



Climate Resilient Food Systems (CRFS) Alliance

“The Water-Food-Energy Nexus” Webinar

16 November 2023

13:30 – 15:00 CET

1. Background

The webinar is part of the webinar series led by the Leadership Group of the CRFS Alliance. It had the objective of exploring how the interactions and interdependence of water, food and energy can be better understood and collaboratively managed to create food systems that are not only sustainable, equitable and inclusive but also climate resilient. A total of 27 participants attended the webinar, including country representatives, UN and non-UN stakeholders, and academia.

2. Proceedings

An introduction to the work of the CRFS Alliance and the importance of maximising and uniting the efforts of existing programs towards resiliency in food systems was given by Motsomi Maletjane (UNFCCC). Thereafter, experts from the Leadership Group presented on various topics related to Water-Food-Energy Nexus as summarized below.

3. Importance of the Water, Food and Energy Nexus in climate-resilient food systems and applications

Sten Schurer (*Water and Energy for Food (WE4F) programme, GIZ*) presented an overview of the program's objectives. The WE4F program aims to consolidate the efforts of the global donor community to enhance impact and efficiency in the production of more nutritious food with less resources. The key topics discussed included:

- The WE4F programme aims to address food security and reduce overconsumption of resources in food production by partnering with innovators across the Water-Energy-Food nexus, focusing on circular economy, access to finance, agriculture water management, and renewable energy.
- The WE4F programme focuses their intervention on the support of SMEs along the food value chain through financial and technical assistance, facilitating access to finance, implementing pilot projects, engaging in policy dialogue, and fostering knowledge exchange.
- Achievements include impacting over 500,000 smallholder farmers with innovative solutions, saving energy and water in the food value chain, and mobilizing external investments.

Yonathan Ayalew (*World Food Programme (WFP)*): Offered insights into the connections between land, water, and climate shocks. He highlighted examples from WFP's Integrated Resilience Programme, showcasing integrated water development initiatives in Chad, efficient water management practices, and clean energy solutions in Niger. Key points discussed include:

- The holistic approach of WFP's programmes, including emergency assistance for immediate food and nutrition needs; addressing root causes of hunger, fostering long-term resilience; recognizing the crucial role of water security in achieving Zero Hunger, impacting peace, social cohesion, gender equality, and education access.

- WEF-related interventions and principles, including sustainable management at the nexus and partnerships for coalition building utilize context-based assessment, planning, and programming, placing people and landscapes at the centre for inclusive processes. The interventions support government-led efforts, strengthen private-sector synergies, and ensure adequate intervention units for meaningful results.
- Achievements encompass over 9 million direct beneficiaries through the Asset Creation and Livelihoods Programme, establishment of community gardens, reforestation of thousands of hectares, rehabilitation of land, and construction of water-related infrastructure.

4. Recognizing the interaction and interdependence of WEF Nexus in ecosystem preservation and food security.

Matthew McCartney (*Initiative on NEXUS Gains, International Water Management Institute (IWMI)-CGIAR*): Presented the NEXUS Gains initiative as one of 11 addressing global challenges like climate change, biodiversity loss, and environmental degradation. Key points include:

- The need to transform food and water systems for sustainability. There are multiple global challenges, such as food insecurity, extreme water stress, agricultural losses due to climate events, and the environmental impact of agriculture.
- The NEXUS Gains workstreams analyses and scales NEXUS interventions, considering foresight methodologies and trade-off analyses; focuses on boosting water productivity, integrated storage management, and energizing food and water systems through inclusive access to clean energy; and strengthens multi-stakeholder governance and develops WEF (Water-Energy-Food-Ecosystems) capacity, including training resources for gender equality and social inclusion. The interventions focus on basins including Limpopo/Income, Blue Nile, Aral Sea, Indus, and Ganges.
- Some examples of the NEXUS Gains' work were presented, including improving irrigation efficiency in Uzbekistan's Karshi Lift Irrigation Scheme, and managing rice irrigation in African countries to reduce GHG emissions, save water, and control malaria.
- The NEXUS Gains' innovation portfolio consists of tools and models for water and energy interventions, WEF capacity building, environmental flow, agrobiodiversity index, water storage diagnostic, and more.
- Collaborations and partnerships include the work with 9 NGOs, 31 governments, 7 main donors, and 49 universities and research organizations.

5. Solutions and innovations on the WEF Nexus:

Léa Tatry (*Flemish Institute for Technological Research (VITO)*): The EPIC Africa Project is a project of Horizon Europe of the EU Commission, with 8 partnerships. Although the EPIC Africa project works on the WEF Nexus in two regions, the Volta River basin in West Africa and the Tana River basin in Kenya, Ms. Léa Tatry presented the former, including the following key points:

- The main challenges comprise competing uses, lack of law enforcement, fragmented planning, uncoordinated financing, non-optimized resource utilization, unclear data sharing policies, and more frequent extreme climate events.
- The WEF Nexus interlinkages in the Volta River basin include water-energy (hydropower), water-land-ecosystem (water quality, unsustainable agriculture), and land-energy-water (erosion, salination).

