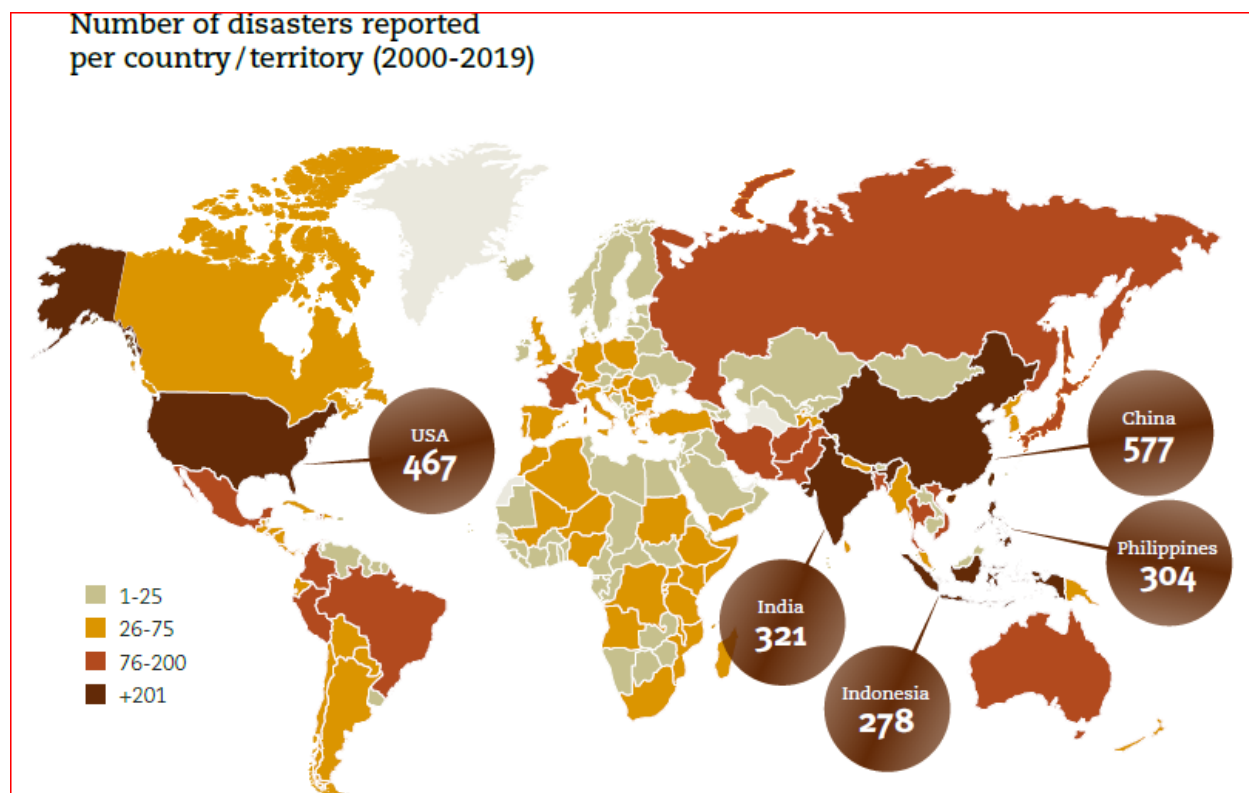


Beyond Covid-2019

United Nations induced report on “Human Cost of Disasters” released on October 13, 2020 says that the disasters recorded between 2000-2019 claimed 1.23 million lives and caused 2.97 trillion USD economic losses to the global economy. The report further lists India as third most disaster prone country in the world behind China and America. This report is a joint work of Centre for Research on the Epidemiology of Disasters (CRED) and UN Office for Disaster Risk Reduction (UNDRR) based on an overview of the last 20 years 2000-2019.

