

Contents

Drought- Define.....	1
Types	1
History of Drought.....	1
Policies and Plans for Drought Management in India.....	2
Policy Brief (2018) of drought in a region.....	2
Disaster Management Plan	2
Key focus of DMP is.....	2
Crises Management Group.....	2
Strategy to face droughts.....	3
Drought in Gujarat.....	4

Drought- Define

Drought is a natural hazard, which has a slow onset, evolves over months or even years but affects a larger region. Drought is classified as meteorological drought when rainfall is deficient >20% than the normal rainfall in the given area

Types

1. Hydrological drought- when there is significant depletion of surface water
2. Agricultural drought- when inadequate soil moisture lead to fall in agricultural productivity.¹

History of Drought

Droughts and famines have received attention of rulers in India right from the 13th and 14th century. Muhammad Tughlakh was perhaps the first Sultan to take systematic steps to alleviate efforts of droughts by distributing grains to drought affected people in Delhi in 1343 AD (Loveday 1985). This approach was followed and improved upon by Mughals and many other kings and rulers later on. During the British period also efforts were made to provide relief to droughts / famine affected people by organizing relief works and food distribution, distribution of fodder, loans to farmers to start cultivation in the next season etc. The first Scarcity Manual was prepared by the British Government in 1883, which was followed by other manuals by some provincial governments (Hirway 2001), The Royal Commission on Agriculture in 1928 recommended promotion of dry land farming to promote agriculture in famine affected regions.²

In the latter half of the 19th century, there were approximately 25 major famines across India, which killed 30-40 million people. The first famine of 1770 is estimated to have wiped out nearly one third of the population. The famines continued until Independence in 1947. The situation improved remarkably in post-independent India. Investment in irrigation works, promotion and availability of quality inputs, focus on research & extension led to increased agricultural productivity and greater resilience among the farming communities. This development did not only render the country self-sufficient in food production but to a considerable extent, famine proof.³

On an average, 80-100 districts received deficient rainfall and were declared drought affected in India, every year including the best monsoon years since 2000. Severe countrywide drought occurred for 4 years since 2000, causing

¹ <https://www.teriin.org/sites/default/files/2019-02/Drought%20Proofing%20India.pdf>

² http://planningcommission.nic.in/reports/sereport/ser/stdy_droght.pdf

³ <http://agricoop.nic.in/sites/default/files/Drought%20Management%20Plan%20.pdf>

widespread hardships to the human and livestock population. Some of the regions spread over in the States of Maharashtra, Karnataka, Andhra Pradesh, Rajasthan, Madhya Pradesh, Uttar Pradesh, Jharkhand, Bihar, Odisha, Telangana are chronically prone to drought.

Policies and Plans for Drought Management in India

Disaster Management Act, 2005 is the primary law at the national level that provisions for management of disasters in the country. It mandates that there shall be a National Disaster Management Plan (NDMP) for the whole of India which will pertain to the disaster management for the entire country.

Department of Agriculture, Cooperation & Farmers' Welfare (DACFW) as the nodal agency to formulate policies, plans and institutional mechanisms related to drought management in the country. DACFW has actively been engaged in devising guidelines and practices that should be followed by the state and district level authorities to mitigate drought conditions in their area. The revised Drought Management Manual was published by the DACFW in December 2016, which has come into effect from Kharif season of 2017. The Manual is a guide for governments and agencies engaged in the prevention, mitigation and management of drought.

Policy Brief (2018) of drought in a region.

Based on the values of indices like Standardised Precipitation Index, Vegetation Condition Index, Percentage Available Soil Moisture, and Hydrology Indices like Reservoir Storage Index, Stream-flow Drought Index and Ground Water Drought Index, it grades the magnitude of the drought events on a scale of values as "Moderate" and "Severe".

As 'Drought declaration' signifies the beginning of Government response to conditions leading to drought situation, based on the drought indices, state governments are authorized to declare drought and carryout relief operations. In case of severe drought, they can also request Government of India for financial assistance by submitting a Memorandum for Financial Assistance. Following the declaration of drought, relief and response measures are required to be initiated to minimize damage to life and property. To provide necessary guidance to the implementation authorities, Crisis Management Plan (CMP) and District Agriculture Contingency Plans (DACPs) have been formulated by DACFW in collaboration with ICAR Central Research Institute for Dryland Agriculture (ICAR-CRIDA).

Disaster Management Plan

DACFW has also released a Drought Management Plan (DMP) in November 2017 which helps in delineating roles and responsibilities of different Ministries/ Departments of the Government of India involved in drought management for mitigation, preparedness and for relief measures in managing the drought.