- The integrated WEF approaches focus on energy planning and modelling in Sub-Saharan Africa, consider uncertainty and spatial distribution, and aim to increase clean energy generation and build African expertise through capacity mobilization.
- The importance of transition arenas for co-developing a common vision and forming networks to address complex societal issues strategically was highlighted.

Claudia Ringler (*International Food Policy Research Institute (IFPRI)*): Presented how the institutionalization of a Nexus guidance can be achieved, especially in a very short time period. The first Water-Energy-Food- Environment Nexus guideline was institutionalised in less than a year, between May and December 2022 in the Niger Basin and their key aspects are:

- Capacity-building and sharing activities among representatives of different countries are key elements for the institutionalization of the guidance. It also had to be deliberated, commented on, and adopted by the River Basin authority.
- The guideline is a relevant tool that defines Nexus activities, their necessity, roles, responsibilities of actor groups, and modalities for monitoring integration.
- The NEXUS provided a tool that consists of a desktop application connected to an online geospatial database for quick Nexus assessment; it allows the generation of customizable reports for preparing notifications and serves as a training/advocacy tool.

6. Experiences and involvement in decision-making processes related to the Water, Food and Energy nexus in Africa.

Madalitso Nkosi, (*The Southern African Confederation of Agricultural Unions (SACAU)*): Shared insights into decision-making processes related to the WEF Nexus at the multilateral regional level between governments and agricultural unions. The key issues discussed were:

- The main challenges in the agricultural sector include the struggle to meet current food demand, with the African population expected to double by 2050 and considering the growing climate risks and disasters.
- The Southern African Development Community (SADC) calls for an integrated planning of water, food and energy sectors and the promotion of regional cooperation. The SADC 5-year Regional Strategic Action Plans (RSAP) on Integrated Water Resources Management has a program focused on the WEF nexus. The participation of SACAU in the SADC agricultural projects represents farmers' interest in the WEF Nexus Dialogue.
- The National Development Plans of SADC Member States set ambitious targets in the WEF sectors. To create synergies between sectoral development agendas, integrated planning and cross-sectoral coordination at regional levels are promoted. At the national level, farmers are represented by national farmer organizations in the forums that discuss issues related to the topic.

7. Relevance of international collaboration and programs for climate resilient food systems: Water and Food Nexus towards the COP28

Ingrid Timboe, (*Conference of the Parties (COP28)*): Discusses the relevance of the WEF nexus, highlighting that these issues have been side-lined historically, with the Food Systems Summit and the UN Water Conference initiated only recently. The COP28 Presidency has been working in the following aspects:



- COP28 will hold the first-ever ministerial dialogue on building water-resilient food systems, where both water and food/agriculture ministers are invited to discuss their work, with 15 countries confirmed. This will take place on December 10th at COP28 in Dubai and will be live-streamed.
- COP28 is planning a UNFCCC partnership on building water-resilient food systems under the CRFS Alliance, working with partners like FAO, IWMI, World Farmers Organization, IFAD, Global Resilience Partnership and the World Economic Forum to bring the Nexus issues forward and provide support to countries in their implication of the national climate commitments and plans over the next two years. This partnership will also be launched on December 10th.
- The COP28 working group will support the development of enhanced NDCs and NAPs ahead of the 2025 deadline, working with the CRFS Alliance and the NDC Partnership to identify countries with specific needs related to climate-resilient water and food systems. This will be done through a toolkit of resources, workshops, and targeted one-on-one engagement.

8. Closing remarks

Motsomi Maletjane (CRFS Alliance) summarised the wealth of opportunities and solutions which are encapsulated in the Alliance and invited any interested parties to contact crfs-alliance@unfccc.int and visit the Alliance's newly launched webpage at <https://www.unfccc.int/crfs-alliance>.



Attendees:

1. Antoine Libert (FAO)
2. Bhava Dhungana (UNFCCC)
3. Christine Muller (EU)
4. Claudia Ringler (IFPRI)
5. Daniela Miranda (UNFCCC)
6. Francesca Gamba (UNFCCC)
7. Grégoire Borchard (UNCDF)
8. Ingrid Timboe (COP28)
9. Isabel Wust (UNFCCC)
10. Kaori Saito (UNFCCC)
11. Léa Tatry (VITO)
12. Lilian Daphine Lunyolo (UNFCCC)
13. Madalitso Nkosi (SACAU)
14. Matthew McCartney (IWMI)
15. Motsomi Maletjane (UNFCCC)
16. Petra Schmitter (IWMI)
17. Robert Kranefeld (GIZ)
18. Ruwimbo Mutirwara (Rhodes University – South Africa)
19. Sanda Zabrian (FAO)
20. Savio Rousseau (ICCCAD)
21. Sebataolo Rahlao (Ezemvelo KZN Wildlife)
22. Selina Behr (GIZ)
23. Sten Schurer (GIZ)
24. Sylvie Wabbes (FAO)
25. Thomas Rebermark (SIWI)
26. Tigist Alemayehu
27. Yonathan Ayalew (WFP)