



# Promoting Water-Energy-Food securities while reducing risks on Ecosystems: The WEFE Nexus approach in Lebanon

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# THE WATER-ENERGY-FOOD- ECOSYSTEMS (WEFE) NEXUS

## WHAT IS SO SPECIAL ABOUT IT?

## “WEFE NEXUS”

The concept of **nexus embodies the idea of integration** and facilitates the proper understanding of inter-relationships of water, energy, food and ecosystems and the way in which policies and interventions in these sectors could be promoted in a coherent and coordinated way so that development is sustainable, and biodiversity is protected.

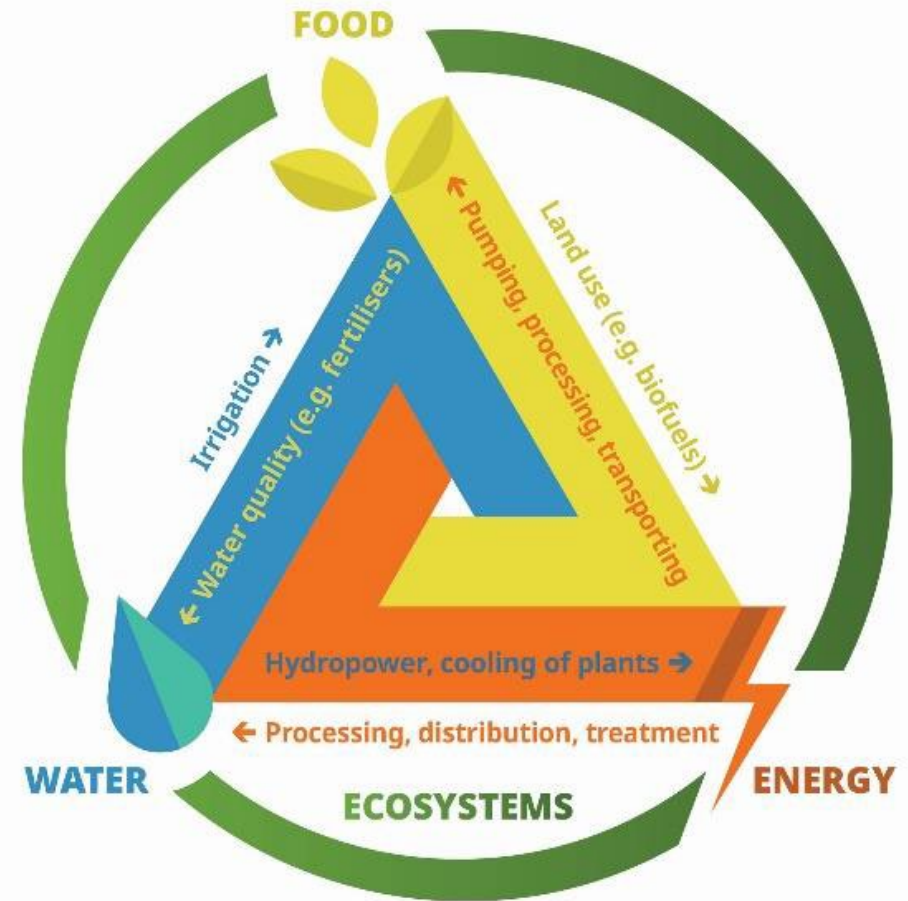
# The WEFE Nexus: a world of interdependencies

**Water <-> Energy:** Water plays a key role in energy production e.g. in hydroelectric plants, for cooling fossil-fuel and nuclear plants, in growing plants for biofuels. At the same time, energy is required to process and distribute water, to treat wastewater, to pump groundwater, to desalinate seawater.

