

GOVERNMENT OF INDIA  
MINISTRY OF JAL SHAKTI,  
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

**LOK SABHA**

**UNSTARRED QUESTION NO. 3756**

ANSWERED ON 23.03.2023

**AGRICULTURAL PRACTICES**

3756. SHRI D.K. SURESH SHRI NALIN KUMAR KATEEL

Will the Minister of **JAL SHAKTI** be pleased to state:

- (a) whether the Government is aware that there are a number of agricultural practices which are adversely affecting the ground water system;
- (b) if so, the details thereof;
- (c) whether the Government is taking any measures to change the crop patterns, which help in producing maximum yield with minimum water; and
- (d) if so, the details thereof?

**ANSWER**

**THE MINISTER OF STATE FOR JAL SHAKTI**

(SHRI BISHWESWAR TUDU)

**(a) & (b)** The Dynamic Ground Water Resources of the country are being periodically assessed jointly by Central Ground Water Board (CGWB) and State Governments. As per the latest assessment (2022), the Annual Extractable Ground Water Resource is 398 BCM. The Annual Ground Water Extraction for all uses is 239.16 BCM, out which 208.49 BCM (87%) has been utilised for agriculture activities. Availability of groundwater resource and its extraction depends upon a number of factors like intensity & period of rainfall, geological strata of the area, number of existing recharge structures, extraction by consumers for various purposes like industrial applications, drinking/domestic purposes, irrigation practices including cropping pattern and crop intensity etc.

**(c) & (d)** The Central Government has taken the following steps to change the crop pattern which help to produce maximum yield with minimum water :-

- i. The National Water Policy (NWP) - 2012 states that water saving in irrigation use is of paramount importance. It further states methods like aligning cropping pattern with natural resource endowments, micro irrigation (drip, sprinkler, etc.), automated irrigation operation, evaporation-transpiration reduction etc., should be encouraged and incentivized. The NWP-2012 has been shared with States/UTs.

- ii. Central Government is implementing Atal Bhujal Yojana with an outlay of Rs. 6,000 crore, in collaboration with States, in certain water stressed areas of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The primary aim of the scheme is demand side management including implementation of crop rotation/diversification, changing crop pattern, use of sprinklers/drip irrigation system etc by involving the local communities at village levels leading to sustainable groundwater management in the targeted areas.
- iii. CGWB is implementing National Aquifer Mapping Programme to delineate aquifer disposition and their characterization for preparation of aquifer/ area specific ground water management plans with community participation. The entire mappable area of about 25 lakh Sq. km. have been completed. The management plans are shared with the respective State Governments for taking appropriate measures for implementation. The Management plans includes the recommendations for change in cropping pattern, adoption of water use efficiency methods like sprinkler irrigation methods and use of underground pipe system for transportation of irrigation water to crops instead of using open surface distribution.
- iv. ‘**Sahi Fasal**’ campaign was launched by the Department of Water Resources, River Development & Ganga Rejuvenation on 14.11.2019 to nudge farmers in the water stressed areas to grow crops which are economically remunerative, healthy & nutritious, suited to the agro-climatic-hydro characteristics of the area, environmentally friendly and are not water intensive. Creating awareness among farmers on appropriate crops, micro-irrigation, soil moisture conservation, weaning them away from water intensive crops to crops requiring less water, assisting policy makers to frame policies etc are some of the key elements of the campaign.
- v. For sustainable management of groundwater resources for agricultural purposes, Indian Council of Agricultural Research (ICAR) promotes rainwater harvesting measures, groundwater recharge and conjunctive use of surface and groundwater resources besides use of micro-irrigation and resource conservation technologies. The Council also promotes diversification of cropping systems for sustainable agricultural development and improving water use efficiency. Accordingly, ICAR has identified and documented efficient alternative cropping systems considering agro-ecological, bio-physical and socio-economic factors with higher productivity potential and income security for different agro-climatic zones.

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