

**Draft Concept Note**

**Joint**

**WMO/UNCCD/FAO/UNW-DPC  
National Drought Management Policies Initiative**

**Capacity Development  
to Support the Development of National Drought Management Policies**



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# 1 Rationale and Background

Drought is one of the world's major natural hazards which occurs in almost every climate region and periodically impacts nations and livelihoods around the world (Figure 1). It affects millions of people and causes significant economic and ecological damage. Key regions facing droughts are, for instance, Sub-Saharan Africa, the Middle-East and North Africa, South-Eastern Europe, Central Asia, Australia, Brazil, India, USA and China (Figure 1 and 2). Droughts are considered to be the most far-reaching of all natural disasters. Estimations indicate that between 1991 and 2000 droughts have been responsible for over 280,000 deaths and cost tens of millions of dollars in damage (WMO, 2012). Because each location is unique, the number of people affected by drought and the types of effects experienced will vary by region. In developing countries, however, drought ranks as the single most common cause of severe food shortages and is regularly listed as a cause in the majority of food emergencies (FAO, 2003). It is estimated that, on the basis of internationally reported droughts since 1900, more than 11 million people have died and over 2 billion have been affected, which is more than by any other single physical hazard (UNISDR, 2011). The 1991-92 dry spell in Sub-Saharan Africa, for instance, was the worst drought of the century covering a region of 6.7 million km<sup>2</sup> and affecting about 110 million people (WMO, 2012). The UN International Decade for Natural Disaster Reduction (IDNDR) has rated that drought accounts for:

- 33 percent of the number of persons affected by natural disasters
- 22 percent of the damage from disasters
- 3 percent of the number of deaths attributed to natural hazards (IDNDR, 1995)

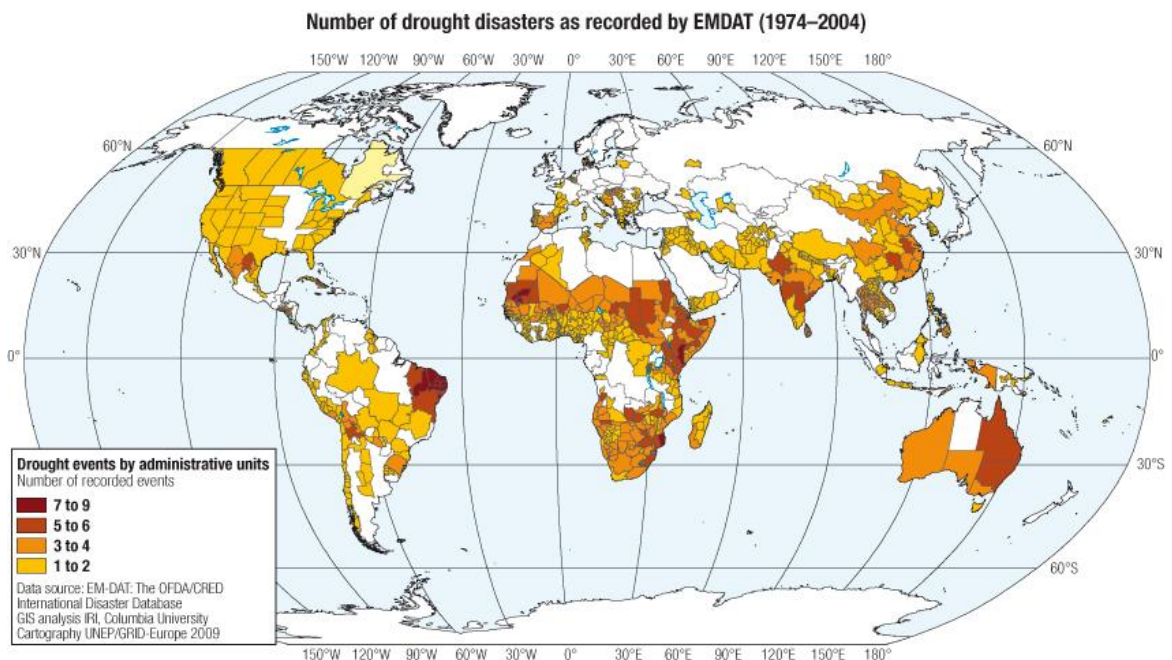


Figure 1: Number of drought disasters 1974-2004 (UNISDR, 2011)

