



Food and Agriculture
Organization of the
United Nations



THE WORLD BANK

EXPERT CONSULTATION

Focusing Agricultural and Rural Development Research and Investment on Achieving SDGs 1 and 2

REPORT

Rome, 9 -10 January 2017

A joint initiative of FAO, IFAD, CGIAR, and the World Bank

In partnership with the European Union



CONTENTS

Sustainable Development Goal 1 and its targets v
Sustainable Development Goal 2 and its targetsvi
Abbreviations and acronymsviii
Summaryix

1. Introduction 1
1.1 Objective and Expected Results 3
1.2 Format of the Consultation 3

2. Highlights from the discussions 6
2.1 Setting the Scene: Challenges in Achieving SDGs 1 and 2 in Rural Areas..... 6
2.2 Measuring impact..... 14
2.3 Taking a closer look at the agricultural investment agenda in relation to achieving SDGs 1 and 2. 20
2.4 What else is needed besides agricultural investment? Institutional environments and complementary policies and programmes..... 29

3. Recommendations 33

4. Towards building the roadmap for action 37

5. Conclusions..... 39

Annexes

A. Summary of the main research questions and gaps emerged from the meeting sessions 40

SUSTAINABLE DEVELOPMENT GOAL 1

End poverty in all its forms everywhere



TARGETS

- By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.
- By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions.
- Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable.
- By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.
- By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.
- Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, in order to provide adequate and predictable means for developing countries, in particular least developed countries, to implement programmes and policies to end poverty in all its dimensions.
- Create sound policy frameworks at the national, regional and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.

SUSTAINABLE DEVELOPMENT GOAL 2

End hunger, achieve food security and improved nutrition and promote sustainable agriculture



TARGETS

- By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
- By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
- By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
- By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed.
- Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.
- Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, in accordance with the mandate of the Doha Development Round.

- Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, in order to help limit extreme food price volatility.

Abbreviations and acronyms

AFA	Asian Farmers' Association for Sustainable Rural Development
APRA	Agricultural Policy Research in Africa
AT	Agricultural Transformation
CC	Climate Change
CEE	Central Eastern Europe
CGIAR CCAFS	CGIAR Research Program on Climate Change, Agriculture and Food Security
CGIAR ISPC	CGIAR Independent Science and Partnership Council
CGIAR SPIA	CGIAR Standing Panel on Impact Assessment
CSA	Climate Smart Agriculture
DIME	Development Impact Evaluation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GFAR	Global Forum on Agricultural Research
GRADE	Grupo de Análisis para el Desarrollo
IA	Impact Assessment
ICBA	International Centre for Biosaline Agriculture
ICED	International Centre for Evaluation and Development
IE	Impact Evaluation
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
LIC	Low Income Country
LMIC	Lower Middle Income Country
LSMS-ISA	Living Standards Measurement Study-Integrated Surveys on Agriculture
MDG	Millennium Development Goal
MIC	Middle Income Country
MSU	Michigan State University
PSE	Paris School of Economics
RIMISP	Centro Latinoamericano para el Desarrollo Rural
RT	Rural Transformation
SDG	Sustainable Development Goal
SSA	Sub-Saharan Africa
ST	Structural Transformation
UCB	University of California at Berkeley
WFP	World Food Programme

Summary

In response to the need to critically assess the role of agricultural research and investment in meeting SDGs 1 and 2 for the near future, as well as to develop a common understanding on the most pressing technical issues to be addressed in a more concerted manner amongst the major global institutions involved, the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the Independent Science & partnership council of the CGIAR (ISPC¹), and the World Bank organized an Expert Consultation that was held at FAO Headquarters from 9 to 10 January 2017. The main purpose was to identify challenges and strategic actions towards achieving a common vision and identifying means of realizing it through coordinated actions.

The Expert Consultation was organized in partnership with the European Commission and brought together over 60 participants including leading experts from each of the agencies involved and other key stakeholders including academics, research institutions, and donors.

Participants contributed actively to the discussions sharing their technical knowledge and experiences with the goal of identifying key priorities towards the development of a common strategy and a roadmap for action. Their recommendations/proposals were prioritized and grouped into five topic areas:

- 1. Improving links between policy and research**
- 2. Prioritising agricultural research and investments**
- 3. Measuring transformative change**
- 4. Fostering value chain approaches**
- 5. Contextualising technology adoption**

The roadmap for action also had a strong emphasis on country level actions. Participants identified a first list of priorities as follow-up actions to better support countries in meeting the SDGs.

- Need to support national policymakers and research institutions to develop a bottom-up approach to better understand the needs and perspectives of communities and stakeholders and integrate them into effective partnerships;
- Need for effective partnership between research and those it serves;
- Need for better targeting of investments based on evidence;
- Need to develop greater local and national capacities to produce, share, and make effective use of new and existing data;
- Need for a better policy-informing collective action, for example mobilizing agricultural knowledge at all levels by sharing lessons, understanding the socio-economic and agro-ecological

¹ The CGIAR Independent Science & partnership council (ISPC) is a standing panel of experts, whose primary mission is to enhance and promote the quality, relevance and impact of science in the CGIAR; advise the CGIAR System Council on strategic scientific issues of importance to the goals of the CGIAR; and to help the CGIAR harness the most valuable partnerships from the international research and development community.

contexts concerned, conducting relevant research and delivering outcomes and transparent feedback;

- Need to formulate researchable questions based on foresight and stakeholder participation
- Need to mobilize stakeholders (civil society, private sector, policymakers, regional fora, institutions of international agricultural research, UN agencies, rural development institutions, donors) at global, national, and regional levels;
- Need to strengthen regional fora to support/build partnerships with farmers organizations, NGOs and the private sector aimed at defining actions geared to meeting SDGs 1 and 2 targets;
- Be more smallholder producer oriented and see farmers as innovators and partners in innovation systems;
- Re-evaluate and re-vitalize the role of agriculture for economic development

In their concluding remarks, the speakers agreed that a long list of challenging questions still need to be answered and the Expert Consultation just provided a starting point to initiate a dialogue that needs to be continued convening other meetings like this.

1. Introduction

The United Nations General Assembly approval of “Transforming Our World: The 2030 Agenda for Sustainable Development”² in September 2015 set 17 Sustainable Development Goals (SDGs) with 169 targets that officially came into force on 1 January 2016. The SDGs build on the success of the Millennium Development Goals (MDGs) but differ from them in that they are universal and apply to all countries, poor, rich and middle-income, whereas the MDGs were intended for action in developing countries only. The SDGs also go further in addressing the root causes of poverty and the universal need for development that works for all people. The goals cover the three dimensions of sustainable development: economic growth, social inclusion and environmental protection.

While the SDGs are not legally binding, governments are expected to take ownership and establish national frameworks for the achievement of the 17 Goals. Countries have the primary responsibility for follow-up and review of the progress made in implementing the Goals, which will require quality, accessible and timely data collection. Regional follow-up and review will be based on national-level analyses and contribute to follow-up and review at the global level.

A core feature of the SDGs is their strong focus on means of implementation—the mobilization of financial resources—capacity-building and technology, as well as data and institutions.

The first two of the new SDGs call for the eradication of extreme poverty and the reduction of half of the proportion of men, women and children living in poverty by 2030 and end of hunger and ensuring access by all people to safe, nutritious and sufficient food all year round. Over the next 15 years, the way in which we manage agriculture will be a major determinant of whether or not we reach these goals.

While great progress in poverty reduction has been achieved over the last decades, the poorest are being left behind: over 2.1 billion people still live in poverty, about 900 million in extreme poverty, and about 800 million live in hunger. High and rising inequality is stalling further poverty reduction. Those still in poverty tend to be the chronic poor, facing numerous constraints to escaping poverty and obtaining food security. Further gains in poverty and hunger reduction will be more difficult, particularly for this group. The majority of the extreme poor live in rural areas, and depend at least partly on agriculture for food and income. In Sub-Saharan Africa alone, more than 300 million of the extreme poor live in rural areas.

To eliminate the remaining extreme poverty and hunger, and significantly reduce overall poverty rates, we need to focus not only on economic growth but on reducing inequality and boosting shared prosperity, particularly in rural areas of the developing world. This requires investment and measures targeted to the regions and households facing the most persistent constraints, particularly in agriculture which is still a major source of income and security for the poor.

However, the challenges facing agriculture and the institutional environment for agricultural growth and technological innovation are far more complex than ever before. Agricultural investments must now focus

² General Assembly resolution 70/1, Transforming our world: the 2030 Agenda for Sustainable Development, A/RES/70/1 (25 September 2015), available from undocs.org/A/RES/70/1.

not just on increasing yields but also on a more complex set of objectives, including improving nutrition, preserving natural resources and adapting to climate change. Rural poverty reduction requires more than just investment in agriculture, including overall rural development policies, off-farm employment opportunities and effective social protection.

The major international public institutions working in the area of agricultural development, food security and poverty reduction include the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the CGIAR (formerly known as the Consultative Group on International Agricultural Research) and the World Bank. All of these organizations are now in the process of realigning their work programs to better support countries in meeting the SDGs. In the process, they are revisiting the evidence of the role of agricultural research and investment in poverty reduction and food security. This gives rise to a unique and important opportunity to build a coordinated understanding and approach to managing agricultural research and investment to reach SDGs 1 and 2 amongst the most influential international agencies working in this area. The benefits of such coordination are numerous; greatly enhanced capacity to take joint actions, reduction in contradictory and costly differences across agencies, higher quality work on the part of the agencies and better results in the countries.

Research in agriculture and rural development will play a critical role in meeting the ambitious targets under SDGs 1 and 2. Investments must be driven by the available evidence on what works, which is only possible through research on potential solutions including rigorous and informative impact evaluations (IEs³). Improvements in the data underlying research is a critical component of developing an evidence base that highlights what interventions are most likely to be successful in achieving the SDG 1 and 2 targets in rural areas.

Recognizing the need to critically assess the role of agricultural research and investment in meeting SDGs 1 and 2 for the near future, as well as the tremendous power of developing this understanding in a more concerted manner amongst the major global institutions involved, FAO, IFAD, CGIAR ISPC and the World Bank are proposing a joint initiative to build coordination amongst the respective agencies in their understanding and approach to managing agricultural research and investments to achieve SDGs 1 and 2.

The initiative focusses on strengthening and raising the profile of research and data to support pro-poor investments in agriculture and rural areas within the partner agencies, as well as amongst policy-makers, civil society and the private sector. The initiative takes explicit account of marginalized populations that have been left behind by development; women, indigenous peoples, as well as family farmers, pastoralists and fishers operating in marginal production areas.

The first step in building this joint initiative was holding an Expert Consultation, which involved leading experts working in this topic area from each of the agencies involved, as well as other institutions. The purpose of this consultation was to develop a common understanding amongst the participating partners on the most pressing issues to be addressed and to help defining a *modus operandi* for taking the joint initiative forward. A part of that involved taking stock of the state of current research in agricultural and rural development, but primarily to identify research and data gaps, methodological issues and

³ The CGIAR uses the term "Impact Assessment" (IA)

bottlenecks in order to explore opportunities to expand, re-orient and inspire new and existing research and data initiatives focused on achieving SDGs 1 and 2.

1.1 Objective and Expected Results

The Expert Consultation on *Focusing Agricultural and Rural Development Research and Investment on Achieving SDGs 1 and 2* was organized around a set of critical questions linked to achieving the SDGs including the following:

1. If the SDG 1 and 2 targets are to be met, what do we expect the agricultural landscape to look like in 2030? What role will smallholders play in the local and global agricultural economy? What will the rural economy look like in 2030? How will this structural and rural transformation take place? What are the theories and key agents/drivers of change? What actions can be taken to guarantee these transformations remain inclusive, particularly for women and marginalised populations? Who are the key strategic partners?
2. Among other things, the SDG 2 target calls for a doubling of agricultural productivity and incomes of small-scale food producers, ensuring sustainable food production systems, and maintaining genetic diversity of crops. What role will pro-poor research, extension and advisory services play in bringing about these outcomes? What types of innovation and adoption of technologies will be necessary? What role will farmer organizations play in promoting innovation and technology adoption? What type of information do we need to make the right investment decisions and track progress in achieving the goals?
3. SDG 1 and 2 targets call for increased resource mobilization and investments in particular areas to enhance agricultural productivity and promote rural development. Which investments are likely to result in the greatest impact? What lessons are being learned from individual investments that allow for greater impact in the future?
4. Agriculture and productive rural development policies and programs represent only one component of the intervention necessary to achieve SDGs 1 and 2. What are the synergies between these interventions and those in other areas such as social protection and financial services? What kinds of interdisciplinary solutions can lead to better development outcomes?

In addition to experts in this field, the consultation also extended an invitation to key stakeholders including academics, research institutions, and donors.

