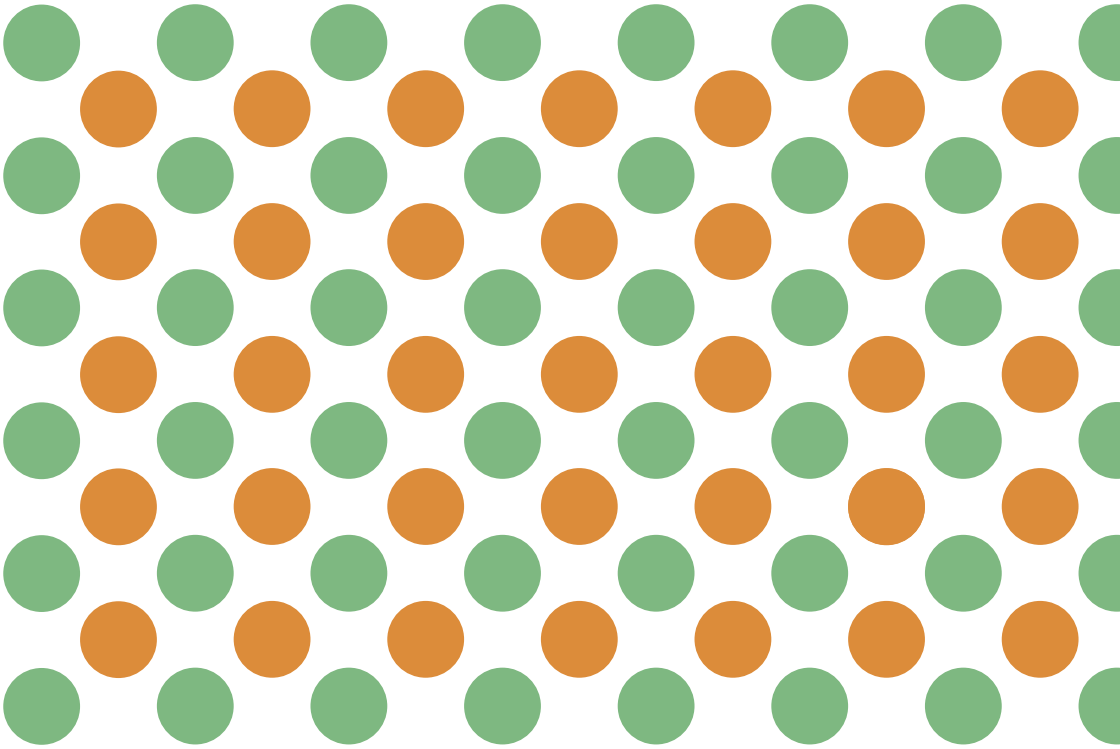
AIRTEA

Strengthening Agricultural Knowledge & Innovation Ecosystem for Inclusive Rural Transformation & Livelihoods in Eastern Africa

INSTITUTIONALIZATION OF INNOVATION PLATFORMS, STRATEGIC PATHWAYS AND GOVERNMENT INCENTIVES FOR PRIORITY COMMODITY VALUE CHAINS IN UGANDA, KENYA & RWANDA



June 2022

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Workshop Report

JUNE 30, 2022

JOSHUA SIKHU OKONYA & MOSES ODEKE

ASSOCIATION FOR STRENGTHENING AGRICULTURAL RESEARCH IN EASTERN AND CENTRAL AFRICA (ASARECA)

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Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is leading Work package 1 (WP1) for the project "Strengthening the Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa" (AIRTEA) with support from FARA and EAFF as co-leaders. The consortium acknowledges the logistical support from ASARECA Secretariat, FARA, EAFF, RAB, KALRO, NARO that led to successful implementation of the workshops.

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Authors of the report

This report compiles the background situation, presentations, and workgroup discussion of participants from three countries Uganda, Kenya and Rwanda. Participants represented the following Organizations: ASARECA, FARA, EAFF, Koppert Biological Systems, Ag-Connectors, University of Nairobi, Cooperative Alliance of Kenya, Jomo Kenyatta University of Agriculture and Technology, The Sustainable Development Goal Center for Africa, Kenya Forum for Agricultural Advisory Services, Kenya Agricultural and Livestock Research Organization (KALRO), Muranga County Government - Kenya Plant Health Inspectorate Service (KEPHIS), Kenya Ministry of Agriculture, Livestock Fisheries & Cooperatives, Kenya Agriculture and Food Authority (AFA), The Lead Consortium, Rwanda Agriculture and Animal Resources Development Board (RAB), Youth Engagement in Agriculture Network (YEAN), EGSP-Imbuto, Seed Potato Fund Joint Ventures (SPF-IKIGEGA), Ministry of Agriculture and Animal Resources (MINAGRI), Kinazi Cassava Plant Ltd, University of Rwanda(UR), INES-Ruhengeri, Sight and Life - Rwanda, Rwanda Forum for Agricultural Advisory Services (Rwanda FAAS), Minister of Agriculture, Animal Industry and Fisheries (MAAIF), International Potato Center (CIP)-Uganda, Makerere University, Uganda Christian University (UCU), Uganda Forum for Agricultural Advisory Services (UFAAS), Uganda National Farmers Federation (UNFFE), Agriculture Environment & Ecosystem (AGRENES), Bugiri District Local Government, International Institute of Tropical Agriculture (IITA)-Uganda and National Agricultural Research Organization (NARO).

This report was prepared by J.S. Okonya, and M. Odeke with contributions from presenters.

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Acronyms and Abbreviations

ABLA	Agricultural Business Learning Alliance
AGRENES	Agriculture Environment & Ecosystem
AFAAS	African Forum for Agricultural Advisory Services
AIS	Agricultural Innovation System
AIRTEA	Strengthening the Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa
AR4D	Agricultural Research for Development
ASARECA	Association for Strengthening Agricultural Research in eastern and central Africa
AU	African Union
CAADP-XP4	Comprehensive Africa Agricultural Development Programme ExPillar4 Institutions
CAK	Cooperative Alliance of Kenya
CIP	International Potato Center (CIP)-Uganda
CGIAR	Consultative Group for International Agricultural Researcher
CIMMYT	Centre for Improvement of Maize and Wheat
COMESA	The Common Market for Eastern and Southern Africa
CoP	Community of Practice
CORAF	West and Central African Council for Agricultural Research and Development
CSA	Climate Smart Agriculture
DeSIRA	Development Smart Innovation through Research in Agriculture
ECA	Eastern and Central Africa
EAFF	East African Farmers' Federation
EGSP	Early Generation Seed Potato Ltd
EU	European Union
FARA	Forum for Agricultural Research in Africa
ICARDA	International Centre for Agricultural Research in the Dry Areas
IGAD	Intergovernmental Authority on Development
INES	Institut d'Enséignement Supérieur de Ruhengeri
JKUAT	Jomo Kenyatta University of Agriculture and Technology (JKUAT)
KEPHIS	Kenya Plant Health Inspectorate Service
IITA	International Institute for Tropical Agriculture
IP	Innovation Platform
ILRI	International Livestock Research Institute

KALRO	Kenya Agricultural and Livestock Research Organization
KaZARDI	Kachwekano Zonal Agricultural Research and Development Institute
KeFAAS	Kenya Forum for Agricultural Advisory Services
MAAIF	Minister of Agriculture, Animal Industry and Fisheries
MSPs	Multistakeholder Platforms
MINAGRI	Ministry of Agriculture and Animal Resources
NaLIRRI	National Livestock Resources Research Institute
NARIs	National Agriculture Research Institutes
NARO	National Agriculture Research Organisation
OACPS	Office of the Organization of African Caribbean and Pacific States
NGOs	Non-governmental organizations
RAB	Rwanda Agriculture and Animal Resources Development Board
RECs	Regional Economic Communities
SADC	The Southern African Development Community
SPF	Seed Potato Fund Joint Ventures
SDGC/A	The Sustainable Development Goals Center for Africa
SMEs	Small and Medium Enterprises
TP	Third Party
UCU	Uganda Christian University, Mukono
UFAAS	Uganda Forum for Agricultural Advisory Services
UNFFE	Uganda National Farmers Federation
UNILAK	University of Lay Adventists of Kigali
VAT	Value Added Tax
WP	Work Package
YEAN	Youth Engagement in Agriculture Network

Executive Summary

Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is participating in the implementation of the project on "Strengthening Agricultural Knowledge and Ecosystem Innovation for Inclusive Rural Transformation in Eastern Africa (AIRTEA). ASARECA is leading WP1 that focusses on creating synergies for MSH engagement through IP prioritization, and establishment and strengthening of IPs. Under the activity on "Establishment of strategic Innovation Platforms along commodity value chains at the country level", ASARECA in partnership with FARA and EAFF organized three (3) IP strategic meetings with policy makers and other relevant stakeholders in Kenya, Rwanda and Uganda. The meeting in Kenya was held on 10th June 2022 at Hill Park Hotel, while the meeting in Rwanda was held on 13th June 2022 at Lemigo Hotel. The meeting in Uganda was held on 15th June 2022 at Golf Course Hotel.

The objectives of the IP meetings were to: **i.** sensitizing relevant stakeholders on the role of IPs in fostering agricultural research for development, **ii.** identify strategic pathways for mainstreaming the IP approach in AR4D institutions; and **iii.** identify policy incentives to catalyze adoption of the IP approach along commodity value chains.

The 1-day physical IP prioritization meetings were conducted in a participatory manner, and involved workshop sessions that comprised plenary presentations, brainstorming and discussions of issues pertinent to the agenda. The discussions were facilitated and moderated by key resource persons from FARA and ASARECA. Throughout the workshop sessions, Q&A was encouraged and key topical issues pertaining to the concept of IP approach were clarified. The three meetings were attended by 103 participants (41 in Kenya, 27 in Rwanda & 34 in Uganda) who included Directors General from National Research Institutes, Directors General from Departments of Policy, Value Chain Development and Extension in the Ministries of Agriculture, Research Scientists from NARIs, Universities and NGOs.

Key issues emerging from the IP strategic workshops indicate that subsidies on several agricultural commodities do exist in each country and range from 30% to 70% depending on the value chain. Value Added Tax (VAT) exemptions for agricultural inputs were reported in Kenya, Rwanda, and Uganda. Matching grants are available in Rwanda and Uganda for TP Projects with good business plans. De-risking of the agricultural sector through crop and livestock insurance exists in Uganda, Kenya, and Rwanda.

It was also severally noted that for IPs to be successful, local level ownership is paramount, and funding strategies outside the project are necessary. IPs should be commodity-based and capacity strengthening for both the IP facilitators and all stakeholders is key. As part of governance, it's critically important to have a management structure (with bylaws that govern IPs) agreed-on by all members.

With regards to institutionalization of IPs, there is the need for a regulatory framework for their establishment and guidelines for their implementation. The IPs must be established and facilitated by local government leaders, and this requires them to be fully integrated into the local development plans. The role of IPs in fostering agricultural development especially through catalyzing up take of proven technologies was appreciated across the 3 countries. Stakeholders expressed that IPs had contributed much in the past and much will be achieved in the future. However, to strengthen the enabling/regulatory environment, there is need to put in place laws to incentivize innovation.

Introduction

1.1 Background

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), Forum for Agricultural Research in Africa (FARA) and the East African Farmers' Federation (EAFF) are jointly implementing a project on Strengthening the Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa (AIRTEA). The project is supported by the EU-ACP Innovation Fund through the Office of the Organization of African Caribbean and Pacific States (OACPS) which is funded by the European Union (EU) through the 11th European Development Fund (EDF). The OACPS is supported by a Technical Assistance Unit (TAU) – which is responsible for the implementation of the OACPS Research and Innovation Programme (https://oacps-ri.eu).

1.2 Objectives of the AIRTEA project

The overall objective of the project is to contribute to achieving sustainable agrarian livelihoods and rural transformation by fostering inclusive innovation environment. The three specific objectives are to:

1. Strengthen the capacities of youth and women in East Africa's multi-stakeholder innovation platforms and link to solutions within national, regional and global food systems.
2. Facilitate technology transfer and uptake through learning routes and multi-stakeholder engagement; and
3. Improve profitability and employment opportunities along agricultural commodity value chains by establishing national and regional Agricultural Business Learning Alliance (ABLA) platforms, business development services and mentorship.

