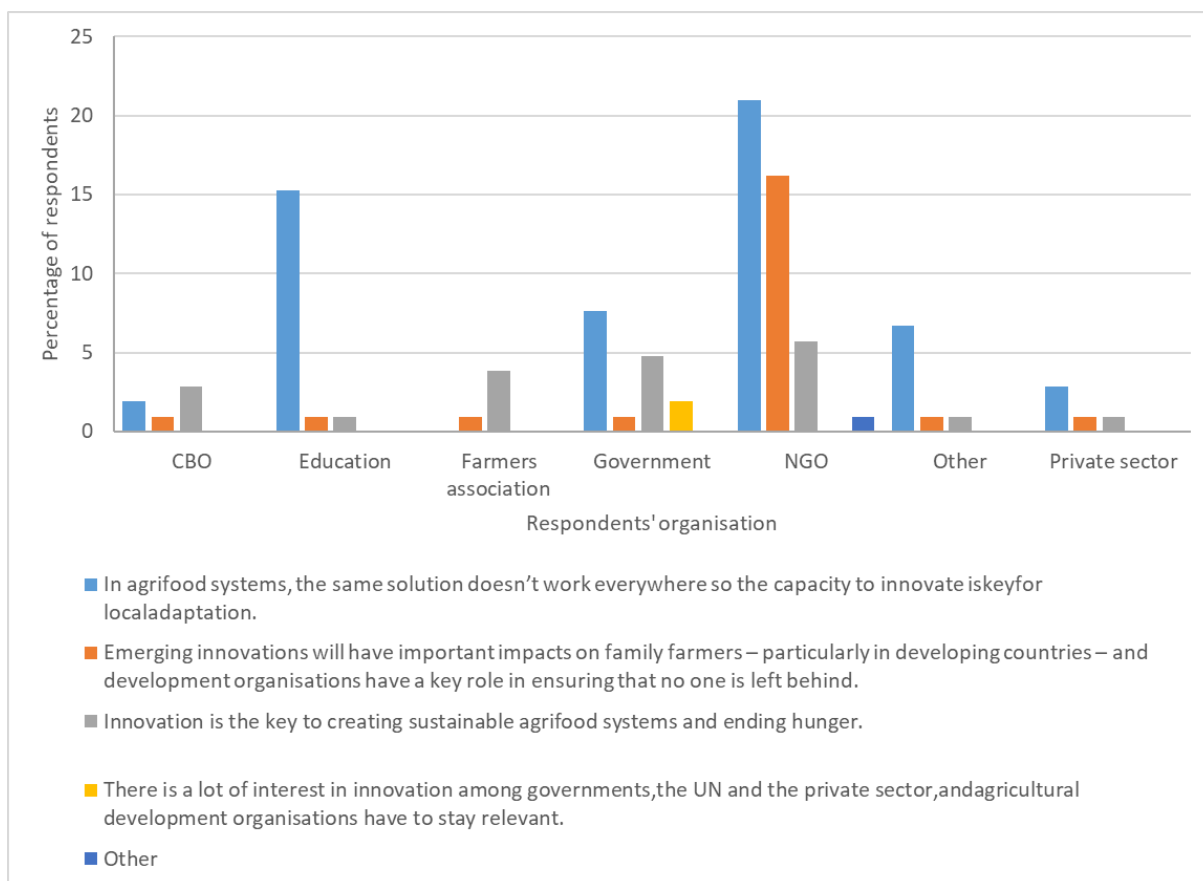
#### 3.3.1 Importance of innovation for organisations supporting agricultural development

When respondents were asked to select the statements that best reflected the importance of innovation for organisations supporting agricultural development, it became clear that this was certainly not because there is interest in innovation amongst key funders and decision-making structures, and rather because innovation is a way of addressing the challenge that solutions do not work everywhere and that capacity to innovate is key for local adaptation (see Figure 16).



**Figure 16: Reasons why innovation is important for organisations supporting agricultural development (given as percentages of total responses to allow comparison with FAO final report)**

When the responses were disaggregated by organisation, the most common response for those respondents from “education”, “government”, “private sector” and “NGOs” was that innovation is important because the same solution does not work everywhere and this innovation allows for local adaptation (see Figure 17). Interestingly, this was not selected at all by the respondents from farmers associations and was less frequently selected by members of CBOs.

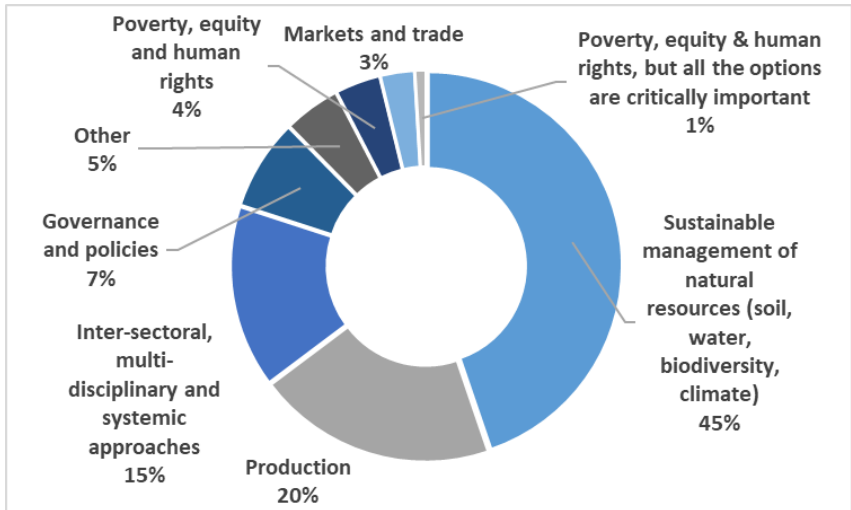


**Figure 17: Disaggregation by organisation for reasons why innovation is important for organisations supporting agricultural development.**

### 3.4 Innovation for sustainable agrifood systems

#### 3.4.1 Area of the system where things need to be done differently

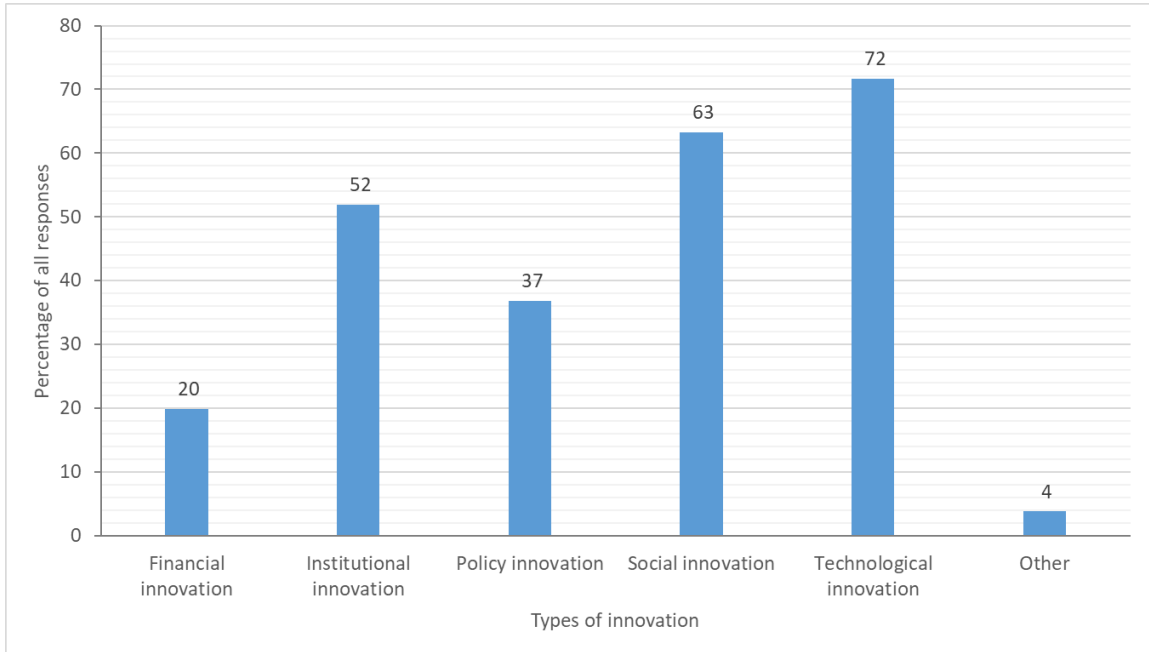
Considering different aspects of agrifood systems, respondents were asked to select the area where they felt there was the greatest need to innovate (i.e. do things differently). The area that was most frequently selected was “sustainable management of natural resources”. Given that Prolinnova promotes innovation related to ecologically oriented agriculture and natural resource management, this is reflective of network priorities (see Figure 18).



**Figure 18: Areas of the agrifood system where things need to be done differently (given as percentages of total responses to allow comparison with FAO final report)**

**3.4.2 Most relevant innovation for building sustainable systems**

It is interesting to see from Figure 19 that institutional and social innovation were strongly recognised as being relevant forms of innovation required for building sustainable agrifood systems. These are aspects that are often neglected by formal research organisations.

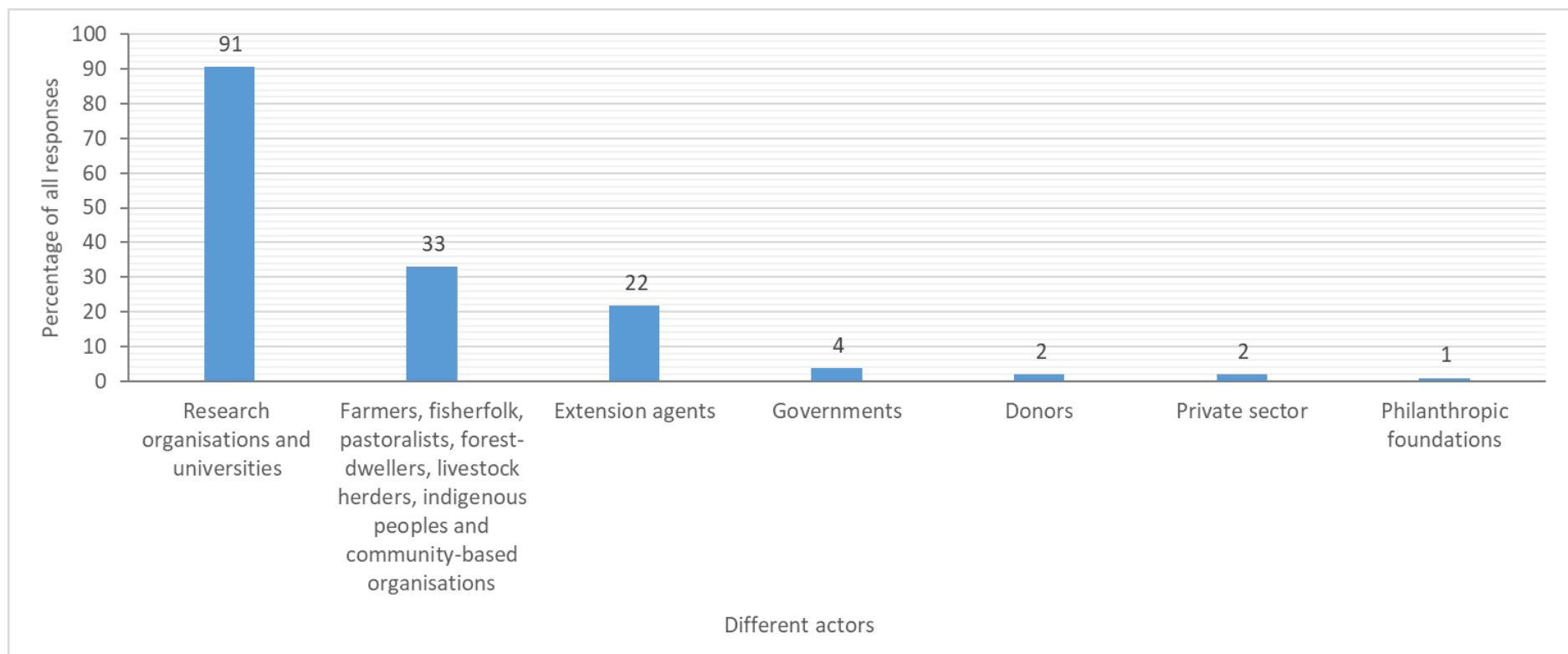


**Figure 19: Importance of different types of innovation for sustainable agrifood systems (multiple options allowed)**

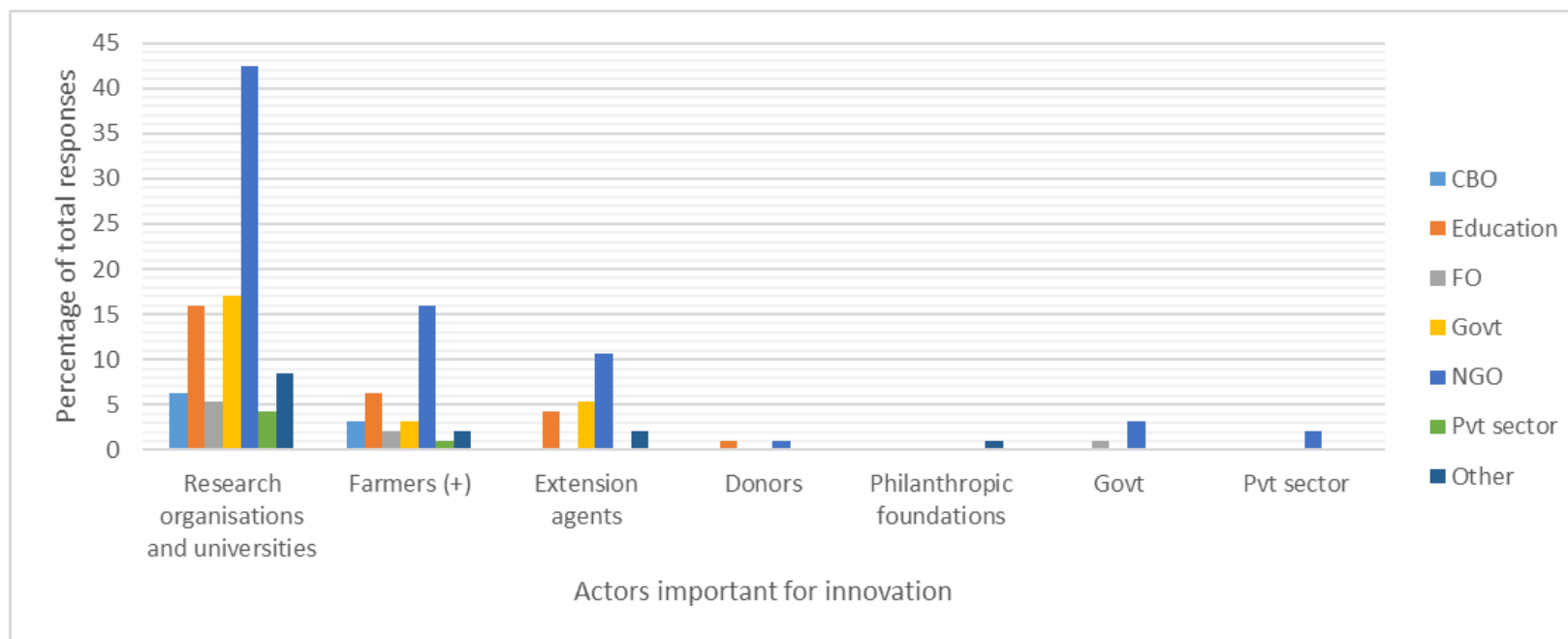
**3.4.3 Actors that play the most important role in the system**

When asked which actors play the most important role in innovation in agrifood systems, the option selected most frequently was “research organisations and universities” followed by the farmer category (see Figure 20). This was an unexpected result given the principles of the network. To explore this further, the results were disaggregated by type of organisation. It is clear from Figure 21, that this perception was shared by a number of organisations, but was most notable for respondents from NGOs.



