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Nexus Dialogues Newsletter



Water-Energy-Food Security Nexus Dialogues

A service by the Nexus Regional Dialogues Programme

Dear readers,

I am very happy to present the 3rd edition of the Nexus Dialogues Newsletter. As the new head of component of the Nexus Regional Dialogues Programme, I am particularly excited to share with you a variety of articles, which provide insights to implementing activities of the Water-Energy-Food Security Nexus approach on different scales and levels. With this issue, we present best practices from the ground, highlight activities and outcomes of the Nexus Regional Dialogues, introducing news from the Nexus research community and review the role of the Nexus during this year's Stockholm World Water Week.

When reading the newsletter, you will realize how the WEF Nexus approach gained momentum and acknowledgement on all levels – from head of states and regional authorities to civil society, small businesses and start-ups. We are now moving to a stage, where the importance of multi-sectoral and inclusive cooperation is appreciated as the right way forward if we want to achieve universal water, energy and food security through a sustainable use of resources while at the same time preserving ecosystems and the environment. However, we are still facing challenges and need to find solutions to better assess and evaluate the complex relationships, trade-offs and synergies between the sectors, identify communication strategies to better present the impacts of the WEF Nexus approach to decision makers and create innovative and new types of business models and suitable financial vehicles to bring forward Nexus projects.

The Nexus Regional Dialogues Programme aims at tackling these challenges and will keep you informed about its activities and outcomes in the future. We are living in a challenging and exciting time, and I strongly believe that the Nexus approach can play a great role in moving towards a more sustainable and fair future.

Enjoy reading our Nexus news!

Sarah Beerhalter

NEXUS REGIONAL DIALOGUE PROGRAMME

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- » Niger Basin // Nexus Country Profiles
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News from the Nexus Regional Dialogue Programme

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Middle East and North Africa // Upcoming Nexus Training in Khartoum, Sudan: Introduction of the Water-Energy-Food Nexus Approach and Identification of Nexus Opportunities



(C) UNAMID / Flickr

Sudan, referred to as the 'food basket' of the Arab region during the 1970s, today depends on food imports and faces increasing energy, food and water resource demands and pressures. This WEF Nexus workshop will train participants on better understanding and assessing the complex WEF Nexus interconnections and teach them to operationalise and implement WEF Nexus strategies. Implemented by GIZ and jointly funded by BMZ and EU, the training is in line with human capacity development - one of the main pillars of the Nexus Regional Dialogue Programme in the MENA region.

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[Read the full article on the Nexus Resource Platform »](#)

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Niger Basin // Nexus Country Profiles



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Nexus Country Profiles from Benin, Burkina Faso, Cameroon, the Ivory Coast, Guinea, Mali, Niger, Nigeria and Chad

The Nexus country profiles are developed within the framework of the Nexus Dialogue Programme, jointly funded by the European Union and the Federal Ministry for Economic Cooperation and Development (BMZ), Germany. The country profiles for the Niger basin cover Benin, Burkina Faso, Cameroon, the Ivory Coast, Guinea, Mali, Niger, Nigeria and Chad.

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[Read the full article on the Nexus Resource Platform »](#)

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Latin America and the Caribbean // Training in Solar Pumping Systems for Irrigation and Other Uses in Bolivia



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In Bolivia, many regions are affected by a lack of water and limited access to modern energy services. When traditional pumping technologies reach their technical limits, the usual means of pumping water for irrigation are gasoline or diesel pumps. To promote solar energy as a safe and environmentally friendly energy supply, the Nexus Programme Bolivia, together with the Ministry of Environment and Water and Ministry of Rural Development and Agriculture organised an international course to develop skills in the design and formulation of water, solar energy and food production projects. (Full article in Spanish)

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[Read the full article in Spanish on the Nexus Resource Platform »](#)

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Central Asia // Outcomes of the Nexus Regional Steering Committee Meeting in Astana

On 12 October 2018, the third Nexus Regional Steering Committee meeting dedicated to developing of a portfolio of investment projects to foster water, energy and food security in Central Asia was held in Astana. Representatives of the Executive Committee of the International Fund for Saving



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the Aral Sea, basin organisations, national ministries and agencies responsible for water, land management, energy and economic development, as well as experts from all five Central Asian countries participated in the meeting.