The action (project) uses the Innovation to Impact Framework (I-IF) concept which incorporates the institutionalization of the Innovation Platforms to provide a protocol for prioritization at national level, IP management, multi-stakeholder approaches. The I-IF model therefore drives an inclusive a science-led and agribusiness-oriented approach to transforming African agriculture. In this regard, it's anticipated that this action will use multi-stakeholder partnerships with the innovation platform approach to nurture the partnerships among farmers, private sector, researchers, policymakers, financing institutions and other stakeholders involved in the value chains of the selected commodities.

The institutionalization of the IP model in national processes is anchored on the understanding that there is need to influence policy makers and other decision makers to take up the IP as a planning tool that can be used for planning of agri-value chain activities. It's against this background that ASARECA and other consortium members of AIRTEA Project convened a high-level strategic meeting to sensitize policymakers about the Innovation platform approach and its role in fostering agricultural research for development. This served as an opportunity for policy makers to highlight the available government incentives that can be tapped into by third-party projects under the AIRTEA program.

1.3 Purpose

The overarching objective of the IP prioritization meetings was to strengthen the institutionalization of IPs into national planning processes.

1.4 Specific Objectives

The meetings aimed at:

1. Sensitizing policy makers about the IP approach and need to mainstream this approach in government planning processes
2. Strengthening the institutionalization of IPs/ MSPs in national planning processes
3. Highlighting the available government incentives that could be tapped in by third party projects that have MSPs

Workshop Approach and Methodology

2.1 IP Prioritization Meeting in Kenya, 10th June, 2022

The 1-day physical meeting was held with key stakeholders, IP champions and policy makers on 10th June 2022 at Hill Park Hotel, Nairobi, Kenya. The meeting was conducted in a participatory manner, in sessions that comprised plenary presentations and group discussions of issues pertinent to the agenda (see program in Annex 1). Q&A was encouraged throughout the process. The IP strategic meetings were facilitated by staff of FARA (Dr. Oluwole Fantumbi, Innovation Systems Specialist) and ASARECA (Joshua Okonya, Program Officer for Technology & Innovation; Moses Odeke, Technical Officer for Monitoring & Evaluation). The meeting in Kenya was attended by 41 participants from 17 institutions of FARA, EAFF, Koppert Biological Systems, Ag-Connectors, University of Nairobi, Cooperative Alliance of Kenya (CAK), Jomo Kenyatta University of Agriculture and Technology (JKUAT), The Sustainable Development Goal Center for Africa (SDGC/A), Kenya Forum for Agricultural Advisory Services (KeFAAS), Kenya Agricultural Livestock and Resources Organization (KALRO), Muranga County Government, Kenya Plant Health Inspectorate Service (KEPHIS), Kenya Ministry of Agriculture, Livestock Fisheries & Cooperatives, Kenya Agriculture and Food Authority (AFA), Kenya News Agency (KNA) and The Lead Consortium (see Annex 2 for group photo)

2.2 IP Prioritization Meeting in Rwanda, 13th June, 2022

The 1-day physical meeting was held with key stakeholders, IP champions and policy makers on 13th June 2022 at Lemigo Hotel, Kigali, Rwanda. The meeting was conducted in a participatory manner, in sessions that comprised plenary presentations and group discussions of issues pertinent to the agenda (Annex 3). Q&A was encouraged throughout the process. The IP Prioritization Meeting in

Kigali, Rwanda was attended by 27 participants from 14 institutions (FARA, EAFF, Rwanda Agriculture and Animal Resources Development Board (RAB), Youth Engagement in Agriculture Network (YEAN), EGSP-Imbuto, Seed Potato Fund Joint Ventures (SPF-IKIGEGA), Ministry of Agriculture and Animal Resources (MINAGRI), Kinazi Cassava Plant Ltd, University of Rwanda, INES-Ruhengeri, Sight and Life, Rwanda Forum for Agricultural Advisory Services (Rwanda FAAS), SDGC/A and Rwanda broadcasting Agency (see Annex 4 for group photo)

2.3 IP Prioritization Meeting in Uganda, 15th June 2022

The 1-day physical meeting was held with key stakeholders, IP champions and policy makers on 13th June 2022 at Golf Course Hotel, Kampala, Uganda. The meeting was conducted in a participatory manner, in sessions that comprised plenary presentations and group discussions of issues pertinent to the agenda (Annex 5). Q&A was encouraged throughout the process. The IP Prioritization Meeting in Kampala was attended by 35 participants from 17 institutions (ASARECA, FARA, EAFF, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), National Agricultural Research Organization (NARO) Secretariat, Kachwekano Zonal Agricultural Research and Development Institute (KaZARDI)/NARO), National Crop Resources Research Institute (NaCRRI)/NARO, Aquaculture Research and Development Center (ARDC)/NaFIRRI/NARO, International Potato Center (CIP)-Uganda, Makerere University, Uganda Christian University (UCU), Mukono, Uganda Forum for Agricultural Advisory Services (UFAAS), Uganda National Farmers Federation (UNFFE), Agriculture Environment & Ecosystem (AGRENES), Bugiri District Local Government, International Institute of Tropical Agriculture (IITA)-Uganda, and National Livestock Resources Research Institute (NaLIRRI)/NARO (see Annex 6 for the group photo).

Workshop Sessions and Discussions in Kenya

3.1 Innovation Platform Strategic Meetings in Kenya

3.1.1 Introductions and Program Objectives

The AIRTEA Project Focal Person at ASARECA and meeting moderator, Joshua Okonya led participants through the self-introductions and the Programme for the 1-day meeting. He said the main reason for this meeting is to strengthen the institutionalization of IPs in national planning processes to sustain the IPs under AIRTEA project. He also emphasized why it is key to sensitize policymakers about the benefits of the IP approach.

3.1.1.1 AIRTEA Project Overview

In his presentation, Dr. Kwaku, the AIRTEA Project Lead at FARA highlighted that the AIRTEA project has three specific objectives:

1) Increased involvement of women and youth in East Africa in linking multi-stakeholder IPs to practical solutions within national, regional, and global food systems
2) Technologies, knowledge, and innovations taken up by all stakeholders involved in the national and regional ABLA platforms
3) Improved profitability and employment opportunities along agricultural commodity value chains

The project lead also noted that the AIRTEA project is structured into four work packages (WP), namely:

1) **WP 1:** Synergies for Stakeholder Action in National Agricultural Research and Innovation Ecosystem and this is led by ASARECA
2) **WP 2:** Support Technology Transfer, Knowledge Management and Information Communication among stakeholders and this WP is led by EAFF
3) **WP 3:** Support Inclusive Capacity Development Business Incubation along Country Priority Value Chains for Smallholders & Other stakeholders and is led by FARA
4) **WP 4:** Program coordination, management, Monitoring, Evaluation and Learning (MEL) and is led by FARA

Out of the 11 Third party (TP) projects under the under AIRTEA project, 6 are being implemented in Kenya. These include:

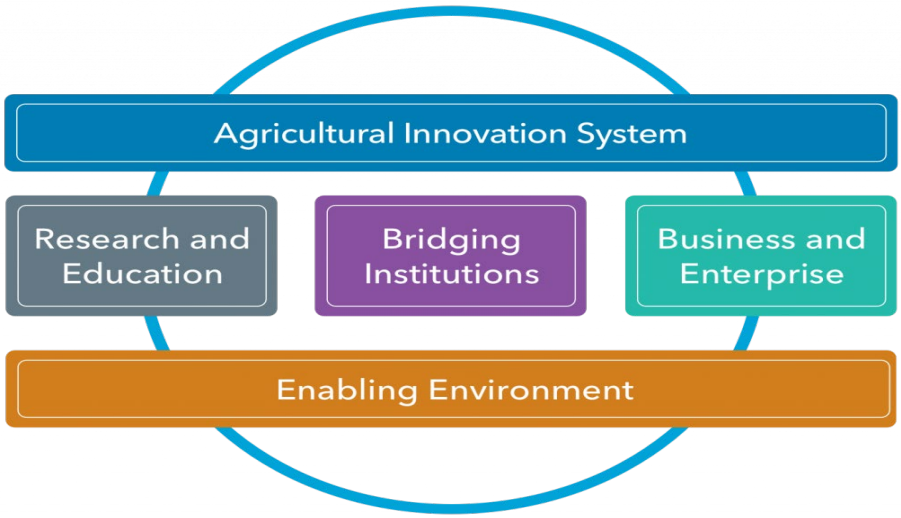
- Upgrading of silver cyprinid (*Rastrineobola argentea*) value chain through multi-stakeholder partnerships and novel climate-smart postharvest processing technologies and practices for improved rural livelihoods. This project is led by JKUAT.
- Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda. This is led by the University of Nairobi, Kenya, Renman Africa, Kenya, and NaCRRI/NARO.

- Leveraging the benefits of multi stakeholders' partnership to support rural women and youth in dairy sector in Kenya. This project is led by CAK.
- Unlocking productivity within smallholder farming systems through use of geospatial technology (GIS), artificial intelligence and biological technologies in the face of climate change. This project is led by Koppert Biological Systems (K).
- Technology Transfer through Innovation Systems: Enhancing Smallholder farmers' capacity for profitable and sustainable potato production. Co-implementing partners in Kenya are Egerton University, Kenya and KARLO.
- Digital Connectors for farming communities. Co-implementing partners in Kenya are KeFAAS, Kenya

3.1.1.3 Institutionalization of Innovation Platforms into Country Processes

Dr. Oluwole Fatunbi, the IP systems specialist at FARA made a presentation on institutionalization of IP approach into country processes. He defined an Agricultural Innovation System (AIS) as a collaborative arrangement that brings together several organizations and individuals working towards a desired change in agriculture (Box 1). He emphasized the need to have a strategic IP at national level to oversee and support operational IPs. He highlighted that several but not all IPs in Africa are registered on FARA's IP Agribusiness Portal. He emphasized that to institutionalize IPs at the Country Level, the following must be done; **i.** Set up the Strategic IP. This will facilitate the AIS to translate research into impact; **ii.** Support for public sector actors to function on IPs; **iii.** Develop affordable financing for Small and Medium Enterprises (SMEs) in agriculture; **iv.** Develop modalities for capacity building including vocational training in farming; **v.** Develop in-country strategy to Scale-up and Scale-out AIS; and **vi.** Use the available training materials on AIS to scale-out IP such as the Comprehensive training manual and ICT based training modules (Fatunbi et al. 2015).

Participants were challenged to reflect on the following issues: **i.** What actions are needed to achieve political leaders' endearment of the IP framework for AR4D? **ii.** What are the likely constraints to the institutionalization of the AIS in the sub region? **iii.** What is needed to develop affordable financing schemes for SMEs in agriculture? and **iv.** How could regional cooperation be improved to prioritize common agenda items that accelerate agricultural development?



3.1.1.4 The role of IP in fostering AR4D

Mr. Moses Odeke, the AIRTEA Project WP 1 Lead at ASARECA gave a summary of evidence of using IPs to foster AR4D. He also gave examples of AR4D institutions (CGIAR, ILRI, CAADP-XP4) that are currently promoting the IP approach while highlighting the benefits of the IP model which includes among others: overcoming challenges on technology transfer, facilitating dialogue, information exchange, capacity development and increase in research capacity. He highlighted the role of IPs in AR4D space as: **i.** facilitation of stakeholder engagement; **ii.** provision of space for learning and change; **iii.** encouraging creativity and learning; **iv.** undertaking M&EL activities to measure impact; **v.** enhancing research through enabling environments for scaling up; and (vi) scaling up of technologies to achieve impact at scale.

He then challenged participants to reflect on the following issues: **i.** How can IPs be used as a tool for agri-value chain development? **(ii)** How can participation of policy makers in national level IPs be enhanced? **iii.** What does it take for governments to adopt and scaled up IP? **iv.** How to enhance feasibility of IP model? and **v.** How to ensure sustainability of IPs for agriculture research for development?

3.1.1.5 Official Opening in Kenya

The 1-day meeting in Kenya was Officially opened by the representative of the DG- KALRO, Dr. Ilatsia Evans, who is the Director for the Diary Research Institute, KALRO, and the National Focal Person of ASARECA in Kenya. Dr. Ilatsia noted that KALRO has operational IPs and welcomed the contribution of the AIRTEA project in strengthening existing IPs specifically in the dairy value chain. He further emphasized the need to continuously engage policy makers within government to ensure that IPs work. He said that agriculture in Kenya is currently faced with challenges of scarcity of animal feeds, human food, high cost of food which are brought about by several factors including the on-going war in Ukraine and the recent lockdowns due to COVID-19. He shared his experience from the previous benchmarking exercise in Ireland where he saw functional IPs in the diary sector. He therefore called on the stakeholders in East Africa to borrow a leaf from Ireland. Dr. Ilatsia concluded his remarks by thanking the AIRTEA consortium members (ASARECA, FARA and EAFF) for organizing the meeting and all participants for sparing time to participate and he declared the meeting officially open and wished participants fruitful deliberations.