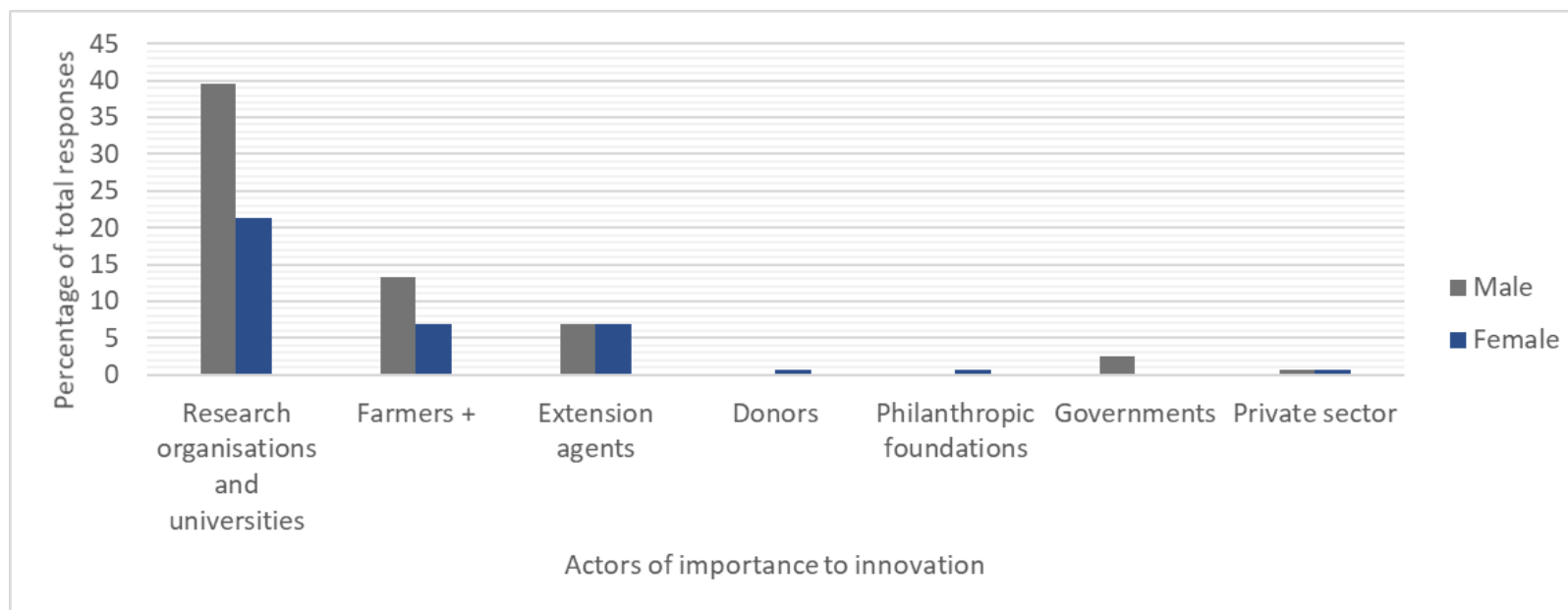


**Figure 20: Respondents' views (multiple options allowed) regarding actors that play the most important role in agrifood systems (percentages calculated relative to all responses to allow comparison with final FAO report)**



**Figure 21: Disaggregation by organisation for respondents’ views (multiple options allowed) regarding actors that play the most important role in agrifood systems (given as percentages of total responses in line with FAO final report).**

The data was also disaggregated by gender to determine whether that had any effect on respondents’ choices. It is interesting to note that no females selected “governments”, but there was one female who selected “philanthropic foundations” and another selected “donors”. Otherwise, the relative importance given to “research organisations and universities” was similar for males and females.



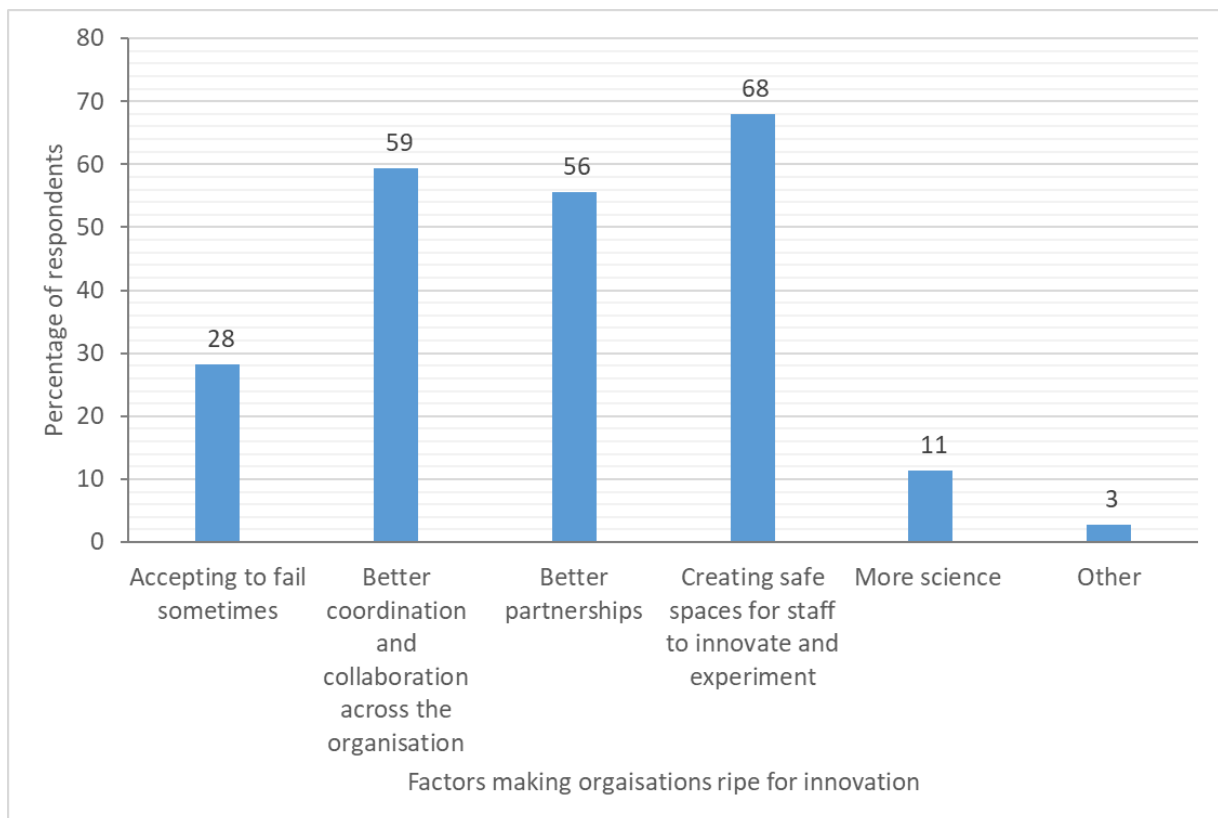
**Figure 22: Disaggregation by gender for actors identified (multiple options allowed) as playing the most important role in agrifood systems (given as percentage of total responses in line with FAO final report)**

### 3.5 What allows for innovative organisations?

While the focus of the survey is on innovation by different actors to achieve agricultural development, it is also useful to look at what is required to allow for innovative behaviour within organisations that support agricultural development.

#### 3.5.1 Organisational factors that make a context ripe for innovation

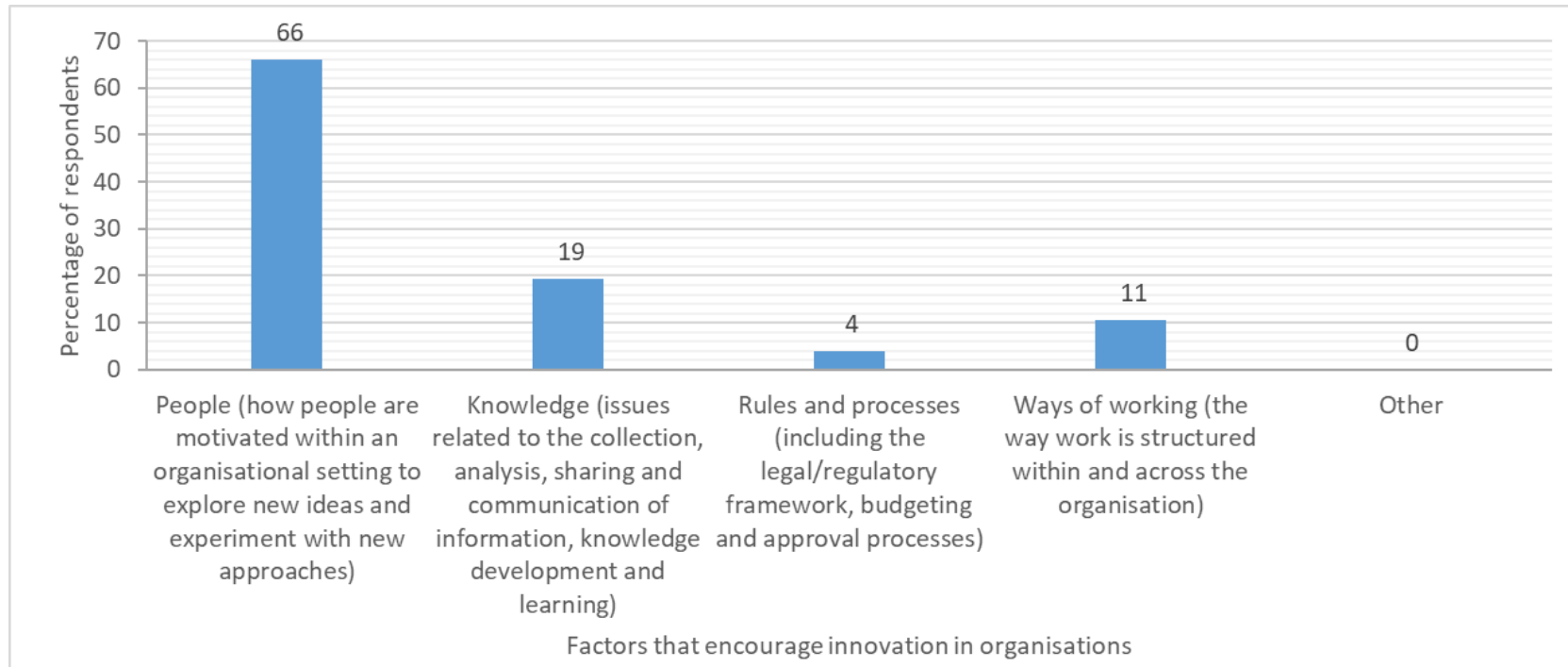
The factor that most respondents felt was most important for innovation within organisations, as seen in Figure 23, was “creating safe spaces for staff to innovate and experiment”. This in turn the ethos that also provides a safe space within which farmers are encouraged to innovate and experiment. “Better coordination and collaboration across the organisation” is another option that was selected relatively frequently by respondents.



**Figure 23: Factors that make an organisation “ripe for innovation” (n=106)**

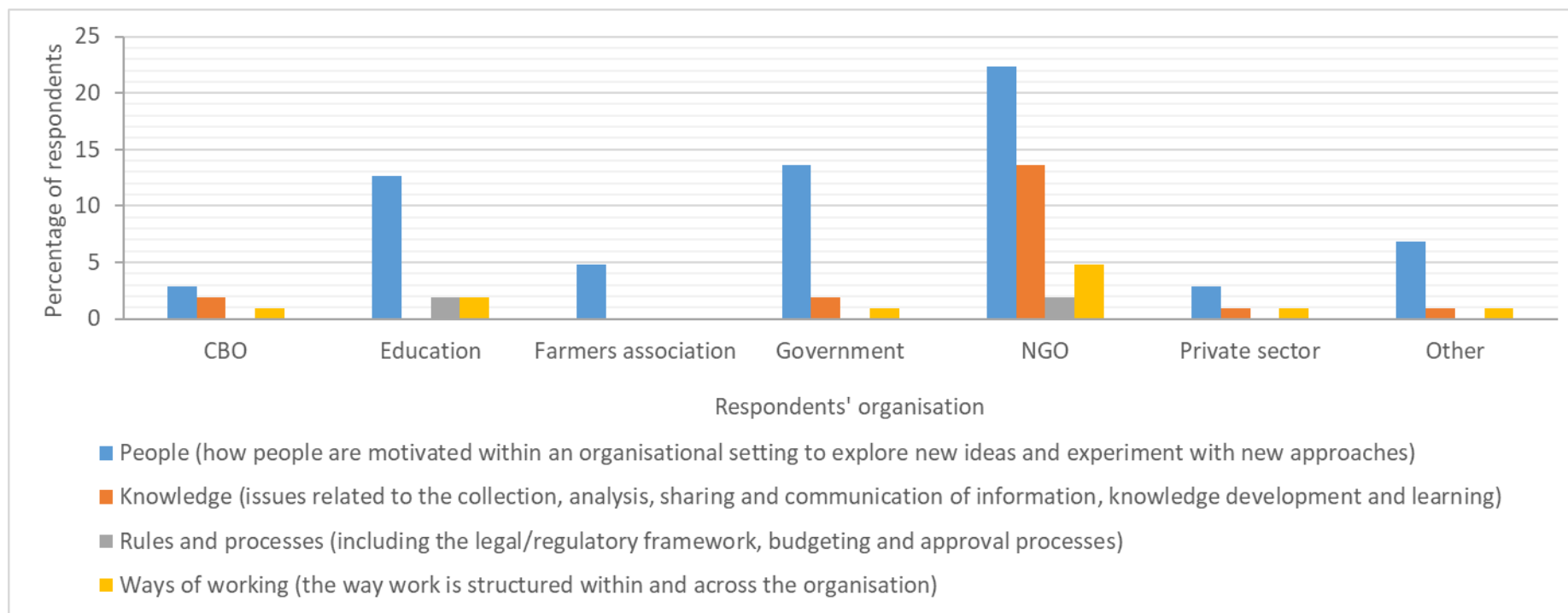
#### 3.5.2 Factors that would help an organisation be more innovative

Innovativeness within organisations that support agricultural development was further explored by asking respondents to select factors (knowledge, people, rules & processes, ways of working, or other) that encourage or facilitate innovativeness. By far, there is a perception that it is the people in the organisation that have the largest effect (specifically, how they are motivated within the organisational setting to explore new ideas and experiment with new approaches), as shown in Figure 24. In turn, this is likely to lead them to work with actors to explore new ways of addressing challenges in the agrifood sector. It is clear from the responses that ‘rules and processes’ are not recognised by many respondents as being important for encouraging innovativeness.