This report is a joint effort of FAO, IFAD, WB and CGIAR ISPC that highlights the key results of the consultation and provides a roadmap for taking the initiative further to build a common vision and coordinated approach to managing agricultural research and investments to achieve SDGs 1 and 2.

1.2 Format of the Consultation

The Expert Consultation on *Focusing Agricultural and Rural Development Research and Investment on Achieving SDGs 1 and 2* took place on 9-10 of January 2017 at FAO Headquarters in Rome, Italy. The consultation was meant to draw on participants' knowledge and experience in the field of agricultural research and investment. To this end, the sessions were designed as a combination of short presentations

followed by interactive plenary discussions based on the active contribution of all experts involved. The two-day consultation was structured into five thematic sessions.

Session 1. Setting the Scene: Challenges in Achieving SDGs 1 and 2 in Rural Areas

- The institutional context and/or the state of evidence on impact of agricultural research and investment on poverty reduction and food security
- Looking towards 2030

Session 2. Measuring impact

- Rethinking impact evaluation: Methodological issues in measuring poverty reduction and food security impact of agricultural research and investment / Review of existing evidence
- Observational data and the rural landscape: taking better advantage of existing data initiatives and scaling up data efforts to analyse the rural economy and inform policy and investment decisions

Session 3. Taking a closer look at the agricultural investment agenda in relation to SDGs 1 and 2

- Approaches to rural investment—a review of portfolio of agricultural/rural productive investment of major multilateral agencies
- How does climate change affect agricultural research and investment strategies for poverty reduction and food security?
- Where does the value chain fit in?
- Can agricultural research lead to poverty reduction and food security?

Session 4. What else is needed besides agricultural investment? Institutional environments and complementary policies and programmes

Session 5. Building the roadmap for actions amongst partners in the initiative

The opening session was meant to set the stage of the consultation, to outline the specific objectives that can be summarized in the following questions:

- Where are we now?
- What are we going to do?
- What do we need to do to better achieve SDGs 1 and 2?

The following sessions examined the current trends of agricultural research and investment in terms of impact on poverty reduction/malnutrition and food security, moving from an overview of the topic to the identification of strategic areas of intervention. At the end of each day of the consultation one member of one of the organizing agencies presented a plenary wrap-up of the key points and questions raised, as food for thought to move from reflection to action.

In the concluding session, experts were invited to look more concretely into opportunities and strategic priorities for the immediate future, and to formulate common recommendations for the institutions involved to follow-up.

The variety of inputs emerging from the discussions were consolidated into a number of common recommendations, which in turn, were collectively prioritized and further refined into several final recommendations intended to serve as guidelines for the proposed coalition.

2. Highlights from the discussions

In the opening session, **Daniel Gustafson** (FAO) and **Paul Winters** (IFAD) on behalf of the organizers outlined the specific objectives of the Expert Consultation and highlighted a number of key issues as inputs for the discussion that can be summarized as follows:

“This is an ambitious agenda. We need a large coalition among Rome-based agencies and more” Dan Gustafson - Deputy-Director General Programmes, FAO

- Importance of linking the work of the development community to the SDG agenda and in particular of considering how we can better align and focus our efforts to reach SDGs 1 and 2;
- Need to have a clear understanding of the rural context in which we operate and of what is effective in bringing about rural development that allows us to achieve SDGs 1 and 2;
- Figure out how we can better focus agricultural and rural development research and investment— with a strong emphasis on research and knowledge generation, to improve our effectiveness in line with ongoing structural changes in agriculture and rural areas.
- Need to consider how the Rome-based agencies can come together as organizations to coordinate efforts in a joint initiative to generate the necessary knowledge.

“What are we going to do? Let’s try to gather everything together...How should we do it? How should we go about it? Should we pick a few countries? Should we hold a couple of meetings a year like this? That’s the idea for the next few days.” Paul Winters - Strategy and Knowledge Department, IFAD

2.1 Setting the Scene: Challenges in Achieving SDGs 1 and 2 in Rural Areas

The SDGs call for the eradication of extreme poverty for the ending of hunger and for the doubling of agricultural productivity by 2030. Given that poverty and food insecurity remain largely rural and that agriculture is considered key to this universal agenda, the SDGs are unlikely to be achieved without significant transformation of rural areas and the agricultural landscape.

While investment in agricultural and rural development are clearly required, this investment must focus not just on increasing yields but on a more complex set of objectives, including promoting poverty reduction among marginalized rural populations, improving nutrition, preserving natural resources and adapting to climate change. The multiplicity of objectives and the recognition that rural areas must transform with development creates challenges in identifying the best agricultural and rural investment strategies and raises concerns that some investments can be counterproductive in the long run. Identifying the best investment strategies requires drawing lessons from the previous experience with

rural transformation that are consistent with the SDG-type goals and thinking forward to what the rural landscape should look like in 2030.

The session, chaired by **Paul Winters** (IFAD), was organized into three segments:

- I. **The institutional context and/or state of evidence on impact of agricultural research and investment on poverty reduction and food security**
- II. **Looking towards 2030 - transforming rural areas.**
- III. **Looking towards 2030 - changing resources.**

The first part provided the current context, the second focused on rural transformation, and the third included discussions on land consolidation and fragmentation and demographic change.

I. **The institutional context and/or state of evidence on impact of agricultural research and investment on poverty reduction and food security.**

- What is the current state of rural poverty and hunger in the world?
- What are the major success stories of rural transformation and achieving SDG-type goals?
- What lessons can be learned from these experiences?

The floor was opened by **Alain de Janvry** (University of California, Berkeley), who highlighted the following three specific objectives of this first part of session 1:

1. Characterize the SDG context for poverty and hunger/malnutrition by contrast with MDGs
2. Identify what worked best under MDGs
3. Derive initial guidelines for the proposed SDG coalition

He started his presentation providing an extensive overview of the patterns of poverty and hunger in terms of regions and income category. He focused on the 1993-2013 twenty-year period showing how major changes occurred in East Asia and the Pacific, South Asia and Sub-Saharan Africa. As shown in the slides below, there was a shift in the number of absolute poor as countries go from low- to middle-income countries. Most of the extreme poor are now located in MICs and LICs and concentrated in "hard places" with high governance deficit.

The slides also show that there was more success in reducing poverty as compared with reducing hunger as the distribution of the hungry is much more equal and goes beyond poverty. The available household-level analyses show that the nature of poverty is not changing much, and remains mainly rural in spite of urbanization. What could change are the instruments that we use to get people out of poverty.

1. Country-level analysis: where do the extreme poor live?

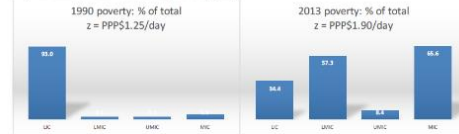
By region



Shift in extreme poverty from East Asia and Pacific in 1993 to **South Asia** and **Sub-Saharan Africa** in 2013

- o In 1993, 47 percent of world poor lived in EAP, mostly in China
- o In 2013, most of the world poor live in SA (33%) and SSA (51%)

By World bank country category

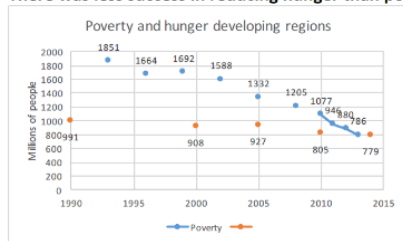


Most of the extreme poor now in MIC (esp. LMIC)
Shift of extreme poor from LIC (93%) in 1990 to MIC (66%) and especially LMIC (57%) in 2013 (India, Pakistan, Nigeria, Indonesia). 30 LICs achieved MIC status over period with 2/3 of world poor. Only 34% in LICs

Many poor in "hard places": Fragile states
30% of world poor in 44 fragile states: 26 LICs and 18 LMICs
18% of world poor in fragile LICs

2. Poverty vs. hunger

a. There was less success in reducing hunger than poverty



While the number of extreme **poor** declined by 58% over 25 years, the number of **malnourished** only declined by 21%

b. Where are the hungry located?



- Hunger much more **evenly** distributed than poverty
- Shows that it is **more than a poverty issue**
- **Determinants** also include lack of social protection, exposure to uninsured risks, deficits in public goods (sanitation), and behavior (quality of diets, hygiene) (FAO SOFI 2015)

3. Household-level analysis: the (un)changing face of poverty

- 900m extreme poor, 700m work in ag., 375m SH farms<1ha
- **Poor remain mainly rural**
 - o Poor 95%→93% rural Tanzania, 88→82% Senegal 2005-15
 - o India: 80% decline in urban P₀, 15% in rural 1988-2012
- **Decline in access to land**
 - o India: 2.3 acre →1.2 poor, 3.8 →1.8 non-poor 88-12
 - o Senegal: land declines all deciles. Tanzania: all except richest
- Continued increase in **population** growth among poor
- Deficit in **basic needs** keeps them captive of agriculture
- Hence, **rural poverty** remains the unchanged-dominant face of poverty in spite of urbanization
- But **instruments** to get people out of poverty different...

4. Policy implications for coalition toward SDG1&2

Poor in MIC (54% in non-fragile MICs):

- Less a resource transfer problem (many have own foreign aid)
- More a growth, and poverty-reducing growth, problem
- Importance of **policy advice** for growth, quality of growth for inclusion, and social protection and assistance
- **Poor in "hard places"** (LICs 34% + fragile non-LIC 12% = **46%**)
 - Need new aid modalities for resource transfers, beyond CPIA
 - Improve quality of governance
 - **New aid modalities:** NGOs, social funds, local governance
- **Poor dependent on agriculture**
 - In spite of urbanization, **Ag** remains key to poverty reduction
 - Population growth and decline in land imply priority to **productivity growth, rural transformation, and migration**

Source: From Alain de Janvry's presentation on focusing Ag and RD research and investment on SDGs 1 and 2: How will it differ from achieving the MDG1?

Alain then turned to the issue of examples of effective poverty reduction we have seen over the recent past including:

- Resilience programs to reduce vulnerability of the non-poor and prevent them from falling into poverty and poverty traps (households may not be poor, but may fall into poverty because of shocks).
- Short-term cash transfer programs especially for the poorest
- Programs to create income and employment opportunities
- Twin-track programs (short-term transfers + asset creation)

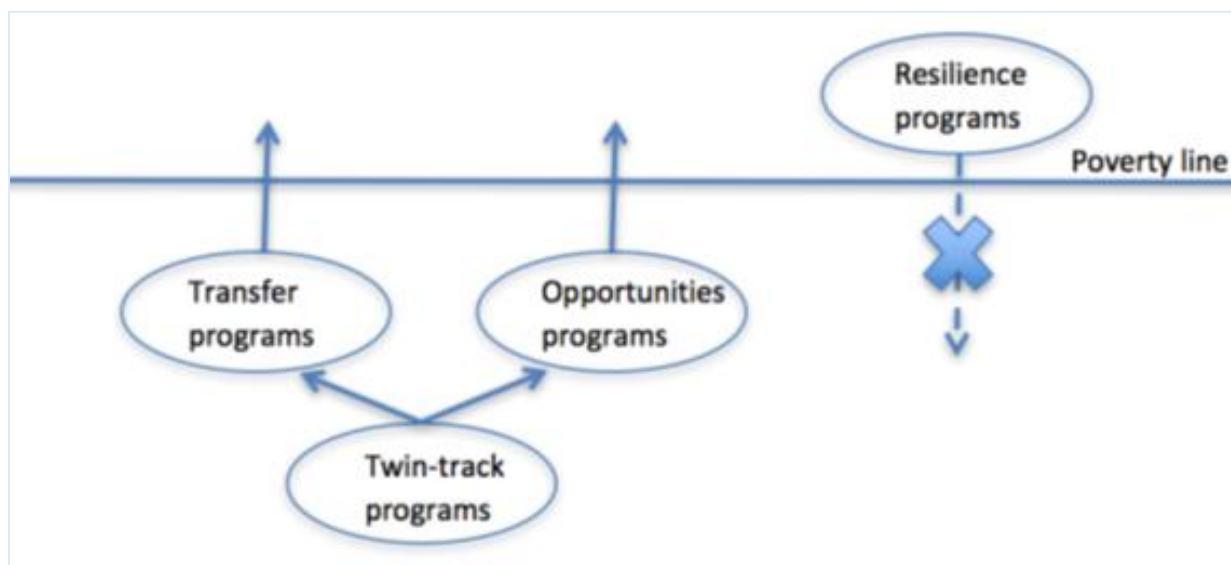


Figure 1 - From Alain de Janvry's presentation on focusing Ag and RD research and investment on SDGs 1 and 2: How will it differ from achieving the MDG1?