3.1.2 Third Party Presentations in Kenya

3.1.2.1 Policy support needed by TPP to establish & operationalize IPs in Kenya

Prof. Dr. Nelson Ojijo Olang'o of JKUAT gave a brief overview of the TPP "Upgrading of silver cyprinid (*Rastrineobola argentea*) value chain through multi-stakeholder partnerships and novel climate-smart postharvest processing technologies and practices for improved rural livelihoods". The project targets to reduce the huge post-harvest losses arising from microbial spoilage due to delayed landing of silver fish from the lake and insufficient sun-drying of the fish, particularly during rainy seasons. Dr. Nelson, highlighted the following policy issues in silverfish (*omena*) value-chain: **i.** Lack of adherence to standards or policies in weights and measures for *omena* trade; persistence of traditional methods

of quantity estimation; **ii.** Use of containers of varying sizes and shapes impose market inefficiencies and pricing challenges on the local market; **iii.** Fisher folk are forced to incur higher costs for venturing into deeper waters due to decreasing quantities of fish caught per trip. Structured collaboration between fisher folk in terms of procurement, fishing, or marketing could help lower these costs; **iv.** Government policy affects fishing through the Fish Act which establishes seasonal fishing ban on *omena;* **v.** Vertical power imbalances that lock fishermen and traders in a vicious cycle of poverty and dependency; **vi.** Inadequate support for traders by the government on credit, equipment, and law enforcement; **vii.** Regulations to control packaging of *Omena* in sacks to standard as some sacks weigh more than others yet the price is the same; **viii.** Action by the government to put in place measures for improved post-harvest processing and value-addition of the *omena* fisheries; **ix.** Government to increase awareness and sensitize the public on the importance of *omena* consumption regarding their high nutritional value and their affordability; (x) Provision of intervening educational or training measures to accord the *omena* traders the necessary skills required to be competitive in a modernized business world; **xi.** Improve the business environment to attract large scale investors who can venture into better processing technologies and access to distant markets with good prospects for returns; and **xii.** Develop and implement policies relating to fishing gears and methods and seasonality to enhance sustainability of fishery.

3.1.2.2 Kenya Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development

Dr. Dora Kilalo from the University of Nairobi, Kenya gave an overview of the project "Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda". This project seeks to: **i.** Increase access to certified seed by small scale farmers; **ii.** Increase cassava productivity and Value-added product uptake; and **iii.** Enhance linkages and collaborations through established multi-stakeholder IPs e.g. cassava knowledge hubs.

Dr. Dora noted that pests and diseases contribute significantly to the losses in production of clean planting material and marketing of cassava products. She highlighted various policy issues that need to be addressed by the policymakers to strengthen the cassava value chain. These include: **i.** Supporting the establishment of knowledge hubs for product development enterprises; **ii.** Harmonizing seed policies (certification standards) across Rwanda, Uganda, and Kenya to allow for transfer of clean planting materials especially for vegetatively propagated crops; **iii.** Supporting a minimum number of seed multipliers to continuously supply the market; and **iv.** Creating market opportunities for cassava by establishing commercial production facilities and promoting the consumption and value-addition.

3.1.2.3 Leveraging the benefits of multi stakeholders' partnership to support rural women and youth in dairy sector in Kenya

Ms. Judith Wamuyu Nthiga from the Cooperative Alliance of Kenya (CAK) gave a brief presentation of the project "Leveraging the benefits of multi stakeholders' partnership to support rural women and youth in dairy sector in Kenya". It's anticipated that the project will lead to achievement of the following outcomes: **i.** Increase in incomes by at least 50% among the targeted women and young farmers; **ii.** Employment opportunities created for at least 60 women and youth for services delivery to dairy farmers; and **iii.** 20% improved business turnover for six existing dairy cooperatives in four

selected counties (Embu, Kirinyaga, Nyandarua and Nyeri) as result of increased milk supply from farmers.

She highlighted the need for following policy interventions: **i.** need to conduct studies to document the policy gaps among IPs within the Diary sector; **ii.** need to undertake advocacy and lobby for incentives for the Diary value chain; and **iii.** need to establish guidelines for operationalization of Dairy IPs.

3.1.2.4 Unlocking productivity within small holder farming systems through use of geospatial technology

Mr. Geoffrey Ongoya of Koppert Biological Systems, Kenya gave a brief presentation of the project "Unlocking productivity within small holder farming systems through use of geospatial technology (GIS), artificial intelligence and biological technologies in the face of climate change". He noted that, there was need for product registration and standardization. Particularly, there is need to: **i.** consider data requirement waivers for positive lists (GRAS) products during product registration and standards; **ii.** harmonize the risk assessment process and shorten the time it takes; **iii.** consider efficacy testing per crop group instead of per crop (PCPB); **iv.** lower the "organic matter minimum limit of 70%" as set by this standard "KEBS: KS 2290:2018"; and **v.** consider subsidies for green technologies (biological crop protection products; bio fertilizers and other organic products by Government of Kenya.

3.1.2.5 Digital Connectors for farming communities

Mr. Peter Mwangi Gitika of KeFAAS gave an overview of the project "Digital Connectors for farming communities". The project anticipates to achieve the following outcomes: **i.** Establish digital connectors to provide extension services to smallholder farmers; **ii.** Develop profiles of digital connectors for easy identification; and **iii.** Support business partnerships between ICT providers and digital connectors to increase access to services by smallholder farmers.

Mr. Mwangi highlighted some policy interventions needed for digital extension services to function well in Kenya. These include the need to: **i.** professionalize extension service provision; **ii.** customize ICT policies (install quality ICT infrastructure and provide authentic information); **iii.** create business incentives for the youths in specific value chains; and **iv.** establish quality and standards for all agricultural produce (right from production, transportation, packaging, and export).

3.1.3 Challenges and Gaps for Management and institutionalization of IPs in Kenya

The Assistant Director- Socio-economics and Policy Development from KALRO made a presentation that highlighted key challenges faced by IPs in Kenya. These included: **i.** Lack of technical expertise to run the IPs that often results into poor governance and leadership related challenges; **ii.** Lack of sustainability strategy and few promotional or advocacy activities for IPs making most project supported IPs to die at the end of the project; **iii.** Lack of institutional policy and legal framework to guide the operations and management of IPs. This often results into ambiguity in roles and responsibilities of each member, sudden change of agenda, making of undemocratic decisions, lack of transparency and accountability, conflict of interest by some of the IP stakeholders; **iv.** Lack of

commitment by members coupled with political instability making initiators and investors shy on long term commitments; **v.** Low production and productivity along the value chains (Small scale production and transaction costs); **vi.** Declining investment in Agricultural extension services (Seed money and technical support for IPs); **vii.** Lack of ownership of IPs by local actors because most of the IPs in Kenya (63%) are usually initiated by Researchers or ministry of Agriculture (25% and only 6% by farmer groups). There is need to ensure all key stakeholders are involved in establishment of an IP; **viii.** Diverse operational procedures may be an obstacle to successful and harmonious operations – public vs private sector; **ix.** Length of time that it takes for platforms to stabilize versus project timeframe; **x.** Lack of buy in from key players; **xi.** Assimilation into 'business as usual' operation; **xii.** Poor infrastructure development (processing, handling, transporting); and **xiii.** Lack of technical specifications or standards for processing and marketing of commodities such as silverfish.

Dr. Mulinge also highlighted the following benefits for IPs established in Kenya: **i.** Improvement in training of farmers which resulted into increased adoption of technological innovations; **ii.** Empowerment of farmers to undertake production and marketing activities independently, and improved collectively access to inputs and markets at negotiated prices by farmers; **iii.** Enhanced linkage of the farmers with other actors; and **iv.** Increase in agricultural production (quantity and quality) contributing to increased food and nutrition security, household income and job creation.

Several lessons have been learned during the implementation of IPs in Kenya. The following are some of the lessons learnt: **i.** Capacity building for all stakeholders, especially on group dynamics and operations of the IP, provides a springboard for central actors to become independent and think outside the box; **ii.** Leadership of the IP is a critical success factor and, while external actors can lead in the initial stages, this role should be handed over gradually to local level ownership; **iii.** Strategies for raising funds independent from those provided by the initiator are necessary for the sustenance of the IP activities; **iv.** Selection and focus on the priority value chain which addresses the appropriate issues/opportunities such as markets is a determinant of the success of IPs; **v.** Appropriate/conducive institutional and organizational environments are necessary for a technological innovation to thrive; **vi.** There is need to link IPs to existing networks e.g. the Agricultural Sector Network under KEPSA for the private sector; and **vii.** There is need to invest in the county agriculture extension system to provide technical advice and seed investment to IPs.

3.1.4 Available Government Incentives in Kenya for Priority Commodities

The Principal Agriculture Officer at the Kenya Ministry of Agriculture, Livestock Fisheries & Cooperatives noted that the "Agriculture Sector Growth and Transformation 2019-2029" plan has three anchors and nine flagships all geared towards: **i.** increasing small scale farmer incomes (flagship 1 & 2), **ii.** increasing agricultural output and value addition (flagship 3 & 4), **iii.** boosting household food resilience (flagship 5&6) and **iv.** enablers (flagship 7, 8 & 9) (MoALF&I, 2020). Furthermore, the Government of Kenya launched the Digital Agriculture Strategy (e- agriculture) in 2020 to hasten agricultural processes, improve trade in agricultural commodities, improve data collection and management, improve service delivery, and reduce post-harvest losses.

She noted that there are various government incentives that could be tapped in by the TPP projects. Some of these include:

3.1.4.1 The National Accelerated Agricultural Inputs Access Programme

The e-Voucher system provided input subsidies in 2007 through the National Accelerated Agricultural Inputs Access Programme (NAAIP) which increased maize productivity by up to 30% and reduced the poverty by 11% (MoALF, 2008). This e-voucher-based system subsidized fertilizers and improved access to maize seed for small scale farmers redeemable at private agro-dealer shops. The program also linked farmers to crop insurance service providers.

3.1.4.2 National Fertilizer Subsidy Program

The National Fertilizer Subsidy (NFS) program through the National Cereals and Produce Board (NCPB) enabled farmers to access fertilizer at discounted prices.

3.1.4.3 National Value Chain Support Program

The National Value Chain Support Program (NVSP) was launched in 2020. It aims to increase the productivity of small holder farmers by supporting them with a wide range of subsidized (40%) inputs (fertilizers, lime, certified seeds, agro-chemicals) through an e-voucher system. This program was initially piloted in 12 counties with Irish Potato, Maize, Rice and Coffee) but was later expanded to 37 counties and to more crops (green grams and sorghum). This subsidy program will in future be extended to include financial services (Insurance) and soil testing services.

3.1.4.4 Warehouse Receipt System

The Warehouse Receipt System under Warehouse Receipt Council facilitates Warehouses Trading in the Commodity Exchange (Kenya Gazzette, 2021). Under this system, the farmers deliver their produce to any accredited warehouse and are issued with a warehouse Receipt which can act as collateral when acquiring credit. In addition to bulking and storage, warehouses also provide other services such as drying, grading, bagging, extension services, transportation to the markets at minimal costs. Currently, the warehouses are in four counties (Nakuru, Trans Nzoia, Eldoret and Meru) and are for bulking maize although plans are underway to also bulk potato.

3.1.4.5 Digital Crop Insurance Program

In 2016, the MoA in partnership with the World Bank group and other stakeholders developed the digital crop insurance Program targeting Maize, Sorghum, Green grams where the government pays 50% of premiums and the smallholder farmer pays 50% of the premiums based on area yield potential. This program aims to improve data collection, processing, storage, data quality checking, improved efficiency of payments using mobile platforms, real time data collection and reducing paperwork.