**Figure 24: Factors that help an organisation to be more innovative (n=106)**

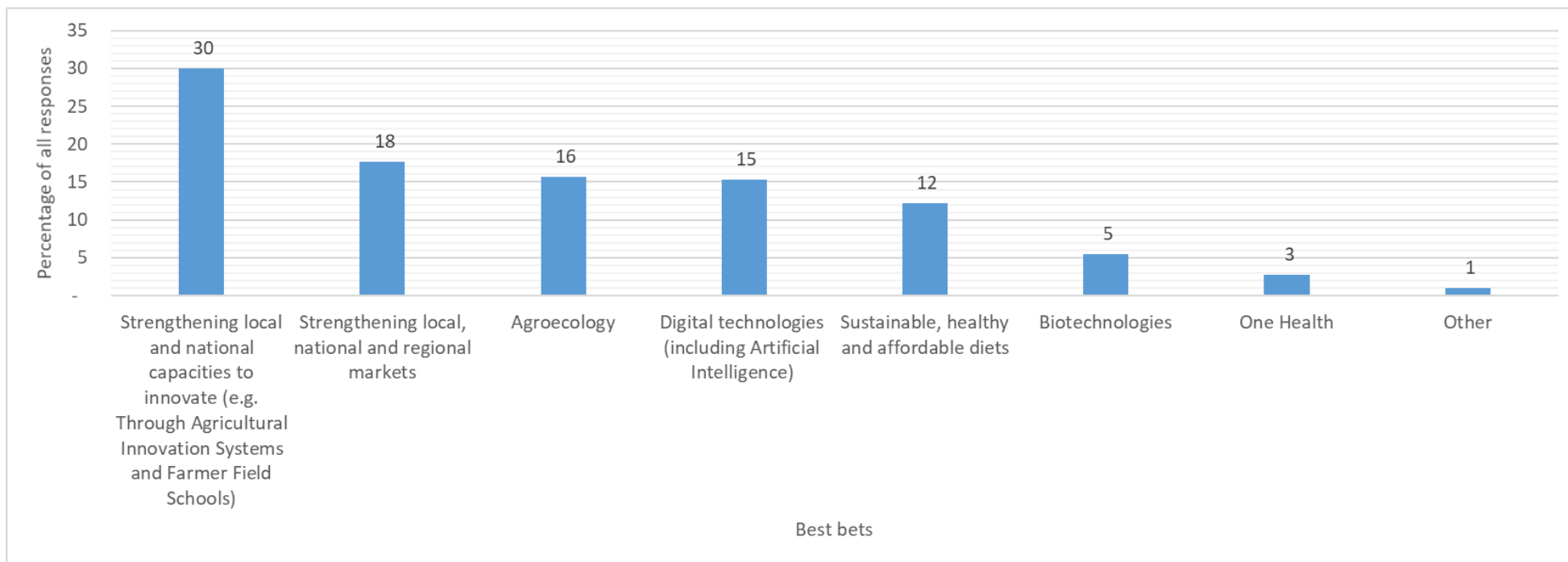
When the responses were disaggregated by organisation, as shown in Figure 25, it became clear that “people” were recognised across all categories as the most important factor for helping an organisation to be innovative, and this was particularly clear for respondents from “NGOs”, “government” and “education”.



**Figure 25: Disaggregation by organisation type of factors that help an organisation to be more innovative (n=106)**

### 3.6 Future priorities: Best bets<sup>1</sup> for innovations

The survey also investigated perceptions regarding future priorities. In terms of areas where respondents felt that change and innovation was required, the option most frequently selected was “to strengthen local and national capacities to innovate”, as shown in Figure 26. Another area where innovation was perceived to be necessary was “strengthening of markets” (comprising ~18% of responses). Areas that received substantially less interest were “One Health” (with which many of the respondents may not be familiar) and “biotechnologies”, which may have been perceived by many as referring to genetically modified organisms.



**Figure 26: Respondents’ perceptions regarding areas (best bets) where innovation is required (multiple options allowed)**

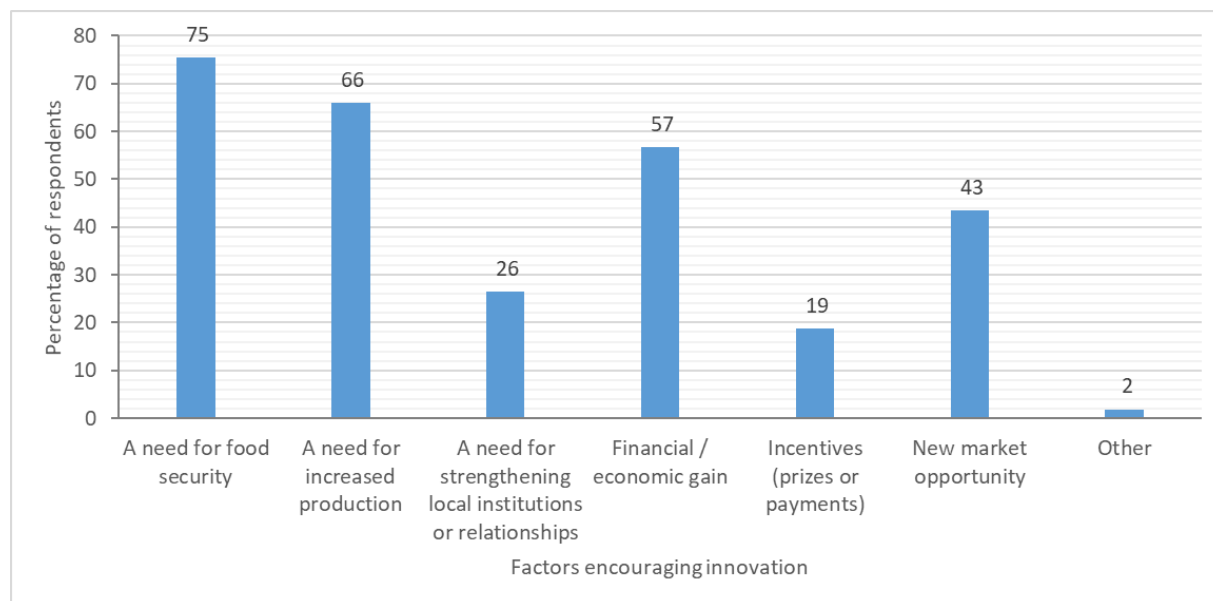
<sup>1</sup> A best bet is an action that is likely to be successful

### 3.7 Local innovation and farmer-led joint innovation

A key section of the survey is that which focuses on local innovation and farmer-led joint innovation, both being concepts that are strongly promoted by the Prolinnova network.

#### 3.7.1 Factors that stimulate innovation by small-scale farmers

There were varied perceptions regarding the factors that stimulate innovation, but that which ranked highest was “a need for food security”, followed by “a need for increased production”, as shown in Figure 27. What is clear from the responses is that the options selected most frequently were those that have direct impact on farmers’ livelihoods.

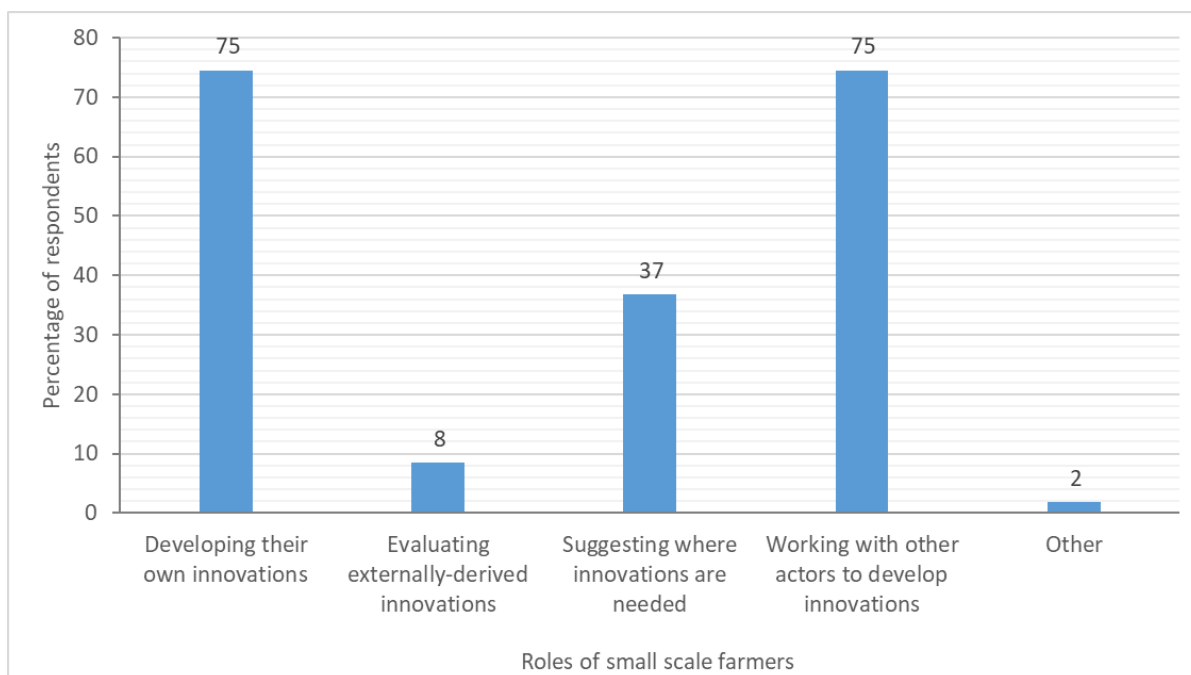


**Figure 27: Factors perceived to stimulate innovation by small-scale farmers (multiple options allowed)**

#### 3.7.2 Roles of small-scale farmers in the innovation process

Respondents were asked to share their perceptions regarding the roles that small-scale farmers play in the innovation process. The responses reflected Prolinnova principles clearly, with the two most prominent responses being to “develop their own innovations” and “to work with other actors to develop innovations”, as shown in Figure 28. The option that the least (other than “other”) selected was “evaluating externally-derived innovations”. This demonstrates that members of the Prolinnova network favour supporting local innovation processes rather than introducing ideas and technologies from outside.

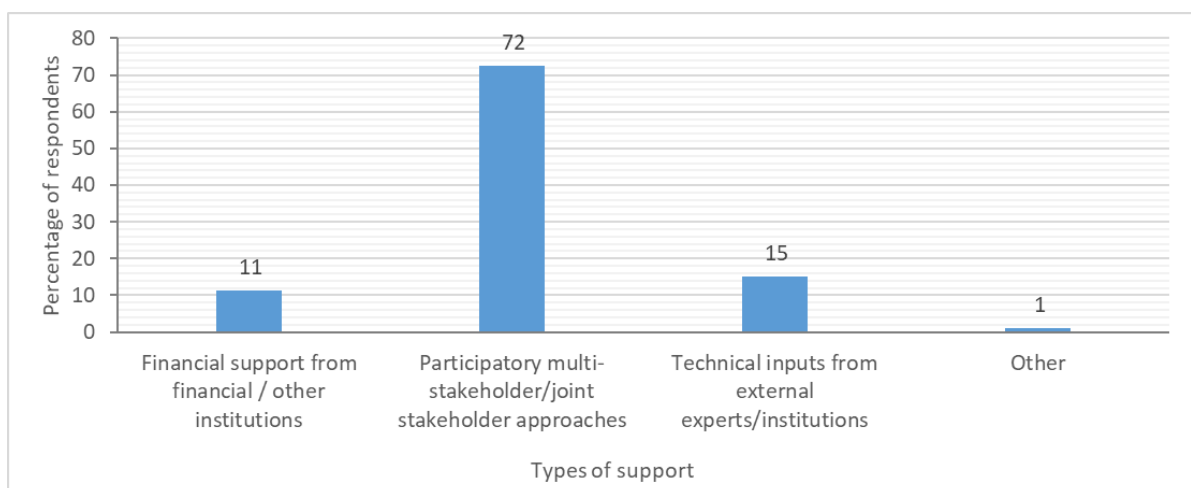




**Figure 28: Respondents' perceptions regarding the roles that farmers play in innovation processes (multiple options allowed)**

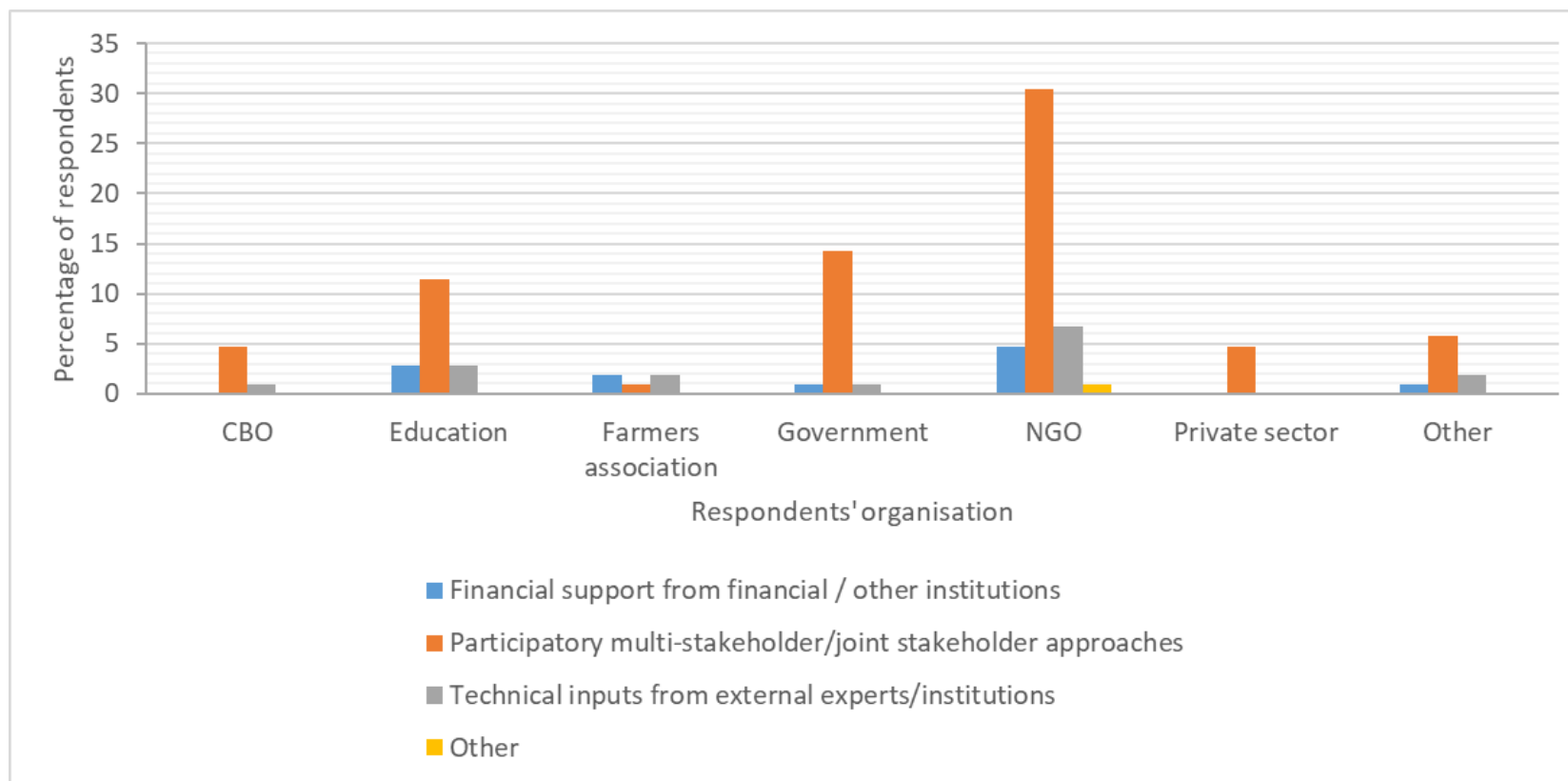
### 3.7.3 Support requirements for farmer-led innovation development

The majority of respondents indicated that participatory multistakeholder or joint stakeholder approaches are the most important forms of support required. This was recognised as being far more important than financial or technical support, as shown in Figure 29.



