

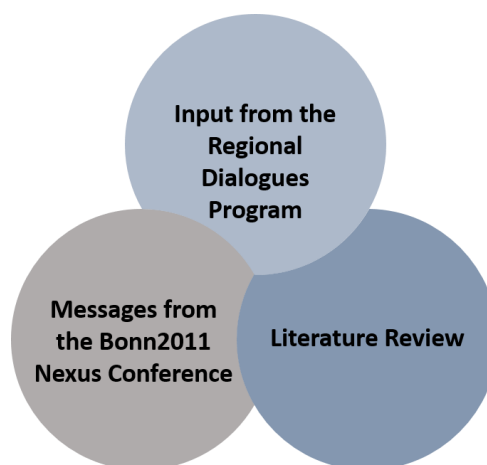
## Annex 1 – Nexus Principles

### Global Water, Energy and Food Nexus Principles



#### Introduction

The goal of the principles is to create a guidance for successfully applying, implementing and operationalising the Water-Energy-Food security Nexus (WEF Nexus) approach<sup>1</sup> in different contexts. The selection process followed a conceptual framework, which can be perceived as a guideline for choosing the principles. The principles are built upon the Messages from the Bonn 2011 Nexus Conference, on a literature review of relevant scientific publications (especially of Shannak, Mabrey, & Vittorio (2018) and Rasul & Sharma (2015)) and on local and expert-based knowledge of the *Nexus Regional Dialogues Programme*, to generate a holistic set of principles from both research and practice.



Access to natural resources and healthy ecosystems is essential for human wellbeing, dignity and sustainable livelihoods. Natural resource management and governance are, however, highly complex and water, food, and energy availability and accessibility challenges are multifaceted. Climate change, the exploitation and degradation of scarce natural resources and the environment, as well as population growth and socio-economic dynamics are putting at risk the ability to provide water, energy and food security for all, while staying within the ecological and planetary boundaries.

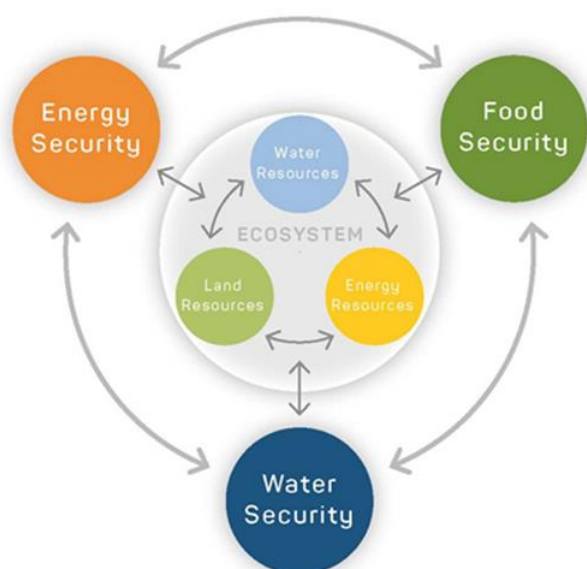
The WEF Nexus provides a **holistic and integrated approach** in order to secure access to water, energy and food in the long term. It strives to put water, energy and agricultural needs, which are competing

<sup>1</sup> The concept of the WEF Nexus acknowledges ecological and social systems as a priority

for the same scarce resources, on an equal footing. It aims to balance interests in resource use, manage conflicts and identify synergies without compromising human wellbeing and healthy ecosystems. In short, the WEF Nexus helps to:

- Highlight complex interdependencies between the water, energy and agriculture sectors
- Provide a framework to determine trade-offs and synergies between the sectors and to reconcile multiple and often conflicting interests and needs
- Promote policy coherence and multi-sectoral and inclusive cooperation
- Provide a tool to achieve the Sustainable Development Goals

The WEF Nexus approach proves to be applicable in a wider context as it can also help to enhance the understanding of interconnections between areas as different as health, gender, human mobility and education. **For example, the crucial role the WEF Nexus can play in peacekeeping, conflict management and resolution, is now increasingly promoted.**



A human rights-based approach and the Agenda 2030 serve as fundamental and non-negotiable frameworks for the WEF Nexus approach. **Hence, the WEF Nexus approach can be seen as a concept, which provides a framework, values and good practices in striving towards water, energy and food security in a just and sustainable way.**

This document shall not be seen as a blueprint but rather as a selection of main principles which, to date, proved to be important for a **successful mainstreaming**

**and operationalisation of the WEF Nexus** approach on different levels and in different regions. It derives from the concrete experiences of WEF Nexus activities in the MENA region, Latin America and the Caribbean, the Niger Basin, Southern Africa and Central Asia and is open for amendments through further lessons learned and exchanges with the global Nexus community and beyond.