Table 1: Drought impacts across the world (Source: UNISDR, 2011, Global Assessment Report on Disaster Risk Reduction; abridged)

<b>Drought impacts within the range of:</b>	<b>Evidence of drought impacts across the world and consequential damage:</b>
<b>Mortality and well-being</b>	<p>Mozambique: 18 deaths reported internationally between 1990 and 2009; 1040 deaths reported by national disaster loss database</p> <p>→ Under-reported drought mortality risk</p> <p>Consequences for poor rural households and rainfed-agriculture: increased poverty, reduced human development, negative impacts on health, nutrition and productivity, declining purchasing power, increasing income inequality</p> <p>Caribbean: extremely reduced agricultural yields (43 % of banana harvest, 25-30 % of onion and tomato yields) in 2009-2010</p>
<b>Rural livelihoods, food security and agricultural production</b>	<p>Australia: loss of 2.34 billion during 2002-2003 drought (mostly agricultural, also affecting economic sectors)</p> <p>India: decline of 29 million tons of food grain in 2002 drought</p>
<b>Urban and economic development</b>	<p>Mozambique: 8 million hectares of crops damaged since 1990, 11.5 million people affected</p> <p>Zimbabwe: 9.5 % decline in manufacturing productivity and 2 % reduction in export receipts due to water and electricity shortages in 1992 drought; \$100 million and 3,000 jobs of cost</p> <p>Cooling: water supplies for 24 nuclear power reactors in the United States threatened (2008); 15 % power generation capacity reduction in France during 2003 heat wave, 20 % reduction in country's hydroelectric production</p> <p>Syrian Arab Republic: one million migrating to cities after successive crop failures (2007-2009)</p>
<b>Migration</b>	<p>Mexico: migration of half of rural population to urban centers during twentieth century due to recurring droughts</p> <p>Consequences: forced migration, increased debt and borrowing, reduced food consumption, unemployment, poorer health, increase in female-headed households, change in family dynamics and women's public roles</p>
<b>Conflict</b>	<p>Droughts cause displacement and migration, increase competition for scarce resources and exacerbate ethnic tensions, encourage to join armed resistance groups resulting in likelihood of conflict</p> <p>India and Bangladesh: migration and intense conflicts since 1950s due to successive droughts</p> <p>Mauritania and Senegal: ethnic conflict and border skirmishes during droughts in 1980s and 1990s</p>
<b>Environment</b>	<p>Droughts affect habitats, water bodies, rivers with major ecological impacts, species vulnerability and migration and loss of biodiversity</p> <p>Florida: loss of 100,000 hectares of salt marshes between 1999 to 2005</p> <p>Spain: draining of wetlands, saltwater intrusion, forest fires in southern Spain increased by 63 % compared to previous decade (1991-1995)</p>
<b>Public spending</b>	<p>Need for increased government spending on relief and compensation</p> <p>Southern Africa: cost of \$950 million for food and non-food assistance in ten countries during 1991-1992 drought</p> <p>Kenya: 70 % of population dependent on food aid during 2007-2009 drought</p>

