



# Sewage Infrastructure Development in Israel

**The water Authority**

The Sewerage Infrastructure Development  
Administration

# Background

- The public sewerage system in Israel is operated by the local authorities
- Israel produces approximately 450 million cubic meters/year of raw sewage
- Most of the wastewater is used for various applications, such as reuse in agriculture, industry and public gardens
- Israel invests approximately **USD 120 million/year** in development and rehabilitation of sewerage infrastructure

## Background (cont.)

- The budget is allocated according to governmental resolutions
- The Sewerage Infrastructure Development Administration accompanies ~500 projects currently in progress

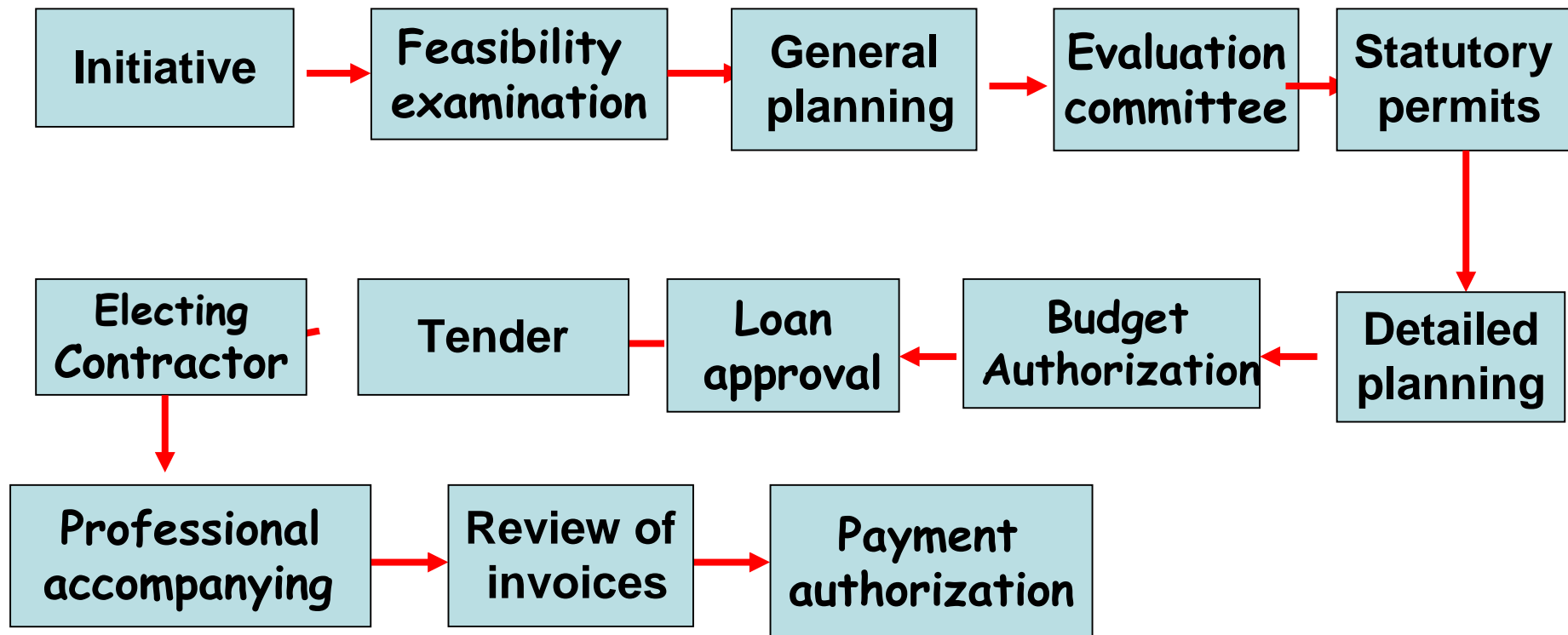
# Statutory Issues

- Statutory Zoning Plan: determines and facilitates the location of the sewage treatment plants (STP'S)
- Strict statutory requirement for the implementation of formal tenders.
- Statutes granting authority regarding various issues of sewage treatment, have spread authority among various Ministries:

## Statutory Issues (II)

- **Municipalities Law (Sewage):** Interior Ministry and MNI (for STP's).
- **Municipal statute:** required for installation (finance) and operation of sewerage system.
- **Public Health Ordinance:** The Ministry of Health.
- **Water Law (Pollution):** The Ministry of Environmental Protection, The Water Authority (concurrent).

# Typical path for project execution



## Simultaneous activities

- The local authorities update the Sewerage by-law
- Checking the ability of repaying the loans by the Ministry of the Interior

# Budget Principles

- The budgetary regulations are divided among sub-regulations according to governmental resolutions.
- The budget is allocated to the local authorities as loans and grants, subject to the above mentioned governmental resolutions
- **Loans terms & conditions:**  
Interest Rate- 5%- linked to CPI  
Term repayment - 20 years

Local authorities ensure the return by adopting sewage fees, based on water consumption.

## Project Approval

- Each project is examined by a professional committee.
- Rationale for project approval:
  - Matches the master plan of the local authority.
  - Exhibits technological and economic feasibility.
  - Complies with regional approach to sewerage plans.
  - Meets budget constraints.



## Criteria and Standards

- The Sewerage Infrastructure Development Administration within the Water Authority, and the Ministry of Finance, consolidated criteria for approving the projects, which take into account technical, social, and economic aspects.

# Uses for Treated the Wastewater

- The treated wastewater can be targeted for several applications:
  - Agricultural irrigation
  - Industrial use
  - public gardens irrigation
  - Stream augmentation

Each plan examined by the professional committee, must take into consideration the reuse aspects of the treated wastewater.

## Estimated Investments

- Costs range between thousands to millions US Dollars.
- The project costs fluctuate according to the type of plant, and depend on several variables such as:  
project size, fluctuation of construction materials in the domestic/global market, topography, location, etc.

# Choice of Technology

- The technology is chosen by the design engineer, and coordinated with the assigned engineering accompanier
- In accordance with a recent governmental resolution, 3 millions US Dollars, will be allocated to assist the development of new technologies in order to improve urban sewage treatment

# The Upgrade of STP's

- 220 millions US Dollars are expected to be invested in upgrading the STP'S throughout the implementation of the government resolution dated August 9, 2005.
- Estimate time for completion: ~ 10 years
- The improvement of the effluents' quality will extend the range of their use.

# Sludge Management

The Sewerage Infrastructure Development Administration has been implementing the new regulations, issued in 2007, concerning sludge treatment to class A, and the total prohibition of sludge dumping into the sea.

*Thank You*

