

GOVERNMENT OF INDIA  
MINISTRY OF CHEMICALS AND FERTILIZERS  
DEPARTMENT OF FERTILIZERS

**LOK SABHA**

**UNSTARRED QUESTION NO. 3312 TO BE ANSWERED ON: 07.08.2026**

**Excessive Use of Fertilizers**

**3312. Dr. Prabha Mallikarjun:**

Will the **Minister of CHEMICALS AND FERTILIZERS** be pleased to state:

- (a) whether the Government has made any assessment regarding nitrate contamination of groundwater, pesticide residues and environmental impacts associated with excessive fertilizer usage, if so, the details thereof;
- (b) whether any studies has been conducted regarding the impact of fertilizer and agrochemical use on human health, water quality and ecosystem sustainability during the last five years, if so, the details thereof;
- (c) whether the Government has identified regions affected by groundwater contamination and soil degradation linked to agricultural chemical use, if so, the details thereof;
- (d) the measures being taken to promote sustainable fertilizer practices, nano-fertilizers, bio-fertilizers and environmentally responsible nutrient management; and
- (e) whether any groundwater quality monitoring, soil restoration/sustainable agriculture initiatives have been implemented in Karnataka, particularly in Davanagere district, if so, the details thereof, district-wise?

**ANSWER**

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS AND FERTILIZERS  
**(SMT. ANUPRIYA PATEL)**

(a) to (c) The Central Ground Water Board (CGWB) informed that they generate groundwater quality data at the regional scale through its groundwater quality monitoring programme and various scientific studies. Groundwater quality is monitored across the country through the Ground Water Quality Monitoring Stations, and the analyzed data are published in the Annual Ground Water Quality Reports of CGWB. As per the Annual Ground Water Quality Report-2025, 20.71% of groundwater samples analyzed were found to contain nitrate above the permissible limit of 45 mg/L (BIS IS 10500). Nitrate contamination above the permissible limit has been observed in parts of 502 districts across 26 States/UTs. The State/UT-wise details are placed at **Annexure-I**. Further, CGWB informed that they have not conducted any specific studies on pesticide residues,

environmental impacts of excessive fertilizer usage, health impacts of fertilizer/ agrochemical use, or soil degradation specifically linked to agricultural chemical use.

Department of Agriculture, Government of Karnataka informed that they have not conducted any exclusive study on nitrate contamination of groundwater, pesticide residues and environmental impacts associated with excessive fertilizer usage. However, balanced application of NPK fertilizers in conjunction with organic manure (FYM/bio-fertilizers) to maintain soil health, organic carbon content and crop productivity is being promoted. Imbalanced and excessive use of nitrogenous fertilizers (especially Urea) leads to soil acidity/alkalinity, secondary and micronutrient deficiencies (such as Zinc and Boron) and secondary leaching of nitrates into shallow aquifers. Further, ICAR and the Directorate of Plant Protection, Quarantine & Storage (DPPQ&S) under the Monitoring of Pesticide Residues at National Level (MPRNL) scheme regularly analyse the samples of food commodities and surface water sources. Pesticide residue levels exceeding Maximum Residue Limits (MRL) remain under control. Under the MPRNL project and the State Sector Program, samples of fruits, vegetables, grains, fish/marine products, herbs, and water are drawn to test for pesticide residues. If samples are found to contain residues exceeding the Maximum Residue Limit (MRL) or traces of off-label pesticide usage, farmers in the concerned areas are sensitized about the ill effects of excessive and off-label chemical applications.

Indian Council of Agricultural Research (ICAR) informed that long-term studies conducted by them have shown that imbalanced nutrient application, particularly sole application of nitrogen, leads to decline in crop yield and soil health. Excess nitrogen is primarily lost through nitrate leaching, resulting in groundwater nitrate contamination, with Nitrate concentrations exceeding the permissible limit of 10 mg/L in some areas. Studies also showed that groundwater nitrate levels increase with fertilizer application rates, with higher contamination observed in high fertilizer-use areas.

