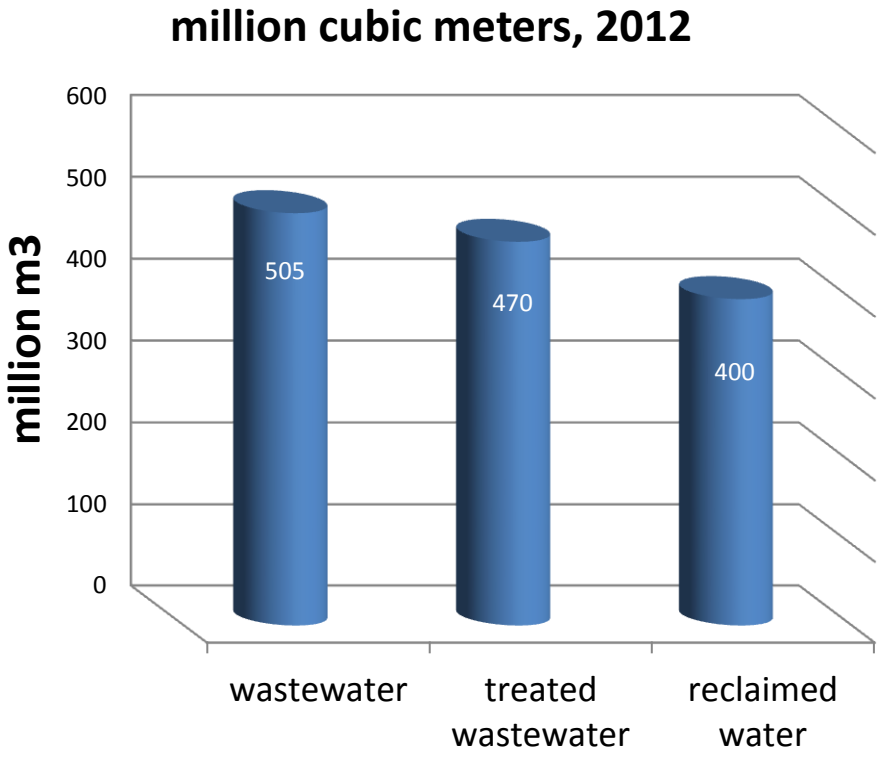
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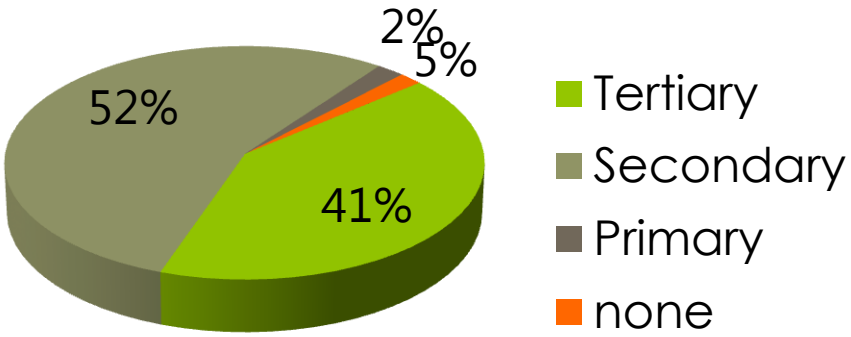
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The Wastewater and Treated Effluents Infrastructure Development in Israel



Wastewater and Effluent Sector Qualities and Quantities





from 2010, all STP's will treat sewage to a tertiary level

505 million m3 → 93% is treated → 85% reuse

world's leading in treating and reusing effluent

The importance of treating wastewater into reclaimed water

- Transforming an obstacle into a resource
- Maintaining fresh water resources
- Maintaining public health and the environment
- Economic growth engine
- Cost effective water supply
- Ensuring steady supply of water for agriculture, industry, public parks and discharge to streams

The complexities of this sector

- **Laws and Regulations:**
  - ❑The collection, transmission and treatment of the wastewater is under the responsibility water corporations/local authorities
  - ❑The reuse plants are established by the private sector
  - ❑Legal authority is divided among several ministries
  - ❑Multiple statutory requirements
- **Limitations on fundraising**
- **Quality of reclaimed water creates current and future challenges**

The Water Authority's role in infrastructure development

Ensuring maximum removal of wastewater and optimum utilization of reclaimed water

- Promote development of infrastructure wherever necessary, especially peripherals and supported authorities.
- Upgrading the infrastructure to improve reclaimed water's quality and widen its range of applications.