In this regard, Wilhite (2000) stated that droughts are the world's costliest natural disaster (6-8 billion dollar annually), affecting more people than any other form of natural disaster. It is acknowledged that droughts have caused human suffering since the beginning of man-kind and are a scourge that is still causing havoc as demonstrated by the drought in the Horn of Africa (2011) and in the Sahel (2012). Drought has major implications not only on lost human lives but, increasingly, in terms of short and long term economic losses as well as significant secondary and tertiary impacts with consequences for developing and developed countries, particularly in the food, water and energy sector. For example, recent droughts caused total crop failure for 75 percent of the farmers in the Syrian Arab Republic and reduced agricultural yields in the Caribbean by 20-40 percent (UNISDR, 2011). Despite a lack of data sources addressing drought impacts and losses on a global scale, Table 1 provides an indication of the magnitude and inter-relatedness on mortality, rural livelihoods, food security, agricultural production, economic and urban development, migration, conflict, the environment and public spending.

In the foreseeable future, climate change is likely to shift the patterns of droughts and possibly increase the frequency and severity of extreme drought conditions (Figure 2) thus further increasing risks of human and economic losses, as indicated by the latest 2007 IPCC report (IPCC, 2007). Research has shown that from the early 1970s to the early 2000s, the fraction of land surface area experiencing drought conditions has risen from 10-15 percent to more than 30 percent (Dai et al. 2004).

At the same time, the number of people living in water-scarce regions will rise to between 1.0 billion and 2.4 billion by the year 2025, representing 13 – 20 % of the projected global population. Africa and parts of western Asia appear to be particularly vulnerable to increasing water scarcity (WMO, 2012).

Considering that these human costs are largely preventable and economic costs can be substantially reduced, a first step is to assist drought vulnerable countries in building national capacities to develop national drought management capabilities. Such a coordinated approach through capacity building on drought issues would enhance food security, reduce the vulnerability of the poorer sections of society and promote economic growth.

Although specific definitions of drought may vary by sector and region, drought generally originates from a deficiency of precipitation over an extended period of time, resulting in a water shortage for some activity, group, or environmental sector (Knutson et al., 1998). There are three general types of drought: meteorological, agricultural and hydrological. Meteorological drought refers to a precipitation deficit over a period of time. Agricultural drought occurs when soil moisture is insufficient to support crop growth, pastures and rangeland species. Hydrological drought occurs when below-average water levels in lakes, reservoirs, rivers, streams and groundwater, impact non-agricultural activities such as tourism, recreation, urban water consumption, energy production and ecosystem conservation. (Source: Wilhite and Buchanan-Smith, 2005; UNISDR, 2009)

From a management point of view, droughts are often less tangible compared to floods and other natural hazards, as their onset, duration, and extent are often not as apparently perceivable. A result of the gradual nature of drought onsets is that the response to droughts is most often limited to crisis management, focusing on recovery from drought impacts.





UN-Water is the United Nations coordination mechanism for all water-related issues. These include surface and groundwater resources, the interface between freshwater and seawater and water-related disasters. UN-Water strengthens coordination and coherence among UN entities dealing with issues related to all aspects of freshwater and sanitation. It was formally established in 2003 building on a long history of collaboration in the UN family. It currently counts on 30 UN Members and 25 other international Partners ([www.unwater.org](http://www.unwater.org)).

## 2 Objective and Goal

There are three important concerns related to national drought management that need to be addressed in this process to be able to identify clear objectives and goals. These include:

(a) The existing misperception between development activities and drought preparedness. There is a need to identify the problems related to drought in order to develop adequate plans and take actions. This confusion is also perceived at scientific or technical level;

(b) The failure to identify as the main goal, the need to develop drought management policies at country levels and taking into account long term issues to address drought and water scarcity problems. It is not a matter of short term planning and

(c) Lack of collaboration between sectors on the country-level. In general, there is poor coordination between drought concerned institutions. Sector coordination is very important if implementation on the ground is to succeed. Thus, reactions and actions need strong collaboration at different levels, planning, response, preparedness and capacity building.

The concerns described above are related with the mandate of various UN agencies. In particular, the UNCCD is called to develop an advocacy policy framework on drought (including water scarcity) for the convention and in consultation with parties, taking gender sensitive approaches into account.

