Concept Note for the 2024 AfricaRice Science Week

Dates: 25 – 29 November 2024

Venue: M'bé Research Station, Cote d'Ivoire and on-line

Theme: Transformation of the Rice-based Food Systems under Climate and Geo-political changes to Accelerate Rice self-sufficiency in Africa through Science and R&D Partnerships

1. Introduction

As one of the most consumed staple crops globally, rice plays a vital role in food and nutrition security, particularly in Africa, where it forms the backbone of diets for millions. Yet, as we grapple with the escalating impacts of climate variability and change—rising temperatures, erratic rainfall patterns, droughts, and floods—rice-based production systems stand at a critical crossroads. The demand for rice in Africa is growing faster than for any other staple food – rice consumption is projected to be the second highest globally by 2025. Fulfilling the rising demand would require rice production in Africa to increase by 30 million tons by 2035, compared to 2010 levels.

The challenge in achieving rice self-sufficiency in Africa in a rapidly changing climate is multifaceted. As a water-intensive crop, rice cultivation is highly sensitive to changes in hydrological cycles and temperature shifts. Simultaneously, it is both a contributor to and a victim of climate change. On the other hand, the industry is evolving, with increasing participation from young entrepreneurs who are adept at managing quality and meeting market demands. Thus, fostering a climate-resilient transformation of rice-based systems through a concerted global effort, where science, policy, and farmer-centric innovations converge to build a sustainable, secure future for all, will not only safeguard food production and healthy and nutritious diets, but also address broader environmental concerns.

Beyond agronomic solutions (e.g., adapting farming practices, adopting innovative technologies, and promoting sustainable resource management), such a climate-resilient transformation requires robust policies, institutional support, and access to knowledge and resources for smallholder farmers who are most affected by these changes, highlighting the need for collective action at all levels. Governments must prioritize agricultural research and policies that encourage sustainable practices. The private sector must invest in technologies that support climate-smart agriculture. NGOs and international organizations must continue to advocate for and support the needs of vulnerable communities. And consumers, too, have a role to play by choosing sustainably produced rice.

AfricaRice and its partners are leading the way in ensuring that rice production is climate -resilient while generating nutritionally rich and healthy food. Various innovations and technologies that have the potential to transform the rice-based production system introduced but dissemination and adoption by the end users remains critical. The upcoming Science Week will assess the feasibility and future of rice self-sufficiency in Africa, present and emerging transformative rice technologies that can accelerate the attainment of rice self-sufficiency, and explore innovative partnership models with NARs, the private sector, and other development partners that aim to build climate resilience across the rice value chain. By fostering a holistic transformation of the rice-based food systems, we can contribute to a future where food and nutrition security are attainable for all, even in the face of a changing climate

2. Objectives of the 2024 Science Week

a) **Charting the future of Rice-based Food systems:** Present and discuss new research outputs and directions that will shape the future of rice-based food systems in the face of the double challenge of both feeding a growing African population with healthy and nutritious foods while safeguarding the environment, with a focus on emerging trends and frontiers in line with the 2030 research and innovation strategies.

b) **Strengthening Strategic R&D Partnerships:** Reinforce the partnership among NARS, AfricaRice, CGIAR and Advanced Research Institutes and forge new collaborations with private sector and development partners to drive the sustainable transformation of Africa's rice sector to create employment opportunities for the youth and women and contribute to the goal of food sovereignty by achieving rice self-sufficiency.

3. Expected outputs of the 2024 Science Week

- A comprehensive report evaluating the progress of current development projects.
- Clearly defined synergies and action plans among scientists, outlining roles and responsibilities for executing innovative partnership models.
- A set of proposed innovations and technologies designed to enhance rice production efficiency and economic returns, aligned with emerging trends and new frontiers in the rice industry.

4. Expected outcome of the 2024 Science Week:

- Sustainable Transformation of Africa's Rice Sector: Enhanced coordination and collaboration among key stakeholders in developing and disseminating proven innovations and technologies, aligned with emerging trends and new frontiers, will create a more efficient, resilient, and sustainable rice value chain in Africa. This will help close the gap between rice production and consumption, reduce import dependence, and increase economic benefits across the region.

5. Dates and mode of the 2024 Science week

The 2024 Science Week is scheduled to take place from November 25 - 29, 2024. The event will be conducted in a hybrid format, with a preference for participants to attend in person at the AfricaRice research station in M'bé, near Bouaké, Côte d'Ivoire.

6. Format/Methodology

The 2024 edition of AfricaRice Science Week will feature a series of thematic keynote presentations, panel discussions, and several side events.

Four key side events have been scheduled, focusing on thematic areas such as breeding and seeds, agronomy, socioeconomics, and grain quality and processing. The conference is as described below:

1. **Pre-event**

   November 18- 21: Pre-event Task Forces online preparatory Annual Review and Planning (ARP) meetings: (number of days of online meeting set by each Task Force)**.**

2. **Main Scientific event**

   Monday25 and Tuesday 26, November:

   Sub-Theme 1: Science to accelerate the transformation rice-based-food systems under the threat of Climate Change

   - **Four keynotes** by invited leading scientists in their respective fields followed by Panel discussions in Plenary sessions (the titles are indicatives and may change):
     Keynote #1: What does Science tell us about the feasibility and future of rice self-sufficiency in Africa: Policy implications
     Keynote #2: The Promise of Perennial Rice to Accelerate Rice Self-sufficiency in Africa while reducing production costs and GHG emissions
     Keynote #3: The Promise of Site-specific & bio-fertilizers to Accelerate Rice Self-sufficiency in Africa while reducing GHG emissions
     Keynote #4: The Promise of Smart Valleys to Accelerate Rice Self-sufficiency in Africa while reducing irrigated land development costs

     Each Keynote will be followed by critical remarks from two discussants, a moderated Panel Discussion and Questions and Answers from the audience

   - **Parallel sessions** with presentations of selected scientific papers on breeding, agronomy, policy and grain quality and post-harvest by scientists from NARS, AfricaRice, CGIAR and Advanced research Institutes (ARIs).

   Wednesday, November 27:

   Sub-Theme 2: R4D Partnerships to accelerate the transformation rice-based-food systems under the threat of Climate Change

   Presentations and exchanges in plenary sessions on R4D partnerships opportunities for scaling for impact with the CGIAR Science programs and Major Funding Initiatives (REWARD, FSRP, RIZAO and The Green Climate Fund)

3. **Taskforces and Bilateral projects Physical meetings**

   Thursday, November 28 (optional): Physical parallel meetings organized by

   a. Task forces (to finalize the results of the online ARP meetings or conduct trainings
   b. Projects (for the review and planning of project activities
   c. R&D partners (bilateral meetings)
   d. Presentation of the Revived Governance structure of the Task Forces

4. **Post-event field visits**

   Friday November 29: Post-event field visits (Visits of relevant rice value chains related public and private R&D infrastructure/communities in Cote d'Ivoire in sites located along the axe Bouake-Abidjan or nearby, with the journey terminating in Abidjan (where the group will spend the night) before departing to their respective countries.

A comprehensive tentative program detailing the agenda for each day is provided here

8. Participants

Participants will include AfricaRice, NARS and One CGIAR scientists, alongside a diverse group of stakeholders from the rice sector in Africa and beyond. This includes representatives from the private sector, farmers and their organizations, rice consumers, government officials, universities, FARA and its constituent SROs, advanced research institutes, donors, policymakers, project partners, NGOs and AfricaRice Board members.