  - ❑ Managing inter-ministerial committee for professional approval of projects.
  - ❑ Statutory and political accompanying of project entrepreneurs.
  - ❑ Project budgeting by use of loans and grants.
  - ❑ Engineering and accounting accompaniment of projects.
  - ❑ Defining regulation requirements in the reclaimed wastewater sector.

Reuse of all sewage effluents in Dan Region (Greater Tel Aviv) Wastewater Treatment plant (Shafdan) and the pipeline to Negev

Sewage from the Greater Tel Aviv area – 125 MCM/Y (2010)

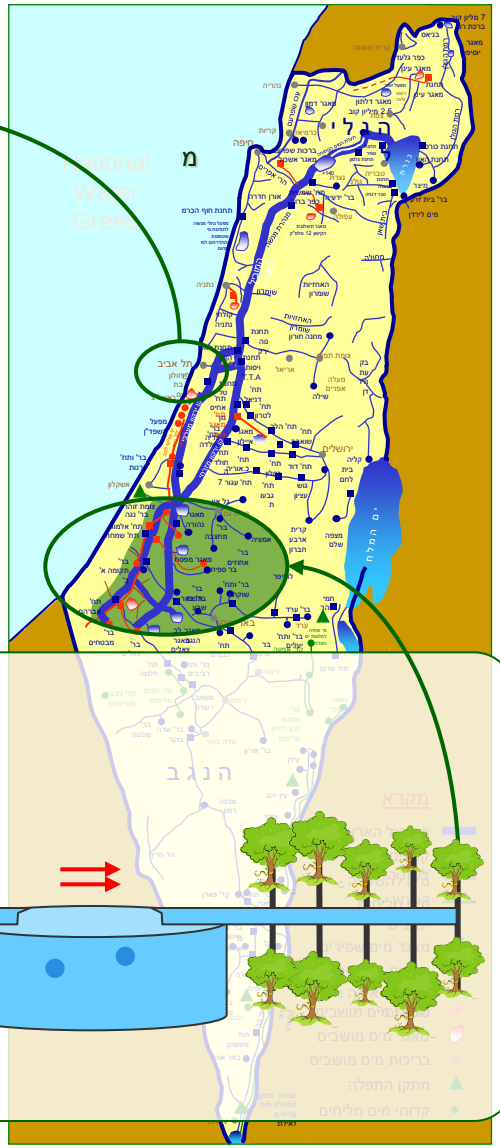
Large-scale WWTP – secondary treatment quality