Ultimately, he gave the following 10 preliminary recommendations for the coalition to provide inputs for the discussion:

1. **Coordination** for country-level, locally owned SDG strategies (comprehensive approach);
2. Address **big issues** (inequality/exclusion, climate change, international migration, global insecurity that all affect poverty and hunger) **sequentially** with rigor;
3. Adapt poverty/hunger reduction strategies to new contexts: poor in **non-fragile MICs** (key role of good policy); poor in **hard places** (key role of new aid modalities, better governance and empowerment of civil society); poor in agriculture and **rural areas** (key role of productivity growth in agriculture and accelerated Rural Transformation (RT) and Structural Transformation (ST));
4. Develop new **growth models** and revalorize the role of **agriculture for development**, especially through Agricultural/Rural Transformation for ST in support of industry and services;
5. Address **population growth** in rural SSA and **international labor migration** from poor/crisis countries (the source).
6. Develop new approaches to reducing **vulnerability** to shocks: instruments for risk-layering (precautionary savings, emergency loans, index insurance, social safety net, aid for relief); technological innovations in agriculture for resilience to climate change;
7. Give more importance to **opportunities** over transfers on development policy agenda: renewed commitment to smallholder farmers, role of agriculture, RT as territorial approaches, role of gender; challenge of labor-intensive growth with post de-industrialization technology, and shift to services and skills;
8. Make **transfers** more effective through **twin-track** approaches
9. **Empowerment** of poor and civil society for sustainability and political economy of SDGs 1 and 2 (need new political economy equilibrium); and
10. Fix local **governance** for countries with CPIA < 3.2 for territorial development in support of rural development and AT/RT.

The discussants, **Roberto Ridolfi** (EU) and **Rob Bertram** (USAID) raised a set of issues, which are cited below:

“We need more private actors, more coordination...Policy alone is not enough. We need a new political equilibrium, good governance, political actors involved in the dialogue. We need to improve the sustainability of agriculture towards a social economic transformation that could create decent jobs to combat poverty-driven migration. We need to link SDGs 1 and 2 with other SDGs, such as SDG 7 as energy is a catalyser for poverty reduction” (R. Ridolfi, EU)

“We need to figure out where we can get the greatest impact on SDGs, put a human face to poverty and understand how to help smallholder farmers to access new markets in hard areas, how to get the right local investments, and what we can do in terms of agricultural research to reduce poverty” (R. Bertram, USAID)

The following common recommendations have been elaborated based on the specific issues raised during the discussion and focus on key areas of intervention.

RECOMMENDATIONS	<ol style="list-style-type: none"> 1. Strengthen the political dialogue 2. Focus more on big issues, especially migration (both forced and non-forced) 3. Create sustainable employment 4. Consider agriculture as a trigger into more poverty reduction (high potential but not immediate impact). 5. Consider investing in other sectors than agriculture (human capital - health, education) to increase opportunities (china’s huge investment in human capital provides an important lesson learned) 6. Consider potential trade-offs between SDGs 1 and 2 and other SDGs
------------------------	--

II. Transforming rural areas

- What do we expect the agricultural landscape to look like in 2030?
- What role will smallholders play in the local, national and global context as rural economies transform and get more interlinked with urban and global economies?
- How will this rural transformation take place?
- What are the theories and key agents/drivers of change?
- What is the link between this transformation and SDG1 and SDG2?
- Is there a risk that agricultural and rural investments can keep smallholders unnecessarily in agriculture?

Presentations and discussion in this part focused on a set of major questions: i) projecting impact of Structural Transformation (ST), with a particular focus on Agricultural Transformation (AT), on both rural and urban poverty and inequality reduction; ii), how to define and measure ST and its effects on agricultural productivity, and iii) how it is playing out in Sub-Saharan Africa (SSA) and rural Asia, what are the constraints and positive aspects. A good synthesis of existing knowledge was provided by **Luc Christiaensen** (World Bank) for rural SSA and **Katsushi Imai** (University of Manchester) for rural Asia and the Pacific.

The point of departure of both studies is the dynamic relation between agricultural growth and AT, as well as poverty reduction. A common observation is that ST takes places and deepens as the economy becomes more and more globalised, industrialized and urbanised, but it is not entirely clear whether ST has led to poverty reduction.

EXPERIENCES AND LESSONS FROM SSA

- There has been ST in Africa but often towards urban, non-tradable services, fueled by resource exploitation. This contributed to poverty reduction but it is not sustainable.
- In countries (Ethiopia, Rwanda) where agricultural staple crop productivity has grown, rapid poverty reduction has been observed over the past 15 years. But not all agricultural policies are equally poverty reducing (i.e. Zambia).
- ST is as much about intra-sectoral productivity increase, as it is about cross-sectoral labor reallocation.
- African poverty remains primarily rural (80%), with the poor still earning the majority of their incomes in agriculture (2/3).
- There is substantial underemployment in agriculture (seasonality).
- African households are not underdiversified given their level of income, but off the farm, they are relatively less engaged in wage employment (both in agriculture and nonagriculture)
- Youth is exiting agriculture, but not disproportionately more than adults.
- Some countries/areas still land abundant, but median farm sizes are declining and soil fertility is a major issue. Land rental markets are emerging, but still little landlessness.
- Agricultural intensification has lagged. Fallow has disappeared and the use of fertilizer and agro-chemicals is no longer uniformly low. Use of improved seeds, mechanization and water control remain limited.
- Agricultural input investment is virtually completely self-financed
- Riskiness is pervasive; droughts and price risks are most frequently cited, followed by health; coping through savings/family. Financial markets or safety nets are mainly absent.
- Excess maize price seasonality continues (2.5-3 times SAFEX level)

From the presentation of Luc Christiaensen (World Bank)

EXPERIENCES AND LESSONS FROM RURAL ASIA AND THE PACIFIC

- AT in terms of commercialisation and product diversity (AT measures) has dynamically increased agricultural value added per capita and its growth, and consequently reduced both rural and urban poverty significantly as well as child malnutrition. No impact was found of agricultural openness index (3rd AT measure) on agricultural productivity or growth. Same applies for agricultural TFP.
- AT has promoted agricultural TFP with lags, which reduced both rural and urban poverty significantly.
- AT and higher levels of population in the working age group are important for a country to move up from the low income country group to the lower middle income country group (LMICs).

From the presentation of Katsushi Imai (University of Manchester).

The discussant, **Kostas Stamoulis** (FAO) stressed the fact that a high degree of agricultural transformation is needed for countries to move from LIC to MIC and in order for transformation to really occur all three components of AT (commercialization, agricultural openness, production diversification) should come together and not be treated separately. Questions, which emerged from the discussion, include:

- *What is the role of agricultural research for development in AT?*
- *Can it help in integrated and diversified farming?*
- *What can it do so that farmers have power over markets?*

- *What are the priorities of the farmers?*
- *Is there a research agenda looking at labour productivity of new technologies?*

Below, main suggestions for future research:

- The importance of increasing staple crop productivity for poverty reduction in the broader context of diversification for AT The role of mechanization. Need to better understand the conditions for profitability and employment effects.
- Which models are most effective in fostering inclusive value chains in terms of employment generation and poverty reduction
- Types and coordination of public investment matter
- The role of non-agricultural economic growth in rural towns in terms of generating off-farm jobs
- Measurement of structural transformation (ST) and agricultural transformation (AT).
- More explicit analyses of determinants of ST or AT.
- Micro-level analyses of AT and poverty (using household data) to shed light on the mechanisms at farm level
- Labour productivity (or TFP) gap between agricultural and non-agricultural sectors (and its underlying factors) as well as how the gap affects poverty in Asia.

III. Towards 2030: looking at land, labor and population

- In a transforming rural economy, what do we expect to happen with agricultural land and rural labour?
- Is land consolidation expected to occur and, if so, what policies or investments are necessary to facilitate this consolidation?
- Is the demographic structure of rural areas expected to transform and, if so, what policies or investments are necessary to facilitate this transformation and take advantage of changing demographic structure?
- Is there a risk that policies or investments in land or labour will distort or limit the transformation of rural areas?

Presenters of this part focused on the issues of land fragmentation and consolidation (**Morten Hartvigsen**, FAO) and the role of migration and the demographic transition (**Guy Stecklov**, Hebrew University), bringing the experiences of Central and Eastern Europe (CEE) and SSA.

EXPERIENCES AND LESSONS FROM CENTRAL AND EASTERN EUROPE (CEE)

- The need to address the structural problems in agriculture (land fragmentation and small holding and farm sizes) has been recognized in 21 out of 25 countries and land consolidation instruments have been introduced. As of January 2017:
- 7 countries with ongoing land consolidation programs;
- In 14 countries land consolidation has been introduced but it is not yet a program;
- 4 countries with little or no land consolidation experience.

What are the minimum requirements for having a land consolidation program?

1. Land consolidation embedded in the overall land policy of the country;
2. A legal framework for land consolidation has been adopted;
3. A public lead agency for land consolidation has been established;
4. Secured funding on an annual basis; and
5. Technical and administrative capacity developed.

From the presentation of Morten Hartvigsen (FAO)

EXPERIENCE AND LESSONS FROM SSA

- Demographic transition has predictable impact on gaps in age structure;
- Despite urbanization slowdown, age structure gap continues. This means that change in population structure is not dependent on urbanization.
- Migrations (rural to urban) play a major role in age and sex gap.

From the presentation of Guy Stecklov (Hebrew University).

The main areas identified for discussion were the following:

- “Land fragmentation”, is not easy term to define being it a very complex issue including many aspects: inheritance, ownership, land use, farm and plot size, plot shape and distance between plots;
- The critical role of land consolidation in agricultural and rural development in terms of increased productivity and the need for consolidation programs/approaches to be embedded in the overall land policy of the country;
- The need to integrate land consolidation projects and programmes with broader local community development needs;
- The need to understand the relationship between rural development initiatives/investments and migration patterns (need for research/data, investments in human capital, creation of jobs for the youth bulge)

In summarizing this second and third part of the session, **Elisabeth Sadoulet** (University of California Berkeley) provided a list of the main challenges to achieve SDGs 1 and 2 in rural areas:

- Need to increase land and labor productivity in small farms (by reducing crop failures, changing crop mix, irrigation, increase farm size);
- Increase the value of staple crops to drive people out of poverty;
- Link to markets and competitiveness in value chains (issues of contract, etc.);
- Participation to rural transformation and diversification of sources of income

- Migration to urban areas? Are the rural young prepared? Is there absorption capacity in urban areas?

The following common recommendations have been elaborated based on the specific issues raised during the presentations and discussion of parts 2 and 3 of Session 1.

RECOMMENDATIONS	<ol style="list-style-type: none"> 1. Identify the role of agricultural research in at in terms of enhancing the poverty reduction effects 2. Identify the priorities of policy makers as well as of poor farmers 3. Increase the value of staple crops 4. Land consolidation programs to be embedded in the overall land policy of the country 5. Invest in rural development, human capital and create jobs for the youth to mitigate rural to urban migration 6. Increase land and labor productivity through technology, research and investments 7. Link smallholder farmers to dynamic markets
------------------------	---

2.2 Measuring impact

Recent reviews of impact evaluation research in agriculture (e.g. by the [Campbell Collaboration](#)) show a paucity of evidence on what works, especially when the outcome of interest is poverty or hunger/malnutrition. And even if we were to look at what governments spend their agriculture budget on, is it the case that whatever rigorous evidence does exist misses the mark?

The goal of this session was to look at the supply of existing impact evaluations and other types of evidence and to identify gaps in both content, data, and methods to inform an agenda going forward.

The session, chaired by **Markus Goldstein** (World Bank), was divided into two segments:

- I. **Rethinking impact evaluation: methodological issues in measuring poverty reduction and food security impact of agricultural research and investment;**
- II. **Observational data and the rural landscape: taking better advantage of existing data initiatives and scaling up data efforts to analyse the rural economy and inform policy and investment decisions.**

Part 1 started with a narrower perspective of what the gaps are relative to existing supply of evidence. Part 2 broadened the discussion, focusing on what questions need to be answered from research beyond impact evaluation (e.g. the impact of policies, understanding the context, better identifying problems policies should target) as well as gaps in data and methods.

I. Rethinking impact evaluation: methodological issues in measuring poverty reduction and food security impact of agricultural research and investment

- What are some big gaps in agricultural and rural data?
- What should we be doing to improve how we are measuring things in the agricultural/rural spaces?
- What research do we need to better understand problems/issues in agriculture in order to better identify potentially effective interventions?

Andrew Foster (Brown University) tried to identify what we are trying to evaluate in terms of measuring success in agriculture. In terms of input costs, there is still considerable need for data on labor, labor costs, and equipment ownership. Risk assessments, including improved forecasts to increase profitability and may reduce the downside risk of technology adoption would require a structure for using quasi-experimental variation to back-out the consequences of true risk distribution.

