

Q NO 3:

1. INTRODUCTION:

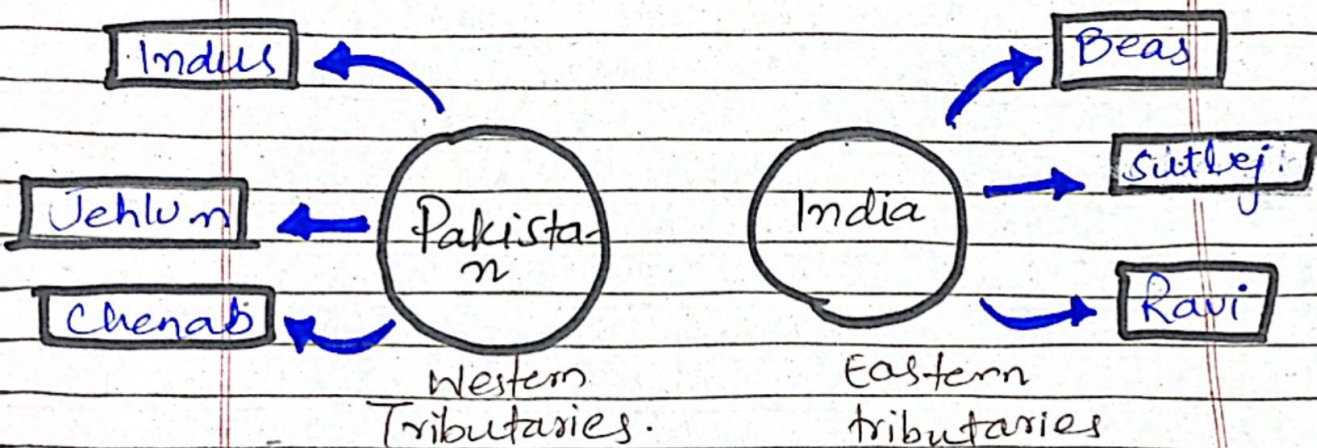
Pakistan can address the growing disparity between water availability in urban and rural areas through policy reforms, infrastructure development, community involvement, sustainable practices, and through bridging the urban and rural divide.

2. HISTORICAL BACKGROUND:

Since the emergence of Pakistan as a nation in 1947 Pakistan has faced a persistent and escalating water scarcity crisis. Initially classified as water stressed, country is now transitioning to being considered a water scarce due to factors such as rapid population growth, climate change, and inefficient water management in agriculture. Issues surrounding equitable access to water & distribution among different sectors exacerbate the crisis, making it a critical challenge for the nation.

The water dispute between India and Pakistan:

The water scarcity is one of the major reasons of tension escalation between India and Pakistan. The water dispute between India and Pakistan primarily revolves around the Indus River system governed by Indus River Treaty signed in 1960. This treaty facilitated by the World Bank, allocate the waters of Indus River and its tributaries between the two countries.



Tensions have escalated over issues such as water scarcity, dam constructions and perceived violation of the treaty.

3. GROWING DISPARITY IN URBAN AND RURAL AREAS:

The growing disparity between water availability in urban and rural areas in Pakistan is a significant concern, exacerbated by several factors:

a. Access to Water in Urban and Rural Areas:

Cities often have better access to water due to more developed infrastructure. But rapid urbanization, growing population, and poor maintenance of water systems have led to increased water scarcity.

Rural areas face more severe issues, many villages lack proper water supply systems. People are forced to rely on distant source of water, which may not be clean or reliable.

b. Water Infrastructure in Urban and Rural Areas:

Urban areas, particularly big

cities have centralized water supply system which can be more efficient but often plagued due to poor infrastructure, leakage and mismanagement.

In rural areas, water infrastructure is often outdated or even non-existent.