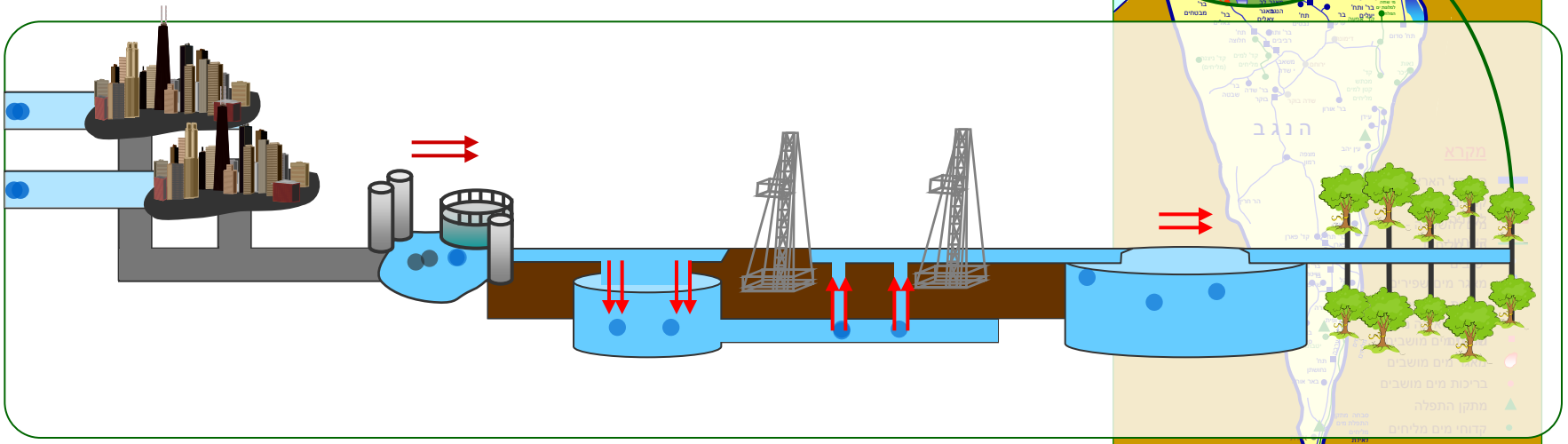
Six infiltration fields

Over 150 production and monitoring wells (quality permitted for "occasional drinking)

90km pipeline to Negev

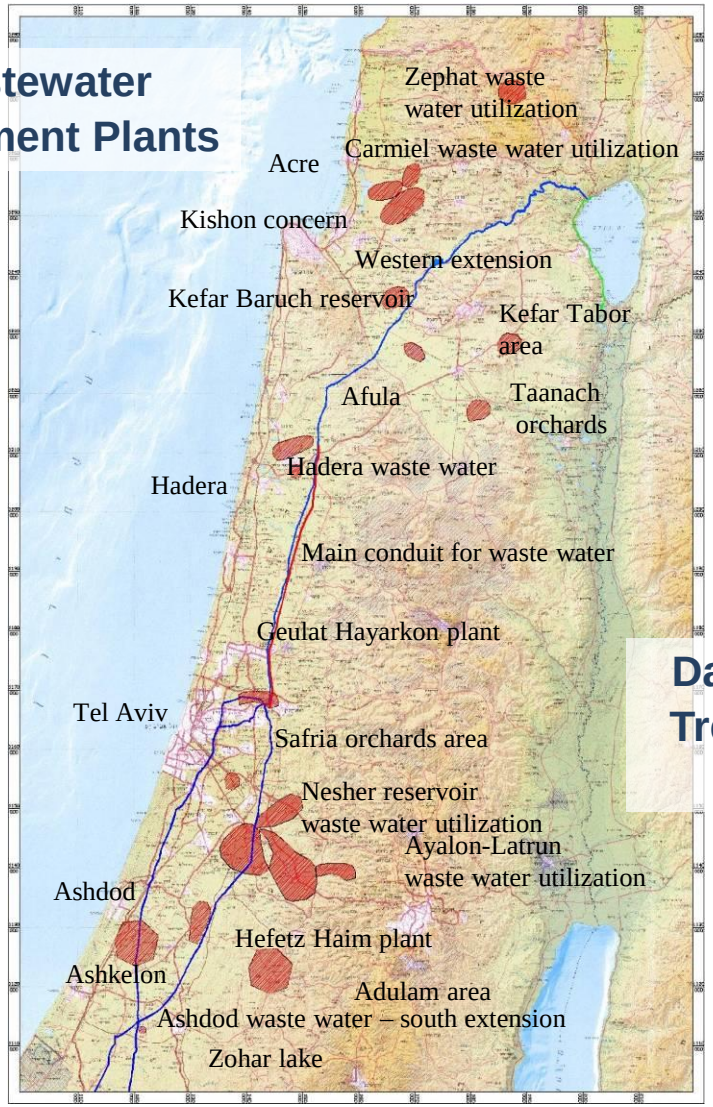
32 pumping stations, operational storages (0.51MCM) and seasonal storages (17.2 MCM)



