

## Case study: The water problem in southwestern USA

- The USA is a huge user of water. The western states of the USA, covering 60 per cent of the land area with 40 per cent of the total population, receive only 25 per cent of the country's mean annual precipitation. Yet each day the west uses as much water as the east.
- The southwest in particular has prospered due to a huge investment in water transfer schemes. This has benefited agriculture, industry and settlement.
- California has benefited most from this investment in water supply. Seventy per cent of runoff originates in the northern one-third of the state but 80 per cent of the demand for water is in the southern two-thirds. While irrigation is the prime water user, the sprawling urban areas have also greatly increased demand.
- The 2333 km long Colorado river is an important source of water in the southwest. Over 30 million people in the region depend on water from the river. Despite the interstate and international agreements (between the USA and Mexico), major problems over the river's resources have arisen because population has increased along with rising demand from agriculture and industry.
- The \$4 billion Central Arizona Project (CAP) is the latest, and probably the last, big money scheme to divert water from this great river.
- Resource management strategies include: measures to reduce leakage and evaporation losses; recycling more water in industry; charging more realistic prices for irrigation water; extending the use of the most efficient irrigation systems; changing from highly water-dependent crops such as rice and alfalfa to those needing less water.
- Future options include: developing new groundwater resources; investing in more desalination plants; constructing offshore aqueducts that would run under the ocean from the Columbia river in the northwest of the USA to California.
- There is now general agreement that planning for the future water supply of the southwest should embrace all practicable options.