

Mega-Dams and Water Transfer projects in China

Examples of managing water supplies using Hard Engineering

3 Gorges Dam

Key features

- A **hydroelectric dam** on the Yangtze River in China.
- In terms of the amount of electricity it generates, it's the **world's largest power station**.
- It cost **\$30 billion**. However, it should only take about 10 years to fully recover the costs.
- The power generated by the 34 generators is enormous. It is equivalent to **burning 25 million tons of crude oil** or 50 million tons of coal.
- Over **100 towns and settlements were submerged** when the dam was built. In addition, over **1,000 archaeological and historic sites** were also submerged and lost.

Benefits

- Power generation for the middle, eastern and southern China. – **Industry and emerging middle class** are 'winners'
- **Controls water levels** – will avoid frequent floods, which cause problems around the Jinjiang river.
- **Tourism** – To see the Yangtze river where a calm lake makes scenic spots which were originally hard to enter are now reachable.

Drawbacks

- **Residents** – The dam partially or completely inundated 2 cities, 11 counties, 140 towns, 326 townships, and 1351 villages. About 23800 hectares, more than **1.1 million people must be resettled**.
- Every year, about **265 million gallons** of raw sewage are deposited in the Yangtze River. Sewage will collect in the reservoir, which increases the **risk for waterborne diseases**.

South-North Water Transfer

Key features

- The Chinese government is building a **\$62 billion** South-North Water Transfer Project.
- The project would divert **44.8 billion cubic meters** of water per year from the Yangtze River in **Southern China** to the **Yellow River Basin in arid Northern China**.
- An estimated **330,000 people were recently relocated** for the expansion of the Danjiangkou reservoir.

Benefits

- The project, officials say, saves China from a **water crisis** that could set its **development** back years.
- Will **distribute water** fairly to the **North** of China.
- Vital for **economic development** and water supply to Beijing and other areas.

Drawbacks

- Many are concerned that the project could exacerbate water pollution problems. **Pollution from factories** along the Eastern Route may render the **water unfit to drink**.
- About **345,000 villagers** have been displaced by the project to date. **Many farming communities** displaced.

- The dam is built near many **geological fault lines**. About **360 million people** live within the watershed of the Yangtze River.
- Huge impacts **environmentally** – endangering 57 plant species, 25 fish species.
- **Landslides may increase**. One killed at least **30 people**.