In terms of geographic distribution, there is need to integrate general equilibrium models incorporating input and output market costs to understand where products grow and consider the distribution of costs on different groups/types of farmers to understand which areas/farmers move to cash crops. In terms of competition in output markets there is need for models and data to estimate market size and surplus accrual for farmers. From an environmental point of view, better models and data are needed that account for spatial and temporal spillovers.

Measuring success	Conclusion
<ul style="list-style-type: none">■ Output per acre<ul style="list-style-type: none">■ Good if objective is to maximize output but ignores opportunity cost of inputs■ Output per worker<ul style="list-style-type: none">■ Useful from a livelihood perspective but ignores distribution■ Agricultural wages<ul style="list-style-type: none">■ Good metric of well-being for landless laborers but may not be indicative of efficiency■ Average profits per acre<ul style="list-style-type: none">■ Accounts for non-land inputs but hard to calculate price of non-marketed inputs and not necessarily a good indicator of how to improve efficiency yield■ Marginal profits per acre<ul style="list-style-type: none">■ Provides a necessary but not sufficient condition for economic efficiency rent	<ul style="list-style-type: none">■ Central challenge is that many important factors are not directly manipulatable■ Thus there is a need for models to better integrate observational and experimental data■ Key needs to integrate different levels of data■ Careful measurement prices in ways that permit assessment of fixed costs

Source: from Andrew Foster's presentation on evaluating returns to agricultural investment

Florence Kondylis (World Bank – DIME) gave an overview of where agricultural investments are allocated across SSA and stressed the key role of impact evaluations (IEs document constraints and opportunities) to retarget such investments, thus increasing their effectiveness.

To give a practical example, she gave an overview of a typical agricultural program and its components (extension, financial and institutional constraints, infrastructure, and market access) with a focus on gender, presenting the results of recent field experiments testing different modalities and identifying areas for future work.

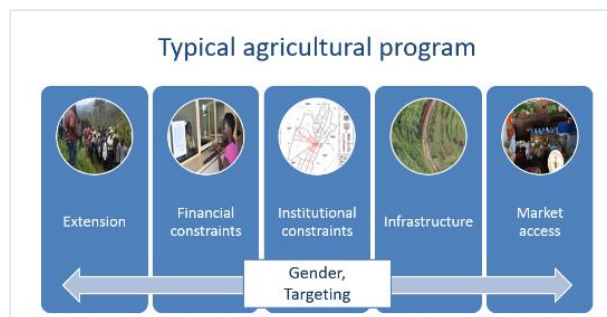


Figure 2 - Components of a typical agricultural program

What emerged is that a lot of work has already been done and recent literature provides good evidence, but, operationally speaking, there are still many gaps in the current research in terms of what actually is needed, where investments should be allocated, who we should target, there are still many questions to be answered.

To conclude, she summarized key issues for further attention:

- Experiment with varying targeting modalities to reach different goals;
- Invest in data:
 - Multi-dimensional data systems to capture structural change around infrastructure upgrading (roads, irrigation, markets), land reforms, etc.
 - improve targeting using novel measures of farmers’ entrepreneurial capacities
 - capture nature of gender discrimination
- Document complementarities in the production function;
- Push harder on choice of promoted technologies/products;
- Work more closely with the private sector (input certification and packaging, contracts)

<h3 style="text-align: center; color: #4F81BD;">Where does the money go?</h3> <ul style="list-style-type: none"> • Recent public expenditure review of agricultural investments across SSA reveals that (Goyal and Nash 2016) <ul style="list-style-type: none"> – Investment is low relative to other developing nations/East and South Asian nations during their “Green Revolution” – Composition of the spending <ul style="list-style-type: none"> • Dominated “low-return” investments: input subsidies [30-70%], extension and advisory services [~35% in Ethiopia, Uganda] • Very small shares allotted to “high-potential” activities: R&D, infrastructure projects (irrigation, access to markets) 	<h3 style="text-align: center; color: #4F81BD;">Impact evaluations to retarget investments</h3> <ul style="list-style-type: none"> • Use IEs to increase effectiveness of these investments <ul style="list-style-type: none"> – Testing various modalities to document constraints and opportunities – Test for complementarities in the production function • Given large amount of heterogeneity, test different targeting modalities <ul style="list-style-type: none"> – separate interventions that aim to <ul style="list-style-type: none"> • Provide social protection • Increase productivity (intensification, commercialization) – Equity vs Efficiency tradeoffs • Build causal evidence to motivate budgetary reallocations
<p>Source: from Florence Kondylis’ presentation on retargeting agricultural investments</p>	

The discussion, led by **Karen Macours** (PSE) and **Paul Winters** (IFAD), raised a few questions and led to some common recommendations.

QUESTIONS

- What does the role of impact evaluation and measuring mean for the research agenda?
- What do we want to focus on in IEs?
- What kind of investment should we really focus on? Who should we target?

RECOMMENDATIONS

1. We still need IEs to look at which interventions are effective, and how to structure them
2. IEs need to be focused to capture “big issues” – not just marginal improvements in projects
3. There is a need to prioritize IEs for specific types of interventions
4. Better coordination of IE efforts and sharing lessons learned is needed
5. Consider what farmers think, invest in them or in generating economic opportunities in their communities

II. **Observational data and the rural landscape: taking better advantage of existing data initiatives and scaling up data efforts to analyze the rural economy and inform policy and investment decisions.**

- What are some big gaps in agricultural and rural data?
- What are some of the key questions that need to be answered by research in order to make more effective policy?
- Can existing data be used to answer these questions?
- What are some cross-cutting issues that are not getting enough attention in current streams of research?

Gero Carletto (World Bank LSMS) opened this session talking about the need to rethink household surveys to support our efforts to achieve SDGs 1 and 2. He stressed the existence of data gaps and the need to collect more and better information. But the question is, *how do we collect such info?* Given the interconnection between SDGs and the need to monitor a complex set of targets, he highlighted the importance of using an integrated approach:

- Integration within the same instrument
 - Multi-topic featuring household, agriculture and community questionnaires to improve understanding of the links between agriculture, household, socioeconomic status, and non-farm income activities and to enable cross-sectoral policy analyses
 - Multi-level – community, household, individual, plot (including gender-disaggregated data)

- Across data sources
 - Geographically linked (geo-referenced; sampling units; admin units)
 - Thematically linked (small area estimation; “cross walking” – survey-to-survey imputation -; high frequency mobile phone surveys)
 - Common nomenclature/coding (admin data – schools, health centers, tax records etc – and market data)
- Use technology to improve data quality
 - Computer-Assisted Personal Interview (CAPI) to replace paper questionnaires with electronic interviewing, for the purpose of improving the quality and timeliness of the collected data
 - GPS to map households and measure agricultural plot areas, enabling the linking of household survey data to other geo-referenced data sources
 - Mobile phones (high frequency data; continuous crops, labor inputs)
 - Sensors (water and soil quality testing; power grid reliability; indoor pollution; activity tracking)

Mr. Carletto brought the example of the Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA) project, an innovative household survey program implemented by the World Bank-LSMS in collaboration with the Gates Foundation to improve household surveys in SSA. Since 2009, the project has been implemented in 8 countries and represents an important lesson in terms of integrated approach, active dissemination of results and open access to data. Indeed, the main objectives of the project are to improve the availability and quality of smallholder agriculture data within a multi-topic framework, to disseminate new data and best practices through methodological papers and sourcebooks to benefit statistical agencies, researchers and practitioners on questionnaire design and survey implementation, to integrate new technology into all aspects of data collection to improve quality, and to provide timely and open access to data to policymakers and stakeholders (through microdata library, ADePT software).

John Thompson (APRA) started his presentation citing a quote from Cunningham about policy, “*Policy is rather like the elephant – you know it when you see it, but you cannot easily define it*” (G. Cunningham, 1963: 229; cited in M. Hill, 1997: 6). The meaning behind this is that policy is clearly central to development, but it is difficult to pin down. Much still needs to be done to understand policy processes, such as:

- Agenda setting: changes in policy priorities and attention to previously under-emphasised issues
- Shifts in policy framing: changes in the way policy actors understand a problem or solution
- Change in resources allocated: changes in the way investments are made and resources are distributed
- Change in the content of policy: changes in the substantive elements of the policy
- Change in the way policy is delivered: change in the way policy is formulated and implemented

In terms of agricultural development, there are several questions to be addressed:

- How are agricultural problems and solutions ‘framed’ – and how does this affect the policy process?
- What actors and interests are driving the process – and who ‘wins’ & ‘loses’?
- What is the role for the state in stimulating agricultural development?

- What is the capacity and willingness of state actors to implement particular policies in particular contexts?

Cheryl Doss (Oxford University) started her talk inviting the audience to think about the need to focus attention on questions about who is doing what, who is growing what, and what is the information we should be pushing for countries to provide so we understand patterns. She then highlighted three aspects that would need to be carefully considered: Better gender-disaggregated data; Conceptual gaps; Coordination. She raised the need to collect better data carefully considering who do we ask the questions to, what questions we consistently should be asking and what questions we need to ask in detail, for example to understand gender and structural transformation dynamics. In terms of data and conceptual gaps, we need to look at what the data can answer rather than what the right question is. We need to focus on what we know and what we still don't know as well as who we target interventions to in order to understand gender dynamics. Questions to capture such dynamics should be included in surveys both in terms of labor, decision making and ownership. In the case of assessing women's agricultural productivity: How much productivity is for women (plots managed by women vs men); what kinds of interventions and impacts? Who controls the outputs? In terms of extension services, what is the impact of targeting women vs men and both of them? Finally, she pointed to the importance of better coordination in our efforts: how do we frame research questions across individual work people are doing? What does that mean in terms of data? How do we harmonize data we are collecting?

The discussion, led by **Stanley Wood** (Gates Foundation) centered on the need to stop the madness of indicators, stop asking questions and talking about data and start to rationalize the use of data and open cross linkages between all data available. In order to better focus investments in data, donors need a bigger picture of the data architecture which has to include the evidence of research studies and focus at the country level as coherence is built upon local needs.

EXPERIENCES AND LESSONS

CGIAR Big Data Coordination Platform

Jawoo Koo (IFPRI) gave an overview of CGIAR coordination platform for big data in agriculture stressing the importance of an effective use of data as one of the most important tools for achieving SDGs. The ultimate goal of the CGIAR Big Data Coordination Platform is to harness the capabilities of big data to accelerate and enhance the impact of international agricultural research. This 6-year platform (2017 – 2022) will provide global leadership in organizing open data, convening partners to develop innovative ideas, and inspiring others to use big data to deliver development impact.

CGIAR SPIA

James Stevenson (CGIAR ISPC) gave an overview of the work of the Standing Panel on Impact Assessment (SPIA), a sub-group of the CGIAR (ISPC), which has an advisory role on issues relating to the impact of CGIAR research activity. Main goal is trying to develop a robust set of methods to routinely track adoption of CGIAR technologies in a cost-effective manner. Such information is a prerequisite for high quality outcome and impact assessments.

Below is a summary of the main proposals from the audience.

PROPOSALS	<ol style="list-style-type: none">1. Use existing platforms (i.e. GGIAR big data, C4D2) to help address shortfalls in survey data through partnerships (i.e. grains) for methodological innovation, survey integration, and capacity development2. Identify the next steps for making existing data more usable and used by developing countries3. Figure out how to deliver available data and analysis to policy makers4. Contextualize and stop generalizing information better data collection, identifying what is really useful and what not (less data more immediate answers)5. Make other forms of data available (i.e. success and unsuccessful stories)6. Figure out what's the right audience for data and think about building the capacity of its users (i.e. ministers of agriculture)
------------------	--

2.3 Taking a closer look at the agricultural investment agenda in relation to achieving SDGs 1 and 2

The first two sessions of the consultation looked at the current context of rural poverty and hunger in the world, the potential transformation pathways for achieving SDGs1 and 2 summarizing the evidence from impact assessments of what works – and where we still are facing key gaps in the evidence base.

Session 3, chaired by **Leslie Lipper** (ISPC), took a closer look at the state of the current agricultural research and investment agenda of major multilateral organizations active in this area to see whether there is a gap between the agricultural investment agenda and the research/impact evaluation agenda. The goal of this third session was to understand where we need to go with the agricultural investment agenda that would also provide a framework for prioritizing the agricultural research agenda; understand how big “game-changing” dynamics, such as that of climate change and radical shifts in value chain development, affect the agricultural investment agenda in the context of achieving SDGs1 and 2; and ultimately understand what that implies for an effective agricultural research agenda to support it.

This session was organized into four segments:

- I. **Approaches to rural investments – a review of portfolio of agricultural/rural productive investments of major multilateral agencies.**
- II. **How does climate change affect agricultural research and investment strategies for poverty reduction and food security?**
- III. **Where does the value chain fit in?**
- IV. **Can agricultural research lead to poverty reduction and food security?**

The first part was a panel discussion with representatives from FAO, IFAD, CGIAR, and the EC providing a snapshot of the main features of their current agricultural investment agenda including the target populations, activities and research supported. The panel also discussed the extent to which achieving SDGs 1 and 2 has explicitly been incorporated into this agenda or if there are plans to do so in the future.