(d) Government of India is promoting sustainable and balanced use of fertilizers through judicious use of synthetic fertilizers, adopting alternate fertilizers, promoting organic/natural farming and implementing resource conservation technologies. Achieving balanced fertilization requires a multi-pronged strategy that integrates policy, technology, and farmer participation. The following measures have been adopted for balanced use of fertilizers:

**(i) Integrated Nutrient Management (INM):** It enables the efficient, economical, and sustainable application of nutrients by judiciously integrating organic inputs, mineral fertilizers, and biological sources. INM recognises that neither chemical fertilizers nor organic inputs alone are sufficient to meet the complete nutritional requirements of crops. It also promotes crop rotation and residue management that enhance system diversity, disrupt pest and disease cycles, and improve nutrient use efficiency.

**(ii) Soil Health & Fertility Scheme:** Government promotes judicious use of fertilizer through Soil Health & Fertility scheme since 2014-15. Under the scheme Soil Health Cards (SHCs) is provided to farmers, to promote balanced and integrated nutrient management

for improving productivity and soil fertility. Soil samples are processed as per standard procedures and analyzed for parameters such as pH, Electrical Conductivity, Organic Carbon, available Nitrogen, Phosphorus, Potassium, Sulphur, and micronutrients (Zinc, Copper, Iron, Manganese & Boron). The diagnostic soil health assessment of farmer fields is taken up periodically so as to issue SHCs at least once in 3 years. Since 2014-15 as on date, 25.90 crore Soil Health Cards have been generated/ distributed. Total of 8313 Soil Testing Labs have been established across the country. Soil Test-Based Fertilizer Recommendations is a fundamental and essential step in balanced fertilization. Based on test results, soils are classified as low, medium, or high in nutrient content. Fertilizer doses are increased for nutrient-deficient soils and reduced where nutrient levels are already sufficient. The Soil Health Card Scheme supports this approach by providing farmers with field-specific soil data, enabling them to apply fertilizers more accurately and avoid excessive use.

**(iii) National Mission on Natural Farming (NMNF):** NMNF was approved by the Union Cabinet on 25.11.2024 as a standalone Centrally Sponsored Scheme to promote Natural Farming. Natural Farming (NF) is a chemical free farming, involving livestock (preferably local breed of cow) integrated natural farming methods and diversified crop systems rooted in the Indian traditional knowledge. The mission aims to promote nature-based sustainable systems of farming with on farm inputs thus reducing dependency on chemical inputs, improve soil health, and reduction in input cost. Budget outlay approved for NMNF is ₹2481.00 crore (Gol share: ₹1584.00 crore and States' share: ₹897.00 ). So far, 18,825 clusters have been formed, 19.00 lakh farmers have been registered, 9.00 lakh hectares area has been covered and 6,388 Bio-Input Resource Centres (BRCs) established. The Participatory Guarantee System (PGS) –Online Certification System has been initiated for the certification of natural agricultural products. Till date more than 14.00 lakh farmers have been registered with more than 6 lakh certificates issued.

**(iv) Paramparagat Krishi Vikas Yojana (PKVY):** Paramparagat Krishi Vikas Yojana of RKVY is being implemented since 2015-16 in all States/UTs except North Eastern States for promoting organic farming. The scheme stresses on end-to-end support to farmers engaged in organic farming i.e. from production to processing, certification and marketing. Primary focus of the schemes is to form organic clusters, with preference to small and marginal farmers, to create a supply chain. Till date, 18.84 lakh hectares area has been covered and 33.94 lakh farmers benefited from the scheme. A total of ₹2608.72 crore (central share) has been released under PKVY Scheme to States/UTs.