CRED support the WHO Global Programme for Emergency Preparedness and Response. In terms of affected countries globally, China (577 events) and the United States of America (U.S.) (467 events) reported the highest number of disaster events, followed by India (321 events), Philippines (304 events), and Indonesia (278 events) (Figure 1). All these countries are given to have large and heterogeneous landmasses and relatively high population densities in at-risk areas.

Figure 1



Further the report in most certain terms suggests that floods and storms were the most prevalent events of natural disasters. And India is the 2nd most affected country by floods: it experienced an average of 17 flood events per year. Further the report highlights three types of costs viz., total number of people affected, deaths, and economic losses.

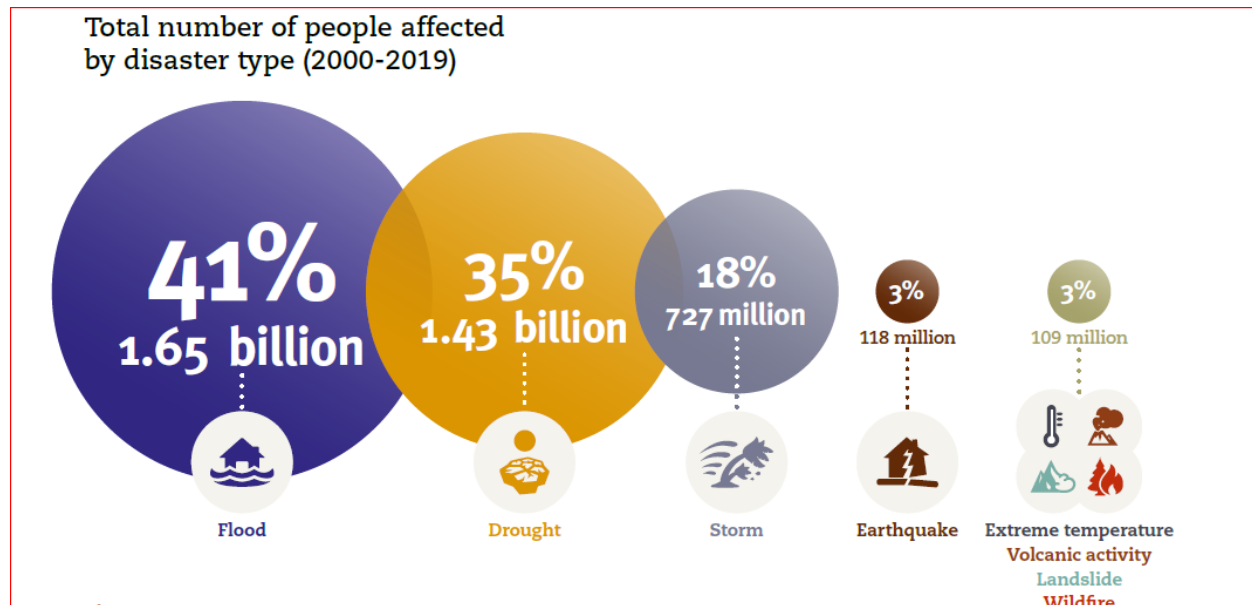
UN Report extracts

The report presents following data to these two disasters that are referred to as most promising to India:-

FLOODS

The report points out that flood have accounted for 41% of all disaster events from 2000 to 2019, affecting 1.6 billion people worldwide, the highest figure for any disaster type (Figure 2).

Figure 2



Furthermore, floods are the most common type of event with an average of 163 events per year. The most affected country by flooding in the past two decades was China, which experienced an average of 20 floods per year. Flooding in China affected a total of 900 million people over the two decades, accounting for approximately 55% of people affected by flooding worldwide. India is the 2nd most affected country by floods: it experienced an average of 17 flood events per year and had a total of approximately 345 million people affected. The deadliest flooding events from 2000 to 2019 were the June 2013 floods in India (6,054 deaths), May 2004 floods in Haiti (2,665 deaths), and the July 2010 floods in Pakistan (1,985 deaths).

