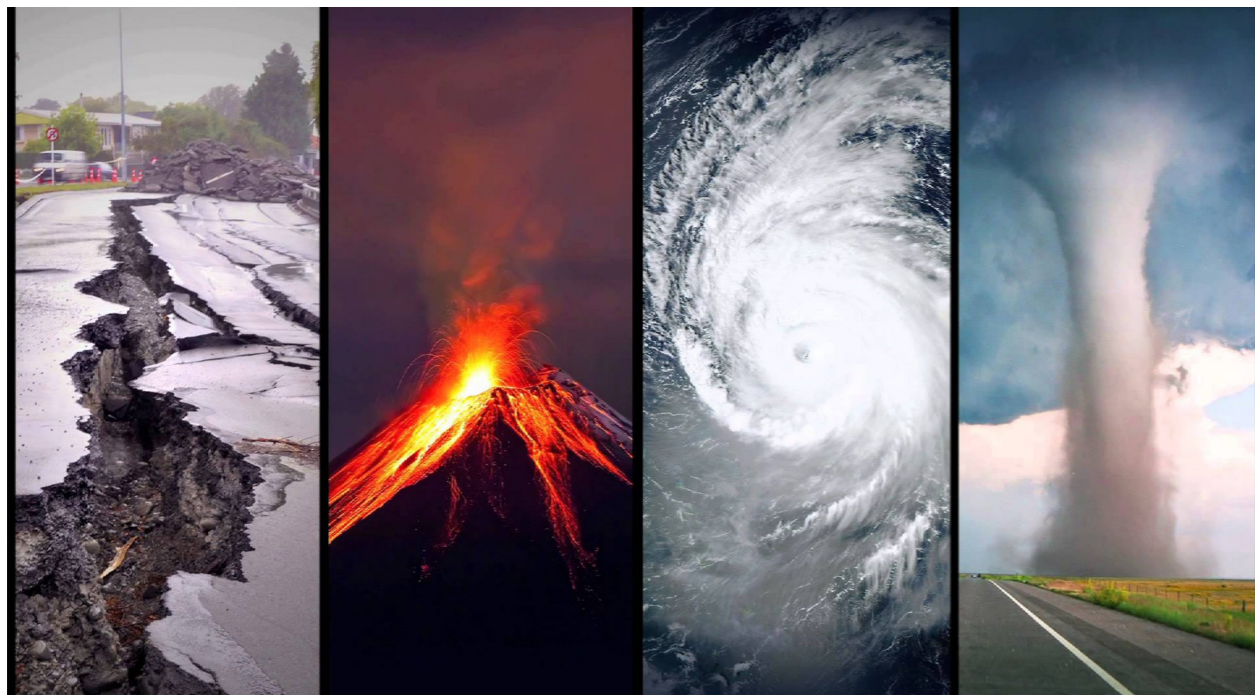


HOW NATURAL DISASTERS AFFECTS AGRICULTURE?

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Throughout human history, natural disasters have played a major role in the economic development and survival of humanity. The economic cost associated with all natural disasters has increased 14 fold since the 1950s. Deaths since the 1950s increased 50% each decade, whereas the corresponding population growth rate was only 20%. World wide, annual economic costs related to natural disasters have been estimated at about \$ 50 to \$ 100 billion.

By the year 2050 it is predicted that globally 1,00,000 lives will be lost each year to natural disasters and the global cost could top \$ 300 billion annually.

NATURAL DISASTERS

“An event is classified as a disaster if at least 10 people are killed and/or 100 or more are affected and/or an appeal for international assistance is made or a state of emergency declared”.

Natural disasters include hydro-meteorological disasters and geophysical disasters (World Disaster

Report, 2003). The hydro-meteorological disasters include landslides/avalanches; droughts/famines; extreme temperatures and heat waves; floods; hurricanes; forest/scrub fires.

AGRICULTURE AND NATURAL DISASTERS

70 % of the global land use is for agriculture, rangeland and forestry

- 12 % for arable and permanent crops
- 31 % for forest and woodlands
- 27 % for permanent pasture.

Agriculture is also the essential source of income in most developing countries. For example, agriculture accounts for 70 % of full-time employment in Africa, 33 percent of total GDP, and 40 percent of total export earnings. Agricultural production is highly dependent on weather, climate and water availability, and is adversely affected by weather and climate related disasters.



Floods



Drought

Above all the natural disasters leaves adverse effect on the agriculture. Each disaster has its own long lasting on the going crops and upcoming crops.

IMPACT OF NATURAL DISASTERS ON AGRICULTURE

Impacts can be direct or indirect in their effect. Direct impacts arise from the direct physical damage on crops, animals and trees caused by the extreme hydro-meteorological event. Indirect impacts refer to loss of potential production due to disturbed flow of goods and services, lost production capacities, and increased costs of production. These appear progressively as a result of low incomes, decreases in production, environmental degradation and other factors, Impacts can also be classified as tangible or intangible. Tangible impacts are those that can be easily measured in monetary terms. Intangible impacts are often difficult to measure in monetary terms eg., anxiety or fear of future natural disasters in convenience and disruption to farm work and stress induced ill health and human fatalities.

Loss of perennial crops such as banana trees or forests has long term consequences on the ability to generate income. Hurricanes might wash out arable land or permanently increase its salinity through storm surges and flash floods. Localized disasters tend to produce limited aggregate impacts, unlike country wide natural events such as Hurricane Mitch. Recurrent disasters in the same geographical area might lead to reduced investment due to the perceived risk of asset loss or emigration from stricken areas.



DROUGHT- Drought impacts crop growth and development at different levels including soil moisture uptake, root growth, shoot growth, various plant processes such as photosynthesis, respiration, plant water uptake and final yield.

FLOODS- Impacts during the non growing season include loss of top soil; loss of soil nutrients; soil compaction; soil erosion; permanent damage to perennial crops, trees, livestock, buildings, and machinery; and permanent cessation of farming in flood plains. Impacts during the growing season include water logging of crops; lodging of standing crops; loss of soil nutrients; loss of pasture use; soil erosion; greater susceptibility to diseases and insects; interruptions to farm operations; permanent damage to perennial crops, trees, livestock, buildings and machinery etc.



UNAVOIDABLE IMPACT OF DROUGHT AND FLOOD ON AGRICULTURAL SECTOR

CONCLUSION

Natural disasters are on the rise and they continue to target the world's poorest and least-developed.

- There must be greater investment in disaster reduction rather than High profile response efforts.
- Improved data on past disasters would help inform investment and policy decisions and thus help secure more appropriate levels and forms of disaster prevention, mitigation and preparedness.
- It is important to develop mechanisms for more efficient assessment and documentation of natural disaster impacts in agriculture.