

Annex 2 – WEF Nexus Safeguards

Table 1: Defining Energy, Water and Food Security for the Development of a Composite WEF Indicator

Definitions of Water, Food and Energy & main elements of these definitions	
Food security	<p>The state of having reliable access to a sufficient quantity of affordable, nutritious food (Oxford English dictionary)</p> <p>A person is food insecure « when they lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. This may be due to unavailability of food and/or lack of resources to obtain food » (FAO 2021)</p> <p>Main elements: Food quality & nutrition, sufficient quantity, availability and access to food.</p>
Water security	<p>“The availability of an acceptable quantity and quality of water for health, livelihoods and production, coupled with an acceptable level of water-related risks (Grey and Sadoff 2007)”.</p> <p>“The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability (UN Water 2013)</p> <p>A water secure city: satisfies the water supply and sanitation needs of the communities, supports a productive economy, maintains river health and ecosystem, and builds resilient communities that can adapt to change (Asia-Pacific Network for Global Change Research on Water Security in Babel et al., 2017).</p> <p>Main elements: Access to acceptable quality and quantity of water, ecosystem health and resilience building.</p>
Energy security	<p>“The uninterrupted availability of energy sources at an affordable price” (IEA 2021)</p> <p>“Access to clean, reliable and affordable energy services for cooking and heating, lighting, communications and productive uses” (AGECC 2010)</p> <p>« the interconnection of availability, affordability, efficiency, sustainability, and governance, measures the degree to which communities and individuals can reliably access energy to meet their needs of their daily lives » (Savacool 2013);</p> <p>Main elements are: Availability, reliability (uninterrupted supply), affordability.</p>

Table 2: WEF Nexus Safeguards Checklist – Step 1

	WEF Eligibility	Implication
W - Water security	Is access and availability of surface, ground, produced water, and/or third-party water improved as a result of the project?	Yes; I do not know N/A, No
	Is the quality and quantity of surface, ground, produced water and/or third-party water improved as a result of the project?	Yes; I do not know N/A, No
E - Energy security	Is access or availability of renewable energy improved as a result of the project?	Yes; I do not know N/A, No
	Is the reliability of energy supply improved?	Yes; I do not know N/A, No
F - Food security	Is the access and availability of food supply improved as a result of the project?	Yes; I do not know N/A, No
	Will the quality of food and/or nutrition levels improve, e.g., due to crop diversification or enhanced access and availability to food all-year round, as a result of the project?	Yes; I do not know N/A, No
Resource use efficiency	Is energy or water-use efficiency improved, in that less energy or water is used to produce the same or higher output?*	Yes; I do not know N/A, No
	Or does the project deliver an energy, water or food saving technology?	Yes; I do not know N/A, No
All WEF resources	Is there evidence or concern regarding significant negative impacts on water, energy or food security within or outside the project boundary that are not mitigated as part of the project design? (see Table 2 for possible negative impacts)	Yes; I do not know N/A, No
	*For example: Less water for more food: Irrigation (integrated approach), hydroponics etc; Less energy for more food: solar drying, renewable energy in food production/value chain; sustainable land use practices, improving soil water retention.	

Table 3: WEF Nexus Safeguards Checklist – Step 2

Non-exhaustive list of risk factors that could lead to <u>negative and significant</u> impacts
Environmental aspects to consider
Will the planned activities contribute to cumulative environmental impacts?
Will the project lead to adverse effects on habitats (e.g., modified, natural, and critical habitats) and/or ecosystems and ecosystem services? For example: habitat loss, conversion or degradation, fragmentation, hydrological changes.
Will the activities take place in areas subject to hazards such as earthquakes, floods, landslides, sever winds, storm surges, tsunami, or volcanic eruption?
Are the activities likely to have potential effects on biodiversity (especially critically endangered and/or endangered species, endemic or restricted-range species, and globally significant migratory or congregatory species) and ecosystem services, including production of living natural resources?
Will the project lead to strengthening the conservation of biodiversity?
Climate Change aspects to consider
Is there relevant information about the effects of climate change - current situation and predictions- in the intervention area?
Will the project contribute to climate change adaptation or mitigation (using green or grey infrastructure)?
Will the project lead to an increased vulnerability to climate change impacts or disaster risks, now or in the future (also known negative coping practices)?
Will the project lead to a reduction of GHG emissions and thereby to climate change mitigation?
Governance and upscaling aspects to consider
Are there policy instruments or governance structures in place to encourage integrated solutions?

Will the project lead to an improvement of intersectoral communication and cooperation?
Did the project or policy result out of a cross-sectoral coordination and planning process?
Is the WEF technology / solution available on the local market?
Is the project financially viable?
Will the project lead to the promotion of sustainable use of resources?
Have arrangements been put in place to guarantee the long-term sustainability of the project?
Water aspects to consider
Will the activities involve transboundary impacts on air, water or other natural resources?
Will water conservation or water saving efforts improve?
What are the main water resources relevant to the activities / interventions?
Could the project lead to greater water consumption?
Energy aspects to consider
What are the main energy resources relevant to the activities / interventions?
Will the share of renewable energy increase in the overall energy mix?
Food/ Nutritional/ Agricultural aspects to consider
What are the main food resources relevant to the activities / interventions?
Will the project lead to soil conservation and/or restoration?

Does the project allow for enhancing nutrition?

Does the project allow for enhancing crop and plant diversity, or land productivity?

Does the project allow for enhancing land productivity?

Will sustainable land management practices, regenerative farming or other nature-based solutions (to climate change adaptation) be employed as part of the project?

Social aspects to consider

How is the social and cultural context in the intervention area?

Who are the stakeholders affected (natural resource-based livelihoods) by the project or planned activities?

What are the main energy users, water users and agricultural producers relevant to the planned activities?

Are the activities likely to induce potential social conflicts?

Are the activities likely to have effects on indigenous peoples and communities, such as impact lands and natural resources, land tenure and cultural resources?

Will the activities potentially generate risks and effect the health and safety of the affected communities?

For example: through the release of pollutants to the environment; use of hazardous materials; generate hazardous and non-hazardous waste; application of pesticides that may have a negative effect on the environment or health

Will the project or activities lead to the advancement of gender equality, especially regarding participation and access to opportunities and benefits?