

Resource Management: Indus Basin Irrigation

The Indus River is found in **Pakistan**, but its drainage basin and tributaries cross into **Afghanistan, China and India**. This makes the Indus River an international river, and that can lead to political **conflict** and difficulties in **management**.



Source: *Water Politics*

Why is the Indus River important?

- The river sources its water from melting snow and heavy rain in the hills of the **Himalayas**. The south of Pakistan receives lower levels of rainfall than the rest of the country, so farmers rely on the river for **irrigation**.



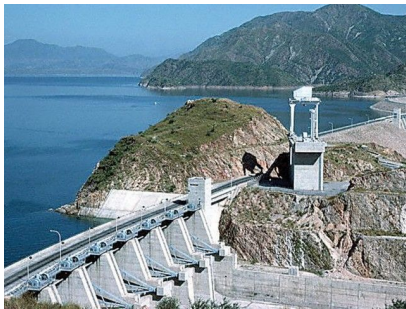
Farming is incredibly important to Pakistan, since food is increasing in price:

- Pakistan grows a **surplus** of food, including wheat, rice and pulses
- However, the cost of food has increased **18%** within the last year (2019 to 2020)
- **37%** of Pakistan's population face **food insecurities**, especially the poorest communities and women

Therefore, to improve the **development** of Pakistan, the government is trying to feed its population sufficiently. So water is extremely important to successful farming.

The Indus Basin Irrigation System

To ensure that farmland receives a supply of water for **irrigation**, a system has been constructed consisting of dams, canals and reservoirs.

Dams	Canals	Reservoirs
<p>There are three dams along the Indus River, with three more planned. The dams create reservoirs that trap water, to be used when water levels fall low.</p>  <p>Source: <i>Pakistan Today</i></p> <p>The largest dam is the Tarbela Dam, which can hold 100 million cubic metres of water</p>	<p>There are 45 canal control points, which can release water into small pockets of land throughout Pakistan.</p>  <p>Source: <i>Historum.com</i></p> <p>The canals were first constructed during the British Rule (1850s - 1950s)</p>	<p>Reservoirs have been very successful in trapping water in different regions across Pakistan. There aren't many natural water stores in the lower river, so reservoirs are necessary.</p>  <p>Source: <i>Tribune</i></p>

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Advantages & Disadvantages

The irrigation scheme isn't helpful for everyone. There are **benefits** and **costs** for different groups of people in Pakistan.

👍 The basin has increased the amount of land **irrigated**, which increases the amount of crops that can be grown in Pakistan.

👍 A large portion of Pakistan's economy is made up of **agriculture**, therefore it is important to keep farms running and profiting now and in the future.

👍 Reservoirs are home to **fish farms**, which provide new job opportunities and a new source of protein for local families.



Source: Youtube

🗨️ The water supply isn't **distributed fairly** and could be the source of conflict in the future. Some farmers receive a larger proportion of the stored water, and companies that operate the irrigation system have new control over the population. This can lead to **inequality**.

🗨️ Farmers haven't been **trained** in irrigation techniques. This is leading to increasing levels of salt in the soil (**salinisation**), which will damage crop growth and leave the ground unfarmable in the future.



Source: About Civil

🗨️ The scheme is costly to maintain, especially the **high cost** of repairs to dams and canals.