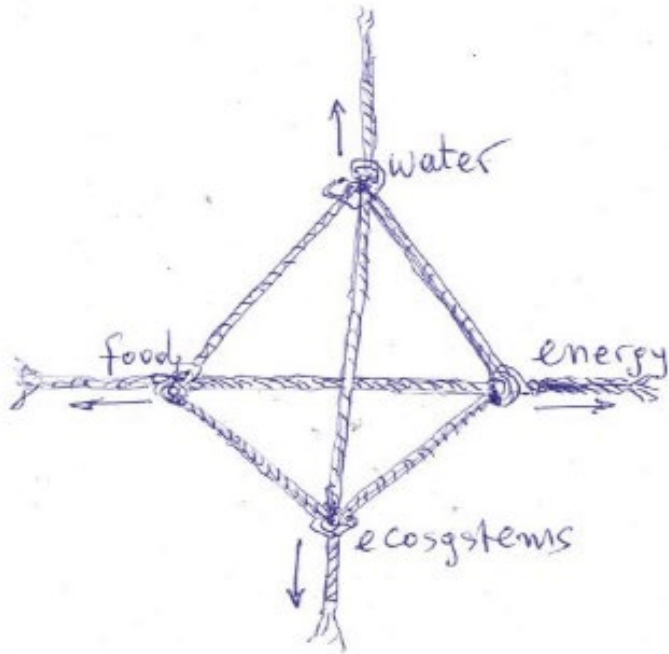
**Water <-> Food:** Water is the keystone for the entire agro-food supply chain, while agricultural intensification impacts water quality.

**Food <-> Energy:** Energy is an essential input throughout the entire agro-food supply chain, from pumping to processing to transportation to refrigeration. Conflicts around land use could arise in the case of biofuels or extended solar installations.

**Healthy ecosystems** are an essential requirement for the sustainability of all the above and are negatively affected if water, energy or food are used in an unsustainable way.

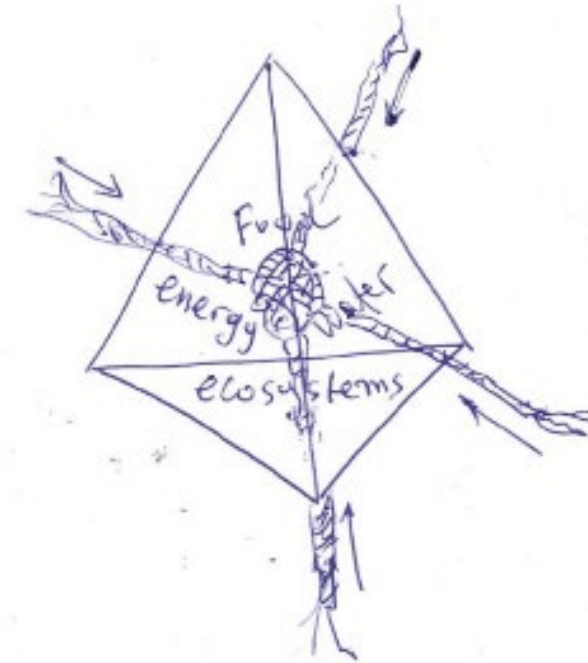
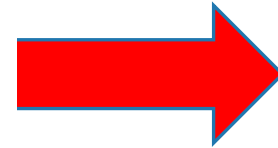