The second and third part of the session consisted of two short presentations designed to focus on new dynamics such as climate change and value chain developments that need to be incorporated in our

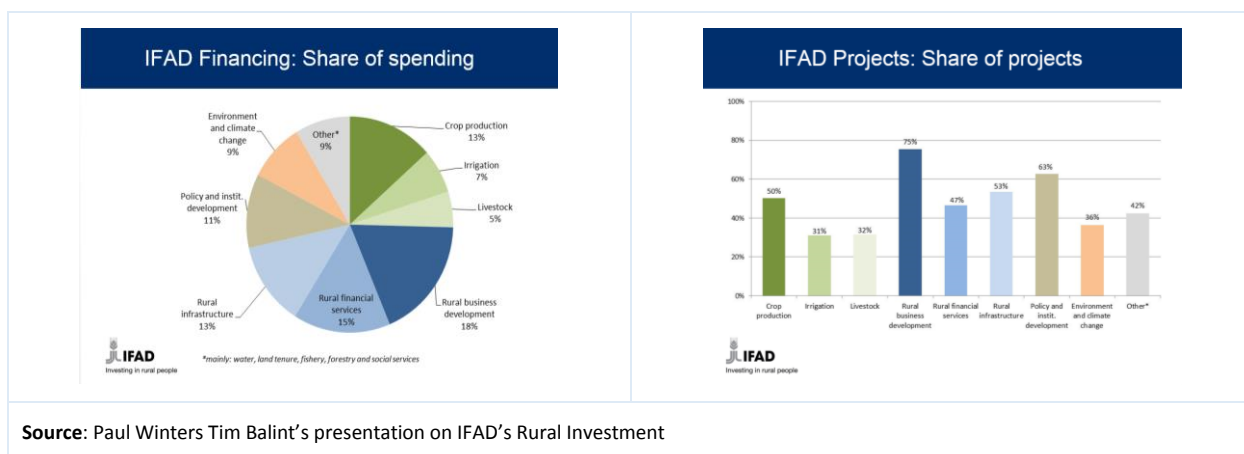
thinking about agricultural investment to achieve SDGs 1 and 2, and the implications for the agricultural research agenda.

The session concluded with a presentation looking at the evidence of agricultural research impact on poverty, hunger and smallholder productivity – as well as the possibility of tradeoffs between achieving SDGs 1 and 2 in research investments.

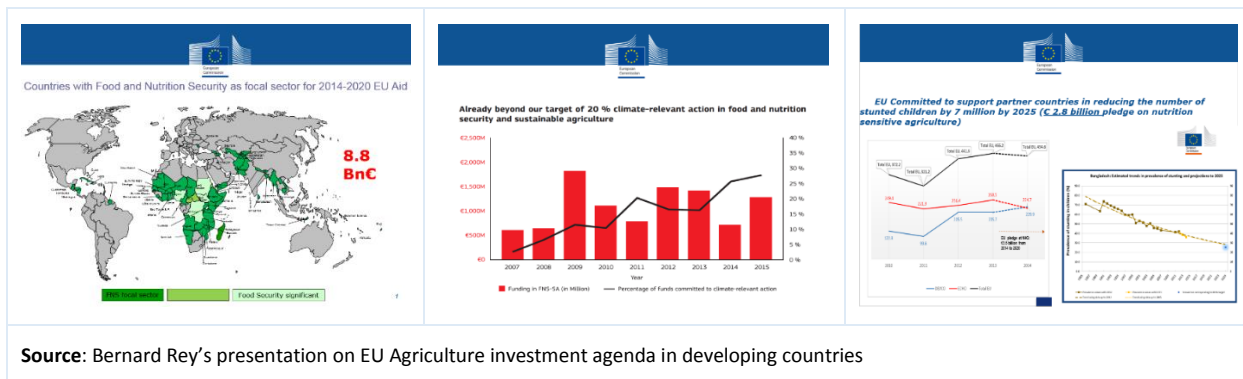
I. Approaches to rural investments – a review of portfolio of agricultural/rural productive investments of major multilateral agencies

- What are key features of the current agricultural investment agenda relevant to SDGs 1 and 2 of major multilateral agencies working in the area of agriculture, rural development and poverty reduction?
- Are current research and impact evaluation agendas adequately linked to the actual investments of these agencies?

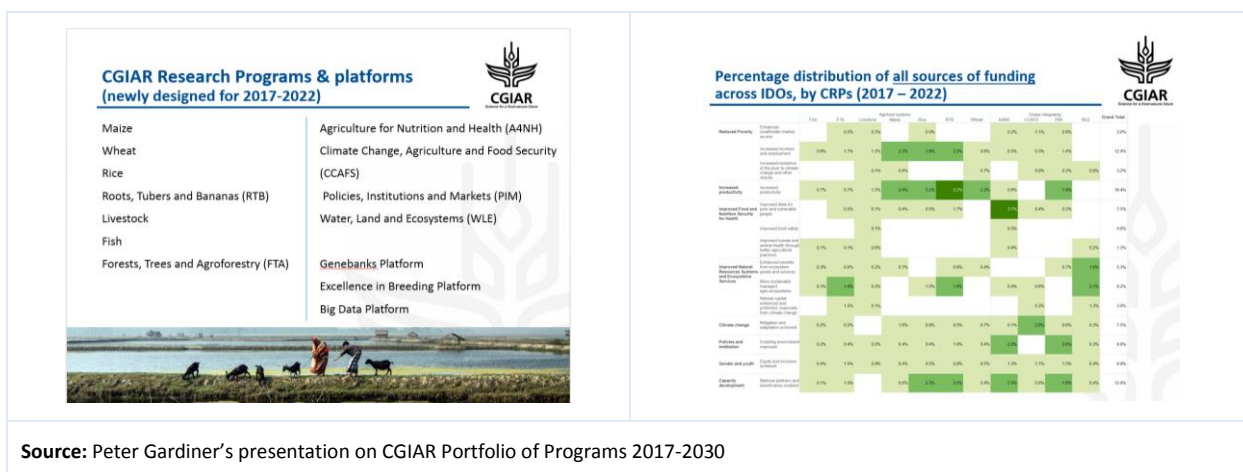
The first part of Session 3 was opened by Daniel Gustafson who stressed the need to target investments to support what farmers really need and to focus research to support specific policies, to increasing our understanding of what works best in terms of policy change and how to evaluate the impact. Panelists from IFAD, CGIAR and EC gave an overview of their respective organizations, current agricultural and rural investment and research programs. Paul Winters’ presentation indicated that IFAD has a high share of investment into rural financial services and business development.



Bernard Rey’s presentation indicated a strong focus on increasing food and nutrition security in EC rural investment portfolio. His presentation also indicated the high priority the EC is giving to integration of climate change into their investment portfolio with climate relevant actions already achieving the target of 20% of food and nutrition and sustainable agriculture investments.



Peter Gardiner presented the new CGIAR research portfolio for 2017-2030 indicating the share of investment across a set of 12 major research programs and 3 system-wide platforms. His analysis indicated continuing strong emphasis on research to increase productivity of major crops, but also heavy emphasis on research to support increases in rural incomes and employment. Additionally, the CGIAR research portfolio incorporates a large share of investment into capacity development.



Maggie Gill (ISPC) provided some background material on the World Bank agricultural investment portfolio and then provided comments on the overall picture of the agricultural investment agenda that emerged from the panel presentations. In her comments, she focused on identifying key principles to support the design of an agricultural research agenda to support the achievement of SDGs 1 and 2, and provided proposals for the “road map”.

Key principles for designing a coordinated approach to agricultural research and investment to best support impact on poverty reduction and hunger:

- We need to have mutual respect for different roles and expertise we bring to the table and take time to understand each other's needs
- We should agree on a few key priorities to work on together
- Take time to learn lessons from successes and failures and act on those
- Understand the context in which results will be applied

- Recognise the dynamism of external factors which will change that context
- Take time to think through with partners where research can best provide technologies/evidence in support of decision-making
- Take advantage of science and technology advances (e.g. genomics, ICT, Big Data)

Thoughts on the “road map”

- **Co-ordination** –this requires a system that allows for frequent knowledge exchanges, as well as capacity to listen, learn and admit mistakes
- **Sequencing** – research takes time to get ‘answers’ and thus sequencing the generation and use of expected research results is important to ensure effectiveness.
- **Prioritising** – identifying a set of priorities for this effort is important – we don’t need to try and work together on everything. Not all investment needs research and research also needs some freedom
- **Better use existing data/knowledge** – a wealth of information already exists, we need (collectively) to know what is good/useful and what is not and how to access it

Ms. Gill posed three questions to the audience to provoke discussion and commence the process of identifying key components for the roadmap.

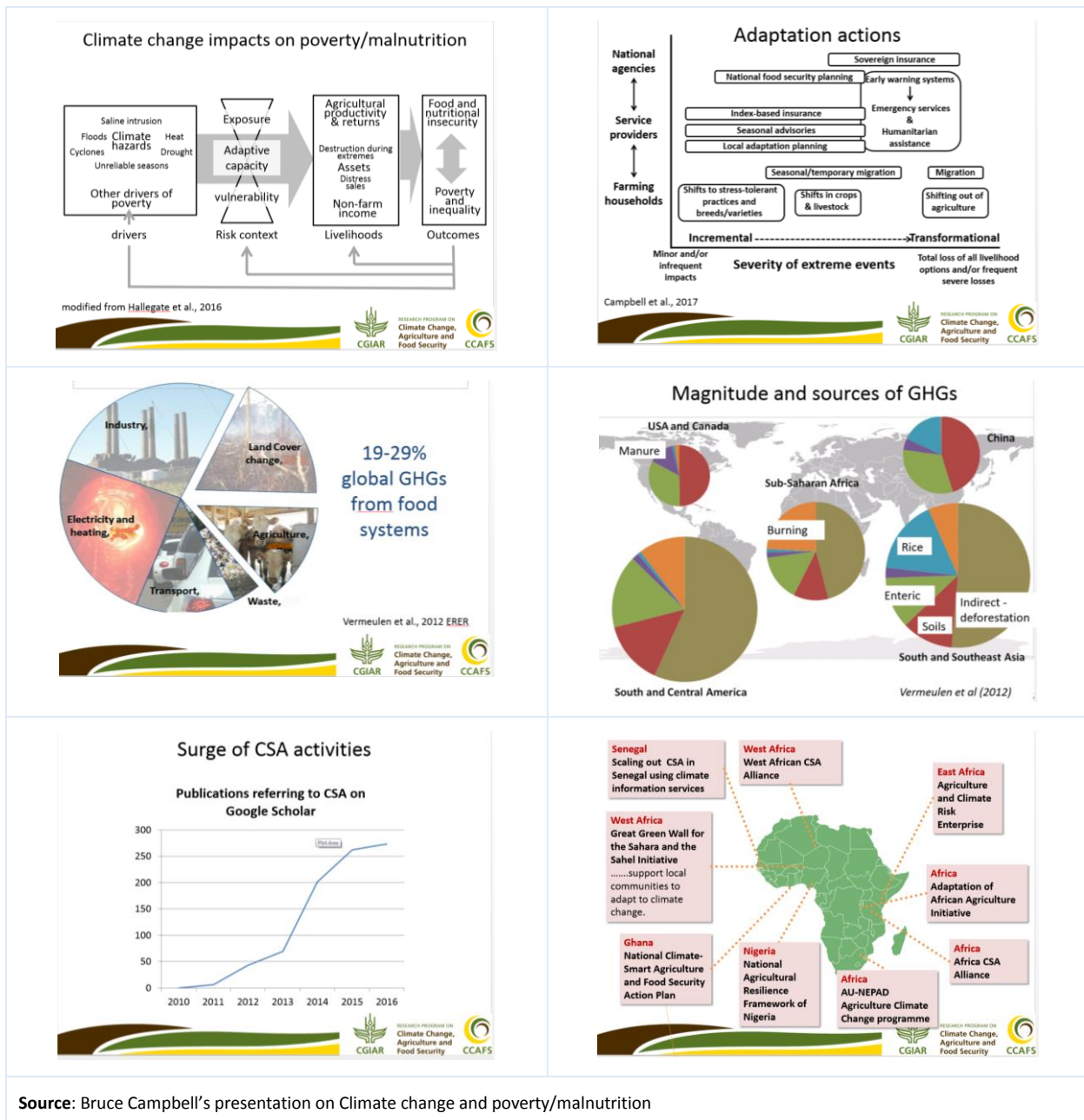
- *“What about the interdependency between research and policy processes? How do we translate research into real impact?”*
- *“Is there coordination and dialogue between agencies to see if current projects and plans are logical?”*
- *“Are we doing enough at country level rather than international level?”*

The discussion continued around the above questions and the following are the main recommendations from the audience.