**Figure 29: Support requirements for farmer-led innovation development (n=106)**

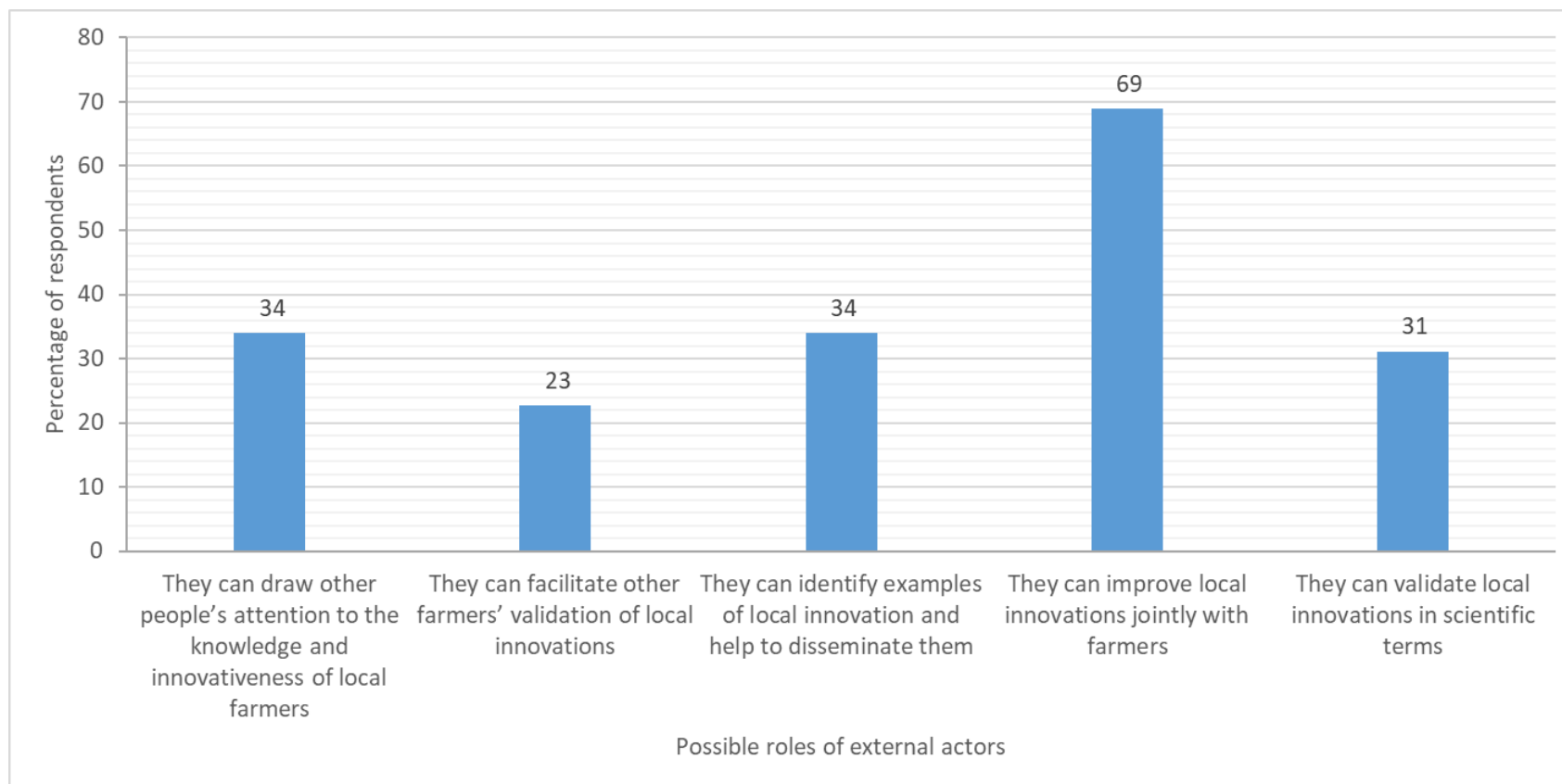
When looking at the responses disaggregated by organisation type in Figure 30 for types of support required for farmer-led innovation development, it is interesting to note that, for all categories except “farmers association”, the option that was most frequently selected was “participatory multistakeholder approaches”. However, this was not the case for the “farmers association” category, where “financial support” and “technical inputs” were identified as slightly higher needs, where they are perhaps more conscious of their resource limitations.



**Figure 30: Disaggregation by organisation for support required for farmer-led innovation development (n=106)**

### 3.7.4 Key roles of external agents to support local innovation processes

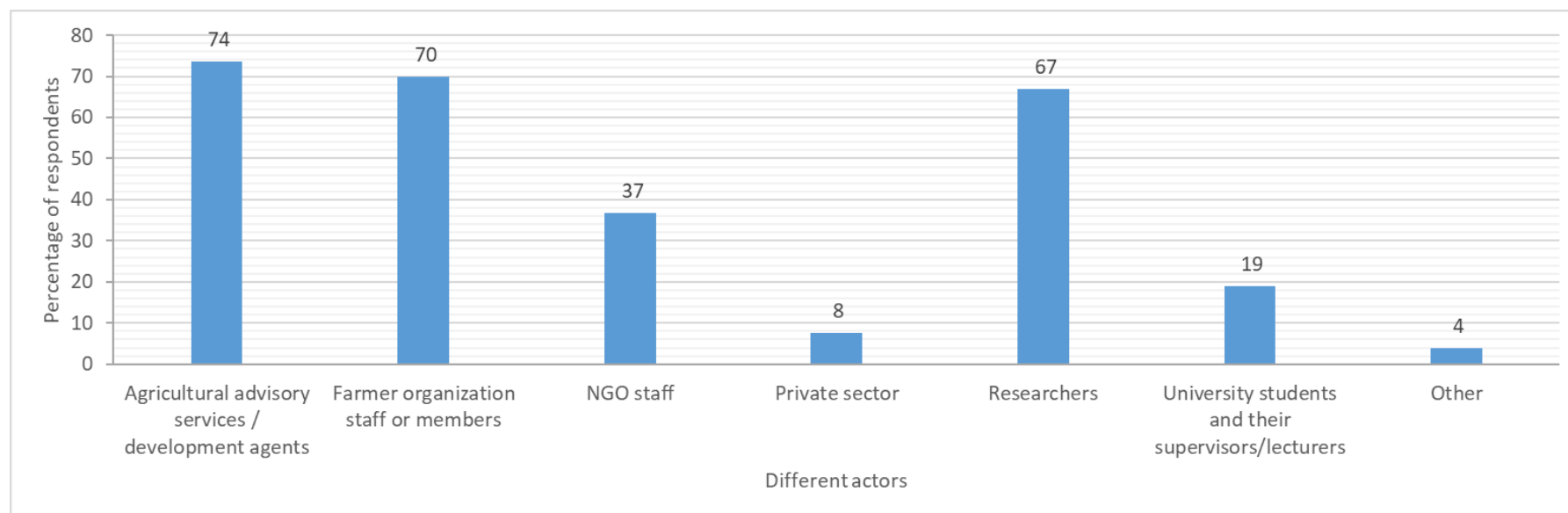
The survey explored the types of roles that external agents can play to support local innovation processes. As shown in Figure 31, the role most frequently selected was to “improve local innovations jointly with farmers”, which was selected as an option by more than 70% of respondents. Again, this reflects the priorities of the Prolinnova network.



**Figure 31: Key roles that external agents can play (multiple options allowed) to support local innovation processes**

### 3.7.5 Most important actors for supporting local innovation and joint experimentation

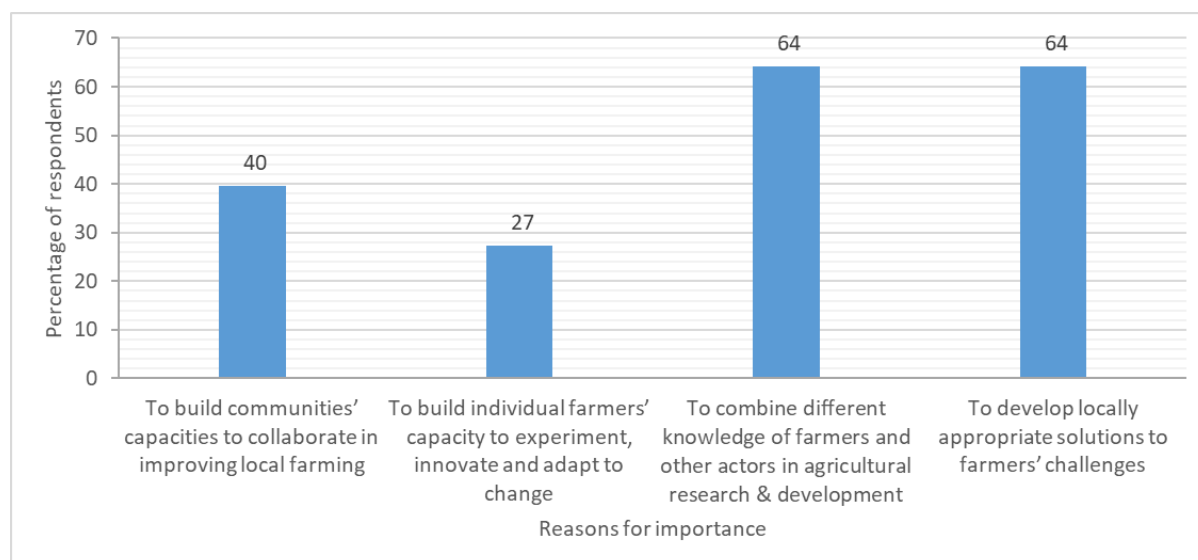
Respondents were asked to select which actors they thought were most important for supporting innovation and joint experimentation. There were three groups that were selected most frequently, namely “agricultural advisory services/development agents”, “farmer organisation staff and members” and “researchers”, as shown in Figure 32. The difference between the choice of actors in Figure 32 (which focuses on local innovation and joint innovation), and the choices shown in Figure 20 (which speaks more broadly to innovation within the agrifood sector), suggests that members of Prolinnova differentiate between these two forms of innovation.



**Figure 32: Actors identified as playing the most important role in supporting local innovation and joint experimentation (multiple options allowed)**

### 3.7.6 Reasons why farmer-led joint experimentation or innovation is important

The respondents were also asked to select options that reflected why farmer-led joint experimentation or innovation is important, as shown in Figure 33. The two options most frequently selected were, “to combine different sources of knowledge”, and “to develop locally appropriate solutions to the challenges that farmers face”. Again, this talks to the value of supporting local innovation processes rather than introducing externally derived innovations as fixed solutions.



**Figure 33: Reasons why farmer-led joint experimentation or innovation is important (multiple options allowed)**

## 4 COMPARISON WITH FAO RESULTS

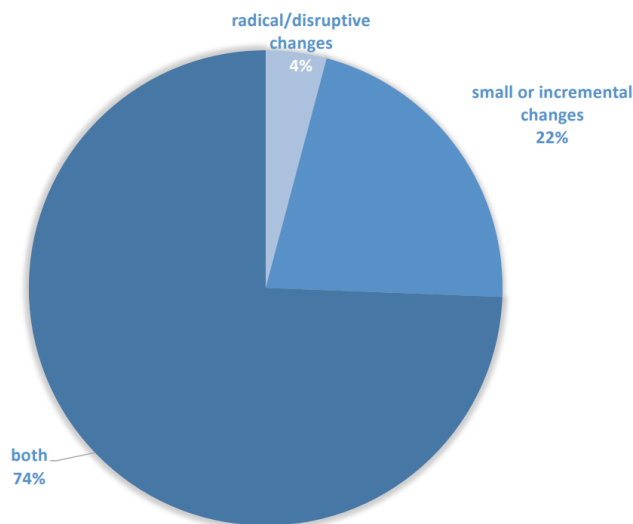
A comparison between FAO and Prolinnova-GFAR survey results shows that there exist both commonalities and divergence in the responses to the survey questions. This section explains the commonalities between the responses of the two groups of respondents. Similarly, diverse views are also described, where they exist. It should be noted that some of the results are compared against preliminary FAO results, where percentages were calculated relative to the number of respondents, and the final FAO report, where percentages were calculated relative to the total number of responses received. Furthermore, in some cases the respondents could select multiple options and thus the sum of the percentages exceeds 100 percent.

### 4.1 Commonalities

#### 4.1.1 Understanding innovation

There were a number of questions where the responses from the FAO and Prolinnova-GFAR groups were fairly similar. For example, both groups of respondents, most perceived innovation as a process, with fewer respondents perceiving innovation to be an idea or an invention, and almost all FAO and Prolinnova-GFAR respondents indicated that innovation cannot be transferred effectively from one context to another. Similarly, the majority of both Prolinnova-GFAR and FAO respondents felt that innovations must be new to the context where they are introduced (rather than being new in the world). However, within the FAO group, there was a greater proportion (35% versus 16% of Prolinnova-GFAR respondents) that said that innovations could include both “new in the world and “new to the context”. This

suggests that there is a greater perception within the Prolinnova network that innovations only need to be new to the context in which they are found. With both groups of respondents, the majority said that innovation is brought about by both “radical/disruptive changes” and “small incremental changes”, but within the FAO group, this option was selected by approximately 75% of respondents, while for Prolinnova-GFAR respondents, less than 60% selected this option, with nearly 40% selecting small or incremental changes. This highlights that within the Prolinnova network, there is recognition that innovation can comprise small changes to adapt existing practices or technologies.



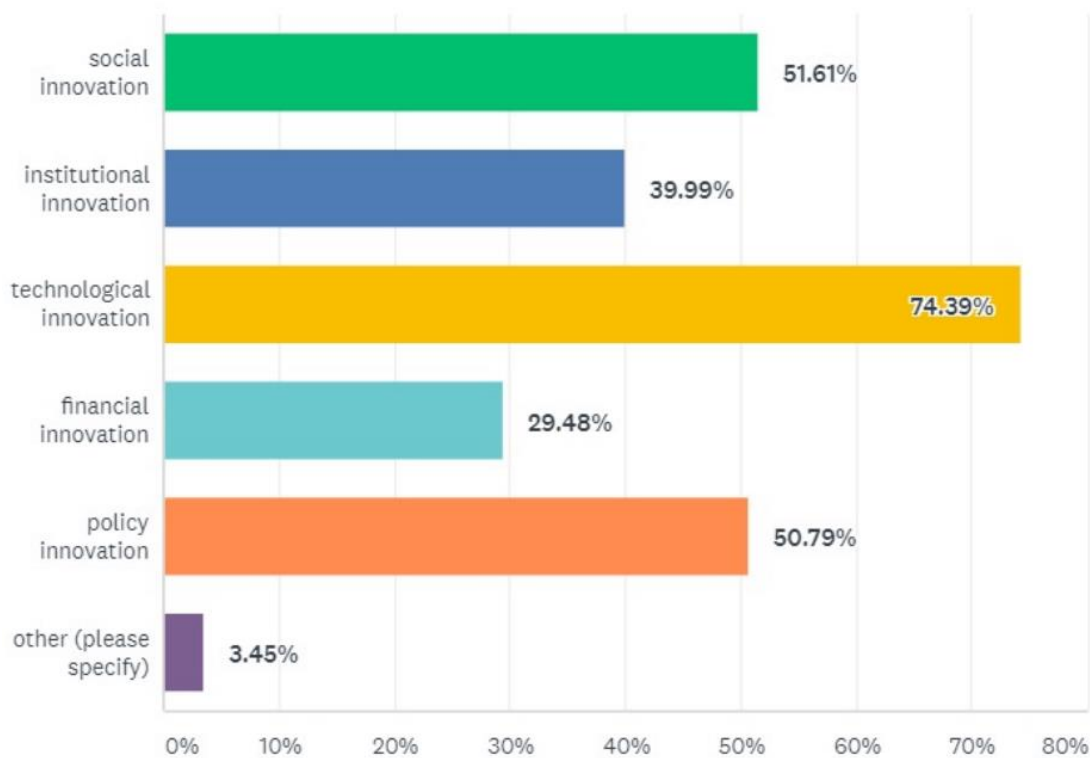
**Figure 34: FAO results for types of change brought about by innovation (Source: FAO preliminary results)**

In terms of the scale of impact of successful innovations, the majority of both FAO and Prolinnova-GFAR respondents perceived that a successful innovation has an impact on both the whole of society and at a very small scale, with less than 10% of either group feeling that a successful innovation has an impact at only a small scale.

