Water scarcity

Water use has been growing globally at more than twice the rate of population increase in the last century, and an increasing number of regions are reaching the limit at which water services can be sustainably delivered. **Essentially, demographic growth and economic development are putting unprecedented pressure on renewable, but finite water resources, especially in arid regions.** By 2025, 1800 million people are expected to be living in countries or regions with "absolute" water scarcity (<500 m3 per year per capita), and two-thirds of the world population could be under "stress" conditions (between 500 and 1000 m3 per year per capita). The situation will be exacerbated as rapidly growing urban areas place heavy pressure on neighbouring water resources. Moreover, environmental services and ecosystem functions cannot be treated any longer as the residuals of all water users. In the future, climate change and bio-energy demands are expected to amplify the already complex relationship between world development and water demand.

The concept of scarcity is somewhat ambiguous and complex to be defined as it implies different dimensions or facets. **First, scarcity needs to be understood as a relative concept**, i.e., an imbalance between "supply" and "demand" that varies according to local conditions. Second, **water scarcity is fundamentally dynamic**. It intensifies with increasing demand by users and with the decreasing quantity and quality of the resource. It can further decrease when the right response options are put in place.

There are several dimensions of water scarcity that can be summarized as follows: (i) scarcity **in the availability** of fresh water of acceptable quality with respect to aggregated demand, in the simple case of physical water shortage; (ii) scarcity **in access** to water services, because of the failure of institutions in place to ensure reliable supply of water to users; (iii) scarcity due to the **lack of adequate infrastructure**, irrespective of the level of water resources, due to financial constraints. In the last two cases, countries may have a relatively high level of water resources endowment, but are unable to capture and distribute them because of limited financial resources for infrastructure development or lack of institutional capacity to maintain and manage them appropriately.

Source: http://www.fao.org/land-water/world-water-day-2021/water-scarcity/en/

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