DRIN CORDA

Enabling Transboundary Cooperation & Integrated Water Resources Management in the extended DRIN RIVER BASIN

Global Water Partnership Mediterranean

UNECE

Also with the support of AUSTRIAN DEVELOPMENT COOPERATION

NEXUS ASSESSMENT

of the DRIN basin: Phase I - Summary

THE NEXUS APPROACH *Water, energy, agriculture / land use and natural ecosystems are strongly interlinked. The Nexus approach is essentially about moving beyond traditional sectoral thinking to achieving overall security and sustainability of all resources by adopting an integrated and coordinated approach across sectors, with a view to reconcile potentially conflicting interests while capturing existing and emerging opportunities.*

THE DRIN RIVER BASIN *The Drin has extensive water resources (the third greatest river discharge into the European Mediterranean), providing a wealth of services to the Riparians that share the basin: Albania (38% of the basin), Greece (2%), Kosovo*[1] (20%), Montenegro (20%) and North Macedonia (20%).*

WATER RESOURCES

- Water resources in the basin are used for public water supply, agricultural use, industrial use and hydropower (non-consumptive).
- Water networks are generally inefficient and water metering is not widely practiced.

  During irrigation season, water consumption reaches high shares of total water availability (75% in the White Drin).
- The water quality in the Drin basin is generally good. The biggest threat are untreated municipal wastewater and solid waste, and diffuse pollution from farming.
- In the traditionally prone to flooding basin, the frequency of floods appears to be increasing.

LAND RESOURCES

- The land cover of the Drin basin is for the most part made of Forests and Scrub and Open Spaces (33% and 36% respectively), and Arable Land covers about 20% of the basin area.
- Of the basin's cultivated land consists of Arable Land (66%) and Meadows (27%), while Orchards and Vineyards amount together to a mere 6%.
- The average size of agricultural farms in the Drin basin is small, particularly if compared to EU averages.
- Forests in the basin are commonly exploited for timber and fuelwood extraction, and tend to be overexploited and degraded largely due to illegal, unrecorded, or poorly managed logging.
- The role of forests on the economies of the region is large and evolving. Livelihoods depend on forest products; primarily wood and wood products, but also mushrooms, berries, herbs and nature-related tourism.
- Uncontrolled conversion of agricultural lands into residential land is widespread.

ENERGY RESOURCES

- Nationally, the Drin Riparians have high levels of energy intensity (energy used / GDP) and energy consumption is increasing.
- In the power sector, the main energy sources are hydro (100% of generation in Albania) and coal (97% of generation in Kosovo*), and together they make up the almost totality of generation in the other two riparians.
- As members of the Energy Community, all Riparians aim at significantly increasing their share of renewable energy.
- The Drin accounts for some 76% of Albania's total hydropower capacity and 20% of North Macedonia's. 5 large hydro plants are located on the main Drin river, (2 in North Macedonia totalling 126 MW and 3 in Albania totalling 1350 MW).

1 This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

KEY NEXUS ISSUES IN THE DRIN BASIN: Challenges & opportunities

1. HYDROPOWER AND FLOODING

- Areas of the basin are extremely vulnerable to flooding, with increasing frequency and intensity.
- Flood management today depends on the way hydropower plants are operated and the extent and effectiveness of cooperation among the dam operators. A lack of coordination under high flow conditions can increase flood risk. The maximisation of electricity production is typically at odds with the requirements of flood mitigation.
- Further analysis is needed to clarify the economic impact of increased transboundary cooperation on dam operations (in terms of energy production) and to better understand the profitability of new hydropower in the basin (considering climate change and other energy sources available).

2. BIOMASS AND FOREST MANAGEMENT

- Forest related ecosystem services bring economic, social and environmental benefits including carbon capture and storage, water treatment and flood protection.
- The current rate of use of biomass for heating is unsustainable and is causing widespread forest degradation and air pollution.

3. AGRICULTURE, IRRIGATION AND FOOD TRADE

- The agricultural sector is stagnating, which makes it difficult to address unsustainable farming practices through new investments.
- There is a mismatch between farmers' perception that water is abundant, and the reality of increasing drought vulnerability. The projected impacts of climate change require that the sector becomes more resilient.
- The types of crops and animals that farmers invest in depend on agricultural markets, support schemes and investment opportunities, and impact the demand for water (and other natural resources).
- The potential for adding value in the agriculture sector through organic farming and local products is significant. Regional cooperation could drive local production to higher value but also more sustainability while creating a positive feedback loop with rural tourism.

RECOMMENDATIONS

- By sharing data and information, operators are more able to adjust to changing water flow conditions and are therefore more able to manage droughts and floods.
- Ensuring common standards of information sharing, transparency of data including public accessibility, sufficient coverage and capacity of the monitoring network.
- Setting up policies, rules and procedures to ensure the proper consideration of flood management and control in hydropower operations.
- Strengthening transboundary coordination between hydropower operators, and between hydropower operators and competent institutions, could prove crucial to improve flood management.

- Modernizing the biomass value chain is a key element for sustainable forest management.
- The relevant institutions (in forestry, energy, natural resource management and land planning) need to be strengthened.
- Addressing the issues of widespread and inefficient use of wood energy for heating in households would reduce forest degradation in the basin area, which has hydrological implications of increased erosion and sedimentation.
- Upgrading and modernizing the wood biomass value chain would help addressing the issue of forest degradation while investing in a mature economic sector, with multiple benefits ranging from income diversification, improved health, climate mitigation, biodiversity protection, improved erosion and sediment control.

- Greater clarity on future demands of water from agriculture would assist Riparians in the implementation of their climate adaptation plans and strategies, and river basin management plans.
- Improved food safety, food standards and plant health are essential prerequisites to improving export to outside markets and to stimulating the creation of a regional agricultural market.
- A higher commitment to regional cooperation in agriculture, notably towards the development of trade of high-quality agricultural products for export, could revitalize the sector and potentially motivate organic farming. This would be in line with a climate smart and tourism-oriented view of agricultural development