(C) CAREC

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[Read the full article on the Nexus Resource Platform »](#)

Global Nexus News

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Interview with the Social Start-up 'Effishent' // Aquaponics for Increased Food Security

The Nexus Resource Platform is widening its scope to include a focus on innovation and entrepreneurship. In this regard, NRP spoke with the social start-up 'Effishent', an Enactus Manheim project. The founders, Simon Simanovski, 22 and Alex Pirkebner, 23 developed a low-cost aquaponics system and combined it with a social business model. The aquaponics technique combines fish farming with vegetable cultivation in a closed loop water circulation. In comparison to conventional farming techniques, their technique saves up to 90% of water and ensures food security— an innovative example of the water-food Nexus. Effishent makes this technique available to small-scale farmers in tropical areas, where it increases food security in the dry season and contributes to generating an additional income for the farmer.



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(c) Effishent

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Water Utilities for Climate Mitigation // Energy-Efficient Pumps for Climate Mitigation in Madaba, Jordan



(C) GIZ

The governorate of Madaba in Jordan receives its drinking water from the Hidaan wells, which are located over 400 meters below the inhabited areas. Consequently, the Miyahuna Water Company uses over 70% of energy to lift the water. Together with the University of Jordan, the WaCCliM project assessed the energy efficiency of the supply network. With new retrofitted pumps, energy savings exceed 1000 tons of CO₂ per year.

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[Read the full article on the Nexus Resource Platform »](#)

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The Fomi Dam // Potential for a Project of Common Interest

This article discusses how the Fomi dam project, which has recently regained momentum, marks a great opportunity to bring the WEF Nexus approach into the planning process as a decision support tool. Located in upper Guinea at the head of the Niger basin, the area is affected by climate change and insecurity. The construction of the Fomi dam would pose

risks and challenges, but it would also create opportunities for development, not only on a local level but across the region. The Niger Basin Authority thus identified the Fomi dam as an important and impactful project for the whole region, including it in the Action Plan for Sustainable Development of the Niger Basin Authority. Striving towards reconciling national needs and objectives with the common, regional interest of environmental sustainability and protection of natural resources, the WEF Nexus approach promotes regional cooperation, the sharing of costs and benefits and following principles of efficiency and priority. It remains to be seen whether Guinea will turn a national project into a project of common interest. (Full article in French)



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(C) Anthony Da Cruz / unsplash

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Read the full article in [French](#) on the Nexus Resource Platform »

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ResNexus 2018 Conference // Rethinking Urban Resilience



The conference is part of the 'Resilience and Vulnerability at the Urban Nexus of Food, Water, Energy and the Environment' (ResNexus) project, jointly funded by the FAPESP, ESRC and NWO. It will be hosted by the Environmental Policy Group at Wageningen University and Research in conjunction with the ResNexus project partners Science Policy Research Unit (SPRU) at the University of Sussex and the Faculty of Public Health at the University of São Paulo.

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Read the full article on the Nexus Resource Platform »

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Outcomes of the Stockholm World Water Week 2018



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The Water-Energy-Food Nexus at Stockholm World Water Week 2018 - A Short Review

This year's Stockholm World Water Week ran under the main theme of **Water, Ecosystems and Human Development**. Although the WEF Nexus term was not the primary theme of the conference, some of the key WEF Nexus principles were thoroughly discussed and emphasised throughout the event:

- Fostering greater cooperation between the sectors, especially in decision-making processes
- WEF Nexus approach as a tool for resolving conflicts of use around natural resources and contributing to peacekeeping
- Preserving healthy ecosystems and valuing ecosystem services
- WEF Nexus approach as a tool for meeting (resource-based) SDGs
- Including voices of marginalised groups in planning processes
- Promoting resource efficiency, a circular economy and a systems perspective approach
- Focusing on nature-based solutions and green infrastructure
- Promoting innovative and new types of business models and suitable financial vehicles



(C) SIWI

The following section presents short articles on the outcomes and discussions of selected WEF Nexus-related sessions during SWWW 2018.