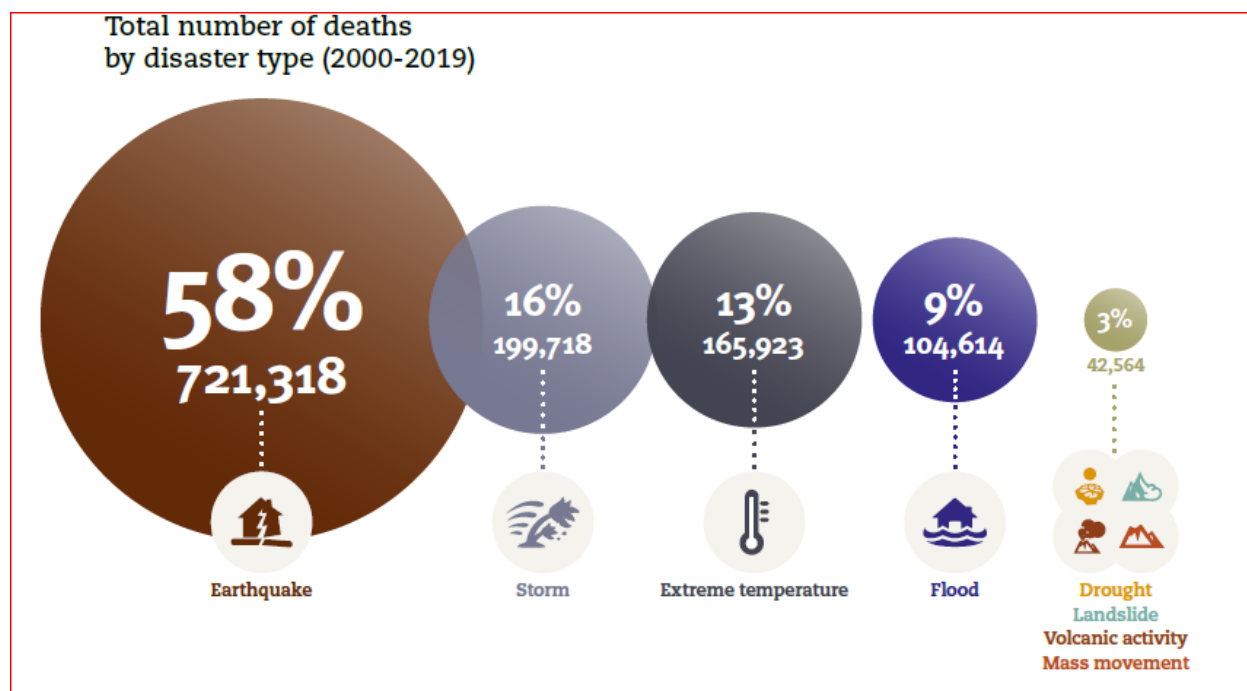
Floods have the highest impacts in Asia, as the continent experienced 41% of all flooding events and with a total of 1.5 billion people affected, accounted for 93% of people affected by floods worldwide. Africa (763 flood events) and the Americas (680 flood events) experience significant flooding impacts as well. Many of these impacts are preventable since flooding, unlike most types of

disasters, has affordable mechanisms of primary prevention, such as dams, dykes and drainage systems.

STORMS

As or the UN report storms, including hurricanes, cyclones and storm surges, killed nearly 200,000 people between 2000 and 2019 (Figure 3), making storms the 2nd deadliest type of disaster worldwide, and the deadliest type of weather-related disaster in the past 20 years.

Figure 3



The 2,043 storms recorded by EM-DAT during this period also make these events the second most frequent disaster type after flooding. While storms typically cut through wide swathes of densely populated regions, island states are particularly vulnerable as many are in storm paths. In 2017, Hurricane Maria hammered the U.S. territory of Puerto Rico, directly resulting in 64 deaths and leading to approximately 3,000 excess deaths.

