



EUROPEAN UNION



The Project is funded by the European Union, implemented by CAREC in cooperation with IUCN, supported by EC IFAS



Photo by NASA at Unsplash

Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment

From Idea to Shared Benefits

Policy Brief

June 2019

Contents

Background.....	1
Purpose.....	1
WEF Nexus models and frameworks	2
Basics of the project cycle	2
Phase 1 – Initiation.....	3
Phase 2 – Planning.....	3
Phase 3 – Execution.....	5
Conclusion	5

This publication was produced with the financial support of the European Union in the framework of the Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food Security Nexus Dialogue and Multi-Sector Investment". Its contents are the sole responsibility of the Regional Environmental Centre of Central Asia (CAREC) and the International Union for Conservation of Nature (IUCN) and do not necessarily reflect the views of the European Union.

Background

The Central Asia Nexus Dialogue Project: Fostering Water, Energy and Food (WEF) Security Nexus Dialogue and Multi-Sector Investment in Central Asia (the Nexus Dialogue in CA Project) is part of the Phase I of the Global Nexus Regional Dialogues Programme, co-funded by the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ). The Nexus Dialogue Project in CA is implemented by the Regional Environmental Centre for Central Asia (CAREC) in partnership with the International Union for Conservation of Nature (IUCN) and with the support of the Executive Committee of the International Fund for Saving the Aral Sea.

The overall objective of the Nexus Dialogue in CA Project is to support to Central Asian countries and regional institutions in sustainable development and regional cooperation with the aim to create a multi-sectoral enabling environment to facilitate sustainable and climate-resilient investments for increased water, energy and food security in Central Asia. The ultimate goal of the Nexus project is to prepare the ground for investments within the EU Nexus Dialogues Programme (Phase II) which is expected to start in 2020.

Nexus Principles:

- Principle 1 – Equitable and balanced weighting
- Principle 2 – Leaving no one behind
- Principle 3 – Political commitment to international agendas
- Principle 4 – Strengthen cross-departmental and multi-sectoral cooperation
- Principle 5 – Enhancing mechanisms for data exchange and modelling
- Principle 6 – WEF Nexus Capacity Development
- Principle 7 – Inclusive and participatory multi-stakeholder approach
- Principle 8 – Financing schemes and investments
- Principle 9 – Considering the broader context of the natural resource governance system
- Principle 10 – Sustainable and efficient resource use
- Principle 11 – Furthering peace and preventing conflict

(Source: Global Nexus Secretariat)

Purpose

Infrastructure and socio-economic development are key strategic goals of CA countries, which are directly linked with the availability of financial resources, both domestic and international. Since the amount of international financial resources available for development projects has been decreasing over the years, it is important to focus available funding on strategically significant and well-designed projects, especially of regional nature with greater impact toward realizing the national development objectives in an environmentally friendly way while also achieving the intended socio-economic advancements. This document aims at supporting the project preparation process by providing brief guidelines on how to prepare project proposals and assess benefits, keeping the WEF Nexus approach in mind.

WEF Nexus models and frameworks¹

Shannak et al. have identified a number of WEF models and frameworks applicable for integrated natural resource planning, which have analytical tools and policy dimension that focuses on developing integrated nexus models:

1. **Water Evaluation and Planning (WEAP) by the Stockholm Environment Institute (SEI)** is a software tool to calculate water demand, supply, runoff, infiltration, requirement by crop, flows, storage, pollution generation, treatment, discharge and instream water quality under varying hydrologic and policy scenarios.
2. **Global Policy Dialogue Model (PODIUM) by Integrated Water Management Institute (IWMI)** is an interactive policy planning and scenario analysis tool which explores the trade-offs and future demands on water resources on a national scale. It is intended to foster dialogue and stakeholder participation, and provide a basis for multi-sectoral planning and analysis.
3. **Water–energy–food framework by the International Centre for Integrated Mountain Development (ICIMOD)** is a system-wide tool focused on the ecosystem, rather than a sectoral tool, and helps reducing trade-offs and allows generating additional benefits from efficient natural resources use.
4. **Climate, Land, Energy and Water Use (CLEWs) by the International Atomic Energy Agency (IAEA)** combines different models including WEAP-water model, Long-range Energy Alternatives Planning System (LEAP) energy-focused model and the Agro-Ecological Zones (AEZ) land production tool to quantify resource use, greenhouse gas emissions and costs associated with meeting energy, water and food security goals.
5. **Diagnostic tool for investment in water for agriculture and energy (DTI) by the Food and Agricultural Organization (FAO)** analyzes the impact of hydropower and irrigation projects on three aspects: (1) human, social and environmental spheres; (2) poverty and food security; and (3) health and nutrition. It also facilitates the identification of practical solutions, which reflect the institutional, legal and policy realities of a country.

