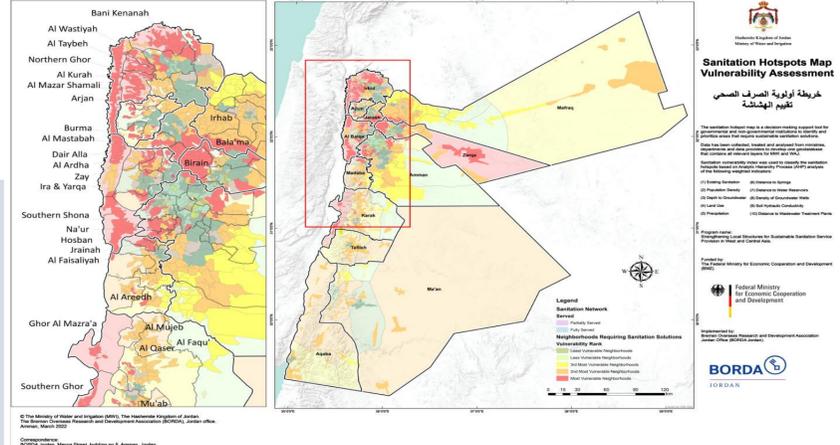


Together for Better Sanitation: Decentralized Solutions for a Sustainable Future in Jordan

Authors: Laila Abu Ezziddin, Ehabiddin Al-Jayyousi, Namagembe Masitullah

Acknowledged Contributor: BORDA Jordan | Moderator: Water Consults - Jordan

Insights synthesized from a national multi-stakeholder sanitation dialogue convened by BORDA Jordan (2025)



Context-appropriate pathways to scale decentralized solutions that can complement existing centralized systems. **rief Overview**

Jordan is facing acute water scarcity compounded by rapid urbanization, placing unprecedented pressure on centralized water and wastewater infrastructure —particularly in remote, peri-urban, and underserved areas. As population growth continues to outpace service expansion, the gap between demand and effective sanitation service delivery is widening. In response, a multi-stakeholder dialogue was convened to examine the potential of decentralized sanitation systems as a practical, climate-resilient alternative. The intervention brought together public authorities, practitioners, and technical experts to identify policy, institutional, and capacity barriers, while exploring

Objective
To analyze lessons from a Jordan-based multi-stakeholder dialogue and explore how decentralized sanitation can be advanced through policy reform, capacity development, and South-South knowledge exchange.

The Intervention
92 experts from government, academia, NGOs, and private sector convened to validate decentralized sanitation as a critical national solution, moving beyond debate to practical application.

The Outcome
A 5-pillar national level roadmap focusing on regulatory reform, financing, and climate resilience. 92% of participants committed to a future knowledge-exchange network.

Participants Across Four Sectors

- Government:** Ministry of Water & Irrigation, Ministry of Environment
- Technical Partners:** Engineering firms and private sector innovators
- Civil Society:** NGOs and international donor agencies
- Knowledge Base:** Academic researchers and universities

Key Equation
Climate Change + Rapid Urbanization + Severe Water Scarcity = System Stress.
Traditional centralized wastewater management faces logistical and economic limits. Decentralized sanitation is now a necessary complement to national infrastructure.

Consensus Building Methodology

Step 1: Expert Panels

Discussions on policy, institutional, and technical landscape to set the baseline.

Step 2: Evidence Review

Analysis of case studies showcasing successful decentralized systems in Jordan.

Step 3: Thematic Breakouts

Deep-dive working groups: Regulation, Academia, Finance, Community, Climate.

Step 4: Synthesis

Aggregation of insights into a unified National Roadmap.

Governance & Policy

- Absence of a comprehensive regulatory and licensing framework
- Unclear institutional mandates for operation and monitoring
- Limited institutional capacity for decentralized system oversight

Financial & Market

- Weak private sector engagement and accreditation mechanisms
- Absence of viable tariff and business models
- Limited access to blended and climate finance

Technical & Operational

- Non-functional systems due to weak O&M arrangements
- Inadequate technology selection in earlier projects
- Limited integration of renewable energy solutions

Social & Knowledge Gaps

- Low community acceptance and trust
- Cultural concerns regarding wastewater reuse
- Persistent gap between academic research and practical implementation**

Strategic Themes Emerging from Breakout Discussions

1. Bridging Academia and Practice
Establish Public-Private-Academia Partnerships (PPAPs)
Align academic research with national sanitation priorities
Institutionalize field-based training and pilot projects

2. Institutionalizing Decentralized Sanitation
Develop national guidelines for licensing, operation, and monitoring
Strengthen coordination platforms (e.g., NICE Committee)
Clarify roles across ministries, municipalities, and operators

3. Financial and O&M Sustainability
Promote low-energy treatment technologies (e.g., MBBR)
Introduce accreditation schemes for private operators
Pilot PPP and BOT models adapted to small-scale systems

4. Community Acceptance and Viable Models
Design targeted awareness and behavior-change campaigns
Engage cooperatives, CBOs, and youth groups
Link sanitation systems to reuse, livelihoods, and local value chains

5. Climate-Resilient Sanitation Systems
Integrate sanitation into national climate strategies
Update standards for treated wastewater reuse
Promote innovation, entrepreneurship, and nature-based solutions

Evidence-Based Roadmap (Synthesized by Water Consults)

Short Term 1-2 Years

- Desk review of existing decentralized systems
- Regulatory gap analysis and guideline development
- Pilot projects in priority locations (schools, health centers, rural hubs)

Medium Term 3-5 Years

- National accreditation and licensing framework
- Scale-up of proven technologies and operational models
- Structured capacity-building for municipalities and operators

Long Term 5-10 Years

- Integration of decentralized sanitation into national wastewater master plans
- Financially sustainable O&M and tariff models
- Knowledge hubs linking Jordan with Global South expertise

SOUTH-SOUTH LEARNING EXCHANGE: INDIA & JORDAN

Jordan and India face shared challenges related to:

- Urban expansion and informal settlements
- Water scarcity, energy intensity, and climate risks
- Need for affordable, decentralized infrastructure solutions

Opportunities for Collaboration with CEST:

- Joint research and technology adaptation
- Exchange on regulatory and accreditation frameworks
- Student exchanges, case-based learning, and pilot demonstrations
- South-South dialogue on decentralized sanitation governance