In terms of knowledge types relevant to innovation, both groups of respondents valued “knowledge (actionable information that aids decision-making)”. However, while FAO respondents placed fairly equal value on other types of knowledge (“data”, “information” and “wisdom”), the Prolinnova-GFAR respondents gave substantial value to “wisdom”, which we can perhaps assume refers to the wisdom held within communities.

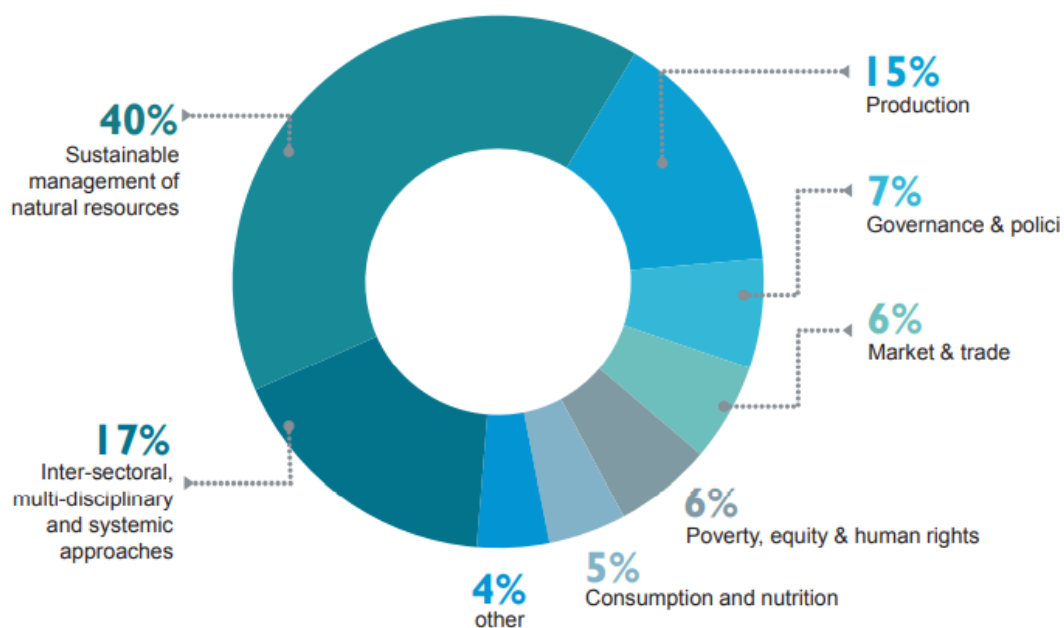
#### 4.1.2 Innovation for sustainable agrifood systems

In terms of the types of innovation required for building sustainable agrifood systems, it is interesting to note that the majority of both the FAO and Prolinnova-GFAR respondents perceived “technological innovation” as the most relevant for building sustainable agri-food systems (selected approximately 70% of both groups), but there was recognition of the importance of non-technical innovation by both groups, as shown in Figure 19 above and Figure 35 below.



**Figure 35: FAO results for different types of innovation needed to build sustainable agrifood systems (Source: FAO Preliminary results)**

In terms of perceptions regarding areas where innovation is required (i.e. things need to be done differently), the majority of respondents in both groups selected “sustainable management of natural resources”, shown above in Figure 18 and below in Figure 36.



**Figure 36: FAO results for areas where things need to be done differently (Source: FAO Report)**

## 4.2 Divergence

The main answers where results from the Prolinnova-GFAR survey diverged substantially from those obtained from the FAO survey are discussed below.

### 4.2.1 Statements about innovation

On the statement related to innovation, the majority of Prolinnova-GFAR respondents chose “innovation is driven by need” (which was an added option in the P-GFAR survey), followed by “family farmers are the most important innovators in agriculture” (see Figure 4). There was very little selection of the option “innovation brings progress”. With the FAO respondents, a few selected the statement that “family farmers are the most important innovators in agriculture”, but the majority (~60%, selected “innovation brings progress”.

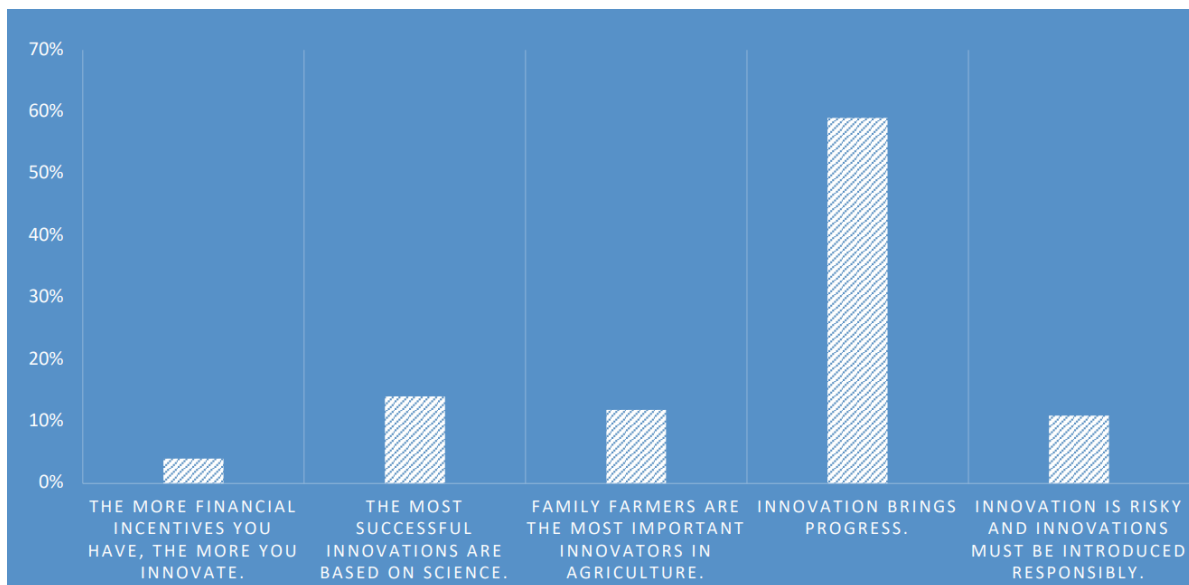


Figure 37 FAO results for statement about innovation (Source: FAO preliminary results)

### 4.2.2 Terms associated with innovation

Of the Prolinnova-GFAR respondents, more than 80% selected “local knowledge and know-how” as a term associated with innovation (see Figure 5), while this option was selected by only around 50% of FAO respondents.

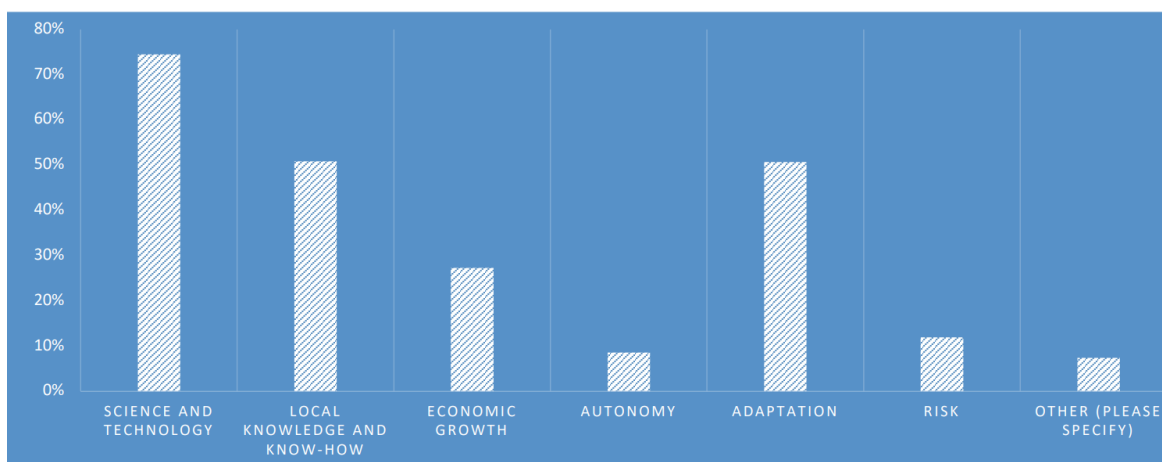


Figure 38 FAO results for terms associated with innovation (Source: FAO preliminary results).



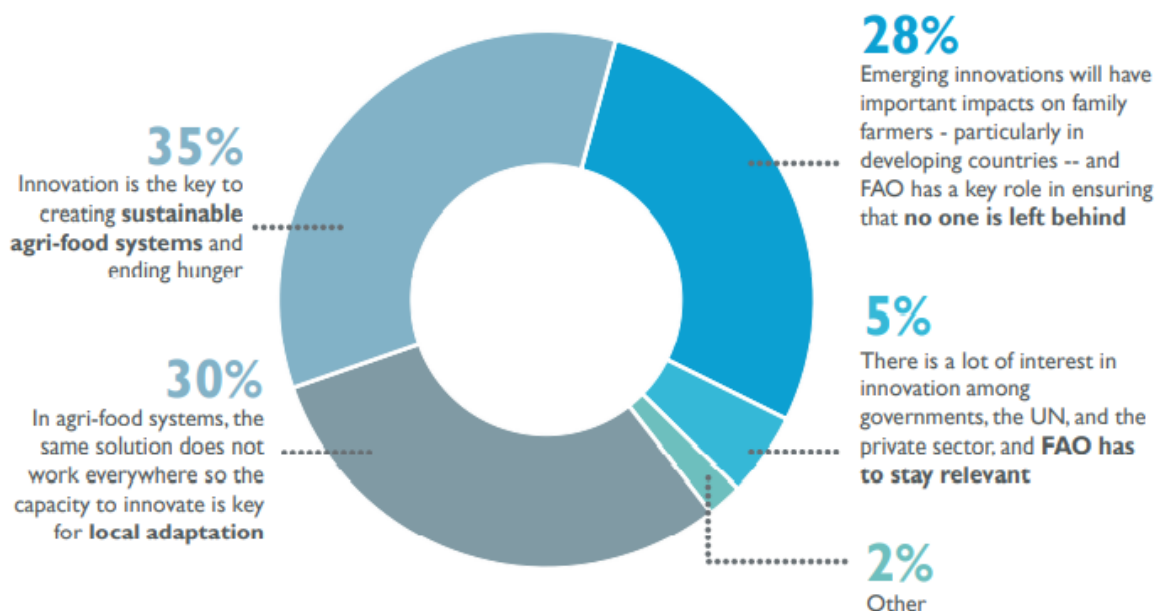
In contrast, more than 70% of the FAO respondents selected “science and technology”, while this option was selected by only approximately 55% of Prolinnova-GFAR respondents. There were some options where there was closer alignment between the perceptions of the Prolinnova-GFAR respondents and the perceptions of the FAO respondents, in particular the selection of the term “adaptation”, which was selected by approximately 50% of the FAO respondents and approximately 60% of the Prolinnova-GFAR respondents as being a term associated with innovation.

#### 4.2.3 Whether innovation is always beneficial

While approximately half of the FAO respondents (51%) felt that innovation is not always beneficial, only 36% of Prolinnova-GFAR respondents agreed with this, with two-thirds saying that it is always beneficial. This might be reflective of Prolinnova’s understanding of innovation being something that is in use at some scale, and which is at least beneficial for the individual or group making use of it. It probably also reflects Prolinnova’s definition of ‘innovation’ as a new and better way of doing things.

#### 4.2.4 Importance of innovation for organisations supporting agricultural development

FAO and Prolinnova-GFAR respondents had different views on the importance of innovation for organisations supporting agricultural innovation (note that for the initial survey this question referred specifically to the FAO). While more than half of the Prolinnova-GFAR respondents (55%) selected the option that “in agrifood systems the same solution does not work everywhere so the capacity to innovate is key for local adaptation”, FAO respondents’ view was more spread across three options, of which “innovation is the key to creating sustainable agrifood systems and ending hunger” obtained 35% of all responses, as shown in Figure 39. Once again, the results demonstrate that within the Prolinnova network, innovation is seen as a key mechanism to allow for adaptation.

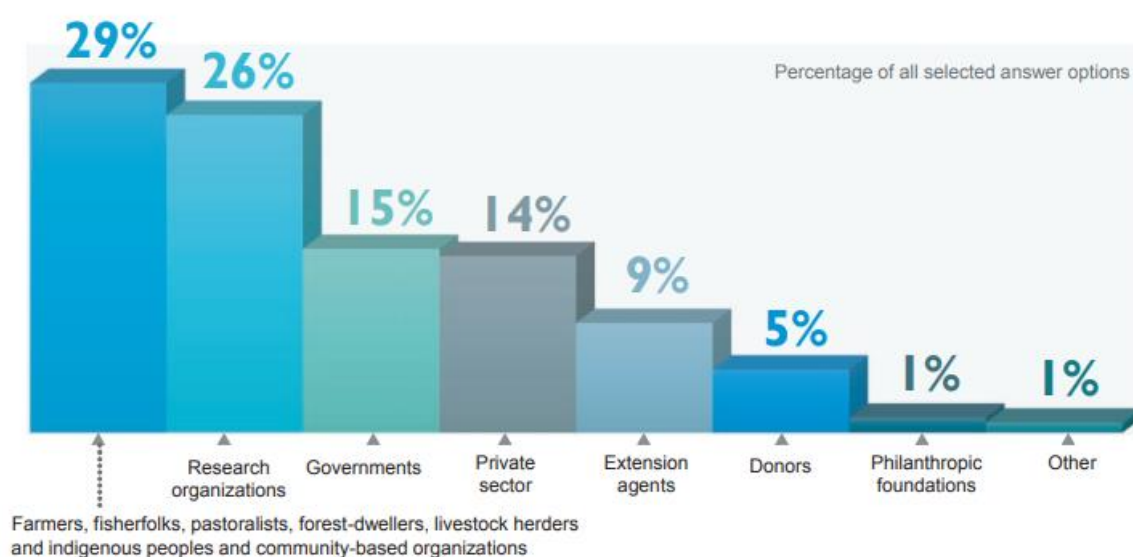


**Figure 39: FAO results regarding reasons why innovation is important for the FAO (Source: FAO Report)**

#### 4.2.5 Actors that play the most important role in innovation

This question provided unexpected results. There was a wider spread amongst FAO respondents regarding the actors that play the most important role in agrifood innovation systems than in the case of the Prolinnova-GFAR respondents.

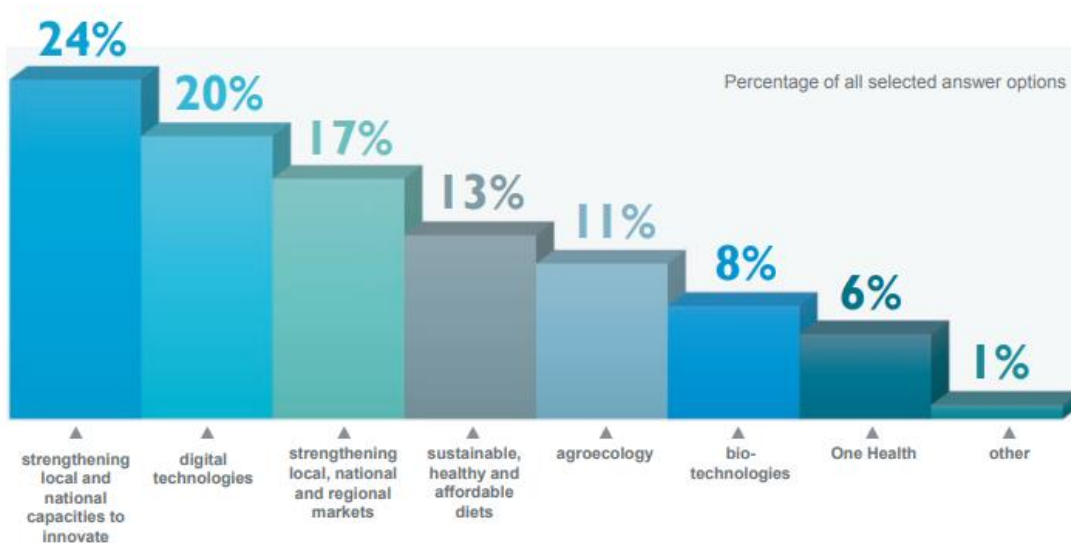
Surprisingly, almost 60% of all responses made by Prolinnova-GFAR respondents were “research organisations and universities” and only about 30% selected the category comprising farmers, fisherfolk and so on (see Figure 20). For the FAO group, the option selected the most was the “farmers, fisherfolk, pastoralists, forest dwellers, livestock herders, indigenous people and CBOs” category, which made up 29% of the responses, slightly higher than “research organisations and universities”, as shown in Figure 40. It is likely that the responses from the Prolinnova-GFAR group are based on their differentiating between ‘innovation’ and ‘local innovation’. For the latter, as shown in Figure 32, there was similar importance given to “farmer organisations” and to “researchers”.