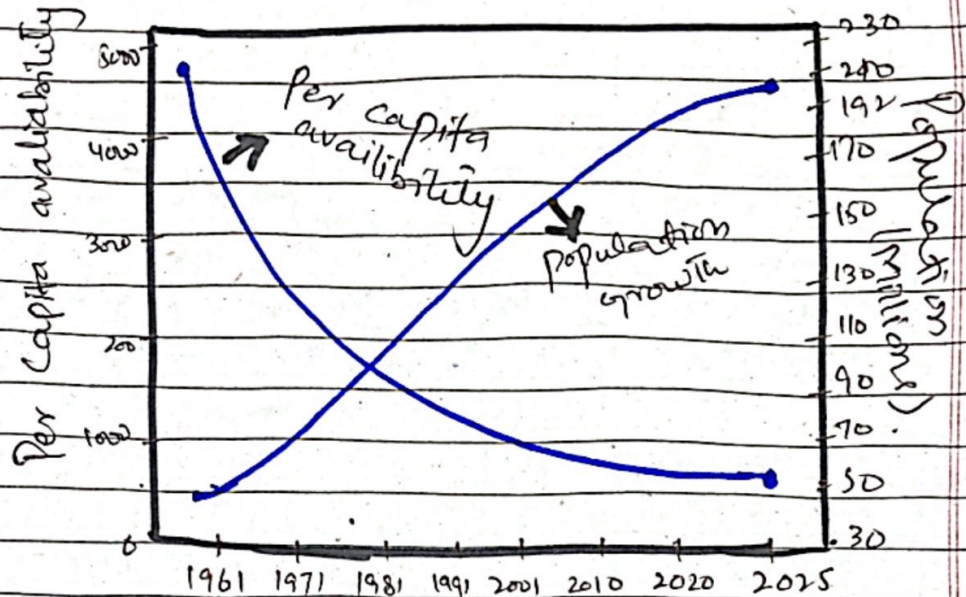
c. Water - Quality of Urban & Rural Water:

In cities and rural areas the water quality is a concern because in cities water is contaminated by industrial wastes and in rural areas the water is contaminated with runoff of agriculture (pesticides and fertilizers) and poor sanitation system. In many rural areas water-borne diseases are common due to contaminated water.

d. Climate Change and Water management system:

Climate change has affected both rural and urban water resources with country experiencing changes in precipitation patterns, melting of glaciers and rising temperature leading to severe

droughts. Poor water management system leads to wastage of water, lack of proper infrastructure and insufficient water distribution system.



4. ADDRESSING SOCIAL AND ECONOMIC INEQUALITIES IN WATER DISTRIBUTION:

Addressing social and economic inequalities in water distribution requires a multifaceted approach that emphasizes inclusive policy making, decision making, fosters public-private partnerships, and ensuring robust monitoring and accountability mechanisms.

a- Policy Reforms In Integrated Water Management:

Development and implementation of comprehensive water management policies that prioritize equitable distribution of resources between urban and rural areas:

A prime example of integrated water management policies can be found in European Union's Water Framework Directive (WFD), which was implemented in 2000. This policy provides a comprehensive approach to water management by focusing on the entire river basin prioritizing equitable distribution of water resources.

b- Community Engagement of marginalized groups:

Involving marginalized groups and rural communities in water-related policy-making is essential for equitable water distribution. This ensures that needs and perspectives of all stakeholders are considered important.

c - Collaboration between government and Public-Private Partnerships:

Collaboration between governments and private entities can mobilize resources & expertise to improve water access in underserved areas.

Case Study: In Africa, innovative partnerships between government and private operators have effectively managed sewage and delivered water to vulnerable communities.

d - Establishing transparent mechanism and accountability to monitor water distribution:

Establishing transparent mechanism and accountability to monitor water distribution for building trust and ensuring equitable access. There should be water equity ~~services~~ networks that emphasizes that all communities have access to safe, clean, and affordable water and are included in decision-making.

e- Usage of Modern technology to mitigate problems of water crisis:

Usage of satellite data, AI to monitor water usage and distribution in real-time.

Usage of modern technologies to map and regulate groundwater extraction in rural areas would help to address water availability issues in both rural and urban areas.

CONCLUSION:

Through the implementation of these strategies Pakistan can resolve the problems and disparities that lies between water availability in urban and rural areas. Pakistan can work towards reducing disparities in water availability ensuring equitable resource distribution and addressing social & economic inequalities exacerbated by water shortage. As rightly said by Leonardo da Vinci:

“Water is the driving force of all nature.”