RECOMMENDATIONS	<ol style="list-style-type: none"> 1. We need to systematize our understanding of the current evidence on impact of agricultural investments on poverty and nutrition; at present we have a widely scattered set of results and knowledge which can be much more effective if built into a systematic knowledge base 2. We need to improve the coordination between researchers in academia and multi-lateral agencies as part of the effort to systematize our knowledge base 3. It is important to identify where weaknesses lie in terms of demand-driven research and investments and address these 4. Attention to achieving results at country level is needed and it will be important to define who is responsible for SDGs 1 and 2 at country level and build strong links with them in an effort to increase the awareness of policy-makers to available research outputs including data – and how it can inform policy 5. Need for specific projects/country level efforts to work on and for multilevel coordination between different actors (NGOs, ministries, subnational level)
-----------------	--

II. How does climate change affect agricultural research and investment strategies for poverty reduction and food security?

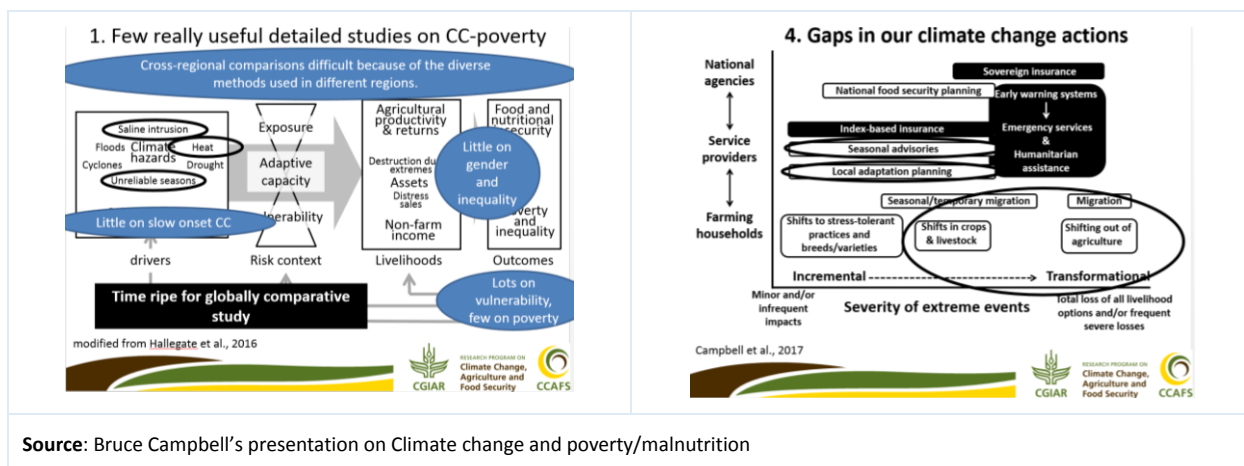
Bruce Campbell (CGIAR CCAFS) gave an overview of the impact of climate change (CC) on poverty/malnutrition, the responses to CC (adaptation, mitigation), and the gaps in the approach in terms of agricultural research and investment. In his presentation, Mr. Campbell emphasized the potential impact of climate change on food security and poverty through various channels, including agricultural production and incomes, as well as value chains. He indicated the need for both incremental and transformative adaptation actions, as well as the importance of de-coupling emissions growth from agricultural growth.



Source: Bruce Campbell's presentation on Climate change and poverty/malnutrition

Talking about gaps, Mr. Campbell noted that there are still a few really useful detailed studies on CC-poverty and identified three main areas where further research is needed

- There is too much mere relabelling of “business as usual” (BAU) as “climate-smart” or “climate-resilient” and research is needed to identify actions that have actual climate benefits in terms of both adaptation and mitigation;
- There is insufficient attention to prioritization of context-specific participatory actions (country level, village level) and approaches to simplifying this process are needed;
- There are gaps in our understanding of effective climate actions – particularly for transformative adaptation.



Source: Bruce Campbell’s presentation on Climate change and poverty/malnutrition

The discussion, led by **Rob Bertram** (USAID), focused on where investments should be targeted. He identified three main pillars: 1. Increased productivity and income for poverty reduction; 2. Adaptation: help farmers to be well equipped to face climate variability, therefore invest in irrigation, water use efficiency, biotic gas, new genetics to give farmers a choice, better information (weather forecasts, extension); 3. Mitigation: measures, such as AWD, zero till, and saving energy, need to be tailored according to the different needs of the area (SSA/Asia). From here, the need to invest in sustainable land, land conversion.

Below are the three main proposals emerged from the discussion.

PROPOSALS	<ol style="list-style-type: none"> Need much more work on ex-ante and priority setting work that explicitly incorporates climate actions Need for demand-driven investment processes that integrate climate actions Need for projects that can address long term and transformational issues – including transformational adaptation
------------------	---

III. Where does the value chain fit in?

Tom Reardon (MSU) talked about how the developments in value chains should affect the agricultural research agenda. He summarized the rapid transformation of food production systems and markets in Africa and Asia, identifying the main trends, and the implications for agricultural research.

In both Africa and Asia we are seeing the following trends:

- Urbanization
- Diets becoming diversified beyond cereals even among the poor
- Higher shares of rural diets from purchased foods and an accompanying rise of urban-to-rural, rural-to-rural supply chains
- Higher shares of processed foods in diets even for the poor Diets are primarily supplied from domestic production sources and (not import based)
- Domestic markets are growing very quickly

In addition, the following regional trends can be discerned:

- Post farmgate supply chain structures are rapidly transforming (e.g. growth of supermarkets, large processing establishment) in Asia and it is now starting in Africa too
- Likewise, these supply chains are also transforming in terms of conduct – e.g. the technologies employed, branding, packaging etc. The post-harvest sector is an important source of employment. Input and ag-services supply chains are transforming in Asia more than Africa
- Farm intensification and conservation investments are a function of development of links to markets (farmers are mainly not intensifying and investing in crops that have limited markets)
- Climate change will accelerate transformation trends and challenges for excluded.

IMPLICATIONS FOR AGRICULTURAL RESEARCH

1. Product focus

- 90% of agricultural research is on cereals, but big opportunities are in livestock, fish, horticulture, oilseeds;
- Lot of debate about agricultural research needs is on subsistence crops, but farmers (even poor farmers in hinterland) focus investment on the marketed crops;
- Debate on agricultural research is 90-100% on farm technology, with little focus on post-farmgate segments and pre-farmgate chains

2. Market focus in short run

- Urban market is already majority of food demand in Asia/Africa and it will be three-quarters in 10-20 years, so what are the domestic urban demands/needs and policy/infrastructure needs?

3. Market focus in medium run

- Product design is now focused on direct consumption, but already half to two-thirds going through processing sector, so there is need to have generalized attention to processability of the products (e.g. maize type that processors want).

4. Regional-product links

- Agricultural research takes as “givens” the recommendation domains/products where they are now, but climate change means regional/zonal shifts in supply chains, so need attention to helping transitions and resilience of chains and farming.

5. Function focus

- Longer supply chains, more perishable consumption and more processing, and shift to modern market growth means more need for food safety in research in next 5-10 years.

6. Data perspective

- The LSMS effort relating to stacked surveys (of all segments not just farms) are needed to underpin research needed for 60% of food system beyond the farm gate.

Below the main challenges presented by the discussant **Ismahane Elouafi** (ICBA):

1. Reach the marginalized poor and integrating smallholder producers into regional and global supply chains to increase the size of the food markets.
2. Achieve impact at scale in terms of development outcomes
3. Increase private sector presence in the value chain. This means strengthening the private sector (agri-food businesses) in LICs and MICs where it is still underdeveloped.
4. Invest in the value chains to link rural producers to consumers in both rural and urban areas to develop new agri-food enterprises.
5. Develop the agri-food sector to generate new jobs through the creation of agri-food enterprises, improve incomes for both rural and urban populations, increase economic resilience in the face of international food price shocks; improve ecological resilience of farms and farmers as the latter are no longer going to be subsistence level producers; improve overall food supply by increasing supply and reducing post-harvest losses and improving distribution of existing food supplies.

The overall conclusion from the open discussion was that it is important to build a research agenda to capture the dynamics of value chains, and we still have a lot of work to do to identify specific research questions to understand what role investment in agricultural value chains play in achieving SDGs 1 and 2.

Below the main proposals.

PROPOSALS

1. Need much more work on ex-ante and priority setting work that explicitly incorporates climate actions
2. Need for demand-driven investment processes that integrate climate actions
3. Need for projects that can address long term and transformational issues – including transformational adaptation

IV. Can agricultural research lead to poverty reduction and food security?

Leslie Lipper (ISPC), moderator, started the session presenting the main thoughts from **Doug Gollin** (Oxford) who could not participate in person.

From Doug Gollin's notes for the session on agricultural research and poverty reduction

- Productivity increases are not the only pathway that will affect poverty and hunger
- Changes in the characteristics of production systems may free up farm labour (perhaps women's labour) for off-farm work. In some contexts, this could improve the livelihoods of the poor, even though the productivity of the farm production system might actually decrease.
- Increases in staple food productivity are neither necessary nor sufficient for reducing poverty and hunger. For example:
 - In the case of a new variety of rice in India that is well suited to mechanical cultivation productivity might rise, but the resulting negative effect on employment could result in an increase in poverty and hunger;
 - A technology that shortens the duration of rice production and enables smallholders to fit in a short-season vegetable crop might increase incomes and nutrition, even if it reduces the measured productivity of the crop.
- Our evidence of impact from agricultural research is simultaneously quite limited and astonishingly large
- We have very little clean causal identification of agricultural research leading to reductions in poverty. This could reflect (a) a lack of adequately framed studies; and/or (b) a lack of evidence on which to base the studies.
- At the same time, we have abundant descriptive evidence that supports the proposition that there is impact – although no single piece of this evidence is necessarily conclusive or strong. For instance, the extent of adoption of improved crop varieties by smallholders is, *ipso facto*, evidence of perceived benefit for a very large number of poor people
- Modelling exercises and model-based analyses consistently support the idea that agricultural investments will reduce poverty. But the general standard of this work is low, and too many of the models rely on crude assumptions and simplifications
- We need to consider potential trade-offs between and among SDG targets. It is disingenuous to pretend that agricultural interventions that achieve poverty reductions and declines in hunger will necessarily be environmentally friendly. It is possible that there may be some interventions that can achieve all three of these objectives, to a limited degree, but it is also possible that there may be stark trade-offs in some cases.
 - It may be that the best path to reducing hunger globally would be to encourage production of grains and protein foods in the Americas on large and efficient industrial farms. But this would not be consistent with increasing the incomes or productivity of smallholder farmers in Africa or Asia.
 - Increasing the income of smallholders might be linked to having them shift from production of food into the production of cash crops for export but may not help to reduce hunger.
 - Trade-offs are not necessarily bad and should not necessarily be avoided.

The question we should be asking is whether a million dollars invested in agriculture achieves a better impact on poverty than a million dollars invested in health or transportation or education or something else. This is of course a very difficult question indeed, but it's the correct one to ask.

The discussion, led by **Javier Escobal** (GRADE), **Karen Macours** (PSE), **Elisabeth Sadoulet** (UCB), and **Richard Caldwell** (Gates Foundation), was mainly focused around some of the provocative points raised by Doug Gollin:

- Link between agricultural research and poverty reduction. Is there concrete evidence? How to measure the impact?
- The impact of technology and innovation on poverty reduction and food security;

- Where to address interventions, both in terms of research and investment;
- Consider potential trade-offs between and among SDG targets.

The discussion focused on the question of HOW agricultural research can lead to poverty reduction and food security, rather than if it is actually the best means of doing so. Proposals that emerged from the discussants and the audience include the following.

PROPOSALS	<ol style="list-style-type: none"> 1. In the effort to develop means of evaluating and measuring impact of agricultural research on poverty we need better coordination and synergy amongst actors active in this area of work 2. Consider the role of economic research to understand the process of innovation and inform scientists about potential returns to the adoption of technologies 3. Think about improving our analysis and understanding of the dynamic trade-offs and synergies between SDGs 1 and 2 and other SDGs (i.e. through field-based assessments) 4. Direct research towards smallholders' priority agenda 5. Focus less on the issue of technology and more on bringing the value back into rural areas and creating employment opportunities for the youth 6. The dissemination of research outcomes in forms that are understandable and useful to policy-makers is currently not adequate and needs much greater improvement 7. Improve downward accountability at country level 8. Effectively involve the private sector
------------------	--

2.4 What else is needed besides agricultural investment? Institutional environments and complementary policies and programmes

Session 4, chaired by **Benjamin Davis** (FAO), looked beyond agriculture from a policy perspective to discuss what else is needed beyond agricultural investment in order to reach SDGs 1 and 2. In other words, what other sets of policies are necessary in order for agricultural investment to impact SDGs 1 and 2. And from there, what are the implications for the agricultural research agenda.

