CGIAR
Science for a food-secure future

Regionally Integrated Initiatives (RIIs)

Transforming Agri-Food Systems in West and Central Africa (TAFS-WCA)

Donor Drop-In Calls, March 9th, 2023.

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Outline

1. Overview
2. Partnership
3. Implementation to date
4. Innovation Business Model Hub (IBM hub)
5. Collaboration with other Initiatives/ synergies
6. Looking forward

Priority Science

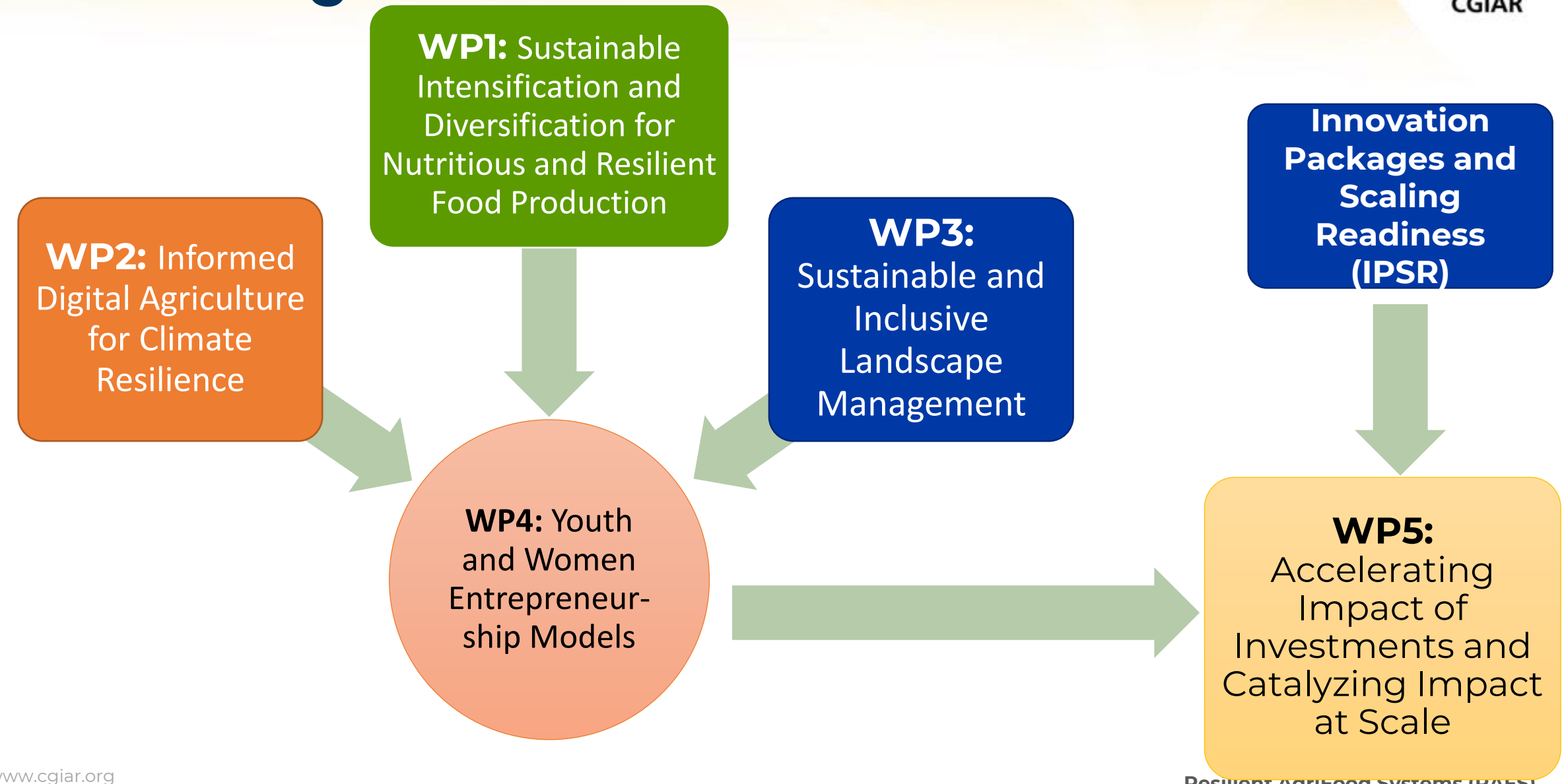
With 22 countries

1. **WCA Africa has one of the lowest land productivities** (high yield-gap)
2. **Climate change** is creating significant challenges
3. WCA is **struggling** to produce sufficient food (**quality and quantity**) for the needs of the region's growing population

The aim is to blend socio-economic issues with bio-physical to transform food systems