Key focus of DMP is

1. to ensure better preparation and timely communication among stakeholders
2. to help reduce the time taken in mobilizing resources for an effective response
3. enable a harmonious relationship among stakeholders

which is critical in managing a drought.

Crises Management Group

A Crisis Management Group functions under the Chairmanship of the Central Drought Relief Commissioner with representatives of associated ministries and organizations. The group meets from time to time to review the drought situation in the country and progress of relief measures. At the state level, Department of Disaster Management and Relief, headed by a Secretary or Relief Commissioner is responsible for directing drought operations in the State. The Relief Commissioner/ Secretary monitor the drought situation and regulate the release of all financial assistance to the district administration. At the district level, Collector implements all decisions related to drought management

through a number of line departments and field agencies. District collector heads a district drought/disaster management committee consisting of public representatives and line departments.⁴

Drought is one of the most frequently occurring national disasters in India. With its increased frequency and expanded coverage in the recent years, about one third of the country is either drought prone or under desert areas. These areas are lagging behind in agriculture and also in overall economic growth. They experience wide year-to-year fluctuations in agricultural production and incomes and have a relatively high incidence of poverty. The poor in these regions are highly vulnerable to a variety of risks due to their low and fluctuating incomes, high indebtedness and low human development.

Strategy to face droughts

The government has adopted a three pronged strategy to face droughts:

1. Providing relief to drought hit population under scarcity relief programmes
2. Designing special area development programme for drought prone areas and desert areas (DPAP – drought prone area programme and DDP – desert development programme)
3. Promoting dry farming agriculture as a part of agricultural policy.

Somehow this approach has not worked very well, as is evident from the increasing drought prone areas in the country and the relatively high poverty and vulnerability of people living in these areas. These areas are lagging behind in growth and tend to remain isolated.

The new opportunities of globalization are likely to bypass these regions if adequate steps are not taken to integrate them into the mainstream economy. There are therefore a need to investigate:

1. whether the drought policy in India has been able to address the multiple dimensions of droughts adequately,
2. whether the policy needs to be reoriented or modified,
3. whether there is a need to reorganize its implementation
4. what kind of measures are needed to enable drought prone areas to access the new opportunities under globalization?

Hanumantha Rao, Ray and Subbarao (1988) in their pioneering study on unstable agriculture and droughts found that agriculture in drought prone areas has been highly unstable. They observed that some water scare states like Gujarat experienced low to medium growth with high instability in the 1970s and 1980s. They also observed that production instability varied with crops:

1. Variations in food crops were less than non-food crops
2. traditional crops were more sensitive to rainfall than new crops
3. variations in Rabi crops were less than the same in Kharif crops.

All these factors affect the cropping pattern in drought prone regions, frequently affecting agricultural growth adversely. It is also observed by scholars that increase in crop productivity due to intensive cultivation and application of new technology also increases crop instability because it requires intensive water use which is highly sensitive to water use. The coping strategies of farmers in droughts frequently go against their long-term interests. For example, borrowings (at high interest rates), mortgage/sale of assets, migration etc. frequently leave the households worse off in the long run. This adverse impact frequently pushes poor households in “a poverty trap”, which increases the intensity of poverty of poor households and affects the well being of women and children highly adversely.

First, the impact of droughts is examined only in a limited way – in terms of its impact on agriculture, sufferings of affected people such as farmers, labourers, women, children etc. Watershed development has now emerged as a

⁴ <https://www.teriin.org/sites/default/files/2019-02/Drought%20Proofing%20India.pdf>

major component of DPAP programme, and many studies have been done to examine its impact on soil-water management. However, there is a need to link this programme with drought proofing of drought prone areas. Also, need to study drought prone areas for their integration into the mainstream development and for enabling them to access the new opportunities provided by globalization. The specific objectives of the study are as follows:

1. To examine the multi-dimensional impact of droughts in a major low rain fall drought prone state, Gujarat. The multiple dimensions of the impact will include short term and long term impact on
 - a. agriculture and on the overall economy,
 - b. natural resources, such as ground and (surface water) land, vegetation and forestry etc, and
 - c. on poverty and human development, i.e. income poverty, health and nutrition, literacy and education etc.
2. To study drought policy in the State and assess the strengths and weaknesses. The drought policy will include all the components of the policy
3. To investigate specific drought related issues like drought prediction, agricultural research for drought prone areas, scarcity relief works, impact of watershed development on stabilizing agriculture, case studies of successful drought proofing etc.
4. To infer implications for mainstreaming drought prone areas in economic development and for enabling these areas to access opportunities under globalization.

The indicators of drought for the different regions will help in designing suitable interventions for the different drought prone regions. The aim is to provide sound statistical basis for formulating and monitoring drought policy. The approach focuses on Gujarat.

