

Expert: Somnath Jha

Title of the Session: 'New Normal' Weather Emerging as a Potential Driver of Socio-Economic Quake

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Summary

Unprecedented surprise and uncertainty in the climatic extremes have become the 'new normal' of the recent time. General relationships between climate signals and seasonal variability are changing during the recent time. Global teleconnection parameters like El Nino and Southern Oscillations (ENSO) indices are losing their importance as seasonal predictors of the regions. Tropical regions with high diversity are more prone to the hazards of 'new normal'. Inter-related climatic factors and a cascading effect due to the 'new normal' weather have been causing silent but gradual changes in the natural biological productivity of the agro-ecosystems. Thus the increased ambiguity of 'new normal' weather has increased the vulnerability of agro-ecosystem along with the dependent agrarian community to the climatic-extreme hazards and the society in large.

Context

Climatic uncertainty has become the 'new normal' across the globe. Unprecedented changes, surprises and uncertainty have become the key words of the definition of this 'new normal'. Norms of secular trend of climate change and related downscaled weather-variation especially in the tropics are proved to be ruled out by the 'new normal' of the climatic events with varying magnitude and intensity of the extreme events during the recent times.

Unprecedented drought, flood, cyclone, cloud burst and the exposure and inclusion of new regions under such hazards have become the general rule during the recent time. Teleconnection-relationship of various El Nino and Southern Oscillation (ENSO) indices to the regional weather variability and seasonal predictability has been changing with the advent of new surprises of extreme weather events in many tropical regions like India.

Thus, the 'new normal' has ushered in a change in the dynamics of the components of the agro-ecosystems of the tropics. Thus, a 'new normal' in climate has also invited a gradual but silent 'new normal' in the natural biological productivity of the agro-ecosystem including the fresh water fisheries. Tropical countries like India where there is a high diversity of geographical, environmental and socio-cultural entities are more prone to manage this 'new normal' due to added uncertainty arising out of these high diversities. Increasing Knightian uncertainty in the predictability of seasonal climate and its impact on agricultural productivity have increased the vulnerability of the people of the regions. High exposures of such vulnerable people are found to be predominated in the nations where intensive and subsistence agriculture is practised.

Socio-economic condition of the people deteriorates where agriculture serves as a major shelter of work-force but contributes less in the annual Gross Domestic Products (GDP).

Thus, the 'new normals' in the climate along with cascading impact on the agrarian societies is gaining potential to emerge as a driver of social jerk by causing surprise quake in the general price level of the agricultural products and thus affecting the nonagrarian citizens also.

Actuarial sciences are also losing ground as a curative approach due to lack of technical robustness in quantifying the risk of the weather based crop insurance products of 'new normal' time and thus the probability of the product failure is increasing with time due to increased ambiguity aversion over the risk aversion.

Therefore, a consensus building and holistic approach are the needs of the time to bridge the gap among the vulnerable agrarian community, expert community and the governments. Adaptability measures and capacity building have to be meaningfully incorporated in the government policy and proper implementation of the same has to be initiated without any further delay.