Rivers in arid lands: 2040 water supply and demand

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Common Features/Challenges

- Main water supply from winter precipitation/snowpack
- Multiple dams and diversions
- Irrigated agriculture in arid downstream basin
- Environmental damage
- Competition among countries/states
- Impact of climate change
- Storage loss from sedimentation
- Land use and population growth
- Instream flow/water quality
- Foresight capacity
Results

- Sedimentation: Storage loss of 5 percent/decade
- Climate change: < 10 percent/decade
- In stream flow: irregular and declining
- Land use: slow decline of irrigated land
- Population growth: will double in 30 years
Results (ct’d)

- 30 to 40 Percent less water by 2040
- Cities will need larger share
- Agriculture can do more with less
- Ecological damage will increase

*Food security: yes
Sustainable development: no*