

Capacity Development to Support National Drought Management Policies

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Drought, Vulnerability and Risk Reduction: the UNCCD Context



United Nations Convention
to Combat Desertification

- **Some Definitions**
- **Impacts and Disasters**
- **Facts of Desertification**
- **Response Measures**
- **Drought Policy**
- **Information sharing**

Source of Presentation: UNCCD Asia Regional Coordination Unit, Mr. Yang Youlin

Some Definitions

Drought refers to *naturally occurring phenomenon* that exists when precipitation is significantly below normal recorded levels, causing serious hydrological imbalances that adversely affect *land resource production systems* (UNCCD).

➤ **Agricultural Drought**

Mainly effects food production and farming. Related with soil / water deficits, reduced ground water or reservoir levels. Deficient topsoil moisture at planting may stop germination, leading to low plant populations.

➤ **Hydrological Drought**

Associated with the effects of periods of precipitation shortages on water supply. Water in hydrologic storage systems such as reservoirs and rivers are often used for multiple purposes such as flood control, irrigation, recreation, navigation, hydropower, and wildlife habitat. Competition for water in these storage systems escalates during drought and conflicts between water users increase significantly.

➤ **Socioeconomic Drought**

Occurs when the demand for an economic good (e.g., water, forage, food grains, fish, and hydroelectric power) exceeds supply as a result of a weather-related shortfall in water supply.

Some Definitions (Cont.)

➤ **Disaster**

Serious disruption of the functioning of a community or society, involving widespread human, material, economic or environmental losses and impacts, exceeding its ability to cope by using its own resources (UN-ISDR)

➤ **Risk**

Combination of the probability of an event and its negative consequences.

Drought Risk disasters:

refer to the potential loss, over a specified time in the future and in a particular community or society, of lives and of worsened livelihoods: reduced health conditions, assets and ecosystem services (UN-ISDR, 2009)

Components of Drought for Risk Management

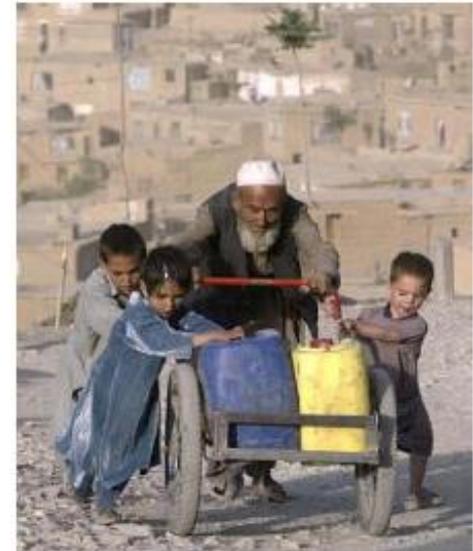
$$\text{Hazard} \times \text{Vulnerability} = \text{Risk}$$

(drought)

(environmental, social, economic
and even political factors)

Climatology,
Probabilities,
Forecasts

Population growth and shifts
Urbanization
Technology (EWS; water
conservation technologies)
Land use practices
Environment degradation
Water use trends
Research/Assessment
Government policies
Environmental awareness
Capacity (technical and institutional)
Poverty



➤ Impacts of drought



Environmental

- Water scarcity
- Wind and water soil erosion
- Desertification
- Biodiversity loss
- Forest fires
- Dust & sandstorms

Economic

- Increased food prices
- Loss of livestock production
- Loss of hydroelectric power, navigation
- Loss in tourism industry

Social

- Increased poverty & reduced quality of life
- Mental & physical stress
- Forced human migration
- Social unrest
- Political conflicts

Top 10 most important Drought disasters 1900 2013 By Country and Deaths Caused

Country	Year	Deaths
China P Rep	1928	3,000,000
Bangladesh	1943	1,900,000
India	1942	1,500,000
India	1965	1,500,000
India	1900	1,250,000
Soviet Union	1921	1,200,000
China P Rep	1920	500,000
Ethiopia	May-1983	300,000
Sudan	Apr-1983	150,000
Ethiopia	Dec-1973	100,000

Top 10 most important Drought disasters 1900 to 2013 by affected country and population