# Visualisation of the WEF E Nexus



**A system of Tension**

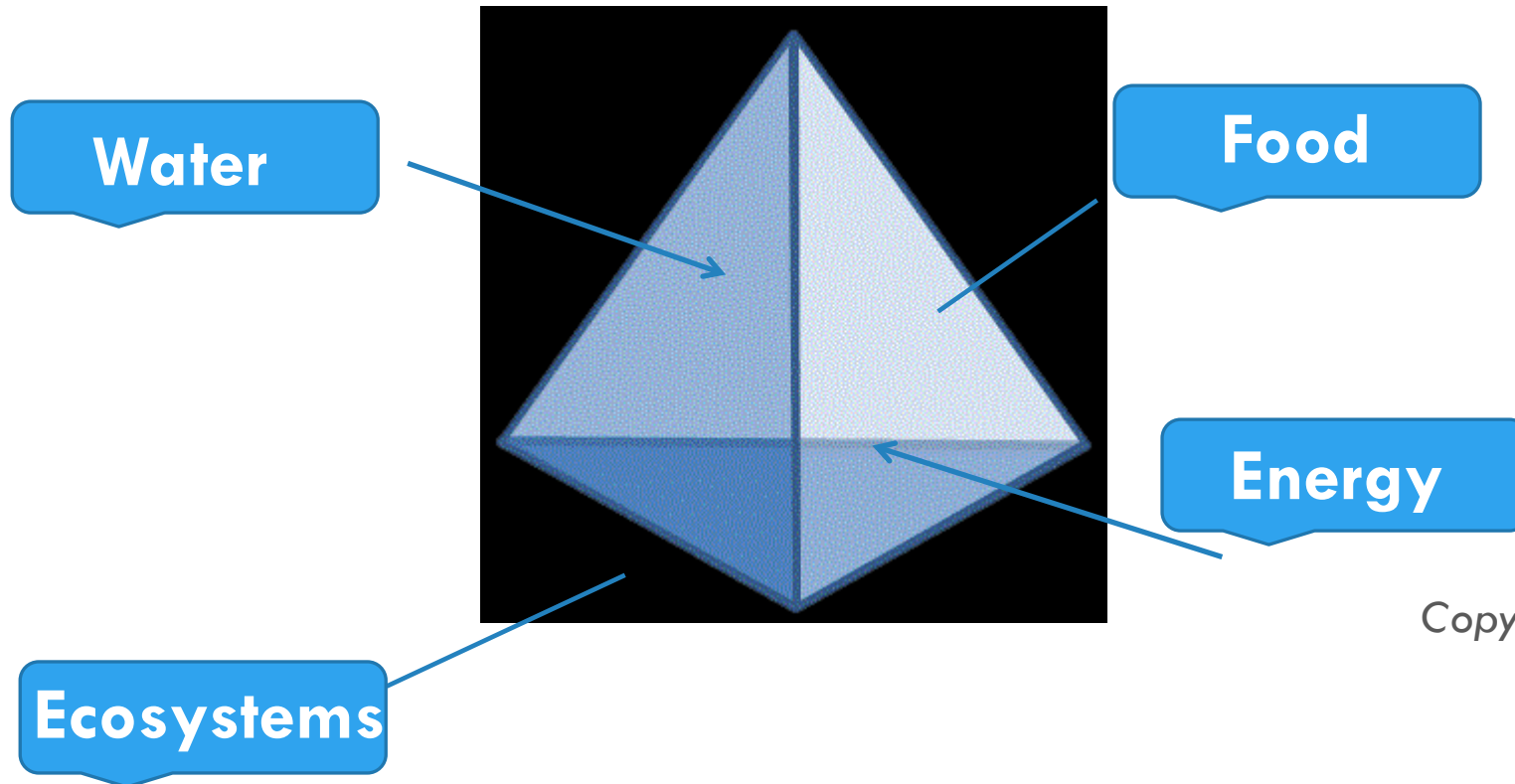
If one pulls too hard, the Nexus will be broken



**A system of Convergence**

Provides equitable « entry points » for the major sectors/components of development