3.1.5 Group Discussions

3.1.5.1 Strategic Pathways for IP institutionalization

During the group discussions on strategic pathways to institutionalize IPs in Kenya, the following issues emerged:

1. The IP approach needs to be anchored within national institutions with a clear strategy, policy, and legal framework. Commodity IPs at county level, sub-sector IPs at sub-regional level and an apex body at national level.
2. There is need to customize the National Agriculture Sector Extension Policy (NASEP) to use the IP for sharing agricultural extension information at County level (KASEP 2022)
3. There is need for Government to strengthen existing IPs by availing funds to NARS like the previous support that was channeled to the Centre Research Advisory Committee. The activities of the IPs could be coordinated by the Research-extension liaison officer (RELO) who should be based at KALRO institute or at the county headquarters.
4. An IP needs to be composed of different already registered groups along the commodity value-chain such as farmer organization, producer organizations, transporters, financial institutions, market vendors or unions, consumer groups and should consistently quality of their product/commodity or service. Gender and social inclusion need to be considered within an IP to enable men, women, youth, disabled and displaced people to equally benefit.
5. Continuous capacity building is needed for facilitator of an IP to ensure that he/she routinely convenes meetings of all the stakeholders to sensitize them of their role within the IP and the need to solve an existing problem.
6. At County can be commodity based but at regional level consolidated to sub-sector level then consolidated/aggregated into sectors based on similarity like cereals, fruits, livestock etc.
7. There is the need to create the enabling environment to promote the participation of women and the youth in government sponsored programmes.

3.1.5.2 Digital Platforms

During the group discussions the following digital platforms were identified and could be explored for linkage of IPs within Kenya and the entire region:

- MKulima young https://www.mkulimayoung.com/
- KALRO Mkulima has over 33 Android agribusiness apps for various commodities
- Mkulima bora app
- Digicow https://digicow.co.ke/
- National Farmers Information Service (NAFIS), Kenya http://www.nafis.go.ke
- Kenya Agricultural Observatory Platform by KALRO https://www.kaop.co.ke/
- Digifarm mobile app by Safaricom
- icow mobile app https://icow.co.ke/
- Performeter Dairy Advisory Centre http://perfometer.co.ke/
- ishamba farmer information center https://ishamba.com/

3.1.6 Way forward and Recommendations for Kenya IPs

1. Stakeholders should work with GOK to identify and work with existing MSPs/Cooperatives that can be transformed into IPs
2. Government should establish a regulatory framework for IPs Need to regulate and ensure quality assurance of information
3. Regional organizations like ASARECA should develop harmonized regional policies on seed to enable germplasm transfer across boarders
4. High-level policymakers (commissioners, member of parliaments, permanent secretaries, and ministers) should be engaged to champion the IPs and advocate for supportive policies
5. National stakeholders should ensure that the IP approach comes as a demand from the local governments, and it's integrated into the local development plans
6. The national stakeholders should work with RECs (COMESA, IGAD, SADC) to support the harmonization of seed regulations in ASARECA member countries.
7. Use of digital platform to link IPs facilitates provision of extension services and reduce cost of bringing people together

Workshop Sessions and Discussions in Rwanda

4.1 Innovation Platform Strategic Meetings

4.1.1 Introductory Remarks and Presentations

The welcome remarks, and overview of the workshop agenda were made by the ASARECA-AIRTEA Focal Point. Mr. Moses Odeke made a presentation on the role of IPs in fostering AR4D in Eastern and Central Africa. Dr. Kwaku and Dr. Oluwole Fatunbi made presentations on the overview of the AIRTEA and IP concept

4.1.1.1 AIRTEA Project Overview

Dr. Kwaku, noted that out of the 11 Third party (TP) projects under the under AIRTEA project, 5 were being implemented in Rwanda. These include:

- Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda. In Rwanda, this project is being implemented by University of Rwanda and Kinazi Cassava Plant Limited.
- Promoting technologies and innovations for improving access to quality potato seeds by small holder farmer through strengthening potato seed systems and multi-stakeholder collaboration in Rwanda. This project is led by SPF and co-implemented with RAB, INES and EGSP-Imbuto.
- Technology Transfer through Innovation Systems: Enhancing Smallholder farmers' capacity for profitable and sustainable potato production. This project is led by SDGC/A and co-implemented by RAB
- Youth Leading Changes in Resilient Private Extension and Advisory Services for Job and Wealth Creation. This project is led by YEAN and co-implemented by RAB and the UNILAK.
- Digital Connectors for farming communities. This project is co-implemented FAAS, Rwanda

4.1.1.2 Institutionalization of Innovation Platforms into Country Processes

Dr. Oluwole Fatunbi, the IP systems specialist at FARA made a presentation on institutionalization of IP approach into country processes. He emphasized the need of having a strategic IP at national level to oversee and support operational IPs. He highlighted that several but not all IPs in Africa are registered on FARA's IP Agribusiness Portal. He challenged the participants from Rwanda to reflect on the following issues: (i) What actions are needed to achieve political leaders' endearment of the IP framework for AR4D? (ii) What are the likely constraints to the institutionalization of the AIS in the sub region? (iii) What is needed to develop affordable financing schemes for SMEs in agriculture? and (iv) How could regional cooperation be improved to prioritize common agenda items that accelerate agricultural development?

4.1.1.3 Official opening in Rwanda

The Director General of RAB, Dr. Patrick Karangwa welcomed participants to Rwanda and thanked ASARECA and FARA for supporting AR4D projects in Rwanda. The Director General challenged the AR4D actors to always address the market-end of the value-chain by connecting farmers to markets to increase adoption of agricultural technologies and innovations. He noted that the project was coming at the right time as farmers (especially women and youth) are recovering from the negative effects of Covid-19. The Director General emphasized the need for multi-stakeholder partnerships and called on countries to work together and develop as a regional block. The DG noted that Rwanda had put in place agricultural policies that support transformation to reduce food security, enhance resilience to climate change and reduce poverty. Dr. Karangwa concluded his remarks by thanking the AIRTEA consortium members (ASARECA, FARA and EAFF) for choosing Rwanda as one of the target countries and he officially declared the meeting open.

4.1.2 Third Party Presentations

4.1.2.1 Policy support needed by TPP to establish & operationalize IPs

The Regional Director, SDGC/A, Sub-Regional Center for Southern Africa, Dr. Ambrose Rwaheru Aheisibwe, gave a brief overview of the TP Project "Technology Transfer through Innovation Systems: Enhancing Smallholder farmers' capacity for profitable and sustainable potato production." The project aims to contribute to improved market access to quality seed potato and ware potato in Kenya, Rwanda, and Uganda' through increased technology transfer and adoption of scalable and equitable agri-business models in seed and ware potato. He noted that the project is anticipated to deliver the following products: **i.** profitable potato technologies/varieties and associated management practices; **ii.** rapid seed multiplication innovations; **iii.** Climate Smart Agriculture (CSA) innovations: drought tolerance and early maturing varieties; **iv.** digital marketing platforms (mobile app, web app or D-Group); **v.** Postharvest handling innovations and, **vi.** seed policy briefs.

Dr. Ambrose highlighted the various policy interventions required to facilitate technology transfer for profitable and sustainable potato production. These include:

1) Establishment and strengthening the capacity of potato IPs.
2) Operationalizing experimental learning and knowledge transfer: Co-develop and test options for challenges and opportunities in potato value chains.
3) Facilitating and lobbying for institutional change e.g. policy innovations and new business models e.g. ABLA
4) Embrace digital marketing innovations including mobile app, web app or D—Group for agri-business management for seed and ware potato.
5) Active participation in policy dialogues and reviews to build trust, relationships and create strong partnerships and alliances.
6) Harmonize seed policies, standards, and regulations in production of certified formal quality seed and quality declared seed (QDS).
7) Support IPs to adopt harmonized standards

4.1.2.2 Promoting technologies and innovations for improving access to quality potato seeds by small holder farmers

The Chief Executive Officer (CEO) of Seed Potato Fund Joint Ventures Ltd (SPF)- Mr. Salomon Mbarushimana gave an overview of the project "Promoting technologies and innovations for improving access to quality potato seeds by small holder farmer through strengthening potato seed systems and multi-stakeholder collaboration in Rwanda". This project seeks to: **i.** disseminate and promote seed potato technologies; **ii.** support local private seed producers to lead EGS production business; **iii.** strengthen the capacity (skills & knowledge) of screen houses owner and seed multipliers; **iv.** enhance the production of sufficient starter seeds of most popular and new potato varieties; **v.** enhance the production and distribution of basic and certified seeds; **vi.** support the rehabilitation of potato seed production and storage facilities (greenhouses, aeroponic, stores); and **vii.** support the development of community-based seed potato systems. The project aims to achieve three main outcomes: **i.** strengthened potato input systems, technology development and supply chain; **ii.** sustained increase of the availability of potato EGS in Rwanda and **iii.** sustained increase of the availability of potato quality seed (certified and QDS).

4.1.2.3 Youth Leading Changes in Resilient Private Extension and Advisory Services for Job and Wealth Creation

The Chief Executive Officer of YEAN- Mr. Etienne Niyigaba, gave a brief overview of the project "Youth Leading Changes in Resilient Private Extension and Advisory Services for Job and Wealth Creation". The project aims to achieve the following products and services for all farmers and other agricultural value chain players: **i.** increased access to extension and advisory services relevant to farmers specific needs; **(ii)** increased adoption of improved agriculture technologies; **iii.** creation of more opportunities for excellence and youth employment; **iv.** increased coverage of extension services to include all agricultural sectors (crops, livestock, agro-forestry, aquaculture and fisheries, food processing, export, inputs); **v.** sustainable financing of agricultural extension; and **vi.** increased number of skilled extension agents.

The CEO YEAN emphasized that the project will complement the efforts of current public extension system "*Twigire Muhinz*i" which focuses mainly on food crops grown by smallholder farmers. The private extension model championed by YEAN strives to achieve the following outcomes: **i.** a transformed Agriculture sector from a subsistence sector to a knowledge-based value creating sector; **ii.** increased agriculture productivity (volume and quality) using good agricultural practices and technologies; **iii.** increased adoption of technologies and innovations led by private-sector players; **iv.** better information flow on markets (supply, demand) to profitable businesses; **v.** improved understanding of extension service provision value-chain; and **vi.** more opportunities an active engagement of private sector in promoting adoption of technologies.

Policy support required by the project was highlighted as: **i.** enhanced public-private-partnership in extension through MoUs and Contracts; **ii.** development of a national extension policy and strategy and a university degree course such as Bachelor of Science in agricultural extension (there is no such a course at any university in Rwanda); **iii.** strengthening producer organizations; **iv.** establishment of a quality certification systems for extension services; **v.** establishment of stakeholder consultation platforms for extension service providers; **vi.** increased funding and subsidies for extension service

providers; **vii.** promotion of increased youth engagement in provision of extension services; **viii.** advocacy for youth organizations to lead agricultural transformations by the line ministry; and **ix.** facilitate access to quality farm inputs and good agronomic practices.

4.1.2.4 Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development

Representing University of Rwanda, Dr. Saidi Rumanzi Mbaraka, gave an overview of the project "Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda". He noted that the specific objectives of the project were: **i.** co-create a new way of delivering healthy cassava planting materials and proven cassava technologies to farmers using village-based bulking centers; **ii.** support the development of community-based incubation centers to enhance capacity in cassava agro-processing, value addition and commercialization; **iii.** support cassava value chain actors' engagement through innovative multi-stakeholder platforms leveraging digital technologies; and **iv.** support enhanced university/research centers-community and industry engagement for sustainable uptake of technologies, innovations, and management practices. The policy support required by the project in Rwanda includes the following: **i.** building networks and work with existing partners as well as building on existing initiatives or IPs; **ii.** foster knowledge and experience sharing across commodity value chains. There is need for the Cassava IPs to learn from Potato IPs which are relatively advanced; **iii.** strengthen and improve cassava seed systems in Rwanda; **iv.** support from the MINAGRI and other key policy makers is needed; and (iv) need to strengthen the role of private sector and youth involvement in the cassava value chain activities.

4.1.2.5 Digital connectors for farming communities in Rwanda

Mr. Ndagijimana Narcisse from AFAAS-Rwanda made a brief presentation of the project "Digital Connectors for farming communities". He noted that IPs in Rwanda are generally constructed along commodity value-chains and are community-based and are multisector in nature and involve extension agents, researchers, local leaders, micro-finance institutions, inputs suppliers, processors, storage facilities, transporters, marketers, buyers, seeds multipliers and farmers groups.