**(v) Mission Organic Value Chain Development for North Eastern Region (MOVCDNER):** MOVCDNER is being implemented since 2015-16 to promote organic farming in the North Eastern States. MOVCDNER is a centrally sponsored scheme with 100% Gol share. The scheme focuses on enhancing farmers participation in agriculture value chain through promotion of organic farming and development of Farmer Producer Organisations (FPOs). Till date, 2.36 lakh hectares brought under organic farming and 2.70 lakh farmers benefited. 427 Unique FPOs and 52 extended FPOs (Total-479 FPOs) have

been formed under MOVDCDNER. 933 infrastructure such as storage, processing units etc. have been created. All 8 north east states have developed their own organic product brands through the support of the scheme. Till date an amount of ₹1491.14 crore (central share) has been released.

**(vi) PM-PRANAM (PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth) Scheme:** PM Programme for Restoration, Awareness Generation, Nourishment, and Amelioration of Mother-Earth (PM-PRANAM) is an initiative which aims to support the mass movement initiated by States and Union Territories (UTs) to preserve the health of Mother Earth through the promotion of sustainable and balanced fertilizer use, adoption of alternative fertilizers, promotion of organic farming, and implementation of resource conservation technologies. All States/UTs are covered under the PM-PRANAM scheme. Under the PM-PRANAM scheme, there is a provision to provide incentives to States/UTs for reduction of consumption of chemical fertilizers (Urea, DAP, NPK, MOP) in a given financial year, compared to the average consumption over the previous three years, equivalent to 50% of the fertilizer subsidy saved.

**(vii) Promotion of Nano Fertilizers :** Nano Fertilizers are plant nutrients packaged in tiny particles called nanomaterials, allowing nutrients to be released slowly and absorbed by crops more efficiently, with minimal waste. In order to promote the use of Nano Fertilizers among farmers across the country, the following measures have been undertaken by the Government:

- Use of Nano Fertilizers is promoted through different activities such as awareness camps, webinars, field demonstrations, Kisan Sammelans and films in regional languages etc.
- Nano Fertilizers, like Nano Urea and Nano DAP, are made available at Pradhan Mantri Kisan Samridhi Kendras (PMKSKs) by concerned companies.
- For ease in application and utilization of Nano fertilizers, like Nano Urea and Nano DAP, through foliar application, initiatives such as innovative spraying options like 'Kisan Drones' and distribution of battery operated sprayers at retail points are undertaken. For this purpose, pilot training and custom hiring spraying services through Village Level Entrepreneurs are actively promoted.

**(viii) Market Development Assistance (MDA):** To promote production of soil carbon enhancers namely Fermented Organic Manure (FOM), Liquid FOM (LFOM), and Phosphate Rich Organic Manure (PROM), Department of Fertilizers provides assistance of Rs. 1500/MT to Compressed Biogas (CBG) operators under Central Sector GOBAR-dhan (Galvanized Organic Bio Agro Resources-Dhan) scheme.

**(ix) Promotional efforts by ICAR :** ICAR promotes soil test-based balanced and Integrated Nutrient Management (INM) through the combined use of organic and inorganic

nutrient sources. The Council has developed Soil Test Crop Response (STCR)-based district general fertilizer recommendations, site-specific nutrient management tools, crop- and soil-specific biofertilizers, including phosphorus-solubilizing microorganisms and liquid biofertilizers, besides technologies for organic manures, biomineral fertilizers and Fermented Organic Manure (FOM). ICAR also promotes slow and controlled-release fertilizers, band placement of fertilizers, efficient irrigation and fertigation practices, and has developed organic farming packages for 80 cropping systems under its Natural Farming Network Programme. These technologies are disseminated through frontline demonstrations, farmer training and awareness programmes.