# Visualisation of the Nexus



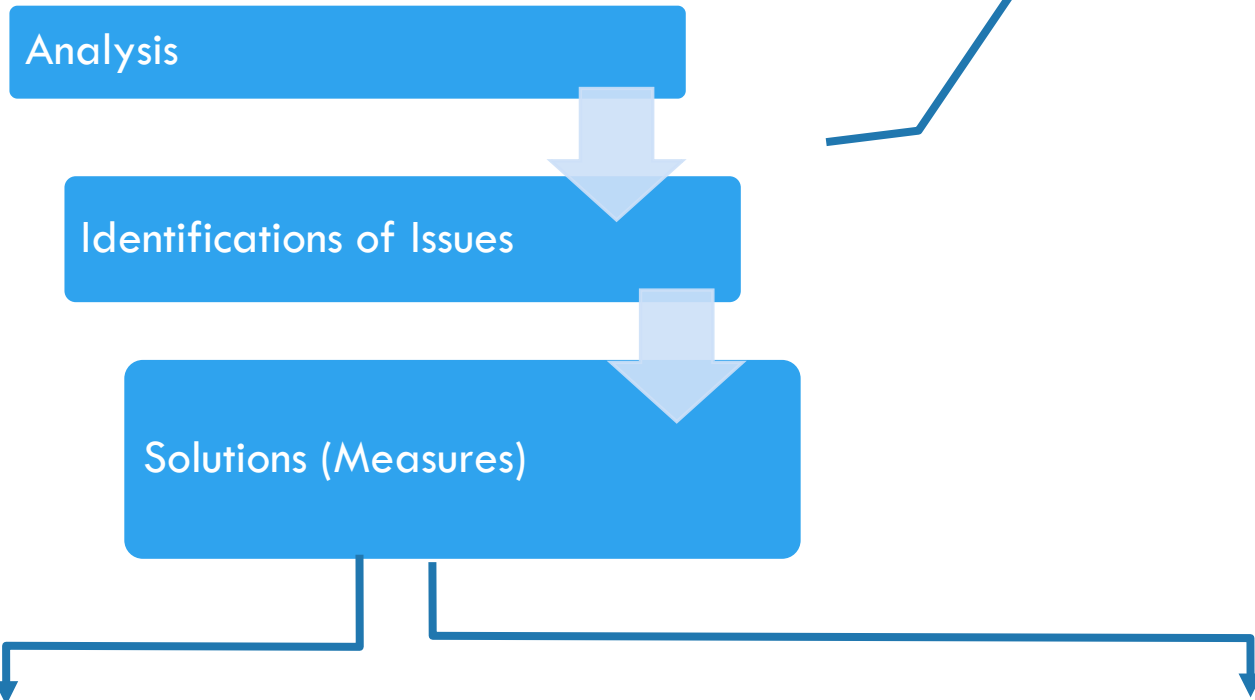
*Copyright: Michael Scoullos*

It provides the ‘**space**’ within which policies and interventions should be closely coordinated and optimised in order to approach sustainable development  
It is large enough and appropriate to allow for **win-win solutions**...provided that the “**silos**” approach is abandoned.

# The WEFE Nexus approach in Lebanon

- Use of the nexus approach in ICZM plans and strategies following the source-to-sea approach that allows:
  - to acknowledge pressures on the coastal area due to upstream causes
  - to identify interlinkages in policy/thematic areas of priority and key cross-sectoral actions that produce positive synergistic effects in solving the root causes of degradation
- To enhance sectoral integration resulting in improved design, hence applicability, of related policies
- To link these with investment development