**Figure 40: FAO results for most important actors in innovation systems (Source: FAO Report)**

#### 4.2.6 Best bets for innovation

Although the option selected most frequently as a “best bet” for innovation in both groups was “strengthening local and national capacities”, this was slightly higher for the Prolinnova-GFAR respondents than the FAO respondents (see Figure 26 above and Figure 41 below). Within the FAO respondents, there was a more even spread of options selected, but for both groups of respondents, some options were selected relatively infrequently, especially “One health” and “Biotechnologies”. This suggests that respondents do not recommend a very focused approach for future priorities.



**Figure 41: FAO results for ‘best bets’ (Source: FAO preliminary results)**

### 4.3 Synopsis of respondents’ final thoughts

This section of the report is a synthesis of the final thoughts that were shared by the many different actors who completed the survey. As far as possible, efforts have been made only to structure the material and to maintain the views expressed by the respondents. *Note: To differentiate between respondents’ and authors’ inputs, all authors’ text is shown in blue italics in this section.*

#### 4.3.1 Understanding the concept of local and joint innovation

Innovation is the product of the need and the time. Innovation is the process of innovation, while “*innovations*” are the products of innovation. Innovations can be technical or organisational and, therefore, can be a product such as a technical innovation, or a process, such as an organisational innovation. One respondent highlighted that innovations are not introduced, but rather they are locally developed, based on local resources. Another was of the opinion that this is why local innovation is a way forward for sustainable agrifood systems. The need to recognise farmers’ endogenous knowledge was also mentioned (*which aligns well with the concepts promoted by Prolinnova, since recognising indogenous knowledge and endogenous development would be recognising knowledge that develops from within a culture, i.e. recognising local innovation*).

Innovations can emerge/develop in a wide variety of situations, both by individuals and in communities, and promoting and sharing local innovations are key for increasing productivity of farmers as well as their economic status. Innovation, while solving farmers’ problems, also needs to include economic considerations, and farmer-led innovation processes have to be aligned with the local economy and markets. The reality for many farmers is that their capacity to innovate will come down to what are already narrow profit margins and the time available to them, and it should be recognised that the poor are likely to put prospects for income generation above environmental considerations. Innovations must be practical and driven by local needs, but their development requires sufficient funding. There was a suggestion that innovations that can be easily taken up by rural communities should be promoted. *The concern with this is that we are then assuming that we can transfer the technology to other contexts and that it will be relevant for all farmers. Local innovation is usually frugal innovation that keeps the costs of inputs to a minimum. It shows others what can be achieved using local*

*resources in a more efficient way. It can inspire other farmers operating under similar resource-constrained conditions to use the local resources available to them in new ways that bring themselves and/or their communities more benefits.*

Farmer-led joint experimentation, which involves multiple actors (*from at least two different stakeholder groups*), is key to developing locally appropriate solutions, and critical to address systemic challenges in the agrifood systems. It is important that knowledge and practices of peasants and applied scientific knowledge are combined with concrete results because the complexity of the food system calls for different contributions from different stakeholders. One of the respondents suggested that farmers can be involved in the process either at the beginning, at the end, or throughout, but that what is important is that they are empowered to be active participants at various engagement levels throughout the innovation process and that the process allows for the co-creation of knowledge and innovation. This is slightly different from the opinion of another respondent who suggests that farmers playing a central role in generating new knowledge, technologies and ways of working, through a process of farmer-led innovation, is necessary for securing social, economic and environmental sustainability of farming.

Farmer-led joint experimentation is important because it reduces the reliance of farmers on external actors, but there is a need to engage more relevant stakeholders in the future because many have not focused on this. Joint innovation processes should be implemented under the leadership of the farmers. The forces between various actors in a (society) must be balanced, without some (*external*) actors dominating the discourse in relation to local communities. This is often due to time pressures related to funding modes or non-transparent procedures.

Another respondent highlighted that there is a mismatch between different actors in terms of their perceptions of innovation, with donors and governments focusing on innovations with immediate and large-scale benefits (impact), which are generally high-tech scientific innovations, while farmers and rural communities depend on “minimal”-change local innovations. These respondents suggested that perhaps attention needs to be given to both types of innovation.

#### *4.3.2 What is needed to support local innovation?*

Support can be related to the innovation process, capacity building, validation and dissemination. The comments received regarding provision of support to local innovation are presented below.

##### Encourage innovativeness

Farmers should be encouraged to bring new technologies and inputs into their agrifood system as and when needed. Individual farmers' as well as communities' capacity to experiment, innovate and adapt to change should be developed. We need to give emphasis to the end products or results of supporting local innovation (*processes*) and demonstrate to farmers (*and others*) that it has tangible benefits.

Support existing innovators, and create networks of innovators that can mentor new network members. Establish local platforms such as fairs that can nurture local innovations since competition also drives the process of innovation. Mobilisation and sensitisation of innovative farmers and networks at the local level stimulate their creativity. Wider dissemination of farmers' innovations gives recognition to the farmers' worth. It is necessary to ensure the personal development of innovators. The value of peer-to-peer learning must be recognised as a key driver of innovation. A networking mechanism that operates at different levels (which

could be a website or physical platform) could allow for interactions related to innovation between different actors.

Some departments have given awards to farmer innovators, as done by the Tigray Bureau of Agriculture and Natural Resources, where the head asked his staff to organise village meetings to honour farmer innovators related to integrated land management that have led to yield improvements. Winners' farms were visited, where they were given the opportunity to explain what they had done and how they had disseminated their ideas to others. Awards were also given to women who were challenging traditions and taking on roles not normally assigned to women, such as making use of animal traction for ploughing. A number of respondents referred to involving youth in agricultural innovation processes, given that there are many countries that have policies supporting youth vocational training.

#### Address riskiness and financial needs

Farmers are afraid and reluctant to take risks given their limited resources, but with funding support they are open to innovating without worrying about addressing their immediate needs. Local financing mechanisms that absorb risk are needed to drive innovation in the face of uncertainty. However, it is important to avoid elite capture by careful targeting such that the resource-poor, less confident farmers can also benefit.

#### Capacity building of different actors

Capacity building of local farmers is needed to ensure food production and to reduce the rate of undernourished societies. Many innovations developed by farmers have not been able to make it into the market and, in some cases, this requires support. Sometimes, the farmers are not able to meet the requirements and standards of existing innovation development support systems.

It is important to strengthen the capacity of the actors who are involved in the (local) innovation process, so that they can provide better support (technological and financial) and also ensure that the innovators and their community benefit from the innovation. This is seen as a mechanism towards institutionalising the PID approach within the mainstream ARD landscape. It was suggested that Prolinnova needs to expand in developing countries and enhance the capacities of civil society organisations (farmer organisations and NGOs) to be able to reach the community level.

#### Documentation of innovation processes

Documentation of the innovation processes should be given priority so that all understand the pros and cons. The monitoring and evaluation of local joint experimentation (*and joint innovation*) experiences contribute to strengthening of local innovations. We need more in-depth cases that provide evidence rather than just an upsurge of "outcome stories" that are not done well. There would be value in producing statistical data related to the impact of local innovation. We need evidence that innovations have contributed substantially to improving the means and living conditions of small-scale family farmers in a particular locality, as this will justify the collaboration of farmers with other actors. Also, while science is important, the documentation of findings and practical implications must be translated and published in an accessible way that excludes jargon and access costs.

#### Validation of local innovations

Some respondents saw the need for validation of local innovations through research experimentation so that they can be reliably promoted.

### Protecting Intellectual property rights

There is always a risk that innovators will lose their innovations, especially where there is an element that can be patented. One respondent saw the need for some sort of facility that operates globally that motivates farmers to register their innovations – *this would need to ensure protection of innovators' intellectual property. Currently, Prolinnova operates with the "copyleft" principle and establishes the "ownership" (intellectual property) of an innovation through its documentation in the public domain.*

#### 4.3.3 *What is needed to drive policy change?*

Farmers have gone from being (*perceived as*) users of research results to being producers or co-producers of knowledge. However, it is still a challenge to integrate PID into the national agricultural research system and ensure the sustainability of funds introduced through projects. (*Local*) innovation has not been prioritised by the government or private sector, and rural advisory services often work against local innovation through a transfer-of-technology mindset (*or else apply this mindset to the transfer of local innovations*). This calls for reformation at a policy level, establishment of facilities that support community–NGO–government coordination for innovation creation, and prioritisation of research for innovation by providing financial aid for students and community-level agri-based researchers.

As one respondent said, the effort made by Ann Waters-Bayer, Chris Reij and others in the late 1990s at Mekelle University is the basis for the farmer-led innovation and joint experimentation approach in that area. Despite its importance, farmer-led innovation and joint experimentation have received little attention and this needs to be re-initiated by considering the achievements made in the late 1990s. The activities implemented during this time were published as a book in 2001 entitled "Farmer innovation in Africa: a source of inspiration for agricultural development".

While local innovation and joint innovation are currently facilitated by NGOs, mainstreaming requires that it be integrated into the work programmes of extension staff and researchers, as well as academic institutions. One suggestion was for research organisations to be brought in as partners for doing research on farmer innovation – *which could involve validation or joint experimentation to look at issues jointly identified by the local farmers and communities and the formal researchers.*

We need to draw on experiences of past projects, such as the Indigenous Soil and Water Conservation (ISWC) project in Ethiopia, which shared results through local media as well as through a series of research reports.

### Creating an enabling environment

For innovations to support the transformation towards sustainable food systems, it is necessary to establish an environment that is favourable to listening and to establishing mutual understanding. Innovators and the innovations would benefit from support from the concerned authorities, as they may encounter financial challenges and lack of access to scientific knowledge.

Local innovation needs institutionalisation and an enabling environment for actors to engage with farmer innovators in an appropriate way without crowding them out. This calls for increased capacity building for more actors to understand and implement the concept correctly.

### Mainstreaming into academic institutions

People from academic and development circles should take an active part in testing and validating innovations, understanding the science behind them, and then disseminating them – *though the latter is concerning, as it assumes that the innovations are not context-specific*. As part of the process of decolonisation<sup>2</sup>, we need to be creative about how to bring to light the narrative about local innovation and innovations – especially within education. This will stimulate students to be creative in their own communities, encouraging local innovation. Thus, students and faculty need to be involved to support local innovation.

### Informing the policy environment

Another suggestion was that, in order to address power imbalances in our food systems, one needs to look at the interactions of local innovation (decentralised governance) with systemic innovation on a higher level. Transformation of agrifood systems to make them efficient, inclusive and resilient, with multiple benefits, also requires innovation at an organisational (meso) level – including those organisations providing innovation support services. Policy changes at a macro level are needed to ensure that an enabling environment exists for innovation and change. Many small-scale farmers would be motivated by the realisation that government policy on innovation favours new or innovative ideas that they have related to agribusiness activities, which calls for more meetings and events related to the local innovation processes.

#### 4.3.4 Survey process

A number of respondents shared views regarding the survey process itself, including that the results of this survey may contribute to sound and credible decision-making. One respondent suggested that the responses received “might delimit some trends beyond FAO staff in the understandings of innovation in agri-food sustainability transitions”. Another hoped that FAO could work towards “changing the mindset in National Agricultural Research Systems, who often believe that innovation is their role and that farmers are just passive recipients of what they develop”. One respondent raised concerns about not being familiar enough regarding agrifood sustainability, which was required to answer the survey questions; it was suggested that we needed to share such materials. Another respondent indicated that they read up about local innovation and PID in order to be better able to respond to the survey, thereby finding out about the principles and significance of innovation.

In terms of shortcomings of the survey, one respondent highlighted their appreciation of the efforts of the survey design to harmonise indigenous (*local*) and modern knowledge for synergy, but raised concerns that neither the innovation diffusion nor the social fabrics of values and identities in the innovation equation are boldly reflected in the survey. Another respondent suggested that the survey should have asked for an example of an innovation and provide information about why they perceive it to be an innovation, as well as explaining the process followed in developing it and what helped/hindered taking it to scale.

There was a request to share the findings from the survey with participants.

---

<sup>2</sup> “Decolonisation of education is the eradication of colonialist epistemologies and social practices in order to centralise Africa’s own”- Motsa, Executive Director in Department of Leadership and Transformation at University of South Africa (UNISA)

## **5 CONCLUDING REMARKS**

### **5.1 Understanding the concept of (local) innovation**

It is clear that most respondents saw innovation as a process that has outcomes, which are the innovations. One respondent highlighted that the outcome of innovation can also be a new 'process'. Within Prolinnova, the focus is on innovation that happens at a local / grassroots level and most responses reflected this. One of the respondents highlighted that there is a challenge of government policy often seeing innovation as high-tech scientific developments, and overlooking the type of innovation that supports resource-poor small-scale farmers. This ties in well with the view that very few innovations involve radical or disruptive changes while more than a third of respondents indicated that innovations involve small or incremental changes. Furthermore, there is a strong agreement amongst respondents that innovations are new only to the context in which they are introduced – although one respondent indicated that the phrase should have referred to development rather than introduction of the innovation. It was a widely shared perception that innovations are driven by need and that family farmers are important innovators, and that local knowledge and know-how are important for innovation.

A key element of local innovation is that it is not limited to technical solutions. Respondents clearly confirmed that social and institutional innovations are also important for building sustainable agrifood systems.

### **5.2 Innovation supports adaptation**

The results of the survey support the perception that innovation by farmers allows them to adapt to change and to other challenges that they encounter. When respondents were asked to select terms that they associate with innovation, "adaptation" was the second most frequently selected option.

Another concept that is linked to this is that innovations are often developed within a particular context to address specific challenges that have been encountered. When respondents were asked to select reasons why innovation is important for organisations supporting agricultural development, just over half indicated that the capacity to innovate is important because the same solution does not work everywhere. This aligned strongly with an earlier question where more than 80% of respondents indicated that an innovation that works in one place will not necessarily work in another place. The role that innovation plays in supporting adaptation was also reflected in the options selected in terms of reasons why farmer-led joint experimentation / innovation is important, in particular, the option "to develop locally appropriate solutions to farmers' challenges".

The role that farmers play in the development of locally appropriate solutions was also strongly confirmed by the respondents. There was recognition of the value of the knowledge that farmers hold (which includes informal processes of learning and experience-based know-how) as well as recognition that joint experimentation/innovation processes allow for the combination of farmers' knowledge with that of other actors. When asked about the support requirements for farmer-led innovation development, more than 70% of respondents selected participatory multistakeholder / joint stakeholder approaches, rather than financial or technical inputs. This reflects the perceived value of bringing the skills and capacities of different actors together to support the development of innovations. This is well aligned with the responses regarding the key role of external agents, the most commonly mentioned one being to "improve local innovations jointly with farmers" (rather than, for example facilitating the validation of local innovations by other farmers). Regarding the roles that farmers play in innovation processes, the options that were most selected were that they have the role of



developing their own solutions and the role of working with other actors to develop innovations. The respondents definitely did not see their main role being to evaluate externally derived innovations.

