Question 3

How can Pakistan address the growing disparity between water availability in urban and rural areas, ensuring equitable distribution of water resources and mitigating social and economic inequalities caused by water shortages?

1) Introduction

"Many of the wars of 20th century were of oil, but wars of 21st century will be about water unless we change the way we manage it."

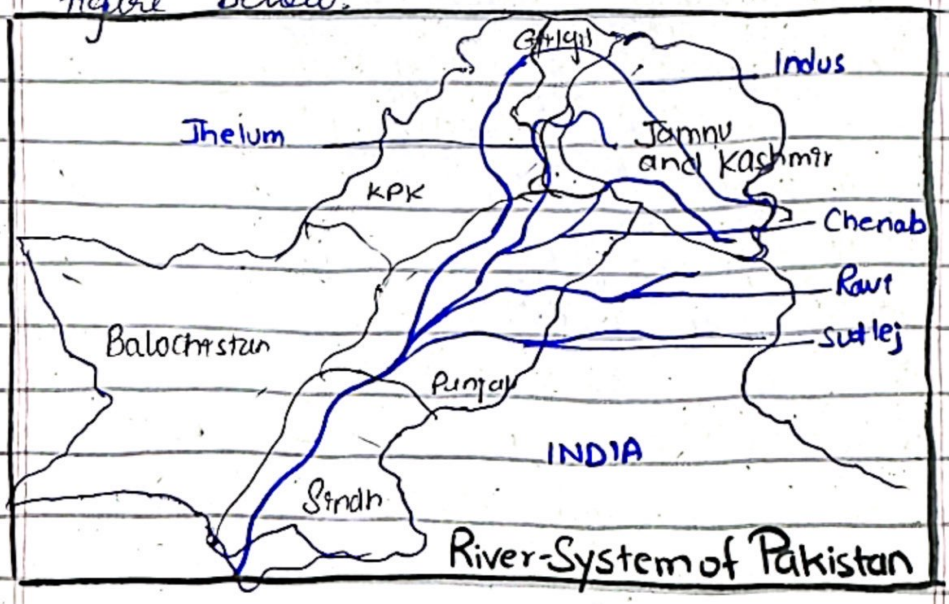
[World Bank, Vice. President Ismail Serageldin]

The above quote highlights the aftermath of having water scarcity issue. According to a standard threshold, a country is said to be water scarce if its per capita water consumption is 1000 million acre feet (MAP) or less than it. Pakistance faces challenges in water distribution which hampers it social and economic growth. Reforms and efficient management of water resource

will lead country to stable grounds.

2 Growing disparity between urban and Ruler areas:

Pakistan's largest renewable water resource is called **"The Indus Water System"** which accounts for providing 78 pc of water. Out of which 95pc of water is consumed ~~for~~ by "Agriculture Sector." Due to this little water remains for rural and urban area, leading to water availability issues in these region. Also the River system of Pakistan flows from moving from North into Punjab and then into Sindh. Southern region complains upper riparian of getting most of the water as shown in figure below.



River-System of Pakistan

c) Policy Measure: Ensuring equitable water availability and mitigating social economic inequality.

To adress the disparity among water availability in rural and urban areas following measures can be taken;

(i) Efficient Management of Water

Pakistan has enough avaible water for use but it is not efficiently management. For instance, as suggested by United Nations Human Right to Water Report 2018, if a person use 50 to 100 gallons of water daily. By taking 100 gallons each for 200 million population it is only 38.6 million acres feet whereas Indus Basin has water around 263-268 million acres feet, which needs to be efficiently in different sectors industrial, domestic etc.

(ii) Telemetering for mitigating social and economic inequalities

One way to adress the water availability issue is to meter the water usage

from all domestic or agricultural units. This imposes taxes for usage of specific amount of water. Thus enhancing judicial use of water ultimately reducing the demand of water which helps in managing water resources.

(iii) Increasing Agricultural Efficiency: Increasing water availability

It is key to leverage technology for efficient water utilisation. Instead of flooding the fields farmers must use precision water techniques such as "Drip Irrigation".

Moreover, 22,500 litres of water is used in production of 1kg cotton and 1500-3000 litres in 1kg sugar-cane production. Shifting from these crops can save water and it can be exported from Brazil. Hence providing water for rural areas.

(iv) **Recycling of Waste Water for mitigating social-economic inequalities**

Urbanisation resulted in industries through which waste waters directly contaminate the fresh water available. To address this issue recycling of waste water through salination units is encouraged to improve water availability as done by Singapore- a water scarce country- recycle water on the basis of private partnerships and efficient pricing, providing for 45 pc of country needs through this recycled water.

(v) **Policy Reforms and Governance for better water availability**

Pakistan government must focus on policy reforms and implementation, as American foreign policy analyst mention, " First of all, Pakistan leadership and stakeholders need to take ownership of this

and declare the intention to tackle it. Simply blaming previous governments, or blaming India, for the crisis won't solve anything."

(vi) Construction of Dams for availability of water

Pakistan's water without being used mostly run into Arabian Sea due to lack of Dams, or storage areas.
Construction of dams will save water as report by World Bank says, 147 (MAF) water is available in Pakistan only 14.5(MAF) is in use.

(vii) Climate ~~Change~~ Adaptive techniques for avoiding water loss

Due to altered weather patterns glaciers of Pakistan are increasingly melting which are a source of fresh water. As in Pakistan climate change is eminent, climate

resilient water availability measures should be taken

(iv) **Harmony among Provinces for sustainable water availability.**

IRSA (Indus River Water Authority) must be empowered to negotiate dialogue, and resolve disputes in province to enhance water availability

4) **Conclusion:**

Pakistan is rich in water resource but face scarcity due to mismanagement This need to be addressed through efficient usage of technology and reforms policy.