Basics of the project cycle

NB: There is no universal set of sectors to be analysed when a WEF Nexus approach is being considered during the project formulation, hence for proper scenario designing a well-structured analysis of all aspects of the project idea is essential. However, water, energy, food and the environment should be at the core of any analysis.

A traditional three-phase project management method was used for the purpose of this document. Each phase is divided into a number of stages, making it possible to effectively utilize resources and spread the total workload into smaller components, thus making it easier to monitor and implement.

¹ Shannak, Sa'd, Daniel Mabrey, and Michele Vittorio. 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. <https://doi.org/10.1016/j.wen.2018.04.001>.

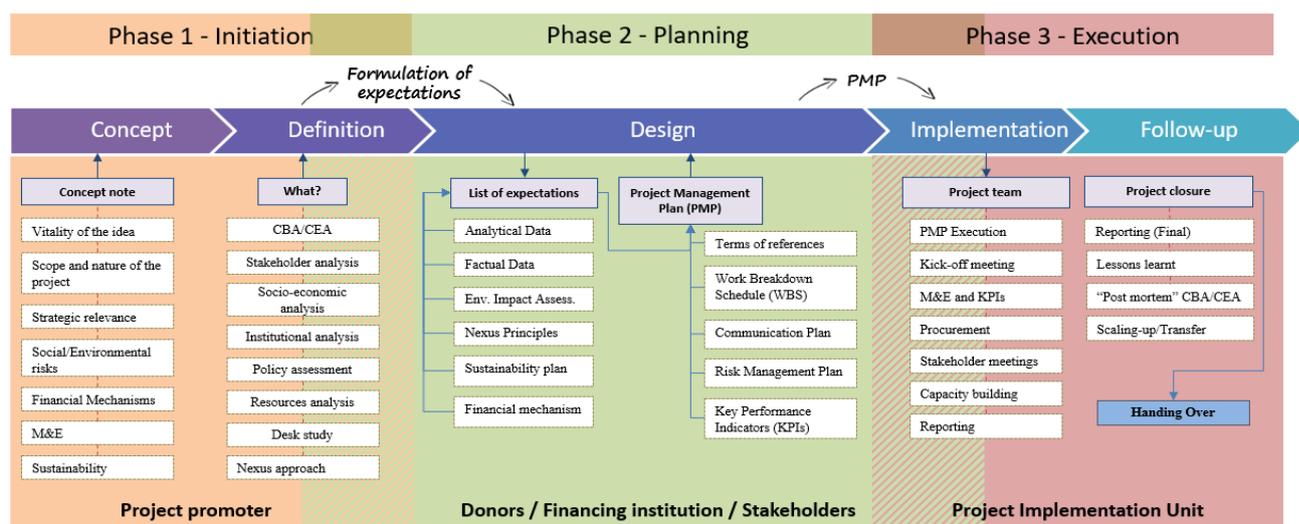


Figure 1: Project cycle schematics

Phase 1 – Initiation

The process of project development is initiated by a project promoter who puts together a proposal in the form of concept note. The “concept” contains a generic description of the project idea and considers the following list of criteria to the extent possible:²

1. **Viability of the idea:** Is there a political support and who is taking the ownership?
2. **Scope and nature of the project:** What will be implemented? Where, when and how?
3. **Strategic relevance:** What national and global strategies are being covered?
4. **Social and Environmental risks:** What is the likelihood of social or environmental impact?
5. **Financial Mechanisms:** What are the budget and investment opportunities?
6. **Monitoring and Evaluation:** How monitoring and evaluation will be done?
7. **Sustainability:** How will the sustainability of the project results be ensured?

Once the project concept is elaborated the project needs “definition”. During this stage the outcomes of the project and expectations of the involved stakeholders are clearly identified through consultations and meetings. It is recommended that all stakeholders of the project collaborate during this stage. Cost-benefit analysis, cost effectiveness analysis and environmental impact assessments help to ensure that benefits are maximized and trade-offs are minimized during the scenario formulation and actual implementation of the project and therefore form the base for the next phase.

Phase 2 – Planning

While the “Initiation Phase” is more theoretical in nature, the “Planning Phase” analyses data to ensure that WEF Nexus thinking is sufficiently adhered by and that multi-sector benefit are achieved.