#### **Nexus Principles: Messages from the Bonn2011 Conference: The Water, Energy and Food Security Nexus – Solutions for a Green Economy**

- Putting people and their basic human rights at the centre of the Nexus
- Creating public awareness and the political will to establish effective legislative frameworks, promoting good governance, greatly reducing and eventually eliminating corruption
- Involving local communities, including indigenous and women's groups fully and effectively in the planning and implementation processes related to water, energy and food nexus for local ownership and commitment.

## Global WEF Nexus Principles: Operationalising the WEF Nexus

### Principle 1 – Equitable and balanced weighting

- ∞ **Equitable and balanced weighting of the water, energy and agriculture sectors in decision-making processes.**

Decision-making processes, concerning the prioritization of water, energy and food security measures, often remain a political decision, driven by different interests in the context of existing social power relations. Power relations have an influence on which actors are involved in decision-making processes, what decisions are made, and hence determine consequences for natural resource management. For a successful operationalisation of the WEF Nexus approach, it is therefore important to apply measures and instruments, which ensure an equitable and balanced consideration of all sectors, holding decision-makers accountable for their actions and decisions.

### Principle 2 – Leaving no one behind

- ∞ **Leaving no one behind is a central principle of the WEF Nexus.**

Specific consideration always needs to be given to population groups whose vulnerabilities are worsened by limited access to water, energy and food resources and who are at risk of discrimination in the given context (such as migrants, refugees, minorities, indigenous people, elderly persons, persons with disabilities and other disadvantaged population groups such as pastoralists, nomads and rural workers). Major WEF Nexus challenges are faced by communities at local level, who frequently depend on agricultural activities for their livelihoods. In all cases, sensitivity to existing gender disparities needs to be considered. In situations of insecurity and extreme events such as droughts, floods and famine, priority is given to human survival i.e. drinking water over irrigation.

### Principle 3 – Political commitment to international agendas

- ∞ **Political will and commitment to take action upon international agendas relevant from the WEF Nexus perspective, such as the Agenda 2030 with the Sustainable Development Goals (SDGs), the Paris Agreement on Climate Change, the Addis Ababa Action Agenda, the New Urban Agenda and the Sendai Framework for Disaster Risk Reduction are a prerequisite.**

Political will and commitment in meeting the targets of internationally agreed agendas provide an enabling environment for mainstreaming and successfully implementing the WEF Nexus approach on a large scale. In turn, the WEF Nexus approach provides tools and pathways in meeting these goals in the long run. To reflect the interdependencies of sectors in international agreements, any target that aims for sustainability should consider the WEF Nexus approach. The WEF Nexus approach supports the SDGs, as it makes direct or indirect interconnections between the SDGs and helps monitoring the progress. Through the approach, the SDG's and other international agendas can be achieved in a more efficient and cost-effective manner.

#### **Principle 4 – Strengthen cross-departmental and multi-sectoral cooperation**

- ∞ **Building an enabling environment to strengthen cross-departmental and multi-sectoral mechanisms allows to foster cooperation and communication between the sectors of water, energy and agriculture on different levels**

An enabling environment in the public sector is a prerequisite, in order to apply the WEF Nexus approach in practice. This includes mechanisms in place (formal or informal) that allow and strengthen multi-sectoral communication and cooperation on various levels. This in turn enhances mutual understanding and fosters trust and cooperation across sectors by identifying synergies and common interests. It is recommended to build on existing structures and capacities at municipal and governmental levels.

#### **Principle 5 – Enhancing mechanisms for data exchange and modelling**

- ∞ **Strengthen mechanisms and tools for exchanging and modelling relevant data, information and statistics between governmental and non-governmental entities of the water, energy and agriculture and other relevant sectors.**

In order to ensure an informed decision-making process, in line with the WEF Nexus approach, quality, reliable and disaggregated data needs to be accessible and shared by relevant stakeholders through commonly accessible databases. Collaboration and coordination between national statistics offices and relevant independent knowledge institutions can improve data reporting channels, harmonisation and consistency. The use of tools and models to analyse WEF Nexus data should carefully balance complexity and applicability in decision-making settings.