### 5.3 Factors that make an organisation more innovative

Innovation is not something that relates only to the development context in which organisations work, it also relates to the organisations themselves. It allows them to adapt to changes that they encounter. In terms of factors that help an organisation to be innovative, two-thirds of respondents indicated that it was the people – and how the people are motivated to explore new ideas and approaches. Again, when asked what factors make an organisation “ripe for innovation”, the one most commonly selected was to “create safe spaces for staff to innovate and experiment”. This is perhaps the same requirement that farmers have, which is why there is a need to “derisk” and promote innovation. Organisations also need to decide on the areas in which they wish to support innovation, where they think change is most needed to build sustainable agrifood systems. From the survey, the area that respondents found to be most important was strengthening local and national capacities to innovate, rather than focusing on a specific topic.

### 5.4 General conclusions

What is very clear from this survey is that the principles and values that define the Prolinnova network emerged strongly from the responses given to the questions. The respondents, who represent a range of stakeholders that play a role within AISs, clearly demonstrated that they recognise that innovativeness is necessary for adaptation to challenges, including climate change, and that external agents need to work with local innovators to find solutions to these challenges.

The key message that can be distilled from this survey is the importance to focus more on the multidimensional, multistakeholder, multifaceted processes through which innovation is developed rather than on the innovation(s) per se. This implies the need to integrate in these processes: i) the local priorities of farmers (and farmers themselves with their skills), which highly value adaptation to local circumstances; ii) the correlated institutional and social innovations that are required to enable and support the expression and valorisation of partnership-based farmer-centric approaches; and iii) the organisational change implications. Organisational changes required to achieve this include new capacities at various levels, motivation to explore new ideas and to experiment, new rules and ways of working, new forms of knowledge and a safe space to innovate.

### 5.5 Recommendations for different actors

Emerging from the outcomes of the survey, which are largely supported by the “final comments” that were provided by respondents, a set of recommendations has been derived for key stakeholder groups towards supporting local innovation and joint innovation processes. These recommendations apply to different stakeholders, as detailed in Annexure 1.

Firstly, there are **recommendations related to advocacy**, which are aimed at organisations that influence the programmes and policies of government departments, donors and so on:

- Identify programmes and policies that need to be revised to accommodate and encourage local innovation and Participatory Innovation Development (PID).
- Encourage donors to allow for research agendas to be driven by what farmers are already trying to do to solve their challenges.
- Support participatory farmer-led multistakeholder / joint innovation approaches.

- Funding can be put in the hands of farmers to support local innovation, allowing them to define the agenda.
- Development policies and programmes of donors should not focus only on high-tech innovations, as many are not appropriate for small-scale family farmers.
- Donors need to consider how to reduce the risk of innovation, especially for small-scale farmers.
- NGOs need to take steps to draw in researchers and advisors into joint innovation processes towards mainstreaming the approaches.

A second set of recommendations is related to **encouraging innovativeness and recognising the contribution of different knowledge sources**, especially farmer knowledge:

- Promote the process / ethos of innovation and not just “innovations”.
- Recognise that farmers can be innovators, not just recipients of innovations/ technologies.
- Recognise that different sources and types of knowledge have a role to play in developing solutions to challenges.
- Encourage testing and adaptation of innovations and technologies by farmers and community members.
- Recognise innovations that are new to an area and not completely new inventions.
- Promote local innovation and farmer-led joint innovation as a way of improving livelihoods of family farmers.
- Create awareness about local innovation and participatory innovation development.
- Encourage/hold fairs and competitions to recognise and encourage local innovation.

**Evidence is required to influence policymakers, practitioners and any other actors**, which calls for the following recommendations:

- Documentation of innovation processes needs to include the roles that different actors have played (including external facilitators if they exist).
- Share experiences and outcomes of multistakeholder innovation processes to create awareness about the potential benefits of moving away from a technology-transfer model.
- Monitor the impacts of innovations and outcomes of joint innovation processes (including a measure of shared values between stakeholders towards a common objective or objectives).
- Monitor the impacts of engaging farmers in processes of innovation and experimentation.

A set of **recommendations applies to the implementation of programmes and projects** that support innovation:

- Do not assume that local innovations / joint innovation outcomes can be introduced to other locations just because of farmer involvement in their development.
- Encourage incremental changes to existing innovations and technologies to improve them.
- Recognise that not all innovations need to be externally validated, especially if other local farmers find them to be good.
- Do not limit innovation to technological developments, also consider social and institutional developments.

- Provide safe spaces for innovation and experimentation where failure is recognised as a possible outcome and a source of learning.
- Some local innovations can be shared but farmers should be encouraged to test and adapt them as required.
- Consider that innovation needs to be supported by other interventions such as supporting market access and value addition (which may provide scope for further local / joint innovation).
- Multistakeholder processes require strong facilitation to ensure that farmers' voices are heard.
- Introduce new instruments that support multistakeholder innovation, such as well facilitated innovation platforms that include farmers.

Some **recommendations were specifically targeting organisations that aim to mainstream these approaches** within their own work programmes:

- Integrate the concepts of local innovation and joint innovation processes into universities so that these concepts become recognised academically and so that students are exposed to alternative ways of agricultural development and research.
- Modify job descriptions of extension agents / advisors so that they can identify local innovations and support joint innovation processes.
- Bring about changes within organisations in terms of how they reward staff in order to foster an appreciation of local innovation and of engaging in joint innovation processes.

The last set of **recommendations** is related to **supporting local and joint innovation processes**, namely:

- Strengthen farmers' capacity to experiment.
- Strengthen researchers' capacity to engage in farmer-led joint innovation processes.
- Strengthen partnerships with actors that can play a role in multistakeholder innovation processes.
- Strengthen local and national capacities to innovate.
- Intellectual property (IP) rights of innovators need to be protected where there are innovations that can be 'stolen' and commercialised by other parties. IP can be protected passively by documenting it, or it can be formally protected with a patent.

The implementation of these recommendations will strengthen the support provided to local innovation as well as farmer-led joint innovation processes aimed at achieving sustainable agrifood systems.

## ANNEXURE 1: DETAILED RECOMMENDATIONS RELATED TO LOCAL INNOVATION AND JOINT INNOVATION

Recommendation	GFAR	FAO	CGIAR Centres	National Agricultural Research Systems	Government extension/ advisory systems	NGOs	Private sector	Farmer orgs.	Donors	Academic
<b>ACTION: ADVOCATE TO INFLUENCE POLICIES AND PROGRAMMES</b>										
Identify programmes and policies that need to be revised to accommodate and encourage local innovation and PID.				X	X	X				
Encourage donors to allow for research agendas to be driven by what farmers are already trying do to solve their challenges.	X	X	X	X		X		X		
Support participatory farmer-led multi-stakeholder / joint innovation approaches	X	X	X	X	X	X	X	X	X	
Put some funding in the hands of farmers to support local innovation, allowing them to define the agenda.	X	X		X		X			X	
Development policies and programmes of donors should not focus only on high-tech innovations, as many are not appropriate for small-scale family farmers.	X	X		X		X			X	
Donors need to consider how to reduce the risk of innovation, especially for small-scale farmers.	X	X		X					X	
NGOs need to take steps to draw researchers and advisors into joint innovation processes towards mainstreaming the approaches.						X				
<b>ACTION: ENCOURAGE INNOVATION AND JOINT INNOVATION PROCESSES</b>										
Promote the process / ethos of innovation and not just “innovations”.	X	X	X			X			X	X
Recognise that farmers can be innovators, not just recipients of innovations/ technologies.	X	X	X	X	X	X	X	X	X	X

Recommendation	GFAR	FAO	CGIAR Centres	National Agricultural Research Systems	Government extension/ advisory systems	NGOs	Private sector	Farmer orgs.	Donors	Academic
Recognise that different sources and types of knowledge have a role to play in developing solutions to challenges.	X	X	X	X	X	X	X	X	X	X
Encourage testing and adaptation of innovations/technologies by farmers and community members.	X	X	X	X	X	X	X	X	X	X
Recognise innovations that are new to an area and not completely new inventions.	X	X	X	X	X	X		X	X	X
Promote local innovation and farmer-led joint innovation as a way of improving livelihoods of family farmers.	X	X	X	X	X	X		X	X	X
Create awareness about local innovation and PID.	X	X	X	X	X	X		X		X
Encourage/hold fairs and competitions to recognise and encourage local innovation.	X	X	X	X	X	X	X	X	X	
<b>ACTION: PROVIDE EVIDENCE OF THE BENEFITS OF INNOVATION AND PARTICIPATORY INNOVATION DEVELOPMENT</b>										
Documentation of innovation processes needs to include the roles that different actors have played (including external facilitators, if they exist).	X	X		X	X	X		X		X
Share experiences and outcomes of multi-stakeholder innovation processes to create awareness about the potential benefits of moving away from a technology-transfer model.	X	X	X	X	X	X		X		X
Monitor the impacts of innovations and outcomes of joint innovation processes (including a measure of shared values between stakeholders towards a common objective or objectives).	X	X	X	X	X			X	X	X
Monitor the impacts of engaging farmers in processes of innovation and experimentation.	X	X	X	X	X				X	X

Recommendation	GFAR	FAO	CGIAR Centres	National Agricultural Research Systems	Government extension/ advisory systems	NGOs	Private sector	Farmer orgs.	Donors	Academic
<b>ACTION: IMPLEMENT JOINT INNOVATION AND SUPPORT LOCAL INNOVATION</b>										
Do not assume that local innovations / joint innovation outcomes can be introduced to other locations just because of farmer involvement.	X	X	X	X	X	X				
Encourage incremental changes to existing innovations and technologies to improve them.	X	X	X	X	X	X				X
Recognise that not all innovations needed to be externally validated, especially if other local farmers find them to be good.	X	X	X	X	X	X				X
Do not limit innovation to technological developments, also consider social and institutional developments.	X	X	X	X	X	X		X	X	X
Provide safe spaces for innovation and experimentation where failure is recognised as a possible outcome and a source of learning.	X	X	X	X	X	X				X
Some local innovations can be shared but farmers should be encouraged to test and adapt them as required.				X	X	X		X		
Consider that innovation needs to be supported by other interventions such as supporting market access and value addition (which may provide scope for further local / joint innovation).	X	X	X	X	X	X	X	X	X	X
Multistakeholder processes require strong facilitation to ensure that farmers' voices are heard.	X	X		X	X	X		X		
Introduce new instruments that support multistakeholder innovation, such as well-facilitated innovation platforms that include farmers.	X	X	X	X	X	X		X	X	X
<b>ACTION: MAINSTREAM PID BY BRINGING ABOUT ORGANISATIONAL CHANGES</b>										

Recommendation	GFAR	FAO	CGIAR Centres	National Agricultural Research Systems	Government extension/ advisory systems	NGOs	Private sector	Farmer orgs.	Donors	Academic
Integrate the concepts of local innovation and joint innovation processes into universities so that these concepts become recognised academically and so that students are exposed to alternative ways of agricultural development and research.	X			X						X
Modify job descriptions of extension agents / advisors so that they can identify local innovations and support joint innovation processes.					X		X			
Bring about changes within organisations in terms of how they reward staff in order to foster an appreciation of local innovation and of engaging in joint innovation processes.	X		X	X	X					X
<b>ACTION: SUPPORT AND ENABLE JOINT INNOVATION AND LOCAL INNOVATION</b>										
Strengthen farmers' capacity to experiment.				X	X	X		X		
Strengthen researchers' capacity to engage in farmer-led joint innovation processes.	X	X	X	X		X				X
Strengthen partnerships with actors that can play a role in multistakeholder innovation processes.	X	X		X	X	X		X		X
Strengthen local and national capacities to innovate.	X		X	X		X			X	X
Intellectual property rights of innovators need to be protected where there are innovations that can be “stolen” and commercialised by other parties. IP can be protected passively by documenting it, or it can be formally protected with a patent.				X		X		X	X	X

The application of these recommendations, which are drawn directly from the findings of the survey, will strengthen the support provided to local innovation as well as farmer-led joint innovation processes towards achieving sustainable agrifood systems.

## ANNEXURE 2: LIST OF PUBLICATIONS MENTIONED BY RESPONDENTS

FORAGRO. 2022. Co-innovation as a methodological tool to help improve economic, environmental, and social results in family farming. Available at: [https://foragro.org/sites/default/files/2022-06/coinnovation\\_FORAGRO.pdf](https://foragro.org/sites/default/files/2022-06/coinnovation_FORAGRO.pdf)

James T.J. undated. 22<sup>nd</sup> International Symposium on Agroecology, Scaling-up Agroecology to achieve the Sustainable Development Goals. Available at: <https://www.fao.org/3/CA2470EN/ca2470en.pdf>

James T.J. 2019. The Commercialization of Farmers' Innovation: Farming Innovators and Rural Entrepreneurs. Available at: <https://impakter.com/commercialization-of-farmers-innovation-linking-farming-innovators-and-rural-entrepreneurs/>

James T.J. undated. Farmer innovations – Sustainable solutions to fight climate change. LEISA India. <https://leisaindia.org/farmer-innovations-sustainable-solutions-to-fight-climate-change/>

Mitiku Haile, Fetien Abay and Waters-Bayer A. 2001. Joining forces to discover and celebrate local innovation in land husbandry in Tigray, Ethiopia. In: Farmer Innovation in Africa, A Source of Inspiration for Agricultural Development (Eds Chris Reij & Ann Waters-Bayer). eBook ISBN9781315071886. Available at: <https://www.taylorfrancis.com/books/mono/10.4324/9781315071886/farmer-innovation-africa-chris-reij-ann-waters-bayer>.

Lee N, Nystén-Haarala S and Huhtilainen L. undated. Interfacing Intellectual property rights and Open innovation. Available at: [https://www.wipo.int/edocs/mdocs/mdocs/en/wipo\\_ipr\\_ge\\_11/wipo\\_ipr\\_ge\\_11\\_topic6.pdf](https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ipr_ge_11/wipo_ipr_ge_11_topic6.pdf)



## ANNEXURE 3: PROLINNOVA-GFAR INNOVATION SURVEY FORM



### Innovation Survey 2022



#### Introduction

FAO is gearing up for innovation in agrifood systems, ways of working, partnerships and mindset. Following up on a survey amongst FAO staff to explore their perceptions of innovation, this initiative seeks to explore this amongst members of the GFAR/Prolinnova network.

Please take a few moments to complete this survey, which will enhance understanding of innovation in FAO/GFAR and Prolinnova, as well as how innovation can be strengthened to support the transformation to more efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind.

While there are many different approaches to innovation, it is important for FAO and GFAR to develop a shared understanding of the concept, and this survey among GFAR/Prolinnova partners represents one step in that process. We therefore invite you to approach this survey with the following basic definition used by the FAO: innovation is doing something differently than you did before.

#### Getting started

The survey has 7 parts:

- What is innovation?
- Why focus on innovation?
- Innovation for sustainable agrifood systems
- What allows for innovative organisations?
- Future priorities
- Questions related to local innovation and farmer-led joint innovation
- Final thoughts

After the respondent information, there are 24 questions (mostly multiple choice and scoring questions). We estimate that it will take you 15–20 minutes to complete the survey.

To get started, please provide the following information about yourself (all fields required). The information below will be used to analyse the survey results, but all results will be anonymous.

#### Respondent information

Name and surname

Organisation that you work for

Country where you are based

Type of organisation

Government	
Private	
Education	

Non-governmental organisation (NGO)	
Community based organisation (CBO)	
Farmers organisation	
Other (please explain)	

Your main role

Academic	
Researcher	
Practitioner	
Consultant	
Farmer	
Other (please explain)	

Sex

Male	
Female	
Prefer not to disclose	

## Survey questions

### What is innovation?

Do you usually think of innovation as: (select one option)

A product?	
A process?	
An invention?	
An idea?	
Something else? (please specify)	

Which statement do you most strongly agree with? (select one option)

Innovations are driven by need.	
The more financial incentives you have, the more you innovate.	
The most successful innovations are based on science.	
Family farmers are the most important innovators in agriculture.	
Innovation brings progress.	
Innovation is risky and innovations must be introduced responsibly.	