- Making food systems more **nutritious, safe and resilient** to climate change
- Promoting digitalized information systems in bundling innovations at landscape level.
- Participatory toolset for **inclusive landscape management** and citizen science for one health
- Addressing **social barriers to create equality for women and youth** doing business in value chains
- **Taking to scale Innovations** with proven impact in the region

Work Packages



Partner engagement/Sub-grants/ Collaborators

- **Two** partner engagement workshops (**West and Central Africa)** organized
- **Four New agreements signed with NARS**: AfricaRice-CIP-CORAF; IITA and CRI-Ghana; AfricaRice and CSIR-CRI; AfricaRice and NCRI-Nigeria;
- **Agreements are under negotiation**: CIP and ISABU (Burundi); CIP and INERA (DRC); ABC and ENABEL (Burundi)
- **Operating within existing Partnerships and MoUs**: ABC has an ongoing MoU with ALIGHT (Rwanda); IWMI and IAR (Nigeria); IWMI and UDS (Ghana)
- Partnership with **WUR** on initiative for Sahelian Zone

Launch and Partners Workshop,
Cote d'Ivoire, June 21-22, 2022

Key achievements

- 68 outputs in the PRMS
  - ✓ 21 Capacity sharing
  - ✓ 16 Innovation development
  - ✓ 18 Knowledge product
  - ✓ 13 Other outputs
- Baseline survey completed in 5 countries in West and Central Africa (**Cote d'Ivoire, Ghana, Nigeria, Burundi and Rwanda**)

Key achievements

- Examples of capacity sharing out of 21 event

Food system

- RiceAdvice Business model design
- Training on TICKS for scaling readiness

Postharvest

- Rice Postharvest Loss Reduction
- Mycotoxin Control in Cereals
- Sweetpotato Processing Training

Agro practices

- Climate-Smart Agriculture
- Digital agro climate advisories
- Container/sack gardening

Inputs

- Seed processing and propagation
- Simple macro-propagation techniques for banana seed multiplication
- High-quality early generation seed of orange-fleshed sweetpotato

Key achievements

- Examples of Innovations out of 16 Innovation development

Business models (Demand driven and co-designed)

Consumers
Retailers
Wholesalers
Miller
Processors
Farmers
Services providers
Input suppliers
Consumers

Food system

- **Customizing Digital AgroClimate Advisory Mobile business**

Postharvest

- **Technologies to reduce postharvest losses (PICS bag)**

Agro practices

- **Optimal options to diversify rice farms**
- **Good agronomic practices for sweetpotato**
- **Decision support tools for site specific fertilizer recommendation**

