

# Non-Revenue Water Reduction

## PROBLEM:

One of the biggest problems in the water sector is non-revenue water (NRW), the water is sent into the system but is not billed. One reason for revenue loss is because the water leaks out of the system due to the poor quality of equipment and pipes. Another reason is that the water is delivered to homes and businesses but not billed due to malfunctioning meters or illegal connections.

Jordan's NRW rates are extremely high compared to other countries with low water supply. In part, this may be due to the non-continuous supply, i.e. the starting and stopping of water supply, which damages the system. In places where continuous supply has been achieved, like Aqaba, non-revenue water is significantly reduced. However, even with non-continuous supply, Jordan's performance could be improved.

## SOLUTION:

To reduce non-revenue water, the Government of Jordan could consider the following options:

- Better data collection regarding the amount of non-revenue water due to technical losses (leaking pipes, etc.) and administrative losses (illegal connections, etc.) to enable better targeting of NRW reduction resources.
- Development of an asset management plan that identifies the condition of assets and plans for the operation, management and repairs needed to maintain the infrastructure annually and over the longer term.
- Expansion of current efforts to collect information on water assets and analyze their maintenance needs as well as the impact of asset failures (i.e. a pipe burst) on customers.
- Accounting for the full cost of water in billing for water sold in bulk to the water companies and the Water Authority of Jordan. Accounting for the full cost of water, rather than just the subsidized price, would provide more incentive to reduce non-revenue water. It would give further incentive to managers with bonuses tied to profit to address NRW.
- Provision of subsidies to water companies on a per connection, per population or per meter of pipe basis with an agreement to decrease the subsidy gradually each year. This would provide incentive to water companies to address NRW while potentially providing gains to its customers in the form of reduced costs and improved service.

It is estimated that an effective NRW reduction would recover greater amounts of revenue water per JD spent than other projects to increase Jordan's water supply, such as the Disi project.

