



# Water Stress, Climate Change and Childrens at Crossroads

**For Prelims:** [UNICEF](#), [Water stress](#), Falkenmark Indicator, [United Nations Framework Convention on Climate Change](#), [Loss and Damage Fund](#), [Child malnutrition](#)

**For Mains:** Issues Related to Childrens and Potential Solutions, Climate Change and its Impact on Childrens.

[Source: DTE](#)

## Why in News?

The latest [United Nations Children's Fund \(UNICEF\)](#) report states that nearly **half of the world's children faced high to extremely high water stress in 2022.**

- The report also captured how the various climate and environmental shocks driven by [climate change](#) are impacting the lives of children.

## What are the Major Highlights of the Report?

- **Water Stress and Climate Impact on Children:** In 2022, **953 million children encountered high or extremely high water stress**, while 739 million experienced water scarcity, and 436 million lived in areas with high water vulnerability.
  - Climate change is intensifying these challenges, with projections indicating that **by 2050, over 2 billion children could face the impacts of frequent heat waves.**
- **Factors Contributing to Water Vulnerability:** It includes **inadequate drinking water services, elevated water stress levels, interannual and seasonal variability, groundwater decline, and drought.**
- **Health and Nutrition Impacts on Children:** Climate-related events like floods **compromise access to safe water and sanitation, leading to diseases like diarrhea among children.**
  - Rising temperatures and erratic rainfall patterns affect food production, worsening **child malnutrition** due to crop failures and increased food prices.
- **UNICEF's Call for Child-Centric Climate Action:** UNICEF emphasizes the criticality of **28<sup>th</sup> Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change**, urging a shift in focus to prioritize children in climate agendas.
  - Advocacy for integrating children and climate-resilient essential services into decisions related to the **Global Goal on Adaptation (GGA).**
  - Emphasizing the need for **child-responsive funding arrangements and governance** within the [Loss and Damage Fund](#) to support climate-impacted countries.

## What is Water Stress?

- **About:**
  - **Water stress** occurs when the **demand for water exceeds its available supply** or

when poor quality limits its usability.

- A region is considered water stressed if there is less than **1,000 cubic meters** of water available per person per year.
- According to the **World Resources Institute report**, globally at least **50% of the world's population** live under **highly water stressed conditions for at least one month** of the year, the WRI report noted.
  - And by 2050, that number could be closer to 60%.
- **Factors Responsible for Water Stress:**
  - This condition arises due to factors such as **population growth, inefficient resource management, climate change, and pollution**, leading to challenges in accessing clean water for societal, economic, and environmental needs, impacting agriculture, industry, and overall well-being.
- **Falkenmark Indicator or Water Stress Index:**
  - The Falkenmark Indicator (which is mostly used for measuring water scarcity throughout the world) or Water Stress Index gauges the strain placed on a country's freshwater reserves by relating the total available water resources to its population.
  - It reflects the pressure exerted on water resources, encompassing the requirements for natural ecosystems. When the renewable water per person falls:
    - Under **1,700 m<sup>3</sup>**, the country is deemed to face water stress.
    - Under **1,000 m<sup>3</sup>**, it's classified as experiencing water scarcity.
    - Under **500 m<sup>3</sup>**, it's deemed to be facing absolute water scarcity within its borders.
- **Impact on Childrens:**
  - **Health Risks:** In areas facing water scarcity, children often bear the brunt of health risks associated with inadequate access to clean water.
    - They face a higher likelihood of waterborne diseases such as **diarrhea, cholera, and dysentery** due to using contaminated water sources.
  - **Long-term Developmental Impact:** Chronic water stress during critical developmental stages can have long-term effects on **children's growth, cognitive development, and overall health**, potentially affecting their future opportunities and quality of life.
  - **Impact on Gender Roles:** In many societies, **gender roles dictate water-related responsibilities**.
    - Water scarcity often places a disproportionate burden on girls and women, affecting girls' education and perpetuating gender inequalities.
    - This can shape children's perceptions of gender roles and social expectations.

## Way Forward

- **Hygiene Education Programs:** Develop comprehensive **hygiene education programs in schools and communities**. Teach children about proper handwashing, sanitation practices, and personal hygiene to prevent waterborne diseases.
- **School-Based Initiatives:** Integrate **water-saving practices into school curricula**. Create student-led water conservation clubs or initiatives to raise awareness and implement water-saving measures within schools.
- **Education and Awareness:** Integrate climate change education into school curricula to raise awareness among children. Teaching them about **climate science, sustainability, and actions** they can take part in to mitigate and adapt to climate change.
- **Children Centered Policies:** Strengthen **global policies and frameworks that protect children's rights in the face of climate change and water stress**.
  - Incorporate child-centered approaches in international agreements, ensuring their voices are heard and their needs considered in related policies.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Mains

**Q 1.** What is water stress? How and why does it differ regionally in India? (2019)

**Q 2.** Suggest measures to improve water storage and irrigation system to make its judicious use under

the depleting scenario. (2020)

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