> *"The IPs are the good way to go as far as new technology up-take is concerned. The IPs have contributed much in the past and much is yet to be achieved in the future. If IPs are institutionalized, self-coordinated and sustainably viable, they will remain relevant and strong entities that will accelerate Agriculture comprehensive development"- Mr. Ndagijimana*

Mr. Ndagijimana noted that over 49 Agricultural IPs were established in Rwanda from 2008 to 2019 by more than 10 projects such as: **i.** RIU-DFID Project (2008), **ii.** PASNVA-MINAGRI Project (2009), **iii.** ASARECA-RAB Projects (2010-2015), **iv.** RAB IP Project (2013), **v.** VICRES-RAB Project, **vi.** SIMLESA-RAB Project (2012), **vii.** Humid Tropics-CIAT-RAB (2014), **viii.** CIAT-Beans Project (2017), **ix.** IITA-RAB Project (2018) and **x.** FAO/EU project on Dairy, piggery, maize, soybeans, rice, agroforestry and cassava (recently).

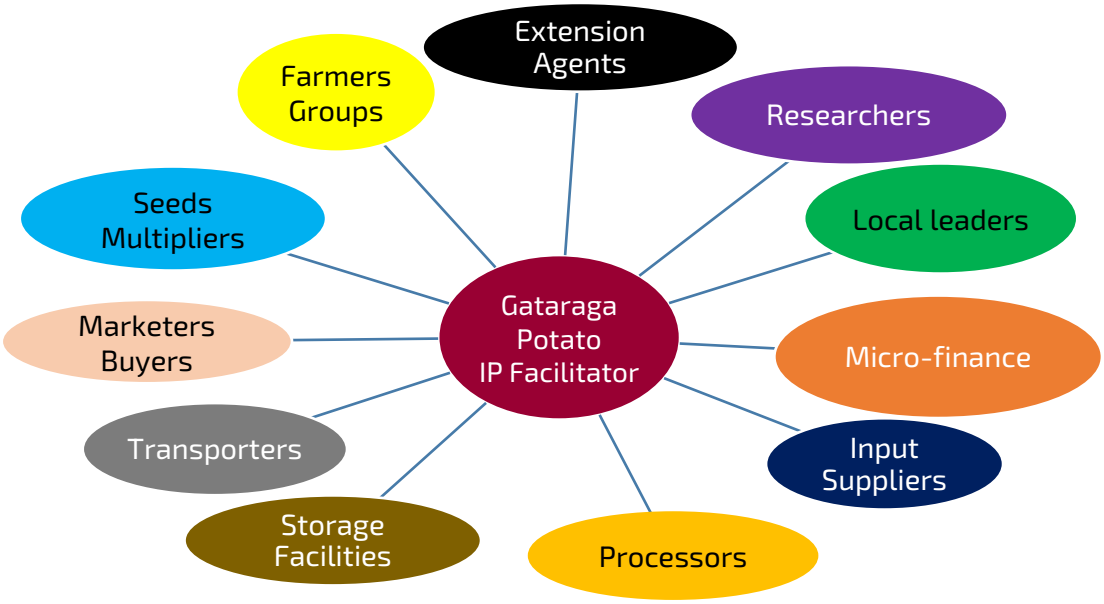
4.1.2 Challenges and Gaps for Management to Institutionalize IPs in Rwanda

Some of the challenges faced by IPs in Rwanda include: **i.** structural and governance challenges since IPs bring together different people of different interests; **ii.** capacity building for various actors (farmers processors, input dealers etc); **iii.** pre-dominance of farmers that need to be organized for a possible representation; **iv.** unclear roles and responsibilities for members of the IP. That is, Terms of Reference of IPs are not clearly defined; **v.** dependence on donor-fund projects; **vi.** informal groups (no legal framework of establishing IPs and no clear organization structure exists; **vii.** maintaining or sustaining interest of members for a long time is difficult; and **viii.** existence of other almost similar platforms (Value Chain based ABCs).

Whereas there are challenges associated with the operationalization of IPs in Rwanda, IPs have also delivered some benefits. Some of these benefits are highlighted below: **i.** increased access to technologies, markets, and credits for agro-inputs; **ii.** increased access to agro-inputs (seeds, Fertilizers, pesticides, equipment); **iii.** reduced cost of labor; **iv.** improved access to farm machinery (animal traction, tractors); **v.** improved access to storage facilities (warehouse) and processing equipment; **vi.** increase income for all stakeholders or members of the IP (farmers, processors, and traders); **vii.** provide opportunities to participate in exchange visits, study tours; and **vii.** increased networks/networking.

Dr. Athanase Nduwumuryemyi of RAB shared some of the lessons learnt during the implementation of IPs in Rwanda. These include:

(i) IPs should be established along commodity based value chains. Since IPs involve several stakeholders along the value (Box 1), it is best if they are commodity-based and seen from the Potato IP in Gataraga.



(ii) Linkage to the markets is critical in determining the success of the IPs. Availability of market for potato seed was the driving force for the success of the potato IPs, Cassava IPs and Maize IPs in Rwanda since 2007.

(iii) Incentives motivate farmers and other stakeholders to participate in IP activities. Incentives for members of an IP included increased household income by the farmer, access to disease-free planting material/ seed, opportunity to participate inf farmer-to-farmer exchange visits and benchmarking exercises

(iv) Ownership of the IP agenda (activities) is critical for the sustainability of the IP. All stakeholders of the IP should participate right from its establishment for them to own it.

(v) Monitoring and evaluation of the IP activities is critical for fostering reflection, learning and tracking of impacts. All IPs need to be monitored and evaluated at national level and there is need for a national IP to do the coordination

4.1.3 Government Incentives in Rwanda for Priority Commodities

The Director General, Commodity Value Chains at MINAGRI - Mr. Octave Nshimiyimana highlighted some of the available government incentives for advancing the IP approach in Rwanda. These are highlighted below.

4.1.3.1 Strategic planning documents and policy instruments

The strategic planning documents provide an opportunity for development and integration of the IP approach in national planning processes. The IP concept is anchored in country strategic documents such as: **i.** Vision 2020: "Technical platforms will be established in line with the pillars of the Vision 2020" (RoR, 2000); **ii.** Economic Development and poverty reduction Strategy 1,2,3 (MINECOFIN, 2013); **iii.** SPAT I, II, III: Agriculture Transformation-with more innovations- strengthening linkages in development process (RoR, 2004, 2009, 2013); **iv.** MINAGRI: Agriculture Extension Strategy: Increase stakeholders' concertation "Platforms" at District, regional and national level (GoR, 2004, Kigali); **v.** Rwanda Agricultural Policy (RoR, 2008); **vi.** Strategic Plans for Agricultural Transformation 4 (MINAGRI 2018); and **vii.** RAB Strategic Plans (2014/2017 and 2019/2025): "Extending Innovations to farmers through AIPs well supported" (RAB, 2020).

4.1.3.2 Assorted VAT and input subsidies

The Director General highlighted other incentives available in the country. He noted that the incentives mainly target cooperatives, farmer's organizations, off-taker driven as well as Joint venture driven businesses. These include the following: **i.** various agricultural inputs and equipment that were VAT exempted by the ministry of finance and economic planning with effect from 10 June 2021, **ii.** input subsidies on seeds of maize, wheat and soya bean; **iii.** investment in public research institutions to develop crop varieties (SPF gave a testimony of receiving a 50% subsidy from RAB on all in vitro potato plantlets purchased which increased farmers access to virus-free potato seed); **iv.** investment in extension services to improve adoption and use of improved seeds; **v.** establishment of policy and regulatory frameworks that provide enabling environment for development of the seed subsector; **vi.** fertilizer subsidies; **vii.** matching grant facility (this scheme finances acquisition of technologies, services, inputs, processing equipment and capacity building, and also facilitates access to formal

markets at national, regional and international levels); **viii.** provision of farm machinery for small scale irrigation technologies, post-harvest handling and processing (the CEO YEAN gave a testimony of his organization being a beneficiary of a 70% subsidy from MINAGRI while acquiring 100 pieces of small machinery); and **ix.** Agricultural insurance scheme where the government pays 40% of the insurance premium.

The scheme is geared towards increasing private investment in the agriculture sector. Currently the insurance covers five crops (maize, rice, chili, French beans & Irish potato) and livestock (cattle, piggery and poultry) but will soon (2023) be extended to cover beans, soya beans and cassava. The Area Yield Index (MPCI) insures commodities against drought, uncontrollable pests and diseases, hailstone damage, flooding of the crop field and windstorm. Livestock are covered against accidents (lightning, injuries, floods and landslides), terminal Illnesses and diseases, emergency slaughter and epidemics.

4.1.4 Group Discussions

During the group discussions the strategic pathways to institutionalize IPs, incentives as well as digital platforms for linking IP stakeholders were identified.

4.1.4.1 Strategic pathways

Strategic pathways identified included: **i.** mapping out all existing IPs and possibly merging some of the platforms; **ii.** continuously assess the performance of the IPs and learning from the successful models; **iii.** linking new IPs to existing institutionalized structures such as the *Twigire Muhinzi* extension program which has farmer field schools and demonstrations; where IPs could start at milk collection centers, crop aggregation centers or warehouses or at commodity processing facilities; **iv.** facilitator of the IP to continuously create interest for stakeholders in order to bring about ownership of IP by all members; **v.** champions and initiators of IPs need to prioritize the sustainability of the platforms right from inception; **vi.** link Agricultural IPs with emerging challenges and opportunities in relation to environment and climate change; **vii.** put in place MEL framework the IPs; **viii.** IPs to embrace of ICT for better communication and visibility; **ix.** establish a legal framework (national policy with a budget and guidelines) for management of IPs (this needs to be incorporated into PSTA); **x.** establish a clearly defined organizational structure for the IPs with annual work plans and bylaws that govern members (internal regulation); **xi.** promote commodity based IPs with different Innovation clusters; **xii.** TORs for IP stakeholders need to be clearly defined; **xiii.** entry points for IPs can be district cooperative unions and federations, land use consolidation sites, district potato seed committees, milk collection centers, potato collection centers, value chain Platforms (e.g. Rwanda Potato Stakeholders Platform (RPSP); **xiv.** Sector wide institutions such as RAB, Universities, NGOs, seed companies should be actively engaged to support establishment and mainstreaming of IPs; and (xv) promote public-private dialogue mechanisms.

4.1.4.2 Government incentives

During the group discussions the following government incentives were identified: **i.** subsidies on inputs (seed, fertilizers, mechanization, and irrigation); **ii.** VAT exemption on specific commodities; **iii.**

national fund for export; **iv.** grants for cooling infrastructure; **vi.** insurance for crops and livestock; **vii.** interest on agricultural loans is reduced by about 5%; and **viii.** post-harvest infrastructure for farmers in consolidated sites.

Based on the group discussions the following digital platforms were said to exist and could be explored for linkage of IPs within Rwanda: **i.** web based applications such as Forum for Agriculture Extension and Advisory Services (FAAS); **ii.** WhatsApp groups per value chain commodities; **iii.** Smart NKUNGANIRE System to digitalize agro-input subsidy program https://smartnkunganire.rw/ (IKOFI, MOPA); **iv.** Market tracker; **v.** Agriculture Knowledge sharing system; **vi.** phone-based digital tools for agronomic advice; and **vii.** AKILIMO (helps to develop tailored fertilizer recommendations https://akilimo.org/)

4.1.5 Recommendations for IPs

Following the group discussions, the following recommendations were made on the possible ways to institutionalize IPs in Rwanda:

1. Establish a national coordination desk for all IPs with a rotational leadership
2. Establish a legal framework, an organizational structure, a financing model and an action plan for institutionalization, of IPs
3. Identify and appoint/commission a champion or custodian at national, regional and continental level (this can be MINAGRI, MINICOM, ASARECA or FARA).
4. Ensure that sustainability mechanisms are in-built during establishment of the IPs including IPs being initially financed by the Government through districts.
5. Map out and scale up New ICT tools for Agriculture developed in vocational institutions
6. Designate champions or advocates of the IP model at higher policy level in order to increase its adoption.
7. Establish a strategic IP at national level in Rwanda
8. Encourage TPP with good business plans, to apply for matching grants to ensure sustainability of their IPs. MINAGRI is willing to support projects that apply for a matching grant from RoR Government.

