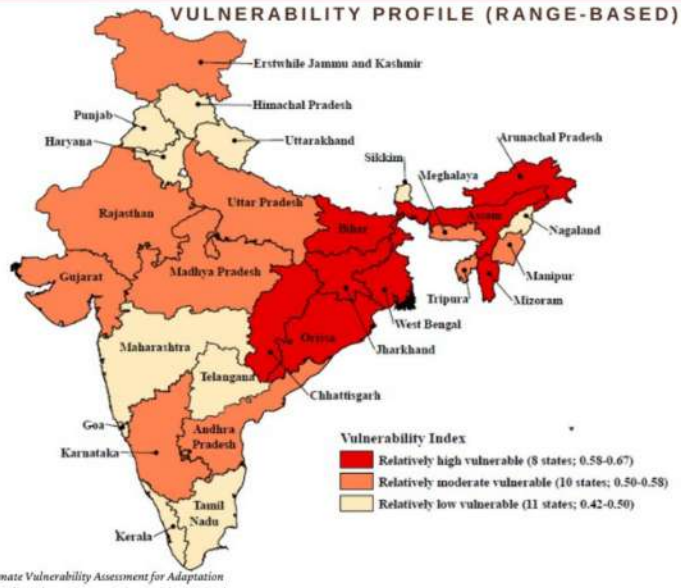
VULNERABILITY INDICES OF THE INDIAN STATES

VULNERABILITY PROFILE (RANGE-BASED)



(Source: Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework, 2019-20)

VULNERABILITY RANKING, 2019-20

A FRAMEWORK FOR CLIMATE VULNERABILITY ASSESSMENT

INDICATORS OF VULNERABILITY

MNREGA
Acts as safety net by providing any adult member of a household registered under the scheme

Income shares from natural resources
Climate variability and change directly affect the productivity of natural resources.

BPL Population
People with extremely low incomes, are among the most vulnerable to climate change

Yield variability of food grains
The agriculture sector is extremely sensitive to climate fluxes, particularly rainfall variability

Road and rail density
Focused on accessibility and connectivity, which are essential in regions that are exposed to climate and disaster risks

Women's participation in the workforce
Regions with more women in gainful employment would signify gender equality therefore such working women are less vulnerable to climate change

The density of health care workers
The availability of doctors and health care specialists at medical institutions represents the functionality of these institutions.

Area covered under crop insurance
Crop insurance helps farming households mitigate losses caused by climate risks

Vector-Borne Diseases (VBD)
Temperature and rainfall variations can foster higher VBD occurrence

Marginal and small landholdings
Farmers experience immediate hardship in face of any climatic hazard.

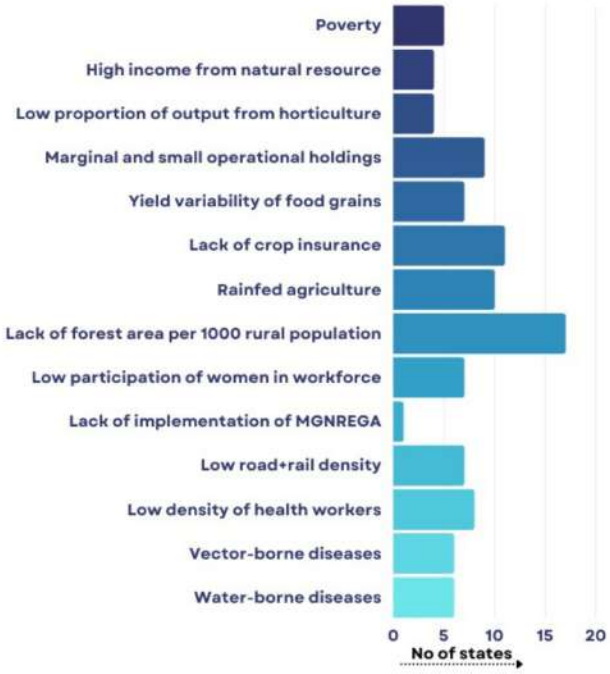
Share of horticulture in agriculture
Provide alternate income sources to agriculture as they are far less sensitive to the impacts of climate risks

Water-Borne Diseases (WBD)
Lack of proper drainage, high incidence of open defecation, and frequent occurrence of floods lead to an increase waterborne pathogens

Forest area per 1,000 rural population
Forests also provide essential ecosystem services for the sustainable productivity of rural economies and building of adaptive capacity

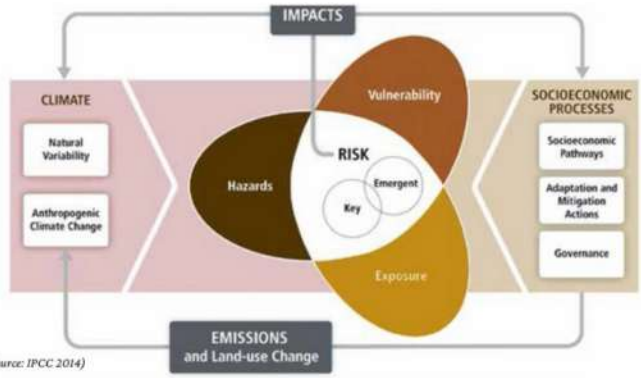
Area under rain fed agriculture
Lack of irrigation indicates a lack of adaptive capacity to mitigate the impacts of climate risks, leading to increased crop loss

MAJOR DRIVERS OF VULNERABILITY



(Source: Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework, 2019-20)

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change, i.e., IPCC-AR5 (IPCC, 2014) defines the risk of climate change at the intersection of 'Hazard', 'Exposure' and 'Vulnerability'



(Source: IPCC 2014)

The first step in Adaptation to future climate change- Reduce vulnerability and exposure to present climate variability

Vulnerability
"considered as a system property indicating predisposition of a natural ecosystem or a socio-economic system to be adversely affected".

Exposure
"the presence of people, livelihoods, species or ecosystems, environmental functions, services and resources in places and settings that could be adversely affected".

Hazard
"the potential occurrence of a natural or human-induced physical event that may cause loss of life, injury or other health impacts as well as damage or loss to property, infrastructure, livelihoods, service provisions, ecosystems and environmental resources".

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