Here are some key questions that were considered--from both the perspective of facilitating a greater impact of agricultural investment on SDGs 1 and 2, but also in terms of forming part of the agricultural research agenda itself:

- a) **Institutions and governance**—how do state and non-state rural institutions mediate the impact of agricultural research and investment? What are the incentives of different actors in agricultural research and investment? What is the political economy of these institutions? From the perspective of institutions and governance, how can agricultural research and investment be made more effective for the poor and those living in marginal production areas—or is this the right question? How can institutions and governance be brought into agricultural research?
- b) **Policy context**—should agricultural investment be embedded within broader approaches to poverty reduction? What complementary interventions are necessary, from social protection to education to agricultural insurance? For example, how important is access to basic social protection for agricultural adoption, production and investment decisions at the household level?

What the implications for agricultural research? What research needs to be explored in combining complementary interventions with agriculture?

- c) **Policy space**—is agricultural investment more effective when part of a territorial approach to planning and implementation? What are the implications for agricultural research?

Some of the panellists in this session brought examples from their countries. Specifically, Colombia (**Angela Penagos**, RIMISP), Mexico (**Gustavo Gordillo**), and SSA (**David Ameyaw**, ICED). Below are the main issues highlighted.

EXPERIENCES AND LESSONS FROM COLOMBIA

Which is the best institutional context for our coalition?

In the case of Colombia, several issues need to be taken into account:

- Rural development and social condition: need to support municipalities, which are far away from the city system; need for territorial planning that could make a difference in poverty reduction;
- Inequalities in terms of opportunities: need for territorial development and women's empowerment;
- Disorganization of rural areas (no land titles, property rights): need for territorial cohesion, infrastructures, institutional arrangements, coordination.

From the talk of Angela Penagos (RIMISP)

EXPERIENCES AND LESSONS FROM MEXICO

There are three interlinked problems in Mexico

1. Very slow reduction of rural poverty;
2. Low growth of agricultural productivity and especially of small farmers;
3. Small quantity and quality of public expenditure channelled to small poor farmers.

Main reason

- Failures of governance (Agri policy is an ensemble of fragmented policies based on particular specific non-public negotiations between interest groups based on strong but exclusionary coalitions, and local and national governments)

Actions needed

- Small and specific projects as bedrocks for policies
- Policies constructed by coalitions
- Institutional design
- Coherence (from policymaker to policy implementer)
- Better governance: alternative coalition for the pilot project involving the ministry of finance and social development, Prospera, 17 programmes from 3 ministries including the ministry of agriculture, and main research institutes (UNAM, UAM, CIDE UIA).
- Better coordination: establish bridges between fragmented policies, actors and institutions.
- Learning process for both institutions and governments.

From the presentation of Gustavo Gordillo.

EXPERIENCES AND LESSONS FROM SSA

Major current trends in terms of AT

- Some progress has been made towards AT
- Noticeable upward shift in expenditure on agriculture by national governments
- Commitment of African governments to prioritizing agriculture in their development agendas
- Faster growth in agricultural productivity, improved nutrition and greater job expansion also in the non-farm segments of their economies
- Increase in agricultural investments by the private sector
- Still much needs to be done to really drive AT for Africa's development and to ensure a better life for its population

Silent trends

- Urbanization and urban population growth;
- Shifts in the labor force towards non-farm employment;
- Generally positive agricultural productivity growth rates and associated poverty reduction;
- Land degradation;
- Rising land prices;
- Increasing climate variability;
- Increasing dependence on imported staple foods;
- Improved market access conditions for smallholder farmers;
- Changing farmland ownership and farm size distributions.

What is needed

- Governance, Political Leadership and Commitment: A strong political resolve for Africa's leaders to revitalize agriculture as the driver of economic growth, poverty reduction, and food and nutrition security
- Promotion of broad-based agricultural growth policies: Broad-based agricultural growth is the foundation of structural economic growth
- Promotion of sustainable intensification for resilience and productivity: "increasing production, income and other benefits, from the same land or less with prudent use of inputs such as water, fertilizers and pesticides while reducing the negative environmental impacts associated with clearing forests, water extraction, and soil usage, and at the same time enhancing the flow of environmental services"
- Increased market access, agribusiness and intra-regional trade: The ability to receive equitable prices for farm produce and to be able to market surplus production that meets quality standards needed by the growing urban population and consumers is a challenge being faced by many smallholder farmers in Africa
- Introduction and adoption of modern digital technology: The success of agricultural transformation in other parts of the world has been dependent on some form of machine power and technological advancement. Technology has been used to improve soil fertility, develop certified seed varieties, control pest and diseases, control irrigation to supplement rainfall, advance harvesting, handling and storage equipment, and reduce post-harvest losses and enhance market efficiency
- Agricultural Research, Advisory Services and Capacity Development: A multi-dimensional research that addresses agricultural challenges and provides technological, economic and institutional knowledge and innovations, contributing to sustainable development. An efficient and effective agricultural research system should have the capacity to generate, analyze and use data, information, knowledge and innovations to support agricultural productivity at national and regional levels of SSA.

SDGs 1 & 2 are achievable but it is more than agricultural investment

From the presentation of David Ameyaw (ICED).

Maya Takagi (FAO) proposed the following interventions:

- Focus research and investments on the poorest/smallholders to strengthen their capacity and increase opportunities;
- Invest in Farmers' Associations (FAs) to increase their share of participation in the value chain and hence their incomes;
- Invest in social protection for both urban and rural population (health insurance, pension, minimum wage) to increase production;
- Invest in rural service provision (water, education, sanitation);
- Bring agricultural research into policies;
- Understand the causes why people still live below the poverty line after years of interventions.

The discussion, headed by **Steven Were Omamo** (WFP), led to the following common recommendations.

RECOMMENDATIONS	<ol style="list-style-type: none">1. Focus on how to link the rural and urban context and consider the political economy of such embeddedness2. Give priority to how to increase social, political and economic organization in rural areas – including through use of territorial development approaches3. Identify context-specific course of action (as researchers)4. Understand how we should be targeting the poorest in the research agenda5. Understand why poverty is so persistent, though the agricultural sector may be dynamic6. Define key interventions to move people out of poverty7. Figure out how to create more innovation systems following a bottom-up approach (involving farmers is compulsory)
------------------------	--

3. Recommendations

A considerable number of questions, issues, and ideas emerged from the discussions of the four sessions. At the end of Session 4, participants were invited to look more concretely into strategic priorities for the immediate future. They were asked to think about some proposals and put them in writing on index cards. Their inputs were then collected and consolidated into a number of recommendations grouped into topic areas in an effort to identify a way forward.

1. IMPROVING LINKS BETWEEN POLICY AND RESEARCH

WHY

Trying to coordinate the dialogue between policy and research is central in order to be more effective and translate research into real impact. This implies many interlinked issues to be addressed and to such end participants recommended a number of actions aimed at improving coordination between the different actors involved.

HOW

- Incentivize development workers and agencies to use **IE evidence** by setting up a high level discussion forum and make it available to funders and policymakers;
- Set priority research and impact evaluation agendas at country level in the context of SDGs 1 and 2 by linking governments, agricultural research institutes and international agencies (**multilevel coordination**);
- Get policy makers interested and involved in research and motivated to use IEs by identifying together the questions to be answered (**political involvement**);
- Make agricultural research and innovation responsive for the poor and hungry in rural areas by building and enhancing collective action of **existing platforms** on research and innovation (i.e. GFAR);
- Establish annual cycle of dialogue between national decision makers, donors and researchers on one topic per year through **annual conferences/workshops**;
- **Build** relevant evidence for policy-making and build capacity of policy-makers to use it. Improve interface between researchers and policy-makers in rural poverty reduction using **existing platforms** (i.e. the Global Donor Platform for Rural Development) to improve coordination and collaboration rather than creating a new platform;
- Convene discussion on how the relevance of research to SDG1 and 2 should be judged (e.g. indicators of the influence of research on development agency involvement strategies);
- Provide advice for complex rural problems with simple instruments;
- Get a greater focus on hunger and poverty reduction in agricultural and rural research and investment agendas starting with generating a mapping exercise that can be built into a “**white paper**” focusing on what evidence is already available and how it is being utilized, as well as what evidence is still missing. This effort should built on the outcomes of the consultation as well as on

what we already know about current research agendas and their impacts on poverty and hunger reduction and where opportunities lie (**share lessons learned**);

- **Maintain this coalition** as a learning group that discusses and synthesizes evidence on – and proposes guidance for culturally and context sensitive presentations.

2. PRIORITISING AGRICULTURAL RESEARCH AND INVESTMENTS

WHY

Setting priorities is crucial in order to identify which interventions are more needed and most likely to be successful in achieving SDG 1 and 2 targets. Collecting more and better and making better use of existing data is among the priorities. Since a wealth of information already exist, we collectively need to get existing research used and usable. Also, in a rapidly changing context, agricultural research and investments need to be specifically targeted by type of region, socio-economic and agro-ecological context.

HOW

- Exchange knowledge and **learn lessons** from successes and failures and act on those;
- Discuss what is working and what is not for **institutional learning**. Discussion should be among organization researchers and their potential clients through workshops and share results on an ongoing basis;
- **Fill research gaps** through a coordinated program of IEs on key topics (benefits of **bundling**); more research focus on poverty and hunger outcomes; influencing existing/future data agenda (support integration/interoperability of data sources); country level pilots of coordination; topical conferences to get users and researchers talk to each other, or to get researchers back to the organizations with data;
- Adapt research and investment strategies to **new contexts**, where climate change and migration are playing a crucial role (demand-driven research and investments).

3. MEASURING TRANSFORMATIVE CHANGE

WHY

Given that poverty and food insecurity remain largely rural and that agriculture is considered key to this universal agenda, the SDGs are unlikely to be achieved without significant transformation of rural areas and the agricultural landscape. While investment in agricultural and rural development are clearly required, this investment must focus not just on increasing yields but on a more complex set of objectives, including promoting poverty reduction among marginalized rural populations, improving nutrition, preserving natural resources and adapting to climate change. The multiplicity of objectives and the recognition that rural areas must transform with development creates challenges in identifying the best agricultural and rural investment strategies. Evidence in SSA and rural Asia and the Pacific reveal that there is a dynamic relation between rural/agricultural transformation-

agricultural growth-poverty reduction. It is therefore important to revalorize the role of agriculture for development through agricultural/rural transformation.

HOW

- Ensure more marginalized and poor farmers, landless and women are able to benefit from structural transformation by making use of links with wider stakeholders through **existing platforms** (i.e. GFAR) to seek ex-ante demand from agricultural communities and using participatory **foresight** of needs to drive agenda from bottom up;
- Analyze the socio-economic and agroecological dynamics driving transformative change by setting up “**sustainability observatories**” in key agricultural “hotspots” around the world where rapid change is occurring; coordinating and concentrating research actions and setting them up for the long term. This would allow to:
 - Take a territorial / landscape-based approach to sustainability and poverty research that would allow intra- and inter-regional comparison of the drivers of change and rural-urban dynamics and their implications for food, farming and human welfare;
 - Concentrate resources in a coordinated fashion to build on existing data sets (both quantitative and qualitative) and develop new ones to create an integrative and systematic approach that would allow the longitudinal tracking long-term trends and changes to the 2030 target and beyond;
 - Invest in the training of the next generation of agricultural scientists (both physical and social) in those places with senior researchers providing training and mentoring support;
 - Create a set of synergistic partnerships and multi-stakeholder platforms with local / regional authorities and organisations (research, policy, private sector, civil society) to develop and test new governance arrangements and support context-specific experimentation to try out new approaches and innovations at scale;
- Focus on **high impact levers** (get better summary of what we already know; high risk radical approaches) by coalescing;
- Conduct **research** on Structural Transformation of African Agricultural and Rural Systems (STAARS) related issues with emphasis on agricultural labour productivity and off farm employment by linking promising junior African scholars with senior researchers and LSMS-ISA to build capacity;
- Develop a common research project aimed at mapping successful initiatives at national and sub-national level that contribute to poverty and hunger reduction.

4. FOSTERING VALUE CHAIN APPROACHES

WHY

To understand where we need and want to go with the agricultural investment agenda, it's fundamental to understand how new dynamics, such as climate change and value chain developments, affect such agenda in the context of achieving SDGs1 and 2 and the implications for the agricultural research agenda.