Gujarat state was formed in the year 1960 when the erstwhile bilingual Bombay State was split into two separate states; Gujarati speaking Gujarat State and Marathi speaking 7 Maharashtra state. With its enterprising population and committed leadership Gujarat has done well since then in terms of overall economic growth. It has progressed to acquire the 4th rank in per capita income among the major states in India and has maintained this rank for the last two decades or so.

Today it is one of the prosperous states of India with about 50 million population (2001) spread over 196,000 sq. km. The state gets highly unevenly distributed rainfall, varying from 300 – 350 mm in Kachchh to 600 – 700 in Saurashtra and North Gujarat to more than 1500 mm in South Gujarat. The low rainfall in many parts of the state is highly erratic in nature. Gujarat is a highly drought prone state. More than 60 per cent of the area of the state is subjected to frequent droughts. In major droughts, some additional areas also suffer from poor rainfall. The incidence of droughts is quite high in the state. In every five years, 2-3 years are drought years and in every ten years there are 2-3 severe and widespread droughts, which are frequently consecutive.

In normal years also about 10 to 15 per cent of talukas are declared drought affected and scarcity works are undertaken here. It has been observed that the frequency and intensity of droughts have increased in the state over the years. However, deaths due to famines are almost eradicated, as food grains are made available to drought-affected people. A few deaths, however, have been reported on scarcity works due to other reasons. The other change is that the droughts now are accompanied by serious drinking water shortages. This is because of severe depletion of water resources in the state in the recent decades. Till about the sixties and seventies it was possible to dig wells/bores/tube wells to access drinking water. ⁵

Drought in Gujarat

While other states like Karnataka, Maharashtra, Odisha, Jharkhand, Bihar and Andhra Pradesh had declared drought at the very offset of the southwest monsoon, and began work on mitigation measures, the Gujarat government remained silent despite receiving deficit rainfall in most of the districts.

⁵ <http://agricoop.nic.in/sites/default/files/Drought%20Management%20Plan%20.pdf>

Until the Gujarat government had been terming the situation in many districts of the state as “scarcity of water”. It was only on December 17, at a press conference in Gandhinagar, that the state government declared 3,367 villages under 51 taluka of 16 districts as drought affected.

Three months after the annual southwest monsoon passed, the Gujarat government has demanded a relief package of Rs 1,725 crore from the Centre for drought-ridden farmers. This comes at a time when the Rabi crop sowing season is already underway. A nine-member central team, comprising officials from various ministries, had visited Morbi, Patan, Surendra Nagar, Kutch, and Banaskantha districts of Gujarat during a three-day tour to assess impact of drought.

About 67 per cent of the districts in the state recorded deficit rainfall. The Saurashtra and Kutch region received 34 per cent deficit rainfall, while East and South Gujarat recorded a deficit of 24 per cent. Farmers in Patan district have also resorted to protests demanding more water from the Narmada canal to carry out irrigation.

Prior to the monsoon, the Gujarat government had also launched a water conservation scheme, called Sujalam Sufalma Yojana, for the month of June. After spending close to Rs 345 crore on the scheme, the state government claimed had claimed a success rate of 110 per cent.

It had claimed that under the scheme, about 1,300 ponds and 34 rivers and canals had been cleaned. However, an audit report by the International Water Management Institute (IWMI) has flagged several irregularities in implementation of the scheme, including political influence in site selection, absence of tenders, misuse of excavated silt etc.⁶

United Nations Convention to Combat Desertification (UNCCD) COP14: 2-13 September New Delhi, India

Nearly 9 000 participants from all over the world took part in UNCCD COP14. IIPA & SEEDS were also a part of it. The Parties to the Convention agreed on the actions each will take over the next two years and beyond to get us on a sustainable development path. The Conference adopted the Delhi Declaration in which parties expressed commitment for a range of issues, including gender and health, ecosystem restoration, taking action on climate change, private sector engagement, Peace Forest Initiative and recovery of five million hectares of degraded land in India.

UNCCD COP14 agreed on 36 decisions to ramp up and elaborate further action on the ground to ensure that the Convention’s goals for 2018-2030 are achieved. At the closing of COP14, UNCCD Executive Secretary Mr. Ibrahim Thiaw shared these takeaway messages:

- Land restoration is the cheapest solution to climate change and biodiversity loss
- Land restoration makes business sense if regulations and incentives to reward investment are in place
- Drought preparedness and response are critical in the face of climate change
- To put people first is to ensure gender balance, engage youth, secure land rights⁷

⁶ <https://www.downtoearth.org.in/news/agriculture/gujarat-declares-drought-after-months-of-delay-62531>

⁷ <https://www.unccd.int/conventionconferenceparties-cop/cop14-2-13-september-new-delhi-india>