In 2019, Hurricane Dorian hit the Bahamas resulting in at least 370 deaths/missing, a high figure for a country of under 400,000 people. Despite the relatively small landmass and total population, the Caribbean has experienced 163 storm events affecting a total of 25.8 million people and resulting in over 5,000 deaths in the past two decades. Additionally, storm events in the Caribbean have caused US\$ 121 billion in direct economic losses, a relatively devastating impact for a small region.

Like distribution for flood impacts, Asia is the most affected continent by storms. Asia accounted for 79% of people affected by storms, with the highest

affected region being East Asia. The continent also accounted for 90% of storm deaths, with South East Asia having the highest death tolls. Critically, the highest share of storm deaths belongs to a single event, Cyclone Nargis in Myanmar. In 2008, Cyclone Nargis struck southern Myanmar and resulted in approximately 138,000 deaths, making it the deadliest storm worldwide since the early 1990's. Furthermore, the Americas experienced 72% of the world's total economic impacts due to storms, most of which occurred in the U.S.

Scientific evidence suggests that, as a result of climate change, certain areas of the world will experience an increase in flooding and storm events. Concurrently, the population in need of protection from such hazards is expected to increase as the total worldwide population in disaster-prone regions increases. Storm drainage systems must be adapted to accommodate increasing rainfall intensity resulting from climate change. Risk-informed policies, backed by political leadership, sustained funding and based on accurate, timely, relevant, interoperable and accessible data, are the key to ensure that the most vulnerable are not left behind.

Encouragingly, there are advances in resilience that have already resulted in reduced human impacts. Weather forecasting has made extraordinary progress in recent years, as has access to mobile phones, now with highly reliable storm forecasts. Thus, authorities can issue alerts and organize evacuations resulting in thousands of lives saved.

Seven Point Agenda

The UN report provides factual data of disaster events which can be taken benefit of by the Niti Aayog. Given this factual data of disaster events and their impact there is therefore a greater responsibility upon India as third most disaster prone country in the world. Unlike Covid-19 disaster where the world perhaps had no advance preparation the floods and storms like disasters which

have a certain degree of recurrence as pointed in the UN report these must be dealt with an advance planning to minimize their dreadful impacts and losses.

The UN report on human cost of disaster is of a concern to each and every citizen of India who had a fundamental right under Article 21 of the Constitution of right to protection of life. Covid-19 has been so tragic for those who lost lives in their family only because of our unpreparedness and failing medical infrastructure. Given this advance research material and proven information it is very necessary for our members of Lok Sabha and Rajya Sabha , members of the State Legislative Assemblies, the epidemiology and disaster management experts and scientists to forthrightly discuss and to take all possible immediate measures to be well prepared in advance. Taking a signal from the UN report it is time ripe for India to take some urgent steps ahead of Covid-19:

1. Constitute special task force under co-chairmanship of Hon'ble Justice Dhananjaya Yeshwant Chandrachud and Dr. Randeep Guleria to address deficient health infrastructure in the country;
2. To draw a separate budget with an agenda for 'human cost of disasters' in carrying out annual budget exercise. We must provide for every possible preventive climate measure to fight any such disaster after detailed scientific evaluation by our scientists and experts;
3. Niti Aayog re-modelling to have members as epidemiologist and disaster management experts;
4. Bring a Constitutional amendment to incorporate a Centre-State Charter for unified management of epidemics and disasters;
5. To draw and implement appropriate plans and incentives to decongest towns, cities and other pockets that are faced with challenges of population density or prone in their nature;

6. Postpone 2022 elections in all states to enable them to first recover from the Covid 19 trauma and next prepare to hold one time simultaneous elections for Lok Sabha and State Legislative Assemblies;
7. Form a separate ministry for disaster management headed by an epidemiologist.

Each time our lack of preparedness to such disasters leaves us with a further increase in number of poor population and poverty and unemployment and these eventually often would burden upon the taxpayers in the form of additional taxes and surcharge. I hope we take due note of UN report on Human Cost of Disasters in our emergency preparedness in future beyond Covid-19 to minimize both human and economic losses in the years to come.

CA Gopal Nathani