### The WEFE Nexus approach methodology



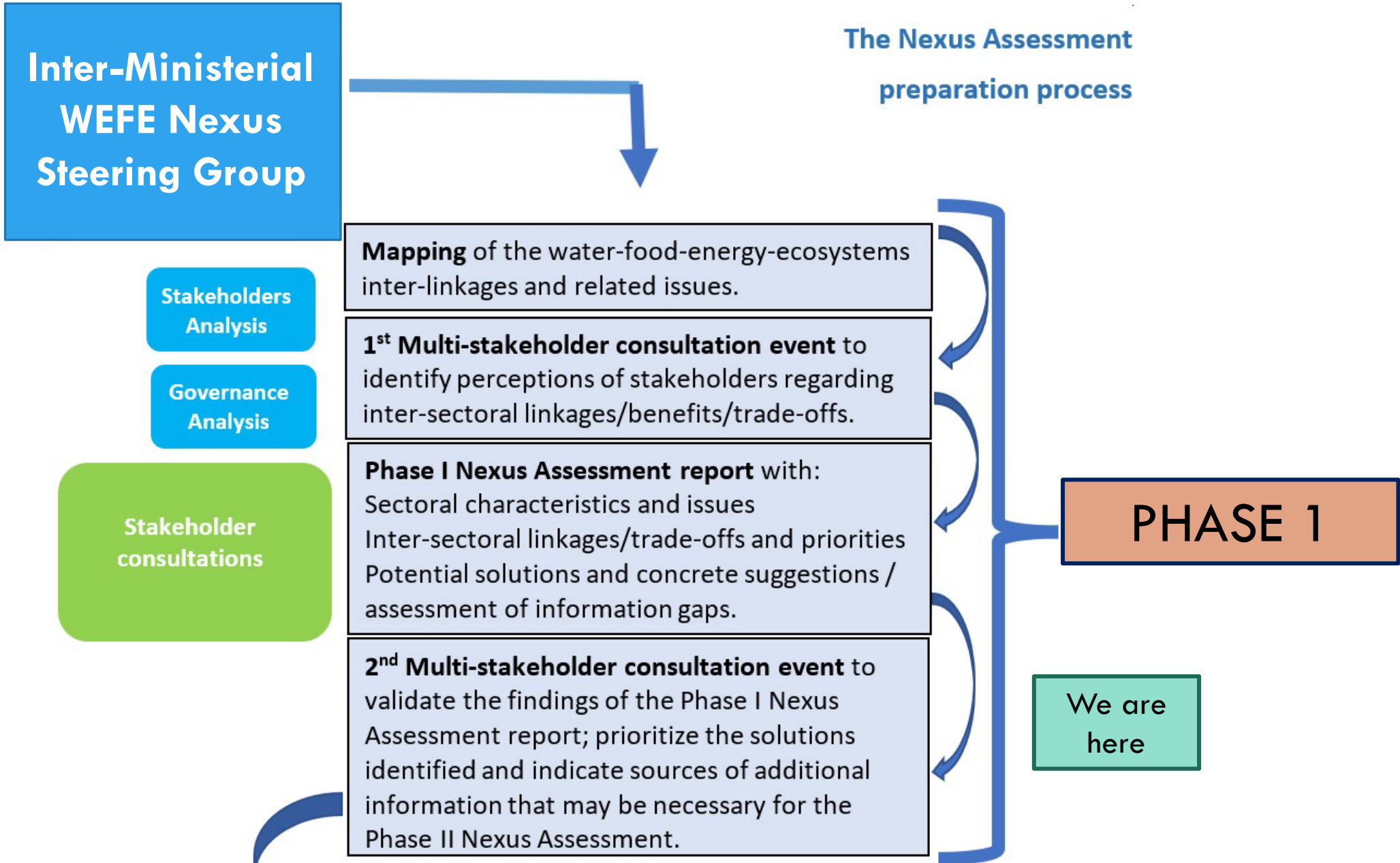
**1. Water-energy-food-ecosystems Nexus Assessments** in priority coastal areas

**2. Nexus Inter-ministerial or cross-sectoral Committees or equivalent bodies established, OR existing inter-ministerial or cross-sectoral bodies steer the development of Nexus Assessments and strategic documents**

**3. Nexus strategies/Action Plans** prepared in priority coastal/transboundary areas

**4. Interventions identified and their financing** by institutional and/ or private development partners and/ or banks facilitated





# Inter-Ministerial WEFE Nexus Steering Group

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Multi-stakeholders' consultation event 2 will validate the findings of the Phase I Nexus Assessment report; prioritize the solutions identified and indicate sources of additional information that may be necessary for the Phase II Nexus Assessment.

