

Effect of climate change on paddy cultivation

†*88. SHRIMATI KAHKASHAN PERWEEN: Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) whether it is a fact that an enormous effect of climate change can be observed on paddy cultivation; and

(b) if so, the details thereof?

THE MINISTER OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI PRAKASH JAVADEKAR): (a) and (b) Different studies project different impact of climate change on rice yield. Studies under National Innovations in Climate Resilient Agriculture (NICRA) project of Indian Council of Agriculture Research (ICAR), Ministry of Agriculture and Farmers' Welfare project that adopting improved varieties coupled with improved agronomic management can improve rice yields by 6-17% in irrigated condition and by about 20-35% in rainfed condition. Effective adaptation measures like adoption of short-duration varieties and site-specific improved management practices can minimize the yield loss in paddy despite changing climate.

As per information from ICAR, simulation studies using integrated modelling framework showed that rainfed rice yields in India are projected to reduce by 6% in 2020 scenario, but the decline was marginal (<2.5%) in 2050 and 2080 scenarios. The irrigated rice yields are projected to reduce by 4% in 2020, 7% in 2050 and by 10% in 2080 scenarios.

ICAR under its National Innovations in Climate Resilient Agriculture (NICRA) project is demonstrating 12 short duration, 15 drought tolerant, 14 flood tolerant, 1 heat tolerant and 3 salt tolerant rice varieties in farmer's fields across the country. They are also demonstrating water saving paddy cultivation methods [System of Rice Intensification (SRI), aerobic and direct seeding], which can reduce the production cost and enhance profitability besides reducing GHG emissions from paddy cultivation.

The Government is implementing National Action Plan on Climate Change (NAPCC) comprising eight Missions in specific areas of solar energy, enhanced energy efficiency, habitat, water, sustaining Himalayan ecosystems, forestry, agriculture and strategic knowledge for climate change. The NAPCC provides an overarching framework for all climate actions. Thirty-three (33) States and Union Territories have prepared their

†Original notice of the question was received in Hindi.

Action Plan on Climate Change in line with NAPCC taking into account State's specific issues relating to climate change. Sectors like agriculture, forest and biodiversity, water resources, energy, urban development and transportation have been prioritized by the States/UTs. Almost all States/UTs have identified agriculture as a priority sector.

The Government is also implementing National Food Security Mission-Rice Component, in 194 identified districts of 25 States. Under the Mission, assistance is provided for various interventions like demonstration on latest crop production technologies, SRI, direct seeded rice, hybrid rice technology, stress tolerant varieties, seed distribution of latest varieties and capacity building of farmers, etc.

Ban on single-use plastic

*89. SHRI S. MUTHUKARUPPAN: Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether it is a fact that Government is considering immediate ban on single-use plastic;
- (b) if so, the details thereof;
- (c) whether it is also a fact that nearly 10,000 tonnes of single-use plastic waste remains uncollected; and
- (d) whether Government has fixed any deadline to put an end to single-use plastic?

THE MINISTER OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (SHRI PRAKASH JAVADEKAR): (a) to (d) As per Plastic Waste Management (PWM) Rules 2016, plastic carry bag made of virgin or recycled plastic less than fifty microns in thickness has been prohibited along with sachets using plastic materials for storing, packing or selling gutkha, tobacco and pan masala.

However, considering the high environmental cost associated with the use of Single-use plastic, particularly the adverse effect on soil, water bodies and on marine environment, Hon'ble Prime Minister has announced India's pledge to phase out Single-use plastic by 2022.

As per the Central Pollution Control Board (CPCB) estimate in 2015 study, 25,940 Ton/day of plastic waste is generated. 60% of which is collected and recycled. On the