HOW

- More systematic work on **input and output markets** and how they feedback agricultural innovations by providing basis/guidance for targeted projects;
- Research to inform the prioritization of value chain investments aimed at speeding up poverty reduction/food security and employment through **ex-ante and ex-poste assessments**;
- Look at the **employment angle** of agricultural value chain development;
- Provide guidance for **private sector** engagement with agricultural researchers;
- From economics to a more **multi-disciplinary approach** by addressing asymmetries, figuring out what kinds of links amongst actors in value chains we are looking for, and paying attention to the role of policies.

5. CONTEXTUALISING TECHNOLOGY ADOPTION

WHY

The success of agricultural transformation in some countries has been dependent on some form of technological advancement. However, technology adoption might be counterproductive in terms of employment opportunities, thus resulting in an increase in poverty and hunger. Therefore, it's important to understand which technology is really effective and especially where to adopt it.

HOW

- Include academics and policymakers to address the issue of the adoption choice and/or choice of non-agricultural employment;
- **Rethink** the conceptualising and analysis of agricultural technology adoption;
- Develop a common research project aimed at mapping successful initiatives at national and sub-national level that contribute to poverty and hunger reduction.

To conclude and summarize, **Esther Penunia** (AFA/GFAR) proposed the following five key priorities to be integrated into policy programs along with five collective actions.

Key priorities	Collective actions
<ol style="list-style-type: none">1) Land/resources rights to increase poor farmers' income2) Appropriate resilience technologies (i.e. CSA)3) Strengthen farmers' cooperatives and associations for value addition4) Better participation in governance involvement5) Strengthen existing multi-stakeholder regional fora on agricultural research	<ol style="list-style-type: none">1) Bring the value back to rural areas to enhance the rural future for both producers and farmers, especially women and the youth2) Use existing stakeholder regional platforms to promote the dialogue on research and innovation (share agricultural knowledge)3) Evaluate the impact of the SDGs on local governance4) Build national agribusinesses and measure the impact of the private sector to advance the SDGs5) Work together on pilot projects towards the 2030 agenda

4. Towards building the roadmap for action

Session 5 was designed to move from reflection to action. The last session was in fact titled “Building the roadmap for actions in the initiative” and saw experts focusing on the following issues:

- Priorities and follow-up actions
- Mechanisms for collaboration and joint initiatives towards achieving a common vision and coordinated approach to managing agriculture to achieve SDGs 1 and 2.

Participants agreed **Being more effective** should be the starting point and to this end a first list of priorities has been developed towards the development of a common strategy:

1. Identify common **topic areas** for intervention;
2. **Prioritize** actions;
3. Identify the weak links for a **better coordination**;
4. Create **partnerships** including different stakeholders at different levels (local, national, regional) comprising both state and non-state actors;
5. Share **lessons** and bring them into institutions and governments. Create a **learning** feedback system;
6. Make better use of **existing research/data**;
7. Build an **evidence base** for practical action;
8. Work towards producing **‘white paper’** by conducting a mapping exercise that includes a review of previous studies to assess the value of their methodologies and the strengths and weaknesses of their analysis as well as the outcomes of the Expert Consultation;
9. Develop a country level piloting exercise to implement recommendations coming out of the expert consultation with the following aspects included:
 - a. Coalesce and create **partnerships** to facilitate the identification of realistic SDG 1 and 2 targets and priorities at national country-level. Identify which targets can be aligned with national priorities and strategies and which are essentially global priorities.

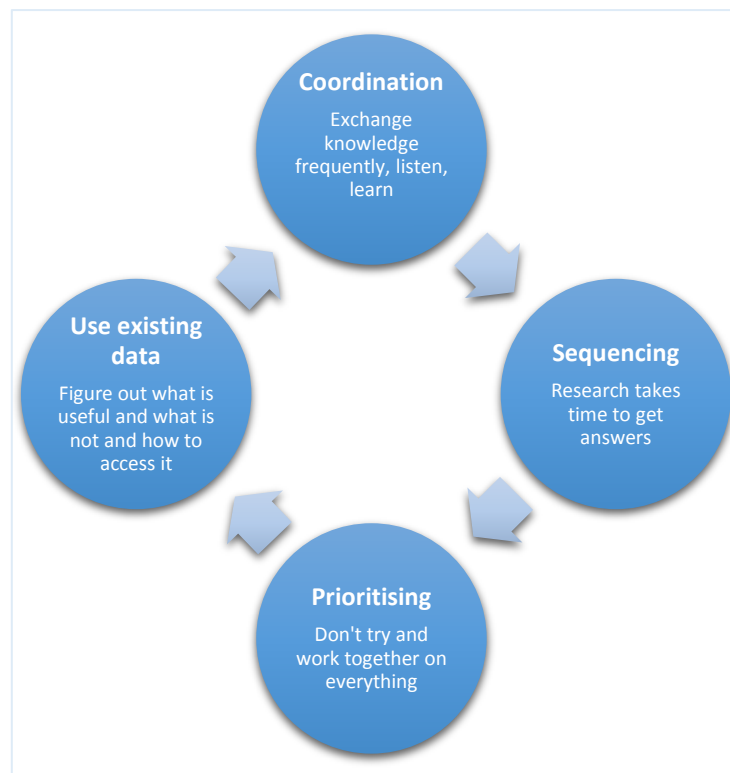


Figure 3 – from Maggie Gill’s main thoughts on the roadmap

- b. Identify **country-level pilots** of coordination as a way to contribute to filling data gaps
 - c. Improve **multi-level coordination** between different actors at national, sub-national and local levels (NGOs, ministries, etc.)
 - d. Strengthen country **capacities** at national, sub-national and local levels, by increasing understanding of the decision-making process making the available research and findings usable and accessible at the level of policymakers and those “who need to know”. Build the capacity of data users (i.e. ministers of agriculture)
 - e. Develop a **joint agenda** taking into account the needs to localize SDGs1 and 2 in response to the new context and focus attention on demand-driven research and investments.
 - f. Create a network of **observatories** to monitor agrarian transformations over time in order to generate corresponding knowledge to inform policy, using a common methodological framework.
 - g. Promote cross-sectoral multi-scale studies and assessments (**bundling**) that may provide insights into the processes of agricultural transformation and socio-technical change and their implications.
 - h. Address **big issues** that affect poverty and hunger (inequality, climate change, migration) contextualizing strategies and **targeting** agricultural and rural **investments** according to the different needs of the areas concerned to avoid unnecessary / “risky” investments.
 - i. **Tailor** approaches to vulnerability to shocks (instruments for risk-layering, technological innovations). Understand the conditions for profitability and employment effects.
 - j. Design local **pilot projects** targeting specific aspects to serve as bedrocks for policies.
 - k. Consider issues of **local governance** for developing territorial approaches/planning in support of rural development and agricultural/rural transformation (fill the gaps in the provision of rural services – water, education, sanitation – and resources – land titles, property rights - and improve the organization in rural areas through territorial cohesion, infrastructures, institutional arrangements, coordination)
 - l. Give importance to the role of **gender** and **women’s empowerment**
 - m. Create **opportunities** to prevent the youth exiting agriculture
 - n. Consider poor farmers/**smallholders** and their priorities as well as those of policymakers
 - o. Listen and involve farmers to create innovation systems following a **bottom-up** approach
10. Produce a **proposal** to outline next steps taking into account the recommendations above and the discussions over the two days of the expert consultation.

5. Conclusions

The Expert Consultation was meant as a first step in a process to achieve better coordination and more effective implementation of agricultural research and investment strategies to support countries in achieving SDGs 1 and 2.

It represented an opportunity to share experiences and open questions with scholars, donors, and experts from various regions in the attempt to find a common way forward. Throughout the two-day gathering, participants' ideas and expertise stimulated insightful discussions and contributed to envisioning a way forward for the work of the coalition.

The enthusiastic response to the Expert Consultation confirmed the need for coordinating actions as well as the need to promptly move ahead in building it – based on the key results and recommendations that came out of this consultation.

In particular, the experts tackled pressing issues such as data and conceptual gaps and the need to fill them – and equally important to ensure that good use is being made of the data and analysis we already have. The importance of creating better feedback loops, sharing lessons learned on an ongoing basis through existing platforms, making research results available to funders and policymakers, stimulating the dialogue between users and researchers, and increase local and national capacities of data users was also stressed.

With the exception of some of the public goods that are clearly global in nature, such as reduced greenhouse gas emissions from the agricultural sector, most research impacts on poverty reduction and food security will be felt at the national level and below. Indeed, to result in tangible impacts, agricultural research initiatives need to be grounded locally. This requires research programs to link up with development programs as well as close and improved coordination and partnerships involving the private sector, NGOs, farmer organizations, and other actors involved in the “game” at national, sub-national and local levels.

In particular, the experts encouraged the coalition to understand the context and focus on local needs, listening and involving farmers in innovation systems in order to avoid useless and/or ‘risky’ investments that might be counterproductive in the long run. In some cases, for instance, technology adoption might be seriously counterproductive in terms of employment opportunities, thus resulting in an increase in poverty and hunger.

A long list of challenging questions was raised in this consultation, as well as considerable sage advice and solid recommendations. These will be carefully considered in the development of the next steps the coalition overseeing this process will take and brought back to the group and other relevant stakeholders in a series of consultations, including a follow up to this expert consultation planned for the end of 2017.

Annex A

Summary of the main research questions and gaps emerged from the meeting sessions

Sessions 1 and 2

RESEARCH QUESTIONS

What?

- Risk/vulnerability – what’s the best way to help farmers cope?
 - Especially seasonal variation, price variation
- What are the impacts of “More than cash transfers” (e.g. cash plus training, assets, etc)
- Nutrition vs poverty
 - When does poverty reduction → malnutrition reduction?
 - When not? Why? What is needed? Tradeoffs?
- What bundles and at what scale? (e.g. index insurance plus ____, irrigation plus ____)
- What to do in fragile states? What kind of projects when you have a governance issue?
- What works to increase growth of rural non-farm enterprises?
- What kinds of skills are important for smallholder productivity growth?
- Consolidation
 - What kind of interventions work for land consolidation?
 - Does consolidation increase productivity?
- Does improving property rights increase productivity?
 - Certification versus title registration (what is the best mechanism?)
 - Impact on consolidation?
- Focus on increasing productivity of widespread crops or on targeted interventions to increase profitability?
- What are the rigidities in the labor markets farmers face?
- Beyond geography: what is the role of market imperfections/fixed costs in determining which crops should be grown where?
- At what level (e.g. farmer, community) do fixed costs bind?
- What are the market imperfections holding back innovation at the local level (farm, community)?
- How to guarantee quality of inputs?
- Which types of technologies are better for internalizing spillovers?
- What’s the most effective mode of extension (e.g. content, modalities)?

- What are the gender dynamics over control over output, how does this matter for production choices and outcomes?

DATA GAPS

What?

- More HH surveys
- Set up data so that it can be geographically (and/or otherwise) linked
- Improve comparability across time in survey data
- Better measurement of value of non-marketed inputs
- Better data on labor, labor costs, equipment ownership and rental
- More harmonization for cross-country comparability/answering bigger questions
- Better data on prices in particular that permit the measurement of fixed costs
- Better data on spillovers/externalities
- Better measurement of farmer knowledge/learning
- More data on infrastructure
- Better sex-disaggregated data
- Better data/questions/comparability to understand gender dynamics & discrimination in agricultural and structural transformation
- Better data on crop varieties

Session 3

RESEARCH GAPS

What?

- More detailed research on CC and poverty, with a focus on gender and inequality
- More research on context-specific participatory actions needed at country and village level
- More research on CC actions, particularly seasonal advisories, local adaptation planning, seasonal and non-seasonal migration that bring about shifts in crops and livestock and shifts out of agriculture, respectively.
- More research on livestock, fish, horticulture, oilseeds and not only cereals
- More research on marketed crops where farmers, also the poorest, focus investment on
- More research on post-farmgate segments and pre-farmgate chains
- More research on domestic urban market demands and policy/infrastructure needs
- More research on processability of crops
- More research on transitions and resilience of chain given the regional shifts in supply chain due to CC

- More research on food safety in consideration of longer supply chains, more perishable consumption, more processing, and shift to modern market growth
- More stacked surveys to get 60% of the food system beyond the farm gate
- More research on the impact of technology and innovation on poverty reduction and food security

Where?

- South Asia
- SSA

Who?

- Smallholders

How?

- Impact evaluations to look at interventions
- Inferential/other research to look at policies, policy levers, understanding problems better
- Fill data gaps (more data and collect better) through:
 - Coordinated program of IEs on key topics
 - More research focus on poverty and hunger outcomes
 - Support integration and interoperability of data sources
 - Country-level pilots of coordination
 - Topical conferences/workshops to get data users and researchers talk to each other
- Get data used by governments, southern researchers
- Increase demand for agricultural data at the national level
- Get research results used for policy by governments, NGOs and international organizations
- Get folks to talk about what is not working as well as what is working.
- Pull evidence together effectively so funders, policymakers have it when they need it