We are here

Data collection and/or generation to fill information gaps identified in Phase 1

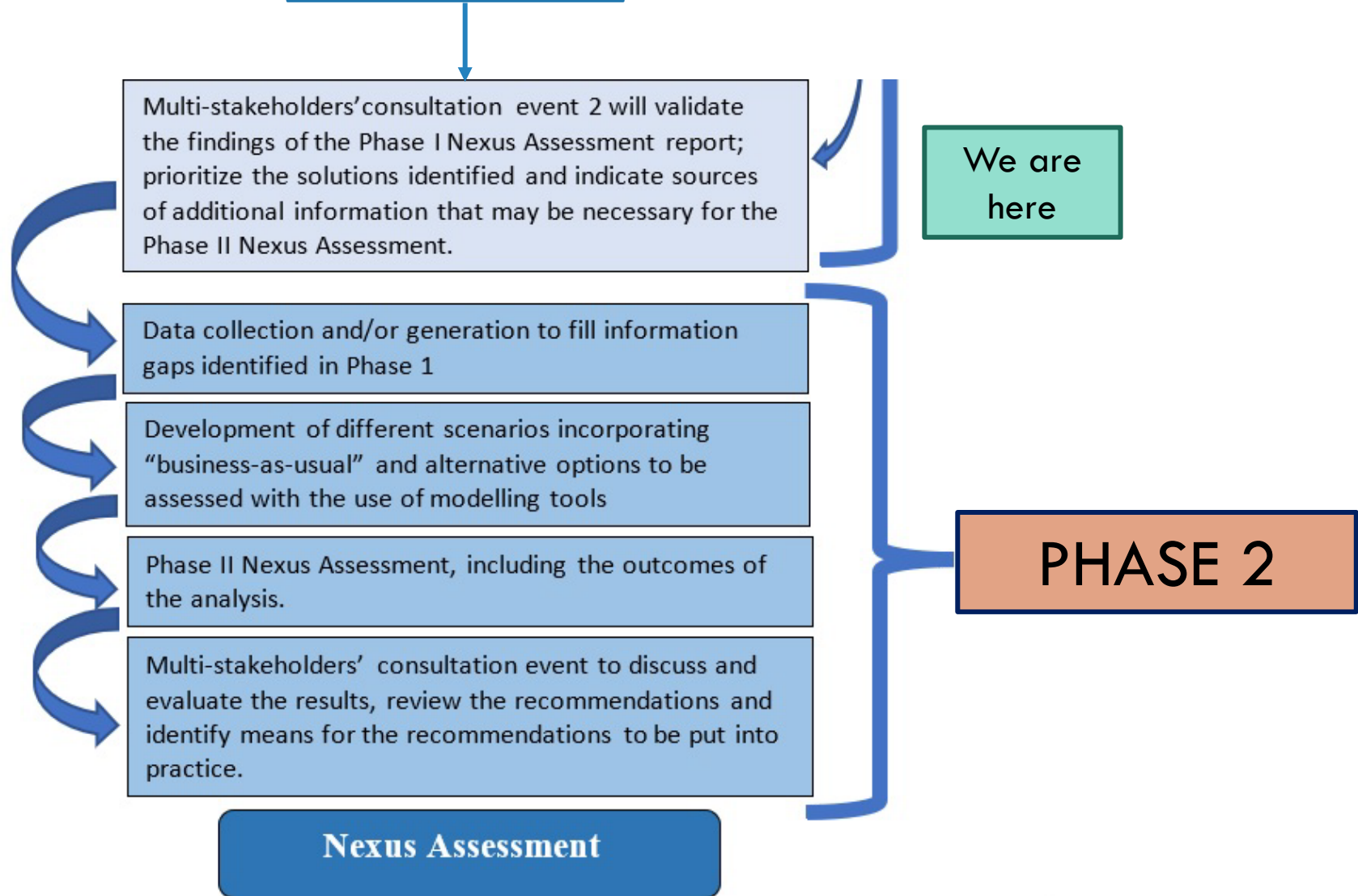
Development of different scenarios incorporating "business-as-usual" and alternative options to be assessed with the use of modelling tools

Phase II Nexus Assessment, including the outcomes of the analysis.

Multi-stakeholders' consultation event to discuss and evaluate the results, review the recommendations and identify means for the recommendations to be put into practice.

**PHASE 2**

**Nexus Assessment**



THANK YOU