Workshop Sessions and Discussions in Uganda

5.1 Innovation Platform Strategic Meetings

5.1.1 Introductory Remarks and Presentations

The welcome remarks, and overview of the workshop agenda were made by the ASARECA-AIRTEA Focal Point. Dr. Kwaku and Dr. Oluwole Fatunbi made presentations on the overview of the AIRTEA and IP concept

5.1.1.1 AIRTEA Project Overview

Dr. Kwaku, noted that out of the 11 Third party (TP) projects under the under AIRTEA project, 6 were being implemented in Rwanda. These include:

- Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda. In Uganda, this project is being co-implemented by the NaCRRI/NARO and Divine Foods
- Technology Transfer through Innovation Systems: Enhancing Smallholder farmers' capacity for profitable and sustainable potato production. This project is co-implemented by Kachwekano (KaZARDI)/NARO
- Harnessing multi-stakeholder innovation platforms for knowledge transfer and aquaculture value chain development in Uganda. This project is led by AbiZARDI and co-implemented by the Aquaculture Research and Development Centre (ARDC/ NaFIRRI-NARO), Uganda National Women's Fish Organization Ltd, Private Sector Foundation Uganda (PSFU), Directorate of Fisheries Resources (DiFR), MAAIF and the World Aquaculture Society -African Chapter.
- Digital Connectors for farming communities. This project is led by AFAAS and co-implemented with UFAAS.
- Enhancing inclusive market access for African Indigenous Vegetable seed and value-added products by Smallholder farmers in Uganda. This project is led by UCU and co-implemented with Uganda National Farmers Federation (UNFFE), Syova Seed (U) Limited and Farm Gain Africa Ltd (FGA).
- Retaining next-generation farmers in agribusiness through enhanced knowledge sharing platforms along with the dairy and selected grain value chains in Uganda. This project is led by AGRENES (Agriculture, Environment & Ecosystems) and co-implemented by NARO (National Agricultural Research Organization), Makerere University, AGRILIV (Agriculture, Environment & Ecosystem), Fleed Tech Ltd and Agritech Advanced systems Limited.

5.1.1.2 Official opening

The Director General of NARO Dr. Ambrose Agona thanked ASARECA, FARA and EAFF for convening the meeting and for funding IPs to be used as a tool for causing change. He thanked the Consortium members for funding projects that contribute directly to the two indicators that NARO is annually evaluated on. These include: (i) number of MSP established and strengthened and (ii) number of new

innovations, technologies generated, disseminated, or promoted. The DG challenged the project PIs to target the youth with entrepreneurial skills since these are intellectually compliant and highly motivated. The DG also noted that there is need to ensure that farmers are benefiting from technologies being developed under the AIRTEA projects. For this to happen, the farmer needs to know the return on investment, e.g. for instance, how much does it cost to produce 1kg of cassava or 1L of milk? In absence of such data on profitability, cost of production or market access, it is not easy to convince the private sector to promote a given technology. The DG noted that, there is a need for institutions to develop robust systems for market intelligence in order to facilitate market access.

The DG implored the project PIs to engage both the formal and informal sector within their IPs in a manner similar to what AFAAS and UFAAS are doing. The facilitators of the IPs should always ensure that there is demand for articulation and opportunity for collecting feedback from their members. It is also paramount to have clear indicators to measure progress, for example how many farmers has the project taken out of poverty? He said that 78% of youth (18-30 years) in Uganda are unemployed with no qualification. Engaging them in agriculture calls for all stakeholders to work as a team (government ministries, private sector and development partners). The DG also noted that with concern the fact that there is little or no commitment at all by governments to invest in AR4D since most African governments are investing only 0.2% instead of 1% of their GDP in research as per the April 14, 2011 agreement by the BRICS leaders meeting in Sanya, China, or investment of 10% of their GDP into agriculture as agreed during the June 2014 in Malabo, Equatorial Guinea. The DG ended his speech by promising that NARO will continue to support ASARECA, FARA and EAFF to achieve the AIRTEA project outcomes.

5.1.2 Third Party Presentations

5.1.2.1 Policy support needed by TPP to establish & operationalize IPs

Dr. Robert Kawuki from NaCRRI at Namulonge outline some of the planned project activities. His project “Strengthening cassava innovation ecosystem and knowledge transfer for inclusive rural livelihoods development in Kenya, Uganda, and Rwanda” is co-implemented with Devine Foods. The planned activities include:

- Train extension agents and women farmers on cassava value-chain, including experiential learning on cassava bulking techniques
- Enhance infrastructure capacity of universities/research organizations to support tissue culture and minisett technologies usage
- Establish nine village bulking centers for seed actors
- Multiply disease-free certified cassava seed using minisett technique
- Promote and market certified cassava seed within grassroots communities
- Establish and equip village knowledge centers (VKC) & agro-processing hub & and link them to millers
- Upscale the production of at least two flagship cassava products in the country
- Brand, package and certify flagship products
- Training in entrepreneurship skills management for youth and women to market processed cassava products

- Create social platforms to increase knowledge and information sharing on access of proven cassava planting materials, production inputs, and safety of cassava products
- Advocate for institutional framework on intellectual property rights to promote innovation generation
- Enlist farmers and actors in cassava value chain and link them to digital platforms and VKC

5.1.2.2 Retaining next-generation farmers in agribusiness through enhanced knowledge sharing platforms along with the dairy and selected grain value chains in Uganda

Dr. Ssemwanga Mohamed Ali of AGRENES and PI of the project "Retaining next-generation farmers in agribusiness through enhanced knowledge sharing platforms along with the dairy and selected grain value chains in Uganda". He highlighted the five most important challenges of the dairy value chain in Uganda, and these include:

- Low productivity caused by climate change, poor animal genetics, subsistence farming, lack of agro-inputs and poor waste management that causes pest and diseases
- Poor quality feeds caused by poor quality forages and hay, low input use, limited facilities for feed processing & storage and limited training in forage and feed production
- Water shortage caused by seasonal rainfall variation, poor quality water and lack of facilities for integrated water management
- Shortage of electricity and labor for dairy
- Limited dairy agribusiness opportunities such as capacity strengthening in technical skills

Dr. Ssemwanga highlighted the following policy interventions needed to strengthen the IPs in the dairy value chain:

- There is need to enhance local, national, regional markets by removing non-tariff barrier and introducing import tax waivers on essential dairy industry inputs, additives and supplies – breeding, feeding, equipment, supplies and consumables
- There is need to build capacity of public and private institutions to enable them conduct thorough market analysis (access & viability) including conducting awareness campaigns
- There is need to get new breeds from Livestock Genetics Society for East Africa
- There is need to have quality standards not only for milk but also efficient payment systems.

5.1.2.3 Enhancing inclusive market access for African Indigenous Vegetable seed and value-added products by Smallholder farmers in Uganda

Prof. Elizabeth Kizito from UCU Mukono and the PI for the project "Enhancing inclusive market access for African Indigenous Vegetable seed and value-added products by Smallholder farmers in Uganda" gave a brief description of the roles of each of the five strategic implementing partners. During her presentation, she noted the project will deliver impact in the following areas: **i.** improved quality of AIV Seeds and value-added products produced; **ii.** improved market access for vegetable production units; and **iii.** improved service delivery by UNFFE.

She then highlighted the areas in the vegetable value chain where policy support is required for the project. These include:

- Prioritization of indigenous foods in government resources and actions through increased budget allocations to programmes promoting indigenous crops/foods. Currently, most government programs dwell heavily on promoting modern agro-export crops and neglecting
- Strengthening formal indigenous seed systems because the lack of effective indigenous seed systems leads to inconsistent seed supply for indigenous crops and ultimately poor access to quality seed
- There is need to invest in indigenous food processing businesses and improving marketing infrastructure for indigenous foods through availing affordable financial and business services.

5.1.2.4 Digital Connectors as accelerators of sustainable agriculture extension services in farming communities in Kenya, Rwanda and Uganda

The CEO UFAAS, Ms. Beatrice Luzobe gave an overview of the project "Digital Connectors as accelerators of sustainable agriculture extension services in farming communities in Kenya, Rwanda and Uganda". In her presentation, she indicated that the project expects to achieve the following outcomes: **i.** four digital connectors established in Bugiri district to provide extension services to smallholder farmers involved in Horticulture through the using digital tools; **ii.** profiles of digital connectors defined for easy identification and recruitment; **iii.** four business partnerships established between agro enterprises/ICT providers and digital connectors to support improved access to services by smallholder farmers; and **iv.** four institutional partnerships established between digital connectors and the broader community.

She also highlighted areas in the project where policy support will be required to support instutionalization of the IPs that are planned for under the horticultural sector. These include: **i.** professionalization of extension service provision; **ii.** customization of relevant policies (e.g. ICT, extension, climate change) at the district level; **iii.** improving business environments targeting the youth and women; and **iv.** value chain specific interventions such as creating a strong link to research, improved access to quality inputs, climate smart production of quality fruits and vegetables for income, value addition and creating link to markets.

5.1.2.5 Harnessing multi-stakeholder innovation platforms for knowledge transfer and aquaculture value chain development in Uganda

Dr. Victoria Tibenda, the Head of the Aquaculture Research & Development Center/NAFIRRI/NARO gave a brief overview of the project "Harnessing multi-stakeholder innovation platforms for knowledge transfer and aquaculture value chain development in Uganda". She gave a background of the aquaculture sector in Uganda and mentioned that it is fast growing and contributes up to 22% of all the fish produced in the country (FAO, 2020). The aquaculture subsector also provides employment, household incomes, food and nutrition security to at least 30% of the local population (NPA, 2020). The aquaculture subsector, however, faces the following challenges:

- Limited access to extension services
- Low quality and quantity of inputs (seed and feed)
- Diseases outbreaks and post-harvest losses of about 30%
- Limited value-addition techniques and access to lucrative markets, and
- Lack of affordable credit services

- Uncoordinated value-chain actions, which reduces productivity and profitability.

She then called for coordinated interventions to enhance access to production technologies/innovations, knowledge, and skill transfer for the gender-centred aquaculture development. And this can be done through the IPs under the AIRTEA project. She highlighted the following as the policy supported needed to operationalize the nine zonal and one national aquaculture IP in Uganda:

1) There is need for policy guidelines regarding formulation of aquaculture IPs
2) A policy for Aquaculture IP registration needs to be in place
3) There need for capacity building of IP facilitators in group dynamics skills
4) There needs to be a plan by government to finance IPs
5) Buy-in of from political leaders (from district level to parliament)
6) Policy applications at national and zonal levels.

5.1.2.6 Harnessing multi-stakeholder innovation platforms for knowledge transfer and aquaculture value chain development in Uganda

Mr. Abel Arinaitwe Byarugaba, a Research officer from KaZARDI/NARO gave a brief overview of the project "Technology Transfer through Innovative seed and ware potato production Systems in Kenya, Rwanda and Uganda". The project expects to contribute to three outcomes: **i.** increased knowledge and capacity of the farmers in adapting and using innovative/rapid technologies to boost potato production in Uganda; **ii.** increased adoption and utilization of potato technologies, innovations, and management practices through demand-driven approaches in Uganda; and **iii.** enhanced farmers' participation and competitiveness in potato markets in Uganda.

Mr. Arinaitwe then highlighted two key areas where policy support is needed in this project. These include: **i.** seed policy harmonization across the East African (project) countries; and **ii.** development of policies to facilitate regional potato trade between project countries.

5.1.3 Gaps and Challenges for mainstreaming the IP approach

The following challenges were identified as key gaps in the prioritization and mainstreaming of the IP approach in Uganda: **i.** uncoordinated policies between government agencies; **ii.** limited access to policy makers which eventually leads to their exclusion in IPs especially at planning stage of IP formation; **iii.** lack of strong governing structures in the IPs with no clear bylaws; **iv.** poorly defined targets of an IP that often leads to members not being clear of the goal, mission, and objectives of the IP; **v.** poor leadership skills of the IP facilitator often resulting in biased coordination/execution/implementation of IP activities; **vi.** diversity of opinion by some IP members who are strongly opinionated; **vii.** lack of representation along all the segments of the value chain (some IPs don't have members at all nodes of the value chain); **viii.** lack of sustainability mechanisms (most IPs are project funded without sustainability plans on how to continue at the end of the project); **ix.** lack of clear TORs (misconception by some members who join with no clear role but rather think that every group formed in a community is an opportunity to get money from government); **x.** poor communication between members of an IP and lack of regular meetings causing a disconnect; **xi.** low funding for policy implementation; and **xii.** interference from political leaders who downplay the

aspect of knowledge and information sharing and focus only on tangible and immediate benefits of an IP.

