GAR Special Report on Drought 2021

The GAR Special Report on Drought 2021 explores the systemic nature of drought and its impacts on the achievement of the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals and human and ecosystems health and wellbeing.

It was released by UN Office for Disaster Risk Reduction (UNDRR) and the report is structured to build broad awareness of the nature of drought and the experience across the world of living with drought. It also builds the case for a new approach to drought risk management.

Key Findings of the GAR Special Report on Drought 2021

The GAR Special Report on Drought 2021 was released on June 17, 2021. This day is also observed as the World Day for Combating Desertification and Drought. Given below are the key findings as per the report released by UNDRR:

- **Definition of Drought as per the Report -** "*Drought is challenging to define clearly. Abnormally dry weather or an exceptional lack of water compared with normal conditions constitute the hazard posed by drought.*"
- **Drought Impacts -** Drought impacts are intensifying as the world moves towards being 2°C warmer. When not adequately managed, drought is one of the drivers of desertification and land degradation, increasing the fragility of ecosystems and social instability, especially in rural communities.
- Groundwater is an important source of freshwater for domestic water supply and agricultural irrigation. **Groundwater accounts for about 38% to 50% of global irrigation water demand**, and partly satisfies the domestic needs of one third to one half of the world's population. The **depletion of groundwater resources, combined with moderate to severe droughts, poses significant risks to water and food security**
- **Causes of Drought -** are caused by changes in persistent atmospheric circulation patterns usually connected to slowly varying atmospheric boundary conditions
- The Food and Agriculture Organization (FAO) reviewed 78 post-disaster needs assessments undertaken in the aftermath of medium- to large-scale disasters. It found that agriculture absorbed approximately 84% of the economic losses due to climate-related disasters 42% of which had affected crop production and 36% was livestock production. Almost 86% of reported loss and damage was due to drought events
- Between 1900–2019, an estimated 2.7 billion people worldwide were directly affected by droughts, leading to an estimated 11.7 million deaths
- Droughts and their adverse impacts are putting livelihoods at risk and are hampering the achievement of SDGs – notably SDG1 (no poverty), SDG2 (zero hunger), SDG3 (good health and well-being) and SDG15 (life on land)
- **What are Systematic Risks?** - Systemic risks are defined as interdependent failures in different parts of a system that might lead to cascading events or even to the breakdown of the

entire system. Droughts contain a range of systemic risk characteristics that need to be acknowledged in drought risk analysis and management

- United Nations Convention to Combat Desertification (UNCCD) has identified key priorities and policy mixes for targeting finance and aligning economic incentives for drought risk reduction in the context of increasing aridity and desertification. These include:
    - Encouraging changes in the behaviour of individuals, corporations, government or society with, for example, financial incentives to switch to crops that are drought tolerant
    - Compensating losses of affected populations so as to avoid a spiralling poverty trap
    - Providing a flow of financial capital that can either enable beneficial investments to be made or promote the smooth functioning of commodity markets, especially in economies where financial and credit markets are already constrained without the added stress of droughts
- As per the report, the main variables for characterizing drought effects are Frequency, Severity, Duration, Cessation, Affected Area and Peak Month

Difference between Water Scarcity and Drought
Drought is different from water scarcity as both phenomena influence each other.

On one hand, an increase in drought frequency or severity, or both, can threaten already water-scarce regions and create new or expand existing regions suffering from water scarcity.

On the other hand, water scarcity significantly increases drought risk, as water-scarce regions lack adequate buffers to cope with droughts.

Impact of Drought - GAR Special Report 2021

The Intergovernmental Panel on Climate Change (IPCC) defines drought as “a period of abnormally dry weather long enough to cause a serious hydrological imbalance.” It leaves a severe impact on the ecosystem, livelihood, biodiversity and various other aspects. The same has been given below, as discussed in the UNDRR’s Global Assessment Report 2021:

- Drought affects almost all dimensions of the environment and society and directly influences the achievement of SDGs
- The main sectors which are affected by drought include:
    - Environment (e.g. forests, wildfires, wetlands, biodiversity)
    - Agriculture (including crop and livestock production) and forestry
    - Public water supply
    - Power generation: hydro, thermal and nuclear
    - Buildings and infrastructure
    - Tourism and recreation
    - Commercial shipping
    - Industry
    - Social impacts
- Drought stress can promote outbreaks of plant-eating fungi and insects

- The World Health Organisation (WHO) in 2012 said that the broad health impacts of drought can be organized into five main categories:
    - Malnutrition
    - Water-borne Diseases
    - Vector-borne diseases
    - Airborne diseases
    - Mental health
- As major centres of population and infrastructure, cities are particularly vulnerable to extreme climate events, include drought
- Drought can have differential economic, social and environmental effects on women in developing countries. Unequal power relations, gender inequalities and discrimination mean women and girls have to work more or get dropped out of work, experience pay cuts and get fewer opportunities