SUSTAINABLE DEVELOPMENT PRINCIPLES FOR NEXUS CHOICES

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The **SDGs** give us a reading lens for finding the interlinkages of interest.

The interlinkages are then studied with the underlying physical and social systems.
Climate action can enable and reinforce building prosperous, equal and peaceful societies.

Climate action has many co-benefits on health (pollution), energy and water systems, and efficient and circular societies.

CLIMATE ACTION AND THE SDGS

...and it is necessary for environmental targets to be met

But some important trade-offs exist:
- Can be costly in the short term
- Can impact fuel-dependent economies

Assessing the Water-Energy-Food-Ecosystems nexus in river basins

To identify benefits of transboundary cooperation & integrated water resources management (SDG 6.5)
• Extensive coordination with stakeholders
• Quantitative modelling of interlinkages
Nexus in the North Western Sahara Aquifer

Agricultural activity
• What is the total irrigated area in the region?

Water demand
• What is the total water demand for irrigation?
• What is the impact of improving irrigation systems?

Electricity demand
• How much energy required for pumping?
• If desalination would be needed, how much energy would be required?

Electricity Supply
• What is the least cost electricity supply option?
REFLECTIONS

- SDGs as a valuable **starting point** for decision-makers to select **dynamics of interest and spur dialogue**
- Then need to go to system level analyses to quantify and understand dynamics
- Especially **important to understand the benefits to collaborate on nexus resources across borders (e.g. pursuing integrated water resources management - SDG 6.5)**