5.1.4 Government Incentives for Priority Commodities

The Principal Policy Analyst from MAAIF- Ms. Odongtho Irene Freda, noted that agriculture contributes 54% of total exports. The National Development Plan 3 (NDP 3) and the Agricultural Value Chain Development Strategy (AVCDS) are the policy tools mainly used at MAAIF. The Strategy involves an all-inclusive approach that provides support to the public and private sectors to spur growth across identified agricultural commodity value chains including cassava, maize, Irish potatoes, dairy, fish, fruits and vegetables. She noted that, the following were the available government incentives for Agriculture in Uganda:

1. The Agricultural Credit Facility (ACF) – set up by Government of Uganda in partnership with Commercial Banks, Uganda Development Bank Ltd and other Participating Financial Institutions (PFIs) since October 2009 to facilitate the provision of medium- and long-term financing to projects engaged in Agriculture and agro-processing, focusing mainly on commercialization and value addition. The loans are at more favorable terms than are usually available under conventional loans, e.g. 12% for general trade and 10% for those in seeds.
2. Financial Inclusion is Pillar 3 of the Parish Development Model (PDM) started in 2021/2022 and is designed to address the existing gaps of limited access to appropriate financial services (savings, credit, insurance, payment systems, etc), by household enterprises that operate in the subsistence segment. The appropriateness is in terms of loan size, grace period, interest rates, repayment schedules, complementary services (e.g. business development services, savings insurance). The PDM has two financial products, i.e. credit under the Parish Revolving Fund, and Insurance under Agricultural Insurance Scheme, with business development services as a complementary service.
3. The Presidential Initiative on Wealth and Job creation (Emyooga) was launched in August 2019 as part of the broad government strategy targeting to transform 68% of homesteads from subsistence to market-oriented production with the overall objective of promoting job creation and improving household incomes. The initiative is centered on 18 categories/Emyooga, covering majority of the hitherto, financially excluded Ugandans engaged in similar specialized enterprise categories. This initiative is managed by the Microfinance Support Centre Ltd (MSC) and offers affordable credit (agricultural & group loans) and business development services.
4. Uganda Development bank (UDB) finances projects geared towards increasing production and productivity of agriculture at farm level for small-holder and large-scale farmers, including loans for industrialists / investors in billions. They focus on value chains as in the NDP 3, with key interest in farm inputs, mechanization equipment, water for production infrastructure, improvement in breeds and varieties of livestock and crop, etc.
5. Through the Agricultural Cluster Development Project (ACDP), the Government of Uganda uses the e-voucher system to provide farmers with inputs at subsidized prices.
6. ACDP also provides Marching Grants to farmer groups in form of capital assets like stores, value addition machinery at a cost sharing of 33% (farmer group) and 67% (Government subsidy). Currently, this for Cassava,

7. Through the Operation Wealth Creation (OWC) program under the National Agriculture Advisory Services (NAADS), Government of Uganda provides free inputs to farmers that include improved breeds of cattle for beef and dairy, improved goats, improved seeds of maize, beans, cassava cuttings, grafted fruits (mangoes, oranges, cashew nuts), coffee
8. Agricultural Risk Management. Under Stamp Duty, the government has introduced an Agricultural Insurance Policy to encourage the uptake of agricultural insurance services and protect the farmers against unforeseen circumstances.
9. VAT Exemptions – There is no VAT on all agricultural inputs (seed, fertilizer and chemicals). They only pay withholding tax and this is aimed at lowering prices and investment in agro-input business.

5.1.5 Group discussions in Uganda

5.1.5.1 Strategic pathways

Based on the group discussions the following strategic pathways to institutionalize IPs in Uganda were proposed:

1. There should be wide consultation among members using the bottom-up approach
2. Select an understanding facilitator who can influence policies and mobilize stakeholders to actively participate
3. The facilitator of the IP should encourage equal participation of all stakeholders/members
4. The IP should plan to include stakeholders all nodes of the value chain
5. IPs need to have harmonized policies across countries to facilitate regional integration for sustainability

5.1.5.2 Government Incentives

During the group discussions the following government incentives that can benefit the TPPs in Uganda were identified:

1) Low interest bank loans through the agricultural credit facility to farmers for agricultural interventions. The interest rates are usually at 13% compared with the commercial bank lending rates of 18%.
2) Matching grants: rural producer organizations with the best business plans compete for these grants of up to USD100,000 to facilitate them set up their businesses. The grants targets selected commodities and services provides by farmer cooperatives.
3) Input subsidies through the e-voucher system to boost production of coffee, maize, rice, beans and cassava for at least 450,000 smallholder farmers (1 acre of land maximum) in 57 districts. In the first, second and third year/cycle upon joining program, the farmer only contributes 33%, 50% and 67% of the total cost of the input, respectively. Orders are made through the phone to an input supplier who is willing and registered to supply. Farmer must have a code against which the input supplier.
4) Through the national food and agricultural system, the government collects data on innovativeness and provides incentives (grants) to the most innovative processor groups of rice, maize, and dairy value-chains.

5.1.5.3 Digital Platforms

The following digital platforms were identified and could be explored for linking IPs within Uganda to various services and products: **i.** MAAIF E-Extension System https://extension.agriculture.go.ug/ ; **ii.** M-omulimisa https://m-omulimisa.com/ ; **iii.** The national seed tracking and tracing system (STTS) by MAAIF, https://nfass.agriculture.go.ug/ ; Mobile apps (E-diary, E-Lunda; Wefarm and Ezy agric) and (iv) AITS (agro-input tracking system).

5.1.6 Recommendations for IPs

1. Establish/put in place laws to incentivize innovation especially in technology generation such as plant variety protection and breeders' rights in crops.
2. Fast track the harmonization of laws and policies across the region such as the COMESA seed harmonization implementation plan (COMSHIP) to ease seed trade
3. Advocate for promotion on the nutrition dense commodities such as the African leafy vegetables, silver fish, and small livestock/ruminants
4. Continuously engage and follow-up high level policy makers. Preferably invite them in residential workshops that span 2-3 days to thoroughly sensitize them.
5. Share widely information generated in the project in form of success stories.
6. There should be follow-up meetings on reviewing specific policies and aligning. –
7. Study the existing policies in each country and see how they are linked to IPs, identify gaps and review alignment. With this analysis, then start to lobby for a review and/ or amendment of policies.
8. Advocate for proper implementation of policies promoting IPs

References

1. Cadilhon, J.J., Schut, M., Misiko, M. and Maheshwari, S. eds., 2015. Innovation platforms for agricultural development. Taylor & Francis.
2. FARA 2021. Strengthening agricultural knowledge and the innovation ecosystem for inclusive rural transformation and livelihoods in Eastern Africa (AIRTEA) Project Fact Sheet. Available at https://oacps-ri.eu/en/projects/strengthening-agricultural-knowledge-innovation-ecosystem-for-inclusive-rural-transformation-livelihoods-in-eastern-africa-2/
3. Fatunbi A.O, J Ekong, M Dhamankar and AA Adekunle (2017). Integrated Agricultural Research for Development (IAR4D): Revisiting Concept, Practice and Upscaling. Forum for AgriculturalResearch in Africa (FARA), Accra Ghana.
4. Fatunbi A.O, A.A Adekunle, G.O Odularu, Anthony Youdeowei, S.A Adisa, Ifidon Ohiomoba and AA Akinbamijo (2015). A Resource Manual for Training in Integrated Agricultural Research for Development (IAR4D) in Innovation Platforms: Forum for Agricultural Research in Africa (FARA), Accra Ghana.
5. Fatunbi A.O, A Youdeowei, S.I Ohiomoba, Adekunle A.A, and Akinbanijo O.O (2016). Agricultural Innovation Platforms: Framework for Improving Sustainable Livelihoods in Africa. Forumfor AgriculturalResearch in Africa (FARA), Accra Ghana.
6. FARA. How to set up an Innovation Platform

7. Laurent C. G, Fatunbi A. O, Kouévi A and Togbé E (2016). Facilitation strategies and experiences for managing Research for Development (R4D) on an innovation platforms. Forum for Agricultural Research in Africa (FARA), Accra Ghana.
8. Agole A, Ochatum N and W. Asiimwe (2021). Assessing the Status of Innovation Platforms in Kenya, Rwanda and Uganda: Report 2021. ASARECA. 102pp.
9. Ministry of Local Government, Government of Uganda (2021). Implementation Guidelines for PARISH DEVELOPMENT MODEL. Available at https://www.masindi.go.ug/sites/default/files/Implementation_Guidelines_for_FOR__PARISH_MODEL_OPERATION%5B1%5D.pdf
10. Ministry of Finance, Planning and Economic Development, Government of Uganda (2021) Third National Development Plan (NDPIII) 2020/21 – 2024/25. Available at http://library.health.go.ug/publications/work-plans/third-national-development-plan-ndpiii-202021-%E2%80%93-202425
11. Innovation Platform Agribusiness Portal (IPAbP) https://ipabp.org/about/
12. MoALF&I (Ministry of Agriculture, Livestock, Fisheries and Irrigation, GoK (Government of Kenya) 2020. Agricultural Sector Growth and Transformation Strategy (ASTGS). Available at https://kilimo.go.ke/wp-content/uploads/2022/03/ASTGS-Abridged-version.pdf
13. MINECOFIN, 2019 .Ministry of Finance and Economic Planning. Government of Rwanda. Economic Development and Poverty Reduction Strategy 3. Available at https://www.minaloc.gov.rw/fileadmin/user_upload/Minaloc/Publications/Useful_Documents/EDPRS_2__1_.pdf
14. Republic of Rwanda (2012). "Vision 2020 (Revised 2012)" Available at https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/RWANDA%29%20Vision%202020%20%28Revised%202012%29.pdf
15. MoALF&I (Ministry of Agriculture, Livestock, Fisheries and Irrigation, GoK (Government of Kenya) 2008. National accelerated agricultural inputs access program (NAAIAP).
16. KASEP 2022. Ministry of Agriculture, Livestock, Fisheries and Cooperatives. KENYA AGRICULTURAL SECTOR EXTENSION POLICY (KASEP) Available at https://kilimo.go.ke/wp-content/uploads/2022/03/DRAFT-KASEP-POLICY-14.3.2022.pdf
17. Kenya Gazette 2021. Kenya Gazette Supplement No. 4. THE WAREHOUSE RECEIPT SYSTEM ACT (No. 8 of 2019). THE WAREHOUSE RECEIPT SYSTEM REGULATIONS, 2021 Available at https://wrsc.go.ke/images/downloads/the-warehouse-receipt-system-regulations-2021.pdf
18. RoR (Republic of Rwanda) 2008 National Agriculture Policy Available at https://www.minagri.gov.rw/fileadmin/user_upload/Minagri/Publications/Policies_and_strategies/National_Agriculture_Policy_-_2018___Approved_by_Cabinet.pdf
19. MINAGRI 2008. STRATEGIC PLAN FOR AGRICULTURE TRANSFORMATION 2018-24. Available at https://www.minagri.gov.rw/fileadmin/user_upload/Minagri/Publications/Policies_and_strategies/PSTA4__Rwanda_Strategic_Plan_for_Agriculture_Transformation_2018.pdf
20. RAB 2020. RAB STRATEGIC PLAN 2020 – 2024. Available at https://rab.gov.rw/fileadmin/user_upload/Publications/RAB_Strategic_Plan_2020_-_2024.pdf

