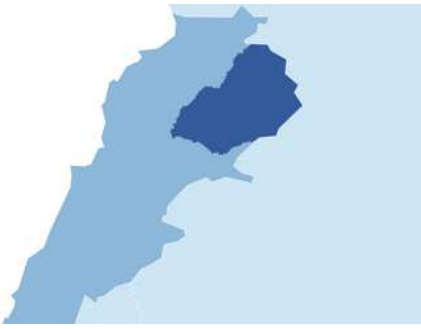
Orontes river basin – Lebanon



- Total area: 24,660 km²; Lebanon part: 1,718 km²
- Transboundary basin (Syria, Turkey), upstream portions in Lebanon, with cooler climate and consistent year-round flow
- 18,000–20,000 hectares irrigated (mainly groundwater) out of a total cropped area of 57,600 hectares
- Imbalanced water allocation and use across countries
- Geo-political conflicts and migration
- Growing competition between irrigation and domestic uses

BARRIERS TO THE ADOPTION OF INNOVATIVE ADAPTATION POLICIES

Barriers	Example
Discretionary water allocation mechanisms	Fragmented decision-making, delayed implementation of different policies, lack of monitoring especially for illegal wells
Costs of transforming institutions to adopt novel policies and governance mechanism	Huge economic (and political) costs towards efficient monitoring and metering technologies, lack of investment in 'human capital' for other NBS or conventional technologies
Limited penetration and marketability of innovative policies Limited monitoring, as well as enforcement, and institutional capabilities.	Green plan for land reclamation and agricultural development suffered budget reduction and insufficient staff; lack of legal framework and of targets for development and diffusion of NBS and non-conventional water resources
Authorities tend to align policy choices and investments with widespread beliefs and attitudes among citizens that strengthen their political legitimacy	Lack of clear framework
Limited monitoring, as well as enforcement, and institutional capabilities	Lack of monitoring technologies and metering systems; common private illegal wells
Innovative solutions demand high return from investments hindering their implementation	Extensive paybacks periods and uncertainty about effectiveness of innovative solutions, such as NBS or insurance systems, limit their implementation
Decision-making and people's awareness are strongly influenced by personal beliefs (based on experiences, memories, group dynamics etc.)	River basin authorities are mostly made of hydrologists, who tend to support engineering approaches over soft/economic instruments
Overselling of traditional policies, tendency to avoid high risk and lack of ex-post evaluation creates inertia to transformative changes	Difficulties in implementation of objectives and planned policies in water management and limited accountability/learning from previous outcomes, resulting in repeated inefficiencies and reduced adoption of innovative approaches
Gaps in modeling	No macro- or micro- economic modeling available, limiting the understanding of the impact of water allocation, land use and policies on rural livelihoods/household well-being

POTENTIAL INNOVATIVE ADAPTATION POLICIES

1. Encouraging farmers to adopt **water-efficient irrigation through policy incentives**. 2. Encouraging farmers to adopt **climate-resilient crops through policy incentives**. 3. Building **data collection systems to track water usage and crop yields** for evidence-based policymaking. 4. **Water allocation policies**. 5. Enforcing **stricter regulations on well drilling and water use**. 6. Restoring the Orontes River by **reducing pollution and improving water quality**. 7. **Evaluating the feasibility and benefits of building the Assi Dam** to secure a more reliable water supply.