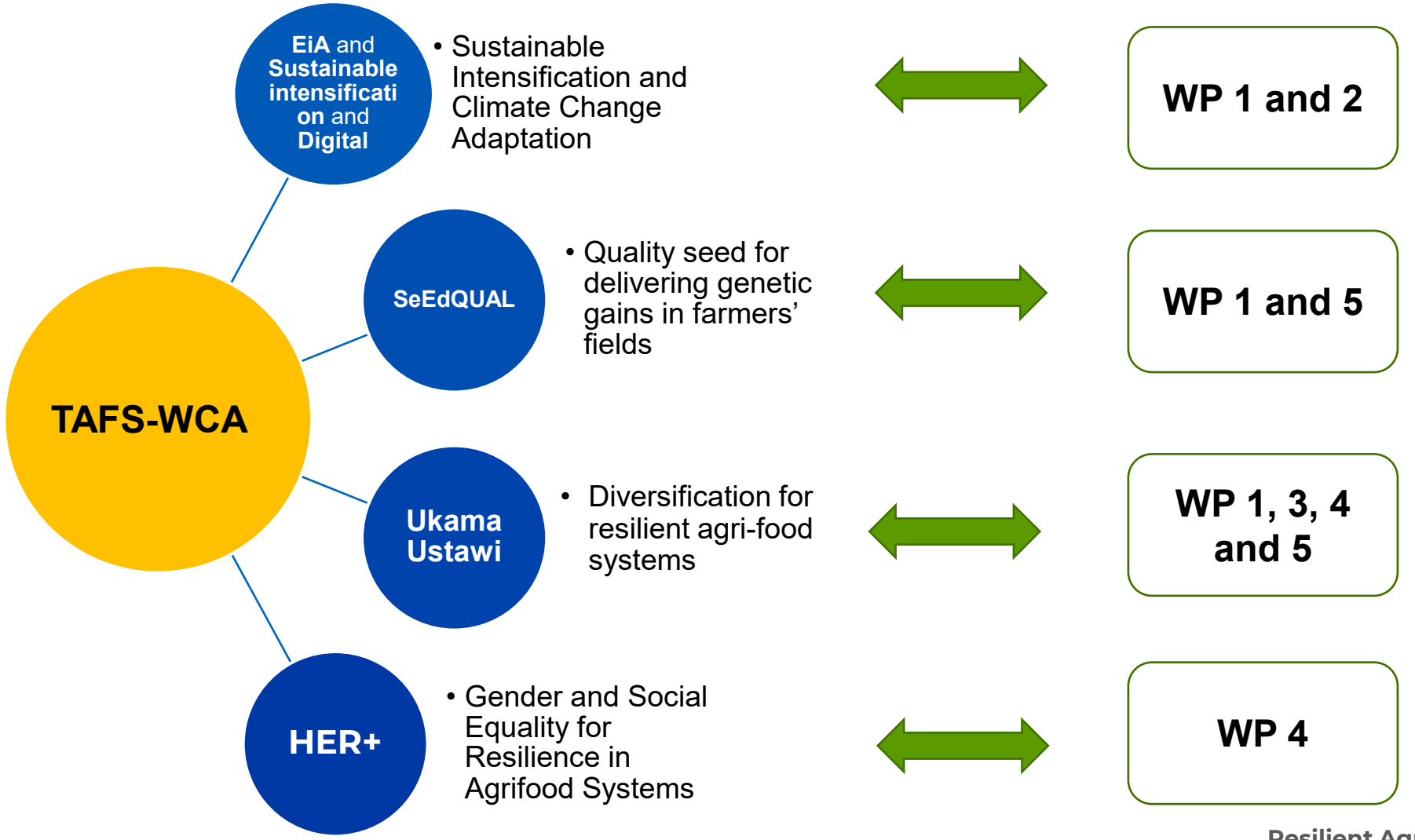
Inputs

- **New biofortified cassava varieties**
- **Isotope techniques for the selection of climate-resilient varieties**
- **Biopesticides against vegetable pests**