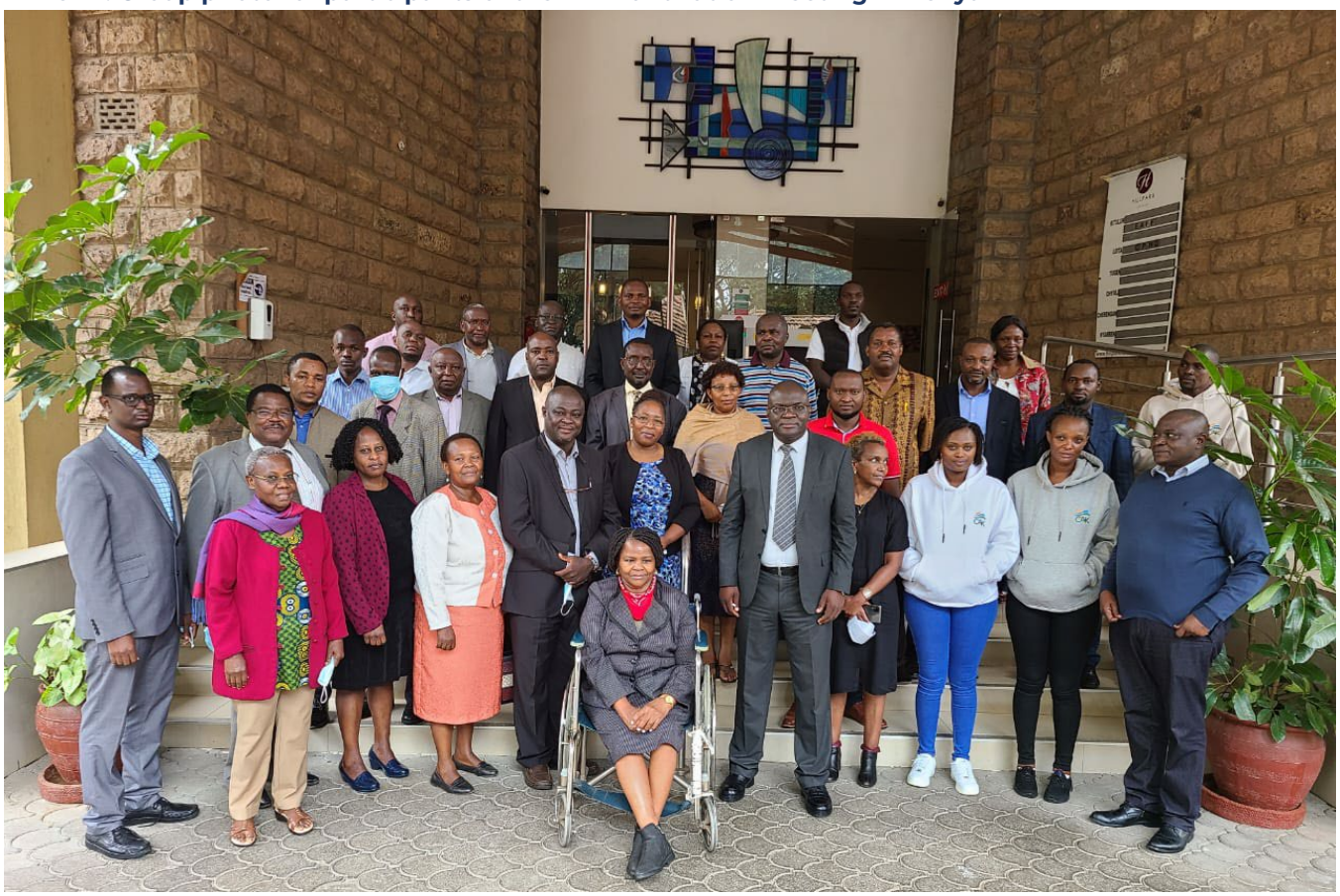
Annexes

Annex 1: Program for the AIRTEA IPP meeting in Kenya

Time (EAT)	Session	Responsible
08:30 – 09:00	Arrival & registration	Elizabeth Ochieng (EAFF)
09:00 – 09:30	Self-introductions & Presentation of the program & meeting objectives	Joshua Okonya ASARECA
09:30 – 09:45	An overview of AIRTEA project & the various Third-Party Projects (TPPs) being implemented in the country	Dr. Kwaku Antwi FARA
09:45 – 10:10	Institutionalization of the IP into the Country Process for ARD	Dr. Oluwole Fatunbi (FARA)
10:10 – 10:30	The role of IP in fostering AR4D	Moses Odeke (ASARECA)
10:30 – 10:45	Welcome remarks and Official Opening by DG of KALRO	Dr. Eliud K. Kireger
10:45 – 11:00	Group photo	Comms Team
11:00 – 11:30	**Tea/Coffee Break (Media interviews)**	**Hotel**
11:30 – 12:15	Presentation of the policy support needed by Third Party projects to establish & operationalize IPs/MSPs in each country Silver Fish Value chains Cassava value chains Dairy value chains Green and digital technologies Digital Extension	**3rd party project Lead** JKUAT (N.Olang'o) UoN (D. Kilalo) CAK (J. Wamuyu) Koppert (G. Ongoya) Ke-FAAS (P. Mwangi)
12:15 -12:45	Presentation on the gaps and challenges of prioritizing IP/MSP approach in the country for the above-mentioned value-chains What it takes to institutionalize the IPs/MSPs What gaps exist? What challenges exist? How can they be addressed?	Policy Expert **Director, Policy & Advocacy** Directorate of Agricultural Policy Research and Regulations, KALRO
12:45 -13:00	Presentation of the available government incentives (loans, VAT exemptions, input subsidies, grants, reduced insurance rates, tax holidays) for MSPs/IP for the above-mentioned value-chains What loans, grants for MSPs exist? What tax exemptions, holidays for MSPs exist? How can MSPs access these incentives?	**Director, Policy, and Advocacy,** State Department for Crop Development and Agricultural Research, MoA **Deputy Director**, Agriculture Food Authority
13:00 – 13:15	Discussion	Dr. Oluwole Fatunbi (FARA)
13:15 – 14:00	**Lunch Break**	**Hotel**
14:00 – 15:00	Group work to share experiences and brainstorm on: Group 1: **Gaps**, Strategic Pathways & digital platforms in the region for linkage of IPs Group 2: **Government incentives** & Strategic Pathways & digital platforms in the region for linkage of IPs	IP champions/ experts Moderator

	Group 3: **What it takes institutionalize the IP**s, Strategic Pathways & digital platforms in the region for linkage of IPs	Joshua Okonya (ASARECA) Moses Odeke (ASARECA) Dr. Kwaku Antwi (FARA)
15:00 – 15:30	Presentation and plenary discussion of group outcomes	Dr. Oluwole Fatunbi (FARA)
15:30 – 16:00	Summary of strategic pathways & roadmap for institutionalization of IPs	Moses Odeke (ASARECA)
16:00 – 16:30	**Coffee Break & End of Day**	**Hotel**

Annex 2: Group photo for participants of the IP Prioritization meeting in Kenya



Annex 3: Program for the AIRTEA IPP meeting in Rwanda

Time (EAT)	Session	Responsible
08:30 – 09:00	Arrival & registration	Dr. Vicky Ruganzu (RAB)
09:00 – 09:30	Self-introductions & Presentation of the program & meeting objectives	Joshua Okonya ASARECA
09:30 – 09:45	An overview of AIRTEA project & the various Third-Party Projects (TPPs) being implemented in the country	Dr. Kwaku Antwi FARA
09:45 – 10:10	Institutionalization of the IP into the Country Process for ARD	Dr. Oluwole Fatunbi (FARA)

10:10 – 10:30	The role of IP in fostering AR4D	Moses Odeke (ASARECA)
10:30 – 10:45	Welcome remarks and Official Opening by DG of RAB	Dr. Patrick Karangwa
10:45 – 11:00	Group photo	Comms Team
11:00 – 11:30	**Tea/Coffee Break**	**Hotel**
11:30 – 12:15	Presentation of the policy support needed by Third Party projects to establish & operationalize IPs/MSPs in each country ◎ Seed Potato value chains ◎ Private extension services ◎ Cassava value chains ◎ Digital extension technologies/ services	TPP Representative ◎ SDG-AFRICA/ RAB/ SPF ◎ YEAN (E. Niyigaba) ◎ UR/ Kinazi Cassava Ltd ◎ AFAAS-Rwanda
12:15 -12:45	Presentation on the gaps and challenges of prioritizing IP/MSP approach in the country for the above-mentioned value-chains ◎ What it takes to institutionalize the IPs/MSPs ◎ What gaps exist? ◎ What challenges exist? ◎ How can they be addressed?	Policy Experts ◎ **DDG** in charge of Agriculture Development, RAB
12:45 -13:00	Presentation of the available government incentives (loans, VAT exemptions, input subsidies, grants, reduced insurance rates, tax holidays) for MSPs/IP for the above-mentioned value-chains ◎ What loans, grants for MSPs exist? ◎ What tax exemptions, holidays for MSPs exist? ◎ How can MSPs access these incentives?	**Director General,** Agriculture Value Chain Management and Trade, MINAGRI
13:00 – 13:15	Discussion	Dr. Oluwole Fatunbi (FARA)
13:15 – 14:00	**Lunch Break**	**Hotel**
14:00 – 15:00	Group work to share experiences and brainstorm on: ◎ Group 1: Gaps, Strategic Pathways & digital platforms in the region for linkage of IPs ◎ Group 2: Government incentives & Strategic Pathways & digital platforms in the region for linkage of IPs ◎ Group 3: What it takes institutionalize the IP model, Strategic Pathways & digital platforms in the region for linkage of IPs	IP champions/ experts Moderator Joshua Okonya (ASARECA) Moses Odeke (ASARECA) Dr. Kwaku Antwi (FARA)
15:00 – 15:30	Presentation and plenary discussion of group outcomes	Moderator Dr. Oluwole Fatunbi (FARA)
15:30 – 16:00	Summary of strategic pathways & roadmap for institutionalization of IPs	Moses Odeke (ASARECA)
16:00 – 16:30	**Coffee Break & End of Day**	**Hotel**

Annex 4: Group photo for participants of the IPP meeting in Rwanda



Annex 5: Program for the AIRTEA IPP meeting in Uganda

Time (EAT)	Session	Responsible
08:30 – 09:00	Arrival & registration	Joshua Okonya (ASARECA)
09:00 – 09:30	Self-introductions & Presentation of the program & meeting objectives	Joshua Okonya ASARECA
09:30 – 09:45	An overview of AIRTEA project & the various Third-Party Projects (TPPs) being implemented in the country	Dr. Kwaku Antwi FARA
09:45 – 10:10	Institutionalization of the IP into the Country Process for ARD	Dr. Oluwole Fatunbi (FARA)
10:10 – 10:30	The role of IP in fostering AR4D	Moses Odeke (ASARECA)
10:30 – 10:45	Welcome remarks and Official Opening by DG of NARO	Dr. Ambrose Agona
10:45 – 11:00	Group photo	Comms Team
11:00 – 11:30	**Tea/Coffee Break**	**Hotel**
11:30 – 12:15	Presentation of the policy support needed by Third Party projects to establish & operationalize IPs/MSPs in each country ◎ Cassava value chains ◎ Dairy value chains	3rd party project Representative ◎ NaCRRI (R. Kawuki) ◎ AGRENES (M. Ssemwanga)

	◎ African Indigenous Vegetable ◎ Digital Extension services ◎ Fish Value Chain ◎ Potato value chains	◎ UCU (M. Nakanwagi) ◎ UFAAS (B. Luzole) ◎ NaFIRRI (V. Tibenda) ◎ KaZARDI (A. Arinaitwe)
12:15 -12:45	Presentation on the gaps and challenges of prioritizing IP/MSP approach in the country for the above-mentioned value-chains ◎ What it takes to institutionalize the IPs/MSPs ◎ What gaps exist? ◎ What challenges exist? ◎ How can they be addressed?	Policy Experts ◎ NARO
12:45 -13:00	Presentation of the available government incentives (loans, VAT exemptions, input subsidies, grants, reduced insurance rates, tax holidays) for MSPs/IP for the above-mentioned value-chains ◎ What loans, grants for MSPs exist? ◎ What tax exemptions, holidays for MSPs exist? ◎ How can MSPs access these incentives?	Policy Analysts ◎ MAAIF
13:00 – 13:15	Discussion	Dr. Oluwole Fatunbi (FARA)
13:15 – 14:00	**Lunch Break**	**Hotel**
14:00 – 15:00	Group work to share experiences and brainstorm on: ◎ Group 1: Gaps, Strategic Pathways & digital platforms in the region for linkage of IPs ◎ Group 2: Government incentives & Strategic Pathways & digital platforms in the region for linkage of IPs ◎ Group 3: What it takes institutionalize the IP model, Strategic Pathways & digital platforms in the region for linkage of IPs	IP champions/ experts Moderator Joshua Okonya (ASARECA) Moses Odeke (ASARECA) Dr. Kwaku Antwi (FARA)
15:00 – 15:30	Presentation and plenary discussion of group outcomes	Dr. Oluwole Fatunbi (FARA)
15:30 – 16:00	Summary of strategic pathways & roadmap for institutionalization of IPs	Moses Odeke (ASARECA)
16:00 – 16:30	**Coffee Break & End of Day**	**Hotel**

Annex 6: Group photo for participants of the IP Prioritization meeting in Uganda