Which words do you associate with "innovation"? (select up to 3 options)

Science and technology	
Local knowledge and know-how	
Economic growth	
Autonomy	
Adaptation	
Risk	
Other (please specify)	

Is innovation always beneficial?

Yes	
No	

Does an innovation that works in one place, necessarily work in another?

Yes	
No	

Innovation must be new: (select one option)

To the context where it is introduced	
In the world	
Both	

Innovation involves: (select one option)

Radical/disruptive changes	
Small or incremental changes	
Both	
None (please explain)	

A successful innovation has impact: (select one option)

On a very small scale	
On the whole of society	
Both	

Learning is a key component of innovation. Select the types of knowledge that are most relevant to innovation for agrifood systems. (select up to two options)

Data (e.g. Facts and statistics)	
Information (organised data)	
Knowledge (actionable information that aids decision-making)	
Wisdom (the judgement to act appropriately to the situation)	

How important is codified, scientific and technical knowledge for sustainable agrifood systems?

On a scale (1–5) where 1 is not at all important and 5 is extremely important

1	
2	
3	
4	
5	

How important are informal processes of learning and experience-based know-how for sustainable agrifood systems?

On a scale (1–5) where 1 is not at all important and 5 is extremely important

1	
2	
3	

4	
5	

### Why focus on innovation?

Why is innovation important for organisations supporting agricultural development? (select one option)

Innovation is the key to creating sustainable agrifood systems and ending hunger.	
There is a lot of interest in innovation among governments, the UN and the private sector, and agricultural development organisations have to stay relevant.	
In agrifood systems, the same solution doesn't work everywhere so the capacity to innovate is key for local adaptation.	
Emerging innovations will have important impacts on family farmers – particularly in developing countries – and development organisations have a key role in ensuring that no one is left behind.	
Other (please specify)	

### Innovation for sustainable agrifood systems

In which area of agrifood systems is it most necessary to do things differently (i.e. To innovate)? (select one option)

Production	
Consumption and nutrition	
Markets and trade	
Sustainable management of natural resources (soil, water, biodiversity, climate)	
Poverty, equity and human rights	
Governance and policies	
Inter-sectoral, multi-disciplinary and systemic approaches	
Other (please specify)	

What types of innovation are most relevant for building sustainable agrifood systems? (select up to three options)

Social innovation	
Institutional innovation	
Technological innovation	
Financial innovation	
Policy innovation	
Other (please specify)	

Which actors play the most important role in innovation in agrifood systems? (select up to three options)

Research organisations and universities	
Extension agents	
Farmers, fisherfolk, pastoralists, forest-dwellers, livestock herders, indigenous peoples and community-based organisations	
Private sector	
Philanthropic foundations	
Governments	
Donors	
Other (please specify)	

### What allows for innovative organisations?

Thinking back over your career to a period when you and/or your team were particularly innovative, what organisational factors made the context ripe for innovation? (select one option)

People (how people are motivated within an organisational setting to explore new ideas and experiment with new approaches)	
Knowledge (issues related to the collection, analysis, sharing and communication of information, knowledge development and learning)	
Ways of working (the way work is structured within and across the organisation)	
Rules and processes (including the legal/regulatory framework, budgeting and approval processes)	

What would help an agricultural development organisation to be more innovative? (select more than one, if applicable)

More science	
Better partnerships	
Better coordination and collaboration across the organisation	
Creating safe spaces for staff to innovate and experiment	
Accepting to fail sometimes	
Other (please specify)	

### Future priorities

Assuming that there will be national and regional variation in priority innovations, but also that some innovations will be relevant to all regions, what do you think are the innovation “best bets” that would be relevant to all regions? (select up to three options)

Digital technologies (including Artificial Intelligence)	
Biotechnologies	
Strengthening local, national and regional markets	
Sustainable, healthy and affordable diets	
Agroecology	
One Health	
Strengthening local and national capacities to innovate (e.g. Through Agricultural Innovation Systems and Farmer Field Schools)	
Other (please specify)	

### Questions related to local innovation and farmer-led joint innovation processes

What are the key factors that encourage or stimulate innovation by small-scale farmers? (Select three options)

Incentives (prizes or payments)	
Financial / economic gain	
A need for food security	
A need for increased production	
A need for strengthening local institutions or relationships	
New market opportunity	
Other (specify)	

What roles do small-scale farmers have in the agricultural innovation process? (Select two options).

Suggesting where innovations are needed	
Developing their own innovations	
Working with other actors to develop innovations	
Evaluating externally-derived innovations	
Other (please explain)	

Farmer-led innovation development process can be best supported through? (Select one option)

Technical inputs from external experts/institutions	
Financial support from financial / other institutions	
Participatory multi-stakeholder/joint stakeholder approaches	
Other (specify)	

What are the key roles of external actors to support local innovation processes? (Select two options)

They can validate local innovations in scientific terms	
They can facilitate other farmers' validation of local innovations	
They can improve local innovations jointly with farmers	
They can identify examples of local innovation and help to disseminate them	
They can draw other people's attention to the knowledge and innovativeness of local farmers	
Other (please explain)	

What actors are most important for supporting local innovation and joint experimentation (Select three options)

Farmer organization staff or members	
NGO staff	
Agricultural advisory services / development agents	
Researchers	
Private sector	
University students and their supervisors/lecturers	
Other (please explain)	

Why is farmer-led joint experimentation or innovation important? (Select 2 options)

To develop locally appropriate solutions to farmers' challenges	
To build individual farmers' capacity to experiment, innovate and adapt to change	
To build communities' capacities to collaborate in improving local farming	
To combine different knowledge of farmers and other actors in agricultural research & development	
Other (please explain)	

## Final thoughts

Any final thoughts? Do you have any suggestions or concerns? Please feel free to attach or share links to documents that you find particularly relevant and important.

**Thank you very much for your contribution!**

Please email your completed survey form by **10 July 2022** to:  
Brigid Letty  
**[bletty@inr.org.za](mailto:bletty@inr.org.za)**

## ANNEXURE 4: FAO INNOVATION SURVEY FORM

### FAO Innovation Survey

#### FAO INNOVATION SURVEY

##### Introduction

FAO is gearing up for innovation in agrifood systems, ways of working, partnerships and mindset. The Chief Scientist, ~~Ismaïl Elouafi~~, would like to invite you to be part of that process. Innovation is relevant to every single person in FAO. Without innovation in how FAO works, it will be difficult to bring innovation to our ~~programmes~~.

Please take a few moments to complete this survey, which will enhance understanding of innovation in FAO, as well as how innovation can be strengthened to support the transformation to more efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment, and a better life, leaving no one behind.

While there are many different approaches to innovation, it is important for FAO to develop a shared understanding of the concept, and this survey represents one step in that process. We therefore invite you to approach this survey with the following basic definition: *innovation is doing something differently than you did before.*

### FAO Innovation Survey

#### Getting started

The survey has 6 parts:

1. What is innovation?
2. Why focus on innovation?
3. Innovation for sustainable agrifood systems
4. FAO as an innovative organization
5. FAO's future priorities
6. Final thoughts

There are 34 questions (mostly multiple choice and scoring questions) and we estimate that it will take you 15-20 minutes to complete the survey.

You can change your responses as many times as you want until you click DONE at the end of the questionnaire.



The results of the assessments will be analyzed by the Office of the Chief Scientist to enhance understanding of innovation in FAO, and how it can strengthened.

To get started, please provide the following information about yourself (all fields required). The information below will be used to analyze the survey results, but all results will be anonymous.

1. Unit (acronym in FAO email address, e.g. LEGA, PSUR, OCB, FAOLON, FAONI)

2. Grade

Other (please specify)

3. Gender

4. How many years have you been working for FAO?

## FAO Innovation Survey

### What is innovation?

5. Do you usually think of innovation as (select one):

- a product
- a process
- an invention
- an idea
- other (please specify)

6. Which statement do you most strongly agree with? (select one)

- The more financial incentives you have, the more you innovate.
- The most successful innovations are based on science.
- Family farmers are the most important innovators in agriculture.
- Innovation brings progress.
- Innovation is risky and innovations must be introduced responsibly.

7. Which words do you associate with "innovation"? (select up to three options)

- science and technology
- local knowledge and know-how
- economic growth
- autonomy
- adaptation
- risk
- other (please specify)

8. Is innovation always beneficial?

- yes
- no

9. Does an innovation that works in one place, necessarily work in another?

- yes
- no

10. Innovation must be new:

- to the context where it is introduced
- in the world
- both

11. Innovation involves:

- radical/disruptive changes
- small or incremental changes
- both

12. A successful innovation has impact:

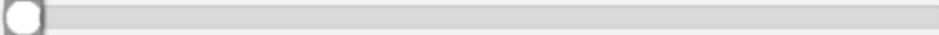
- on a very small scale
- on the whole of society
- both

13. Learning is a key component of innovation. Select the types of knowledge that are most relevant to innovation for ~~agri~~food systems. (select up to two options)

- Data (e.g. facts and statistics)
- Information (organized data)
- Knowledge (actionable information that aids decision-making)
- Wisdom (the judgement to act appropriately to the situation)

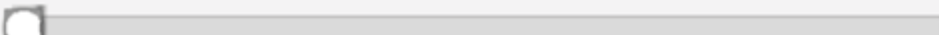
14. How important is codified, scientific and technical knowledge for sustainable ~~agri~~food systems?

Not at all important                      Average                      Extremely important



15. How important are informal processes of learning and experience based know-how for sustainable ~~agri~~food systems?

Not at all important                      Average                      Extremely important



## FAO Innovation Survey

### Why focus on innovation?

16. Why is innovation important for FAO? (choose one)

- Innovation is the key to creating sustainable ~~agri~~food systems and ending hunger.
- There is a lot of interest in innovation among governments, the UN, and the private sector, and FAO has to stay relevant.
- In ~~agri~~food systems, the same solution doesn't work everywhere so the capacity to innovate is key for local adaptation.
- Emerging innovations will have important impacts on family farmers -- particularly in developing countries -- and FAO has a key role in ensuring that no one is left behind.
- Other (please specify)

17. What metaphor best describes the role you would like to see FAO playing with regard to innovation: (choose one)

- FAO is a match-maker, linking countries that develop innovations with countries that need them.
- FAO is a midwife for innovations that are created by other actors.
- FAO is a lab where innovations are developed.
- Other (please specify)

## FAO Innovation Survey

### Innovation for sustainable ~~agri~~food systems

18. In which area of ~~agri~~food systems is it most necessary to do things differently (i.e. to innovate)? (select one option)

- production
- consumption and nutrition
- markets and trade
- sustainable management of natural resources (soil, water, biodiversity, climate)
- poverty, equity and human rights
- governance and policies
- inter-sectoral, multi-disciplinary and systemic approaches
- other (please specify)

19. What types of innovations are most relevant for building sustainable agrifood systems?

(select up to three options)

- social innovation
- institutional innovation
- technological innovation
- financial innovation
- policy innovation
- other (please specify)

20. Which actors play the most important role in innovation in agrifood systems? (select up to three options)

- research organizations and universities
- extension agents
- farmers, fisherfolks, pastoralists, forest-dwellers, livestock herders and indigenous peoples and community-based organizations
- private sector
- philanthropic foundations
- governments
- donors
- other (please specify)

21. How should FAO ensure that innovation is beneficial for the economic, environmental and social dimensions of sustainable development, and that no one is left behind? (choose more than one, if applicable)

- by analyzing trade-offs
- by strengthening quality review and safeguards of projects and investments
- through systemic analysis and assessment of the impacts of innovations
- by strengthening inclusive mechanisms for negotiating outcomes among relevant stakeholders
- other (please specify)

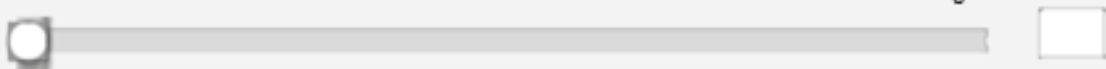
22. What is the most important innovation that FAO has ever developed or supported? What made it successful? (please explain)

## FAO Innovation Survey

### FAO as an innovative organization

23. How would you rate FAO's capacity to innovate?

low medium high



24. Thinking back over your career to a period when you and/or your team were particularly innovative, what organizational factors made the context ripe for innovation? (select one option)

- people (how people are motivated within an organizational setting to explore new ideas and experiment with new approaches)
- knowledge (issues related to the collection, analysis, sharing and communication of information, knowledge development and learning)
- ways of working (the way work is structured within and across the organization)
- rules and processes (including the legal/regulatory framework, budgeting, and approval processes)

25. What would help FAO be a more innovative organization? (select more than one, if applicable)

- more science
- better partnerships
- better coordination and collaboration across the organization
- creating safe spaces for staff to innovate and experiment
- accepting to fail sometimes
- other (please specify)

26. What challenges do you see in terms of strengthening coordination and collaboration across the organization? (select more than one, if applicable)

- lack of incentives
- lack of capacity
- competition for resources
- lack of trust
- other (please specify)

27. What gaps do you see in FAO's expertise and capacities? (select more than one option, if applicable)

- documenting and sharing knowledge
- coordination and overcoming silos and fragmentation
- human resources
- project cycles and management
- other (please specify)

## FAO Innovation Survey

### FAO's future priorities

28. Select the most appropriate objectives for FAO's work on innovation (select up to three options)

- Support countries to know what innovations are available and how to assess, prioritize and adapt them to their context
- Share knowledge and experience between the different regions
- Integrate innovation as a catalyst in all FAO's technical and normative work in a coordinated manner
- Build foresight capacity to evaluate and anticipate context-specific impacts, including the potential benefits, risks and unintended consequences
- Strengthen the technical and policy capacity needed to develop, adapt and scale-up innovations in a just and inclusive manner
- Other (please specify)

29. What principles should provide the foundation for FAO's approach to innovation? (select up to three options)

- support a country-led, demand-driven approach to innovation
- prioritize innovations that are accessible to smallholders and are environmentally sustainable
- prioritize innovations that close yield gaps
- focus on delivering public goods
- strengthen partnerships with the private sector
- ensure transparency and accountability
- other (please specify)

30. Assuming that there will be national and regional variation in priority innovations, but also that some innovations will be relevant to all regions, what do you think are the innovation "best bets" that would be relevant to all regions? (select up to three options)

- digital technologies (including Artificial Intelligence)
- biotechnologies
- strengthening local, national and regional markets
- sustainable, healthy and affordable diets
- agroecology
- One Health
- strengthening local and national capacities to innovate (e.g. through Agricultural Innovation Systems and Farmer Field Schools)
- other (please specify)

31. What are the key emerging issues that FAO will need to confront? (select multiple options, if applicable)

- access to innovations
- exacerbating inequality
- the need for regulations regarding new technologies
- data ownership and control
- impact of new technologies on the role of public and private sectors
- other (please specify)



32. Which organizations/actors must FAO prioritize in its partnerships in terms of innovation?

(select up to three options)

- research organizations and universities
- extension agents
- farmers, fisherfolks, pastoralists, forest-dwellers, livestock herders and indigenous peoples and community-based organizations
- private sector
- philanthropic foundations
- governments
- donors
- inter-governmental organizations
- other (please specify)

## FAO Innovation Survey

### Final thoughts

33. Any final thoughts? Do you have any suggestions or concerns? Please feel free to upload or share links to documents that you find particularly relevant and important.

34. File Upload (optional)

Choose File

Choose File

No file chosen

**Thank you very much for your contribution!**