Department of Agriculture, Government of Karnataka informed that following measures being taken in the State:

- (i) Balanced use of Fertilizers is being recommended based on soil test reports and also through promotion of adoption of Nano Urea and Nano DAP, Fermented Organic Manure (FOM), Liquid Fermented Organic Manure (LFOM), green manure crops and biofertilizers for which extensive awareness campaigns are being conducted through newspapers, handouts, training programmes, and other publicity initiatives in collaboration with IFFCO and other fertilizer manufacturing companies. As of now, a total of 10,85,560 bottles of Nano Urea and 4,77,610 bottles of Nano DAP have been sold across the State. Extensive awareness campaigns are being conducted under the **'Khet Bachao Andolan' and other departmental schemes** to educate farmers about the harmful effects of excessive use of urea and other chemical fertilizers. The campaigns promote balanced and judicious fertilizer application. Use of Bio-fertilizers helps to fix nitrogen and to dissolve/mobilize nutrients naturally.
  - (ii) Promoting sustainable agricultural practices such as crop rotation and agroforestry to mitigate soil degradation. Plant cover crops between seasons to trap nutrients and reduce soil erosion. Use of Green manure seeds is being promoted to increase the organic carbon content, to improve the physical, chemical and biological activities of the soil.
  - (iii) Promoting precision farming.
  - (iv) Natural farming / organic farming is being promoted in 1,272 clusters Under National Mission on Natural Farming (NMNF) by providing incentives to the farmers.
- (e) The Central Ground Water Board (CGWB) informed that they monitor groundwater quality across the country including Karnataka state and its Davanagere district through its Ground Water Quality Monitoring Stations. As per the Annual Ground Water Quality Report, 2025, the district-wise and parameter-wise number and percentage of groundwater samples exceeding the permissible limits in the State of Karnataka including Davanagere district is placed at **Annexure II**. In Davanagere district, out of 19 groundwater samples analyzed, 7 samples (36.8%) exceeded the permissible limit for nitrate, 2 samples

(10.53%) exceeded the permissible limit for fluoride, while none exceeded the permissible limit for electrical conductivity.

Indian Council of Agricultural Research (ICAR) informed that they have undertaken high-resolution (1:10,000 scale) Land Resource Inventory (LRI) in several districts of Karnataka, including Davanagere, through ICAR-National Bureau of Soil Survey and Land Use Planning (NBSS&LUP). The LRI provides detailed information on soils, land capability, erosion, drainage and land suitability, and supports soil restoration, sustainable land use planning, watershed development, crop diversification, site-specific nutrient management and climate-resilient agriculture, enabling efficient management of land and water resources.

Department of Agriculture, Government of Karnataka informed that during 2026–27, under various State sector and Central Sector schemes organic inputs viz green manure seeds, organic fertilizers, bio-fertilizers, micronutrients and soil amendments are being distributed to farmers through Raitha Samparka Kendras at subsidized rates as an initiative towards sustainable agriculture. District wise target details are at **Annexure III**. Soil restoration & sustainable agriculture initiatives initiated in Davanagere district are as mentioned below:

- (i) **Vasudhamrutha Scheme:** A flagship initiative to increase organic carbon levels and to improve physical, chemical, and biological properties of soil. An amount of Rs. 14.78 Lakhs earmarked for distribution of Green manure seeds at 75% subsidy.
- (ii) **Soil Health Card (SHC) Scheme:** Customized nutrient recommendations are delivered to farmers to prevent over-fertilization and rectify site-specific deficiencies by analysing for 12 parameters. During last five years 51,380 soil health cards have been distributed to farmers.
- (iii) **Integrated Nutrient Management (INM):** Micro-nutrients, bio-fertilizers (such as Azotobacter and Rhizobium), and soil amendments (e.g., gypsum and lime for acidic/alkaline soils) through Raitha Samparka Kendra's (RSKs) are being distributed through various schemes of department.
- (iv) **National Mission on Natural Farming (NMNF):** Natural Farming practices are being promoted in 48 clusters covering in 2400 Ha.

Further, Government of Karnataka informed that to minimize top soil run-off and recharge groundwater levels, soil and water conservation structures such as check dams, trench-cum-bunds, nala bunds, and contour bunding are being promoted through Watershed Development Programmes (Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and Rashtriya Krishi Vikas Yojana (RKVY)).