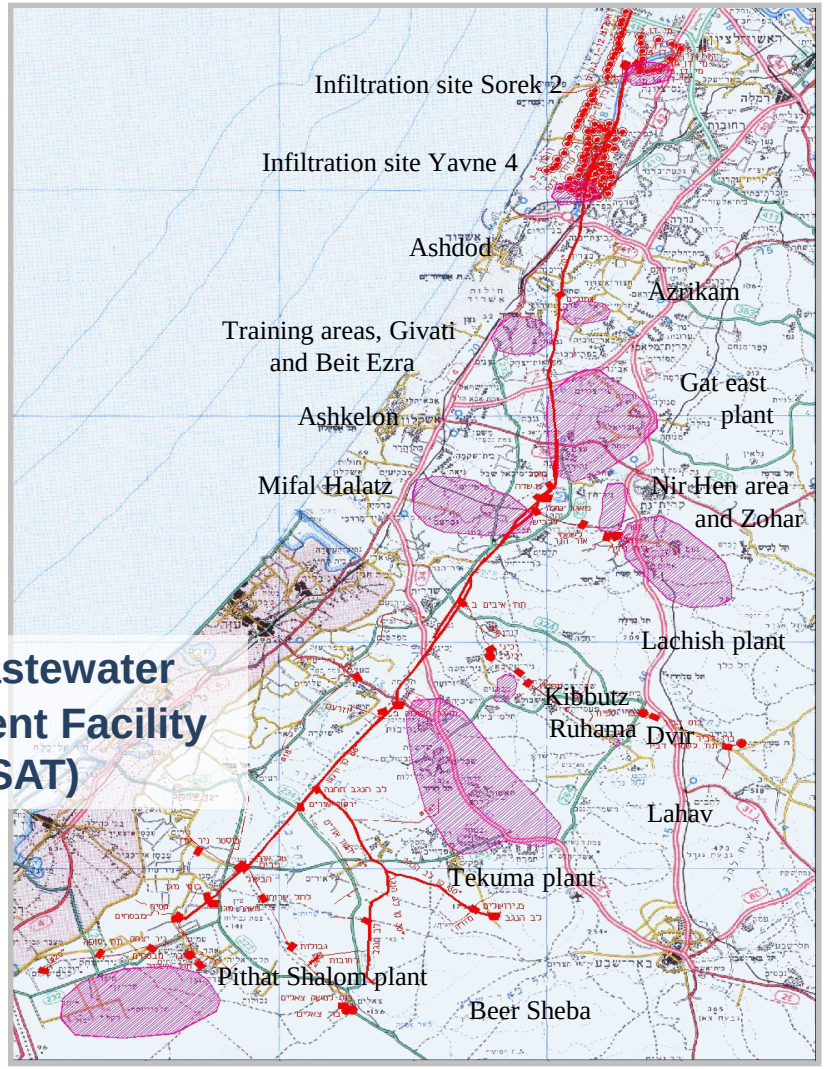


Reuse of All Sewage Effluents

Wastewater Treatment Plants



Dan Wastewater Treatment Facility (SAT)