#### **Principle 6 – WEF Nexus Capacity Development**

- ∞ **Building Nexus capacity of people, institutions, organisations, and both the public and private sectors through trainings and awareness raising is essential.**

WEF Nexus capacity development fosters informed decision-making and the ability for a holistic and critical thinking, in order to prioritise the most sustainable solutions in decision-making processes. Additionally, the transfer of sector-specific knowledge to other sectors, and the translation of scientific research into practice can be supported by capacity building. Specific institutional and individual capacity building programs need to be developed in the context of the WEF Nexus with a focus on creating competencies in dialogue facilitation, conflict resolution, data management and analysis. This should be acknowledged and understood on both, a technical and policy level. It must be recognized that capacity development is a long-term and continuous strategic process.

#### **Principle 7 – Inclusive and participatory multi-stakeholder approach**

- ∞ **Fostering inclusive and participatory multi-stakeholder planning and decision-making processes, including multi-stakeholder partnerships and collaborations with local, national and regional research institutions, associations, organisations and the private sector.**

Multi-stakeholder platforms facilitate intersectoral dialogue and support collaboration between researchers, policy-makers, civil society and the private sector. Efforts to work with public institutions,

such as ministries or river basin commissions, who have the mandate to bring a multitude of different actors together and find incentives for different actors to cooperate, can lead to an increased security and efficiency of resources. Multi-stakeholder engagement approaches ensure participation and enable trust, equity, accountability and transparency to create partnerships with shared visions among the different stakeholders.

### **Principle 8 – Financing schemes and investments**

#### **∞ Financing schemes and investments (public or private) shall support WEF Nexus implementation objectives to facilitate innovative and future oriented methods**

Existing WEF Nexus indicators, methodologies and guidelines should be applied in selecting WEF Nexus investment projects and within the development of joint multi-sectoral investment plans at the regional and basin level. This ensures an equitable consideration of both economic and natural resources development, as well as a contribution in meeting the SDGs. Furthermore, environmental and social assessment studies should be a prerequisite. The support of local start-ups, social and environmental entrepreneurs and social businesses should be enhanced. Cooperation with the private sector should be promoted by communicating co-benefits created with projects that follow the WEF Nexus approach.

### **Principle 9 – Sustainable and efficient resource use**

#### **∞ Promotion of sustainable and efficient resource use and consumption patterns**

Structures, effects of globalisation, global trade and its externalities, have to be sensitively taken into account when proposing concepts of natural resource governance and management. On a small scale, resource efficiency can be reached through technological innovations, such as Solar-Powered-Irrigation Systems. On a larger scale and in the long-term, a change of consumption patterns that leads towards a circular economy reinforces a sustainable resource use. Economic and regulatory instruments can improve resources efficiency, enhance economic and climate resilience and help to achieve the goals of the SDGs and the Paris Agreement. A challenge lies in aligning short-term political agendas and long-term sustainable objectives.

### **Principle 10 – Furthering peace and preventing conflict**

#### **∞ Improve peace, stability and security in a fragile context through the WEF Nexus in areas where resource conflicts are exacerbated by climate change.**

Regional security challenges often emerge from competing interests of communities or governments over shared, scarce natural resources. Inequality of access to natural resources on inter-state level and within countries enhance these tensions. Furthermore, pressures on water, land and energy resources increases due to factors such as inefficient utilization of the resources, population and economic growth, migration movements and, most importantly, climate change. Resource conflicts have the potential to contribute to increased instability, especially as climate change intensifies the pressure on

the natural resources. Pursuing an integrated, WEF Nexus approach helps to counter negative spirals of resource scarcity and conflict and establishes climate resilient development opportunities.

*“We have to change our mindset to think Nexus”*

Violeta Kuzmickaite (Senior Adviser for the EU and International at VLAQWA  
- Flemish Knowledge Centre for Water)

## References

Shannak, S., Mabrey, D., & Vittorio, M. (2018). Moving from theory to practice in the water–energy–food nexus: An evaluation of existing models and frameworks. *Water-Energy Nexus*, 1(1), 17–25.

Rasul, G., & Sharma, B. (2015). The nexus approach to water–energy–food security: an option for adaptation to climate change. *Climate Policy*, 16(6), 682–702.