During this phase the following elements of the project are elaborated and clearly stated to ensure smooth implementation of the project and its monitoring, which will help to estimate the shared benefits received from the intervention:

- **Work Breakdown Schedule (WBS)** – visual representation of the project that provides the project team with manageable implementation steps, including clear guidelines for transboundary activities and multisectoral interlink.

² Please refer to the From Idea to Shared benefits – write-aid for more details.

- **Communication Plan** – awareness raising tool to present the milestones of the project through targeted messaging to identified groups. This is especially important when the project affects large populations and has environmental effects.
- **Risk Management Plan (RMP)** – a tool used to mitigate possible risks associated with the project implementation and address occurring unfavorable conditions in a timely and organized manner.
- **Key Performance Indicators (KPIs)** – used to monitor a project’s performance, adherence to timeline, illustrate the appropriation rate of the budget, the achievement of the goals and other components of the project management plan. For projects with WEF Nexus thinking a set of respective indicators should be used.
- **Financial mechanisms**³ – exploration of the project eligibility for available funding types, such as:
 - **Investment grants** – consist of capital transfers in cash or in kind made by governments to other resident or non-resident institutional units to finance all or part of the costs of their acquiring fixed assets.
 - **Official Development Assistance (ODA) Loan** – government aid that promotes and specifically targets the sustainable development in developing countries.
 - **Loan Guarantees** – legally binding agreement under which the guarantor agrees to pay any or all of the amount due on a loan instrument in the event of nonpayment by the borrower.
 - **Equity investment** – direct capital contribution to a company or investment fund, usually to send a signal to other investors and attract additional capital.
 - **Sources of funding** (based on the WECOOP2 Investors guide⁴):
 - EU Investment Facility for Central Asia (IFCA)
 - European Investment Bank (EIB)
 - European Bank for Reconstruction and Development (EBRD)
 - Green Climate Fund (GCF)
 - World Bank (WB)
 - Asian Development Bank (ADB)
 - Asian Infrastructure Investment Bank (AIIB)
 - German Development Bank (KfW)
 - French Development Agency (AFD)
- **Investment attractiveness** – funding return mechanism which could include a Public-Private Partnerships (PPP) component or set the base for public or private ownership, as well as the generation of new jobs in the local community.
- **Sustainability plan** – ensure financial/organizational/infrastructure sustainability, whether it is about creating new institutions, products or services. Self-sustaining resource mobilization mechanism could be used as a final point on the sustainability section, if that does not contradict or is supported by the project idea and state laws.

³ <http://www.oecd.org/>

⁴ Investors guide developed under the second phase of the Regional Coordination and Support for the EU-Central Asia enhanced Regional Cooperation on Environment, Climate Change and Water (WECOOP2) <https://www.greeninvest-ca.eu/content/investors-guide>

Phase 3 – Execution

In the last phase of the project cycle the practical execution of the project, an assessment of the final deliverables and reporting on the accomplishments and lessons learned take place. Depending on the project scope and scale the time required to fully fulfill this phase may vary from several months to several years. To ensure the timely and satisfactory implementation of all components of the project it is important that WBS and KPIs are well formulated and followed. This is the last and final project management stage, when the project deliverables are handed over to the intended beneficiaries.

Key Performance Indicators (KPI) which were identified during the project design stage will serve as a “post mortem” assessment tool to measure the project progression, communicate the project progress, help to evaluate the degree to which the project management plan was implemented and identify the project failure points. They will also help to assess the impact project activities had.

Conclusion

Assessing shared social and economic benefits of the project intervention is probably the hardest, but definitely one of the most important, aspects in any project because it provides the basis for political trust and opens doors for cooperation.

The portfolio of WEF Nexus project ideas that were formulated within the scope of the Nexus Dialogue in CA Project covers vast array of environmental and socio-economic aspects of development of the Aral Sea basin, and if viewed as a holistic document meets all the requirements of the WEF Nexus approach. However, since the projects are at the concept stage, they need to be further elaborated. Therefore, this policy brief will assist the project promoter in understanding the scope of work and data needed to formulate the project concept into a full-fledged proposal, and also will give concrete guidelines on identifying viable funding mechanisms and their respective requirements to finance and realize the projects. Most importantly, Nexus approach can ensure that multisectoral WEF Nexus thinking is applied to receive the highest return on the resources used. Importantly, the WEF Nexus approach allows to gain more non-economic benefits when compared to a silo approach, since benefits are maximized and trade-offs are minimized.

Contacts

E-mail: nexuscentralasia@carececo.org

Website: carececo.org/en/main/activity/projects/nexus/

Author: Rustam Issakhojayev, CAREC expert