Country	Date	Population Affected
India	May-1987	300,000,000
India	Jul-2002	300,000,000
India	1972	200,000,000
India	1965	100,000,000
India	Jun-1982	100,000,000
China P Rep	Jan-1994	82,000,000
China P Rep	Apr-2002	60,000,000
China P Rep	Oct-2009	51,000,000
India	Apr-2000	50,000,000
China P Rep	Jun-1988	49,000,000

Top 10 most important Drought disasters 1900 to 2013 by country and economic costs

Country	Date	Damage (000 US\$)
United States	Jun – 2010	20,000,000
China P Rep	Jan-1994	13,755,200
United States	Jan-2011	8,000,000
Australia	1981	6,000,000
Spain	Sep-1990	4,500,000
China P Rep	Oct-2009	3,600,000
Iran Islam Rep	Apr-1999	3,300,000
United States	Jul-2002	3,300,000
Spain	Apr-1999	3,200,000
Canada	Jan-1977	3,000,000

Drought Policy

- Only a few developing countries have formulated and implemented national drought preparedness and mitigation policies mainstreamed in national SD strategies / development plans towards building more ***drought resilient societies***
- Progress on drought preparedness has been slow at the national level (*UNCCD national reports: drought issues limitedly reflected*)



An integrated national drought policy

... that is based on the sustainable use and management of natural resources (land / soil, forest, biodiversity, water, energy, etc.) in **all** socio-economic sectors (agriculture, industry, etc.) for sustainable development.



From short-term to long-term

What needs to be done?

1. Policy development and governance for drought management (national perspective)

➤ *National Mechanisms*

- ✓ Institutional tools for improving decision-making (national authority, budget, etc.)

➤ *Preparedness*

- ✓ Establishment of a system to cope with the effects of drought as its done with other natural disasters

➤ *Investments, Innovation and Technology Transfer*

- ✓ Investments in infra-structure
- ✓ Innovative ways for economic development (China and Israel experiences, among others)
- ✓ Capacity building and financial cooperation (examples: Central America)

What else needs to be done?

2. Set up Policies and Measures on drought management at the local level

- Strengthening infrastructure at farm level (communication, hydrological infrastructure, access to local markets)
- Diversifying and improving productive activities to reduce risk
- Adoption of traditional and new technologies (irrigation, rainwater harvesting) and
- Innovation schemes for land management of terrestrial ecosystems: SLM, IWRM

The role of the UNCCD and Partners

NAP a tool of national policies for combating desertification and also to mitigate the effects of drought

UNCCD COP 11 adopted an Advocacy Policy Framework (APF) on drought and advocacy to address the key drought issues (decision 9/COP 11)

UN Partner Agencies and networks (WMO, FAO, UNCCD, UNW, CBD and others) cooperating to support countries to improve decision-making process and National Policies on Drought Management

UN and International Agencies to promote the establishment of an *investment framework* to cope with drought and desertification at country level.

The UNCCD COP 11 decision: the APF on Drought addressing the cost of inaction

- 1. Proposes a mix of strategies for different economic sectors:** bottom-up approach for agriculture, and other approaches for other sectors (industry...).
Why? Impacts and responses are different in different sectors.
- 2. Requires data for addressing socio - economic vulnerabilities.** Proper data is envisaged on: Poverty, access to resources, mapping. How is the case in your country? Do you have such data? How is it the understanding of the factors of vulnerability and resilience? Coping capacities? Drivers?

The UNCCD COP 11 decision: the APF on Drought addressing the cost of inaction

- 3. Fostering enhanced consistency between national policies (for example drought and agriculture) and emerging external drivers** (such as markets, trade regulations, financial and fiscal constraints); what are the areas needed to be addressed for a drought policy in your country?
- 4. Innovative approach;** Does your country need a new policy framework? Some of the needed policies, measures and tools are already in place, but need to be adapted. How policies trigger (local / national) action?
- 5. Stakeholder participation:** Fostering for policy relevancy. Could we start with a preliminary assessment of the existing relevant national policies? This, to identify the capacity needs for addressing drought policies, accountability for implementation and to improve the country delivery ability.

Roundtable discussions: Some ideas

GROUP B

**What are the
drought
vulnerability
causes / reasons
in your country**

GROUP A

**Who / What is most
vulnerable to
drought in your
country?**

GROUP C

**What criteria are
used for
prioritizing
vulnerability?**



Thank you!

