THE TIGRIS-EUPHRATES RIVER BASIN

A MODERN HISTORY OF WATER SCARCITY

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Background **<1950S**

Traditionally one of the driest regions of the world. Droughts have always been of concern but water scarcity has become more apparent in recent years. This river system has been the foundation of human civilization since Ancient Mesopotamia.

1

Expansion

1950S

Times of plenty led to increased agriculture and a population boom in the area. The population rose from 100 million to 380 million from 1950 to 2000. This has since contributed to water scarcity.

2

Hydroelectric Power

1960S

The beginning of the Southeastern Anatolia Project (GAP). The project was aimed at building dams across Turkey for hydroelectric power. This included 22 large dams and 19 hydroelectric power plants.

3

The 1st Dam

1974

The Upper Keban Dam was completed in Turkey. This was the first major dam in the Tigris-Euphrates river system created for electricity and holds 30 cubic kilometers of water.

4

The Iran-Iraq War

1980-1988

A large armed conflict fought between Iran and Iraq. This led to heightened conflict surrounding water resources and control of streamflow on the Tigris and Euphrates rivers.

5

Innovation

1980S

Emirates Bio Farm and other agricultural producers began using vertical farming techniques as a way to conserve water in agriculture

6

Alliance

1987

An agreement was made between Turkey and Syria, requiring 500 m3/s to flow across the border. In 1990 Syria and Iraq agreed to give 42% of streamflow to Syria and 58% to Iraq.

7

Sustainability

2010S

The region has seen an increase in water-saving and recycling methods such as wastewater treatment, constructed wetlands, drip irrigation, and sensors that indicate when watering is needed in agricultural areas.

8

Political Control

2000

A sharp increase in dam construction, especially in Iran. Hundreds of dams of varying sizes have been constructed to control water flow. In 2008 Turkey began the construction of 11 dams along the Iraqi border as a means of border security.

9

Retaliation

2016

Turkey cut the flow of the Euphrates to Syria where Kurds and other groups developed a democratic alternative to the political powers in Syria. This created a significant decrease in electricity and agricultural yield.

10

Problem Solving

PRESENT DAY

The region suffers from water scarcity with reduced streamflow in the Tigris-Euphrates river system. Climate change presents rising temperatures and unpredictable precipitation. Collaboration among political leaders, intentional water governance, and technology are necessary for solving this water crisis.

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