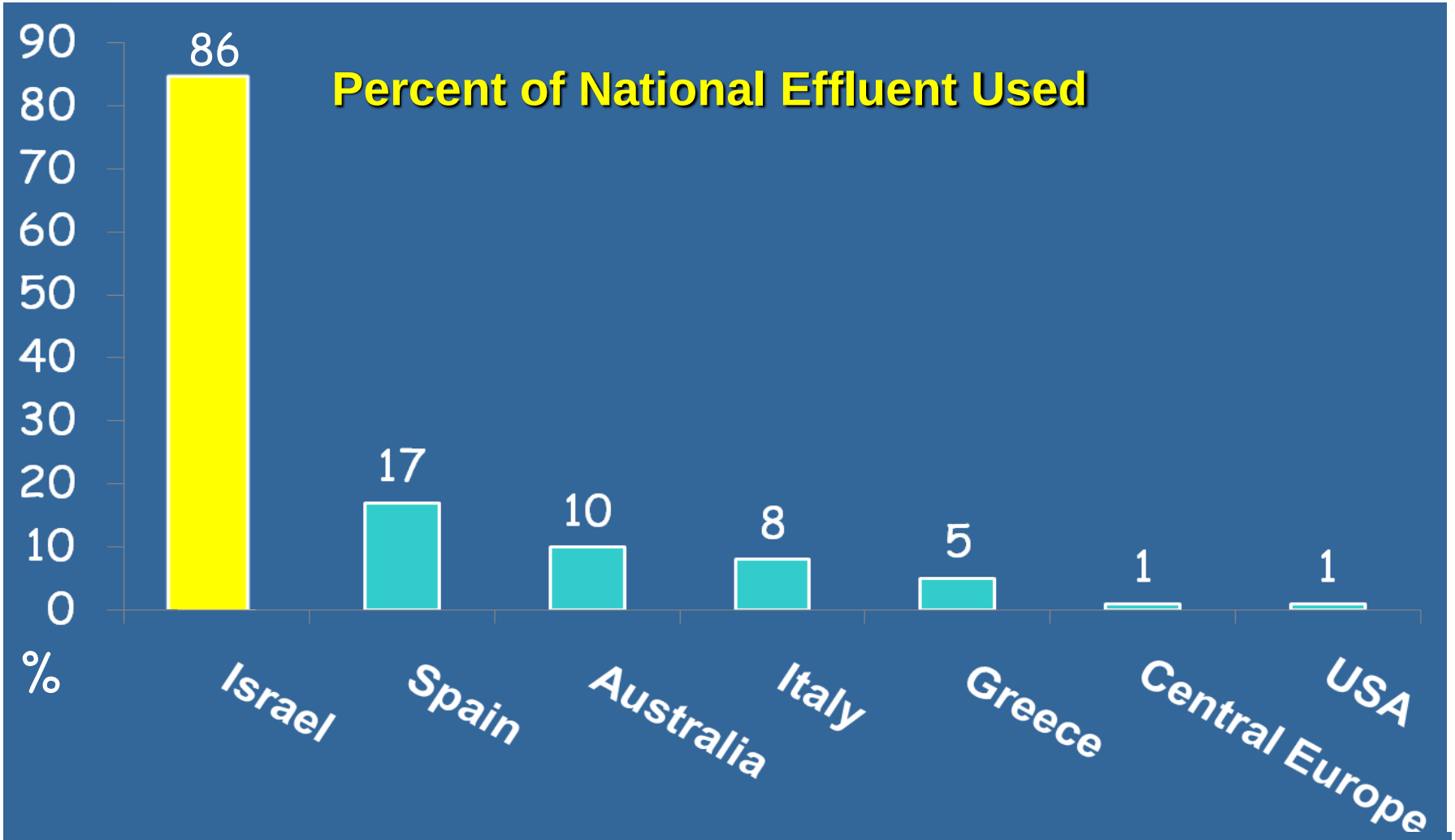
Investments and Achievements

The Water Authority's investments	Achievements of the Israel's water sector
Sewage Infrastructure Development 2.3 billion $ since 1993	Over 4000 projects of sewage transfer and treatment systems, including most STP's in Israel (almost 400)
Reclaimed water Plants 750 million $ since 2000	62 mega- projects of reclaimed water facilities, added transferring about 142 million cubic meters per year (36% of all reclaimed water, and 7% of all water in Israel)