The objective of this joint initiative is to increase the capacities within the target countries on the development of risk based National Drought Management Policies. This is based on the identification of the capacity needs from national to local levels to develop such policies and implement risk based management strategies. Such National Drought Management Policies also link with UNCCD's mandate to develop an advocacy policy framework on drought, as well as emerging issues on the global agenda such as water and food security, biodiversity loss and climate change.

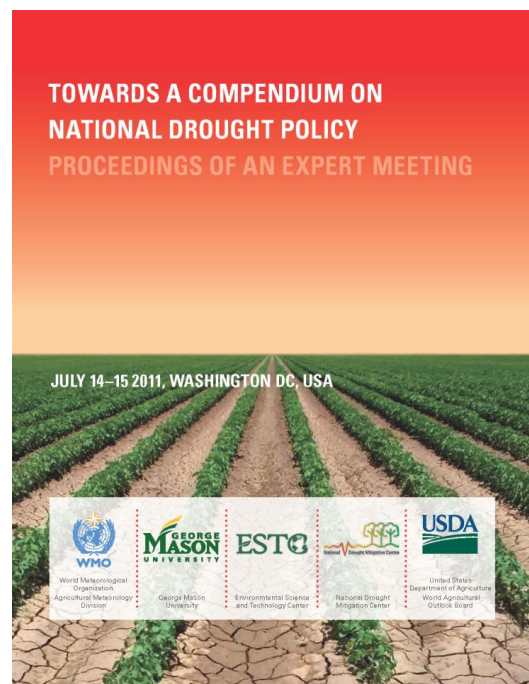


Figure 3: Towards a Compendium on National Drought Policy. (Sivakumar, Mannava V.K., Raymond P. Motha, Donald A. Wilhite, and John J. Qu (Eds.). 2011).

The goal is to enable participating nations to assess their national situation on disaster management, the position of drought management therein, and to familiarize themselves with a suite of strategies which allow them to develop risk based National Drought Management Policies.

### 3 Material

The core of the capacity development initiative is based on the “Proposed Elements in the Compendium on National Drought Policy” (Sivakumar et al., 2011, p. 128-135, Figure 3), which are the results of an expert meeting held in July 2011, in preparation for the High-level Meeting on National Drought Policy ([www.hmndp.org](http://www.hmndp.org)).

They developed a set of key elements of national drought policy under the three areas:

- Drought Monitoring and Early Warning Systems
- Vulnerability Assessment and Impacts
- Emergency Relief and Response

They represent a collection of elements suggested for consideration in the event of developing a national drought management policy.

As the situations vary significantly from country to country, no prescriptive or stringent set of elements of a national drought policy were defined, but rather a set of elements guiding the policy development in every country’s individual and specific situation.

### 4 Target Group

For the regional workshops, all committed countries of the respective regions will be considered to participate.

The participants will be identified from ministries and national organizations in a selective process. Ideally the workshop will bring together participants from different national ministries, such that cross-disciplinary networks can be fostered. The participants should be in a position to make an impact on the development of drought management policies at national level.

Countries will be requested to nominate potential participants to the kick-off meeting. The nominated candidates will be asked to submit their CVs and a motivation statement. Actual participants will then be selected from the nominated participants. Participants will be selected on the criteria that:

- Candidates are willing and able to produce a preliminary write-up on the status of national drought management strategies and the existing capacities and perceived capacity needs for drought management. This shall be submitted before the kick-off meeting.

- Candidates are able to organize, host and coordinate a network of stakeholders at country level



They are able to influence policy setting at national level and are prepared to coordinate subsequent activities at country level

The participants agree to compile national reports prior to the workshop and respond to questionnaires in the framework of the event. The participants agree that their reports may be published on the defined page on UNW-AIS and in the form of proceedings.

