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FACT SHEET

Water Reuse and Environmental Conservation Project

New sand filter unit at Wadi Mousa

Water issues in Jordan are complex, and responsibilities cross multiple agencies and entities. Water resources and pollution problems will not be solved one at a time; they call for big-picture, integrated solutions. The Water Reuse and Environmental Conservation Project works across ministries and with multiple stakeholders to find comprehensive solutions to apparently disparate problems.

The project supports improvement of the regulatory environment, industry training and networking on pollution prevention and environmental management, landfill and "hot spot" rehabilitation, and water and biosolids reuse to support community livelihoods.This project has:

- Designed wastewater treatment plants that treat industrial wastewater so it can be used for irrigation
- Trained farmers in safe water reuse practices, and their fields have never been greener
- Designed landfill rehabilitation plans for proper disposal
- Worked across agencies and municipalities to streamline regulations and laws so they are enforceable; trained regulatory staff to be effective
- Shown industrial facilities how to save money by improving operations and thus reducing pollution
- Set up a network portal through which industrial facilities, academics, and others share knowledge and experience
- Gained Prime Minister's attention and cross-ministry cooperation to clean up Ekeder and Russeifah

GOALS

- Increase industrial water and energy efficiency through training, technical support and establishing a community of experts
- Support industrial efforts to improve environmental performance and strengthen Ministry of Environment's ability to enforce regulations
- Strengthen ability of laboratories to analyze industrial wastewater samples
- Clean up polluted "hot spots," improve industrial waste management practices, and strengthen industrial wastewater treatment
- Help communities generate income through water reuse; increase public awareness of benefits of water reuse
- Promote sustainable reuse of biosolids, to enhance community livelihood

PROJECT SNAPSHOT

Implemented by: AECOM

Duration: 2010 – 2015

Total Funding: $32.6 million

Focus: Industrial water and energy conservation, improved industrial waste management, community level water reuse

Beneficiaries: Industry, farmers, government officials, affected general public

Geographic coverage: Entire country

Primary partners:
Aqaba Special Economic Zone
King Abdullah II Center for Excellence (KACE)
Jordan Investment Board
Jordan Chamber of Industry
Ministry of Agriculture
Ministry of Municipal Affairs
Ministry of Environment
Ministry of Industry and Trade
Ministry of Water and Irrigation
Royal Scientific Society

ACHIEVEMENTS

MoEnv and project staff investigated lands around Azraq Refugee Camp, to determine suitability for establishing a forage farm using reclaimed water

Regulatory Strengthening

- Strengthened Ministry of Environment capacity in institutional development; environmental policies, laws and regulations; environmental assessment and licensing; waste management; inspection and compliance. **Result**: Better enforcement of environmental regulations, increased institutional transparency, new EPL approved by cabinet
- Established www.jordannetwork.net, registered 1865 users, uploaded 1326 resources and held 53 events, transferred to RSS. **Result:** Improved environmental performance through shared database of best practices
- Supported three national laboratories to qualify for accreditation in waste water testing. Result: GoJ and industry access to affordable WW testing for compliance
- Developed process for national environmental performance award, transferred to KACE. **Result:** Increased incentive for responsible industrial environmental performance

Pollution Prevention and Industrial Waste Management

- Trained staff from 100 industrial facilities on environmental management systems/pollution prevention (EMS/P2); Partnered with 30 facilities to develop EMS and P2 plans. **Result:** Water- and energy-saving and pollution control measures being implemented in factories throughout Jordan
- Prepared designs and tender documents for Zarqa industrial WWTP and for upgrade of WWTP at Abdullah II Ibn Hussein Industrial Estate (Sahab). **Result**: Industrial facilities will have treatment options so they can comply with discharge standards and gain economic benefits of reuse.
- Prepared Aqaba Water Reuse Master Plan and Integrated Water Resources Management Plan and Strategic Environmental Management Plan for industrial estate at Sahab, in cooperation with JIEC. **Result:** Industrial estates have tools and models for managing environmental issues in integrated comprehensive way.

Disposal Site Rehabilitation

- For Ekeder, planned site cleanup and new treatment and disposal facilities; developed master plan for future development; planned recycling facilities; engaged multiple ministers in clean-up. **Result:** Reduced pollution, better protection for public health and environment, economic opportunity through recycling.
- Designed cleanup plans for Russeifah landfill, lagoon, mining pit and abandoned tunnels, fostered broad clean-up coalition. **Result:** Environmental hot spot cleaned up, protecting public health and the environment.
- Designing sanitary landfill cell in Aqaba, investigating recycling opportunities. **Result**: Improved environmental protection and extended landfill timeframe.

Water Reuse

- At Wadi Mousa pilot project, trained water users' association and farmers in irrigation system repair, best practices in water reuse for irrigation, and marketing. **Result**: Improved crop yield, established seeds farm, increased incomes.
- Working with farmers at Lajjoun, Al-Zaatari and Azraq to replicate Wadi Mousa success. **Result:** Standardized options for reuse that can be replicated easily to improve community livelihoods.

Biosolids Management

- Supporting GoJ in revising regulations for biosolids use in land application for agriculture. **Result:** Safe use of biosolids will increase fodder crop yields, restore rangeland, reduce pollution, and benefit communities economically.
- For As Samra, prepared design and tender documents for new landfill to dispose of biosolids. **Result**: Safe disposal of biosolids at As Samra.