

Standing Committee Report Summary

Promotion of Climate Resilient Farming

- The Standing Committee on Agriculture, Animal Husbandry and Food Processing (Chair: Mr. P.C. Gaddigoudar) presented its report on ‘Promotion of Climate Resilient Farming’ on February 7, 2024. Climate change harms crop yields and agricultural productivity. Its impact can be mitigated if institutional and policy support is provided for adapting to the changes. Key observations and recommendations of the Committee include:
 - **Potential impact and mitigation measures:** Developing countries are more vulnerable to climate risks since they rely on agriculture, and lack necessary technologies to manage the risk. Without mitigation and adaptation measures, poor farmers may remain trapped in a cycle of low income, high debt, and poverty. These adverse effects can be mitigated through integrated approaches such as technological advancements, meteorology, and data sciences. The Committee suggested that the National Innovations in Climate Resilient Agriculture (NICRA) Scheme should be implemented in all risk vulnerable villages to protect farmers from climate and meteorological incidents. NICRA is a project that was launched in 2011, and aims to enhance resilience of Indian agriculture against climate change through strategic research.
 - **Crop diversification:** Diversification of crops enables agricultural ecosystems to adapt to climate change. However, the Committee observed that current public policies and development interventions offer inadequate assistance to diversify crops. In addition to mitigating the effects of climate change, crop diversity also helps in ensuring food security, enhancing soil fertility, controlling pests, and bringing yield stability. The Committee suggested that the Ministry of Agriculture and Farmers Welfare provide all possible assistance to farmers to achieve this.
 - **Water conservation:** Management of water resources is a key feature of sustainable agriculture. The Committee noted that irrigation infrastructure needs to be upgraded, especially in North-western India. It is the country’s food basket and is prone to climate induced droughts. The Committee also noted that drip irrigation is currently only adopted for high-value horticultural crops. It suggested that the government take a nuanced stance on electricity subsidy meant for drawing groundwater. The Committee noted that the subsidy is a major contributor towards declining groundwater levels. It suggested that algorithms which optimise irrigation schedules, conserve water, and minimise environmental impact must be used.
 - **Organic farming to reduce greenhouse gas emissions:** The agriculture sector contributes approximately 14% to the country’s greenhouse gas emissions. Use of synthetic nitrogen fertilisers contributes to high emission rates of nitrous oxide. The Committee noted that organic farming has the potential to minimise greenhouse gases. Mineral nitrogen is prohibited in organic farming which leads to lower nitrous oxide emissions. The Committee recommended that the Ministry promote organic farming to help farmers adapt to climate change.
 - **Improvements in Krishi Vigyan Kendras:** Krishi Vigyan Kendras (KVK) serve as knowledge and resource centres of agricultural technology. The Committee highlighted their contribution towards the overall improvement in farmers’ quality of life. It observed that KVKs now need improvements in infrastructural and technological facilities. For instance, they should use technological innovations to impart information 24x7, and in vernacular languages. The Committee observed that these changes will revamp existing KVKs and equip them to meet climate related challenges.
 - **Food and nutritional security:** Indian agriculture faces a major challenge of insufficient productivity. Food and nutritional security is a core issue for India, and sustaining it remains a challenge. The Committee observed that there needs to be increased public investment in advancing and disseminating climate resilient crop varieties. These crops would have heightened tolerance to temperature and precipitation fluctuations, and will be more proficient in water and nutrient utilisation. It suggested that agricultural policy must prioritise improvements in crop productivity, and formulate safety nets to cope with climate change induced risks.
 - **Political aspect of climate change:** The Committee noted that the most challenging political aspect of climate change policy is the inadequate recognition by village Panchayats or local self-governing bodies. It noted that efforts by higher tiers of governance may not yield results unless a village Sarpanch is made aware of climate goals in the broader development strategy. Since Panchayats can leverage funds from several government schemes, awareness at that level will be beneficial. For instance, scheme funds may be utilised for soil and water management or creating reservoirs. Introducing a ranking system at the national or regional level for villages adopting best climate resilient practices may incentivise adoption of such practices.

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