\*\*\*\*\*

**Annexure-I**

**Annexure referred to in reply to parts (a) to (c) of Lok Sabha Unstarred Question No. 3312 for answering on 07.08.2026**

**State/Union Territory-wise Number and Name(s) of Partially Affected Districts for Nitrate**

| S. No. | State/UT         | No. of Samples | % of samples (Nitrate > 45mg/L) | No. of partially affected districts (Nitrate > 45mg/L) | Name of Partially affected districts                                                                                                                                                                                                                                                                                    |
|--------|------------------|----------------|---------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Andhra Pradesh   | 1135           | 24.23                           | 27                                                     | Alluri Sita Rama Raju, Anakapalli, Anantapuram, Annamayya, Bapatla, Chittoor, East Godavari, Eluru, Guntur, Kakinada, Konaseema, Krishna, Kurnool, Manyam, Nandyal, Nellore, Ntr, Palnadu, Parvathipuram Manyam, Prakasham, Sri Satya Sai, Srikakulam, Tirupati, Visakhapatnam, Vizianagaram, West Godavari, Ysr Kadapa |
| 2      | Assam            | 145            | 1.38                            | 2                                                      | Morigaon, Tinsukia                                                                                                                                                                                                                                                                                                      |
| 3      | Bihar            | 584            | 13.36                           | 28                                                     | Araria, Arwal, Aurangabad, Begusarai, Bhojpur, Buxar, East Champaran, Gaya, Gopalganj, Jehanabad, Katihar, Khagaria, Kishanganj, Madhepura, Madhubani, Muzzafarpur, Nalanda, Nawada, Patna, Saharsa, Samastipur, Saran, Sheikhpura, Sitamarhi, Siwan, Supaul, Vaishali, West Champaran                                  |
| 4      | Chhattisgarh     | 830            | 10.6                            | 19                                                     | Balod, Balodabazar, Balrampur, Bemetara, Bilaspur, Dhamtari, Durg, Gariyabandh, Janjgir-Champa, Jashpur, Kawardha, Korba, Mahasamund, Mungeli, Raigarh, Raipur, Rajnandgaon, Surajpur, Surguja                                                                                                                          |
| 5      | Delhi            | 135            | 24.44                           | 8                                                      | Central, East, North, North West, South, South East, South West, West                                                                                                                                                                                                                                                   |
| 6      | Goa              | 7              | 14.29                           | 1                                                      | North Goa                                                                                                                                                                                                                                                                                                               |
| 7      | Gujarat          | 618            | 18.93                           | 25                                                     | Ahmedabad, Amreli, Anand, Arvalli, Banaskantha, Bharuch, Bhavnagar, Chhota Udaipur, Dahod, Devbhumi Dwarka, Gir Somnath, Jamnagar, Junagadh, Kachchh, Kheda, Morbi, Panchmahal, Porbandar, Rajkot, Sabarkantha, Surat, Surendranagar, Tapi, Vadodara, Valsad                                                            |
| 8      | Haryana          | 811            | 14.18                           | 22                                                     | Ambala, Bhiwani, Charkhi Dadri, Faridabad, Fatehabad, Gurugram, Hisar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendragarh, Mewat, Palwal, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonipat, Yamuna Nagar                                                                                                       |
| 9      | Himachal Pradesh | 161            | 11.8                            | 6                                                      | Kangra, Kullu, Mandi, Sirmour, Solan, Una                                                                                                                                                                                                                                                                               |
| 10     | Jammu & Kashmir  | 247            | 9.31                            | 6                                                      | Baramulla, Jammu, Kupwara, Rajouri, Samba, Udhampur                                                                                                                                                                                                                                                                     |
| 11     | Jharkhand        | 381            | 17.32                           | 17                                                     | Bokaro, Deoghar, Dhanbad, Dumka, Garhwa, Giridih, Godda, Gumla, Hazaribagh, Jamtara, Koderma, Latehar, Loherdaga, Palamu, Ranchi, Sahibganj, Simdega                                                                                                                                                                    |