## **5 Implementation Mechanism**

### **5.1 Capacity Development Workshops**

The capacity development workshops will serve two major purposes. They will give an overview of problems related to drought management and National Drought Management Policies as coping strategies. The workshops will also link the subject to current issues on the global development agenda such as climate change and food security. Secondly, they will focus on the capacities that countries need to develop such policies and implement risk based management strategies. The participating countries will also have the opportunities to share experiences and discuss challenges.

Prior to the workshops the participants are requested to prepare a national report that provides the status, needs and key challenges related to drought management policies in their countries. Questionnaires will be developed to assist participants in fulfilling this task.

### **5.2 UN-Water Activity Information System (UNW-AIS)**

In support of the initiative, the UN-Water Activity Information System (UNW-AIS) will be used extensively. UNW-AIS is UN-Water's online platform to present and share information and knowledge on water-related projects and learning initiatives of its members and partners from a global to local level. Two core components of the UNW-AIS are related to projects and learning activities, both face-to-face and distance learning. UNW-AIS also contains results from several project mappings conducted under the auspices of UN-Water Task Forces, Thematic Priority Areas and the GEF IW:Science initiative. The content of the UNW-AIS is structured along UN-Water's focus areas.

As such, the capacity development initiative on National Drought Management Policy development will use a designated space on UNW-AIS with project pages documenting the activities of the initiative. The designated space will also serve the participants and others as a resource for follow-up and implementation. It will further make available reference material provided by the members and partners participating in the initiative. Also, the national reports of the participating countries will be available there.

The page will be accessible through the following short link:

[www.ais.unwater.org/droughtmanagement](http://www.ais.unwater.org/droughtmanagement).

### **5.3 Output**

At the International Wrap-up workshop, a summarizing output of the initiative will be presented. The goal is to present a policy/analytical brief and a summary of the workshops. In the course of the workshop series the scope of the policy/analytical brief will be defined.

## **6 Time Line**

The initiative will be structured as follows:

International Kick-off workshop in form of a Side Event at the HMNDP Meeting in Geneva on Thursday, 14<sup>th</sup> March during the lunch time slot

4 Regional Workshops of 3 days duration in Eastern Europe, Asia-Pacific, Africa, Latin America and the Caribbean which follow in 2013-2014.

International Wrap-up conference in mid 2014 (1 or 2 days)

## **7 Language**

The international workshop will be conducted in English, while the regional workshops will be more adapted to the regional dominant language (English, French or Spanish).

## **8 Project Partners**

### **8.1 World Meteorological Organization (WMO)**

The World Meteorological Organization (WMO) is a specialized agency of the United Nations. It is the UN system's authoritative voice on the state and behavior of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources.

As weather, climate and the water cycle know no national boundaries, international cooperation at a global scale is essential for the development of meteorology and operational hydrology as well as to reap the benefits from their application. WMO provides the framework for such international cooperation.

WMO promotes cooperation in the establishment of networks for making meteorological, climatological, hydrological and geophysical observations, as well as the exchange, processing and standardization of related data, and assists technology transfer, training and research. It also fosters collaboration between the National Meteorological and Hydrological Services of its Members and furthers the application of meteorology to public weather services, agriculture, aviation, shipping, the environment, water issues and the mitigation of the impacts of natural disasters.

The vision of WMO is to provide world leadership in expertise and international cooperation in weather, climate, hydrology and water resources and related environmental issues and thereby

contribute to the safety and well-being of people throughout the world and to the economic benefit of all nations.

(Source: [http://www.wmo.int/pages/about/index\\_en.html](http://www.wmo.int/pages/about/index_en.html))

## **8.2 United Nations Convention to Combat Desertification (UNCCD)**

Desertification, along with climate change and the loss of biodiversity, were identified as the greatest challenges to sustainable development during the 1992 Rio Earth Summit. Established in 1994, UNCCD is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found. In the 10-Year Strategy of the UNCCD (2008-2018) that was adopted in 2007, Parties to the Convention further specified their goals: "to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability<sup>1</sup>".

