

**Thematic 2 :****Rice and Climate Change**

Date: Monday, 09th March, 2025
Venue: Novotel Convention – Room (TBD)

Concept note**1. Background**

The agricultural sector is facing many problems, including the natural disturbances inherent in climate change. Indeed, climate change leads to fluctuations such as extreme temperature, variations and erratic rainfall, which directly affect crop yields, especially rice yields. For example, FAO (2024) reports that an increase of temperature could reduce rice yields by nearly 20% by 2050 and 40% by 2100.



Rice consumes 20-30% of the
Freshwater resource
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On the other hand, it should be noted that rice production has a considerable impact on the climate, on the depletion of natural resources and on the degradation of ecosystems. Rice cultivation produces methane, a powerful greenhouse gas such as carbon dioxide (CO₂) and nitrous oxide (N₂O). Rice production is responsible for about 1.5% of global greenhouse gas emissions and consumes between 24 and 30% of the world's fresh water.



From this point of view, rice plays an important role on climate change, both by being affected by it and by contributing to it. Indeed, the effects of climate change on global rice production are a growing concern, particularly in critical regions such as West Africa. Despite the contribution of rice to GHG emissions, it should nevertheless be stressed that rice is a staple food for nearly 4 billion people and is a pillar of food security in many countries. It provides nearly 20% of global calorie intake (27% of calorie intake in low- and middle-income countries). Consumption amounts to more than 510 million tons per year.

Faced with this situation, if nothing is done to mitigate the impact of climate change on the rice sector, we will face an aggravation of food insecurity. Indeed, in a world where nearly half of the population, or 3.5 billion people, depend on rice for their livelihoods, reduced productivity could deal a fatal blow to global food sovereignty. However, the shortage of rice would be felt worldwide, as this cereal accounts for about 20% of the total calories consumed worldwide; Which sooner or later will raise the question of whether we will be able to produce enough rice to feed everyone.

Thus, the stakes will have to be:

- ✓ **Increasing total rice production to ensure food security:** Simply responding to the growth of the world's population requires a 20% increase in production by 2040,
- ✓ **Increase productivity** while taking adaptation measures to the impacts of climate change and mitigating the negative effects of rice cultivation on the climate (GHG emissions),
- ✓ **To improve the efficiency of the use of resources** (land, water, labour) in the face of competition from urban and industrial uses of these resources.
- ✓ **Increasing the profitability of production** to improve the incomes of the estimated 400 million poor people engaged in rice cultivation,
- ✓ **Adapt to structural changes** such as the ageing of the agricultural population in Asia and the explosion in the number of young people in Africa, through more attractive work opportunities;
- ✓ **Ensure the development and competitiveness of national rice crops** (particularly in Africa and Central America) in a context of fierce international competition and/or the implementation of free trade agreements that weaken small producers in the face of public export support policies.

To make these issues a reality, it is imperative that governments, donors, local actors work together to mitigate the impacts of climate change on global rice production.

It is in this context that the CARD Secretariat is organizing a side-event on "Rice and Climate Change" to assess what is being done or being done to mitigate the effects of climate change on the rice sector.

2. Objectives of the session

This session aims to have a better understanding of the impact of climate variability on the one hand on the aggravation of the risk of food insecurity and on the other hand on the achievement of the objectives of the second phase of the CARD. Through targeted presentations and interactive discussions, the aim will be to:

- show how climate change can be a factor in accelerating food insecurity through the decline in productivity and production levels;
- Share research innovations, including high-performance varieties adapted to climate change;
- Present integrated practices for better adaptation to the effects of climate change;
- Stimulate a frank dialogue between experts and participants in order to identify concrete and appropriate solutions;
- Identify levers to disseminate and scale up adaptation and mitigation measures in CARD member countries.

3. Session approach and proceedings (Duration: 95 minutes):

The session will take a dynamic approach, alternating between technical presentations and interactive exchanges. The goal is to maintain a sustained pace while allowing a collective appropriation of the content.

The program will run as follows:

Session component	Duration	Details / Responsible
A. Opening & Session Framing	5 minutes	Moderator introduction and overview of session objectives
B. Panel Presentations	60 minutes (15 min each)	<ol style="list-style-type: none"> 1. <u>Hon Minister Ramilison Harifidy</u> – Impact of climate change on the achievement of the goal of rice self-sufficiency in Africa and existing solutions to mitigate the risk by focusing on policy measures to be put in place to increase production to reduce imports 2. <u>Pr. LEONG POCK TSY Jean Michel</u> (DG FOFIFA) - Impact of climate change in achieving rice production targets in Madagascar and solutions adopted to mitigate the risk by focusing on the development of practices such as SRI 3. <u>Dr Abdel Ismael</u> (IRRI) – Resilient varieties developed to mitigate the risk of climate change and how to make these varieties available to producers’ 4. <u>Dr Elliot Dossou-Yovo</u> (AfricaRice) – SMART Valley Approach, adaptation measure face to climate change?
C. Panel Discussion & Reflections	10 minutes	Moderator-led discussion among panelists on major challenges toward achieving CARD phase 2 target (production of 56 MT of paddy) due to CC, share solutions on how to mitigate the impacts of climate change on African rice production and reflect the best way to scale up the solutions in different countries.
D. Plenary Q&A with Participants	15 minutes	Open floor for participants’ inputs, reflections, questions, and knowledge sharing
E. Closing Remarks	5 minutes	Moderator wrap-up, summary of key takeaways, and next steps