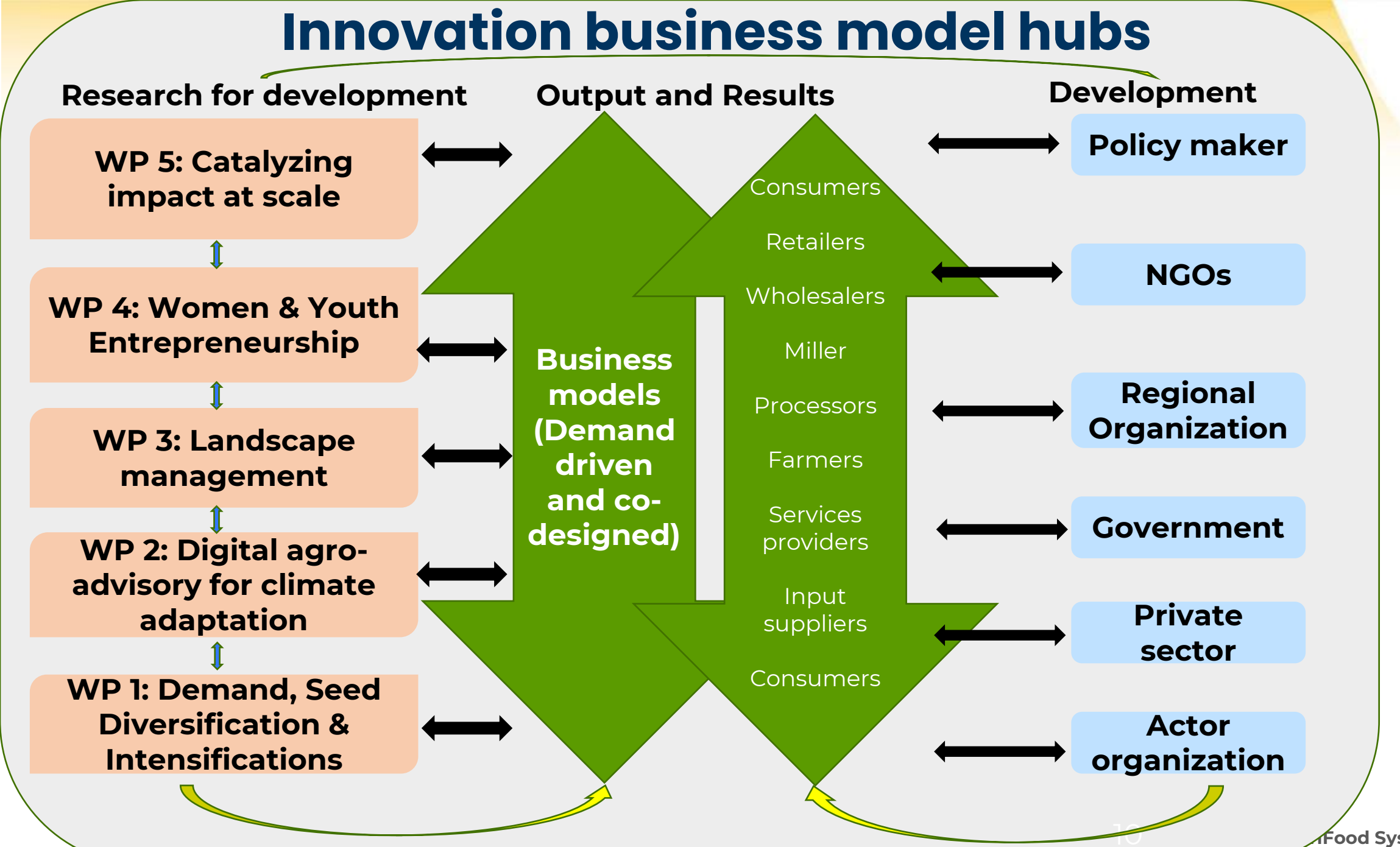
Other highlights

- Side event on how linking **CIS to CSA** can enable sustainable scaling of innovations to strengthen agrifood systems during the **FARA 2022 Biennial Africa** CSA Stakeholders Conference; 15 September 2022, Accra
- Meeting of **One CGIAR representatives and Initiative leads**/focal points in Nigeria- 12 October 2022
- Dialogue on the **CGIAR 2030 Research and Innovation strategy** in Rwanda – 10 Nov. 2022
- **One CGIAR WCA Updates and Consultative Workshop**, 13-14 December 2022, Accra, Ghana
- Participation to **COP27**, Sharm El-Sheikh, Egypt, 7 November 2022
- Workshop with WUR on Center of Excellence in the Sahelian Zone, Niamey 15-16 December 2022

Collaboration with other Initiatives/synergies



Innovation business model hubs



Innovation Business Model hubs (IBM hub)

- ✓ **A methodological framework and case study of the IMB hub approach published in 2022**

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An extended Canvas business model: A tool for sustainable technology transfer and adoption

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ABSTRACT

The rise of new agricultural technologies represents an opportunity for agricultural development, especially to achieve the 2030 Sustainable Development Goal. However, farmers in developing countries struggle with adopting new agricultural technologies due to several socio-economic factors. This study proposes a service-based business for transfer and sustainable scaling of new technologies to increase household resilience. Two segments, (i) cost-benefit and (ii) sensitivity analysis was added to the original Canvas business model. We used two innovative technologies: a personalised extension application and a rice threshing machine to apply the business model. Quantitative data from 700 randomly selected rice farmers in Kano State, and qualitative data collected using the Delphi method were used. The adapted Canvas business model is profitable when both technologies are used separately, with an Internal Rate of Return (IRR) of 23 and 28% for the threshing machine and the application, respectively. However, higher profitability is observed when both technologies are combined in one business model. In this case, the business has an IRR of 33%. Moreover, the study shows that the combined business model is vulnerable to the service price. Therefore, we recommend re-evaluating the business model to determine a fair price and payment method for both the service recipient and the provider.

1. Introduction

In addition to the creation of new technologies, the scaling and sustainable adoption of innovation is essential to the successful and sustainable transfer of technology. Generally, technological change is defined in terms of the invention (development of a new idea), innovation (introduce new technology and analyse the market and the interaction between supply and demand.

This study presents the case of two technologies developed by the Africa Rice Center (AfricaRice) and its partners: *(i)* a modern threshing machine named ASI thresher from the initial institutions involved in the center's conception (AfricaRice; Senegal River Valley National Devel-

Way forward

- **Review and Planning Meeting** – (April (3-7 or 10-14)
- **Baseline survey** ongoing in 2 countries in Central Africa
- Develop **Women and Youth Innovation Business model Hub**
- Testing of **business models** to increase entrepreneurship for youth and women
- Evaluation of different early generation seed technologies for **scaling readiness**
- Follow-up of teams participating in **Innovator Workshops**
- **Co-design sustainable catchment** land use plans and practices that are embedded in relevant local and /or national governance systems

Strengthening partnership and collaboration

- Partnership with bilateral projects (AICCRA, HealthyDiet4Africa)
- Possibility to collaborate with regional organizations especially CORAF, ECOWAS and ECCAS
- Partnership with regional programs such as the **West Africa Food System Resilience Program (FSRP) and TAAT (2nd phase)**
- Possibility of extension to Sahelian zone in collaboration with WUR

Thank You!

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