Can the implementation of the Water-Food-Energy-Ecosystem Nexus support economic growth in the Mediterranean region?

Incorporating water into broader development frameworks through Nexus approaches

Marlos De Souza
Secretary – Water Platform FAO
The Syr Darya Basin - Context
The Syr Darya Basin - Context
The Syr Darya Basin – Nexus Challenges
selected elements of the Water-Energy-Food Nexus in the Syr Darya Basin
Current Nexus interlinkages in the Syr Darya Basin

SYR DARYA BASIN

- Very high dependence on hydropower to meet electricity and heating demand upstream (low resilience in dry years)
- Hydropower allows for extension of power generation through integration of other renewable energy sources

WATER FOR ENERGY

WATER STORAGE AND BUFFER (wetlands, artificial lakes), FISHING, WATER TREATMENT

WATER FOR FOOD & LAND

NEXUS CURRENT STATUS

- Highly agricultural basin (wheat, cotton, cattle breeding, aquaculture)
- Large and complex irrigation schemes (great water losses)
- Traditionally grown cotton is highly water intensive but diversification is reducing its share of agricultural output
- Soil salinization due in particular to poor drainage and waterlogging

ENERGY

- Wastewater treatment commonly lacking or inadequate
- Hydropower (upstream) and agriculture (downstream) conflicting water needs
- High energy-intensity irrigation schemes

ENERGY FOR WATER

FOOD & LAND

- Soil degradation causes water quality degradation, erosion and sedimentation
- Diffuse pollution from irrigated agriculture
- Water reservoirs can balance water needs between seasons and years
- Fuelwood used in rural households causing deforestation (mountain areas, riparian forests)

ECOSYSTEMS
The Syr Darya Basin – Nexus Solutions
Next steps: Aral Sea Phase 2

- the review of national policy instruments on water, agriculture, and related themes in the Aral Sea Basin using the scenario thinking approach;

- identifying common interests from different stakeholders and what is known as ‘common ground; and

- Consolidated the process gains in the Phase 1 and insights communicated to a wider audience.
Thank you!