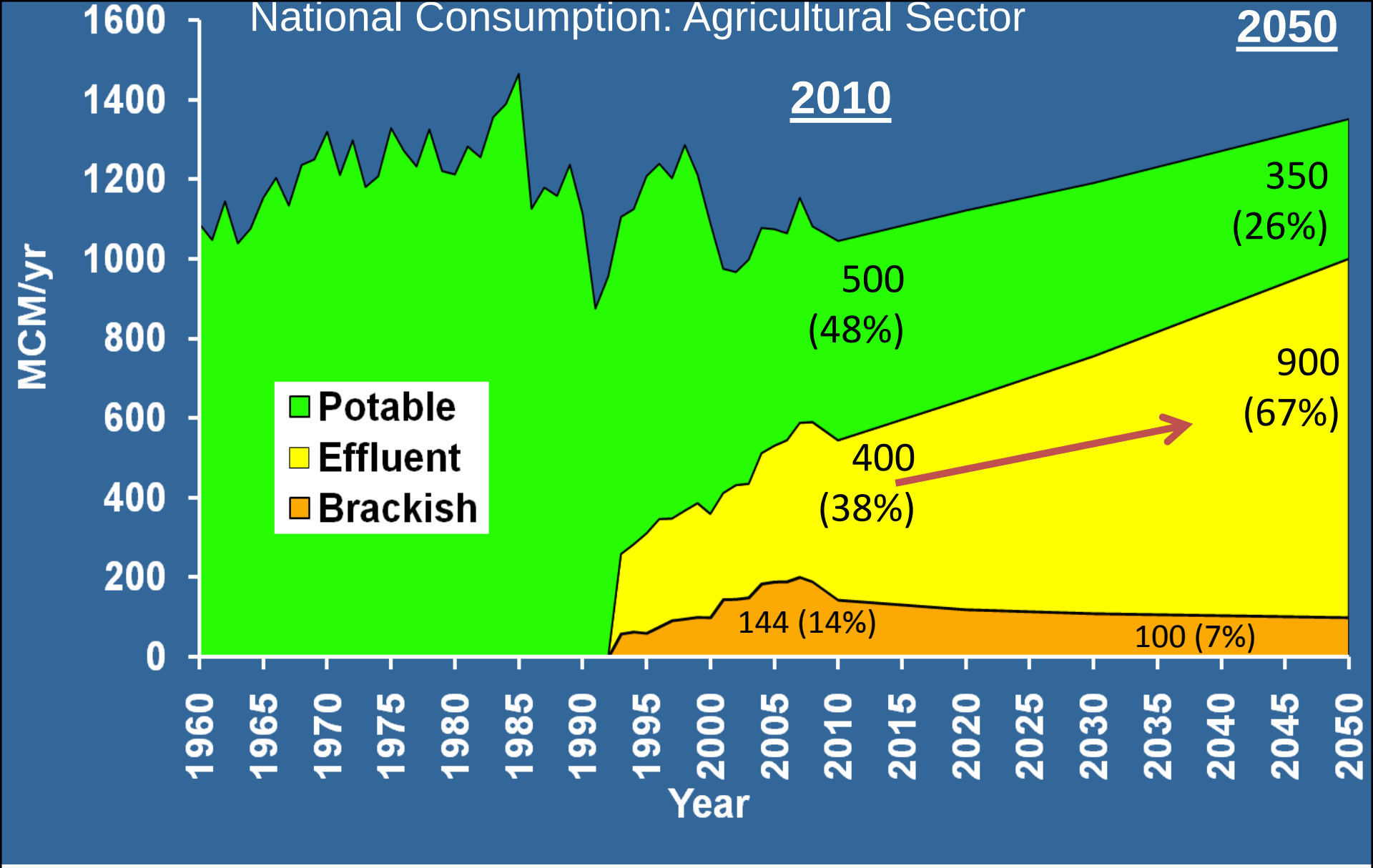
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Effluent Quantity for Irrigation

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Next Steps (Improvements Within 5-7 Years):
Israel will increase use of the total national effluent produced each year from 86% to 90%

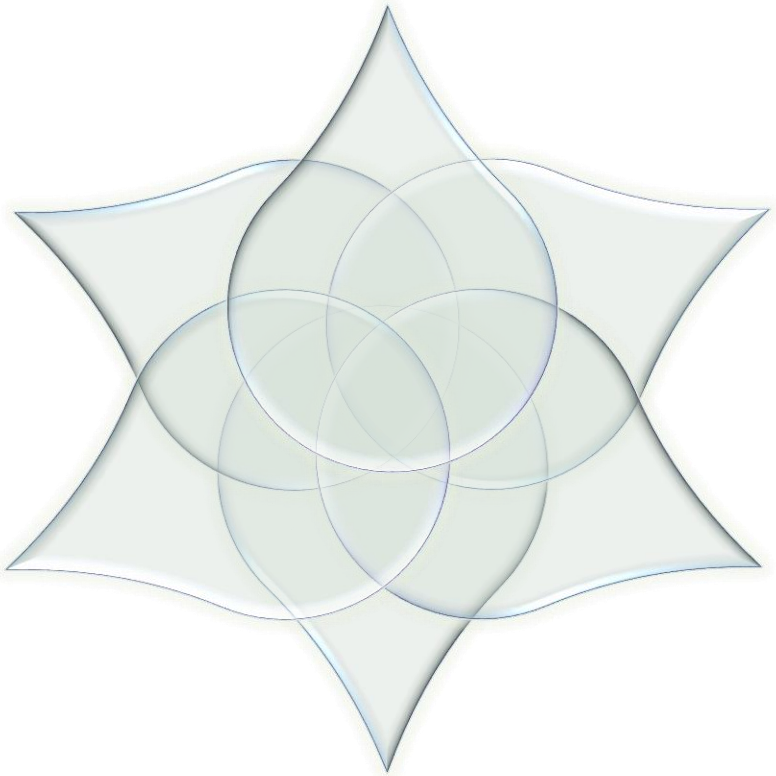


If effluent were not used in agriculture, desalinated water production would be required (a more costly alternative) to supply the agricultural sector's needs.

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Always a drop ahead