In order to enhance the mitigation of drought caused short and long term economic losses in such sectors as agriculture and hence food security, energy and industrial production and the natural environment, the UNCCD Secretariat envisages to take advantage of the High level Meeting on National Drought Policy (HMNDP) to consolidate the development of the Advocacy Policy Framework (APF) on drought in response to decision 9/COP 10 paragraph 11b<sup>2</sup>.

In this regard the promotion of and engaging in this joint initiative is directly linked to fulfilling UNCCD's mandate to develop an advocacy policy framework on drought (including water scarcity) for the convention and in consultation with parties, taking gender sensitive approaches into account, to be adopted by COP 11 in 2013.

## **8.3 Food and Agriculture Organization of the United Nations (FAO)**

Achieving food security for all is at the heart of FAO's efforts - to make sure people have regular access to enough high-quality food to lead active, healthy lives. FAO's mandate is to raise levels of nutrition, improve agricultural productivity, better the lives of rural populations and contribute to the growth of the world economy.

The wide support provided by FAO for the development of the agriculture sector has been instrumental in buffering drought impacts. FAO has been active in the production of knowledge materials and the provision of support to drought-prone and drought stricken countries, both directly and indirectly. It is one of the major players in supporting member countries to evaluate drought impacts and assess food needs, to mobilize assistance aid and to implement emergency projects aimed at fighting hunger, rehabilitating the production base and helping populations to recover their food production capacities. FAO played an active role in the negotiations leading to the United

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<sup>1</sup> Source : <http://www.unccd.int/en/about-the-convention/Pages/About-the-Convention.aspx>

<sup>2</sup> <http://www.unccd.int/Lists/OfficialDocuments/cop10/31add1eng.pdf>

Nations Convention to Combat Drought and Desertification (UNCCD) and is one of its implementing Agencies.

Past experience with emergency response to drought and the drastic impacts of recent drought waves have prompted FAO and other organizations to take greater interest in more pro-active risk-based management approach which includes much greater emphasis on drought monitoring and early warning, risk assessment, and management planning. In 2002, FAO declared drought as a Priority Area for Inter-disciplinary Action (PAIA) and was instrumental in establishing a regional network on drought in the Near East, Central Asia and the Mediterranean. It also promoted the adoption of pro-active drought preparedness strategies, developed guidelines for the process adapted for the Near East region and provided training and direct support to several countries of the Near East and Central Asia for elaborating such strategies. The initiative is currently being up-scaled for the global level<sup>3</sup>.

#### **8.4 UN-Water Decade Programme on Capacity Development (UNW-DPC)**

The UN-Water Decade Programme on Capacity Development (UNW-DPC) started work on 1 August 2007. The aim of the programme office is to strengthen the activities of the more than two dozen UN organizations and programmes already cooperating within UN-Water, and to support them in their efforts to achieve the Millennium Development Goals (MDGs) related to water. This is not just a matter of capacity development related to water, but also of education, training and institutional development. It also links the activities in the water sector to the broader efforts of the UN International Decade 'Education for Sustainable Development' and other relevant UN Decades.

UNW-DPC is hosted by the United Nations University in Bonn and financially supported by the German government. The Vice-Rectorate of the United Nations University in Europe (UNU-ViE) provides central services for all UNU entities in Bonn including UNW-DPC.

#### **8.5 Further targeted UN-Water Partners**

Additional potential partners, among others, are: the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Environment Programme (UNEP), The United Nations International Strategy for Disaster Reduction (ISDR), the United Nations Development Programme (UNDP) and the United Nations Framework Convention on Climate Change (UNFCCC).

The initiative will begin with a core of interested partners, but remains open to other interested UN-Water Members and Partners who can add significant expertise and are willing to contribute to the workshops, also after the initiative has been launched.

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<sup>3</sup> Source: <http://www.fao.org/>

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