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Outcome // Creating Peace Through the Water-Energy-Food and Security Nexus Perspective

In many regions, dwindling water and land resources endanger the livelihoods of the population. Often, poor land and water governance and management – such as a lack of transparent, agreed, and 'fair' access rights – multiplies the negative effects of increased



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[Review the resources of this event on the Nexus Resource Platform »](#)

variability. As water becomes less predictable, competition among resource users over the perceived benefits of different uses becomes fiercer. Applying the Nexus perspective can identify future and mitigate existing conflicts from intensifying. See further resources at the Nexus Resource Platform.

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Outcome // Donors' Water Strategies Under the 2030 Agenda



(C) SIWI

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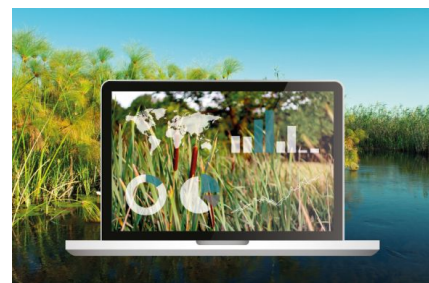
[Review the resources of this event on the Nexus Resource Platform »](#)

The rising importance of water in the development agenda is proven by a dedicated SDG on water as well as by the fact that water is integrated into more than 90% of the NDC adaptation chapters. A new dynamic is needed to actually deliver on SDG 6 and other water-related goals and targets. See the donors' water strategies under the 2030 Agenda on the Nexus Resource Platform.

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Outcome // Using Information Tools on Multifunctional Nature-Based Solutions to Achieve Sustainable Development Goals

The implementation of the water- and interrelated SDGs calls for joint action by various stakeholder groups empowered by the provision of data, information and knowledge on Nature-Based Solutions (NBS) through modern easy-to-use information and communication tools. The objective of the event was to understand how information tools need to be designed to optimise and increase the use of multifunctional nature-based solutions.



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[Review the conclusions and resources of this event on the Nexus Resource Platform »](#)

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Outcome // Middle East and North Africa Focus: Benefits for Ecosystems and Wetlands Through the Nexus

In the Mediterranean, wetlands are among its richest



(C) Bryan Minear / Unsplash

ecosystems, providing exceptional value and services including water purification, flood control, carbon sink and shoreline stability. However, they are also among its most threatened ecosystems with more than half having disappeared during the 20th century, and most of the rest under degradation or artificialization, mainly through water over-abstraction, urban development and tourism expansion, pollution and drainage.

[Review the conclusions and resources of this event at the Nexus Resource Platform »](#)

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Outcome // Bridging Conservation and Development Through Stakeholder-Inclusive Transboundary Water Governance

Bridging Conservation and Development Through Stakeholder-Inclusive Transboundary Water Governance: How do the imperatives of water-related ecosystem conservation and those of water security for human socio-economic development become intertwined in transboundary basins, which provide freshwater to 50% of the world's population? How are these efforts faring in practice? Read the conclusions on the Water, Energy & Food Security Resource Platform.



(C) SIWI

[Review the conclusions and resources of this event on the Nexus Resource Platform »](#)

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Outcome // Pollution-Driven Water Scarcity for Ecosystems and Human Uses Worldwide



(C) SIWI

To meet the SDGs, we need to understand regional hotspots of water scarcity, both in terms of water quantity and quality. This session focused on modelling the causes, impacts and solutions to reduce the gap between the supply and demand of clean water to ecosystem functioning and societal needs. Read the conclusions on the Water, Energy & Food Security Platform.

[Review the conclusions and resources of this event on the Nexus Resource Platform »](#)

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Outcome // Towards the Circularization of Hydroelectricity Using Existing Hydraulic Infrastructure

Synergistic approaches that respond to both food and energy needs and an integrated management of water are crucial to addressing the WEF Nexus. They are also needed in order to achieve the Sustainable Development Goals 2, 6

and 7. Installing hydropower plants in the greenfield imposes high environmental and social impacts. On the other hand, the waste of energy in water infrastructure is common. A direction for the decarbonisation of energy sources in the context of hydroelectricity must lead the fight against such energy waste. See further resources on the Nexus Resource Platform.

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Review the resources of this event on the Nexus Resource Platform »



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