| S. No. | State/UT       | No. of Samples | % of samples (Nitrate > 45mg/L) | No. of partially affected districts (Nitrate > 45mg/L) | Name of Partially affected districts                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------|----------------|----------------|---------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12     | Karnataka      | 398            | 45.48                           | 27                                                     | Bagalkot, Belagavi, Bellary, Bengaluru Rural, Bengaluru Urban, Bidar, Chamarajanagara, Chikballapura, Chitradurga, Dakshina Kannada, Davanagere, Dharwad, Gadag, Hassan, Haveri, Kalaburagi, Kodagu, Kolar, Koppal, Mandya, Mysuru, Raichur, Ramanagara, Tumkur, Vijayanagara, Vijayapura, Yadgiri                                                                                                                                                    |
| 13     | Kerala         | 361            | 10.8                            | 15                                                     | Alappuzha, Ernakulam, Idukki, Kannur, Kasargod, Kollam, Kottayam, Kozhikode, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram, Thrissur, Trivandrum, Wayanad                                                                                                                                                                                                                                                                                  |
| 14     | Madhya Pradesh | 726            | 22.04                           | 44                                                     | Agar Malwa, Alirajpur, Balaghat, Barwani, Betul, Bhind, Burhanpur, Chhatarpur, Chhindwara, Damoh, Datia, Dewas, Dhar, Guna, Gwalior, Harda, Indore, Jabalpur, Jhabua, Katni, Khandwa, Khargone, Mandla, Mandsaur, Morena, Neemuch, Panna, Raisen, Rajgarh, Ratlam, Rewa, Sagar, Satna, Sehore, Shahdol, Shajapur, Sheopur, Shivpuri, Sidhi, Singrauli, Tikamgarh, Ujjain, Umaria, Vidisha                                                             |
| 15     | Maharashtra    | 1565           | 33.93                           | 33                                                     | Ahmednagar, Akola, Amravati, Aurangabad, Beed, Bhandara, Buldhana, Chandrapur, Chatrapati Sambhaji Nagar, Dharashiv, Dhule, Gadchiroli, Gondia, Hingoli, Jalgaon, Jalna, Kolhapur, Latur, Nagpur, Nanded, Nandurbar, Nashik, Osmanabad, Parbhani, Pune, Raigad, Sangli, Satara, Solapur, Thane, Wardha, Washim, Yavatmal                                                                                                                              |
| 16     | Nagaland       | 67             | 10.45                           | 5                                                      | Kohima, Mokochung, Phek, Tsemnyu, Wokha                                                                                                                                                                                                                                                                                                                                                                                                               |
| 17     | Odisha         | 654            | 12.84                           | 17                                                     | Anugul, Balangir, Baleswar, Bargarh, Boudh, Cuttack, Dhenkanal, Kalahandi, Kandhamal, Kendrapara, Khordha, Koraput, Nayagarh, Nuapada, Puri, Sambalpur, Sonapur                                                                                                                                                                                                                                                                                       |
| 18     | Pondicherry    | 9              | 11.11                           | 1                                                      | Pondicherry                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 19     | Punjab         | 756            | 14.68                           | 21                                                     | Amritsar, Barnala, Bathinda, Faridkot, Fatehgarh Sahib, Fazilka, Ferozpur, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Moga, Muktsar, Pathankot, Patiala, Rupnagar, Sangrur, Sas Nagar, Tarn Taran                                                                                                                                                                                                                                 |
| 20     | Rajasthan      | 643            | 50.54                           | 31                                                     | Ajmer, Alwar, Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Nagaur, Pali, Pratapgarh, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk, Udaipur                                                                                                                                                        |
| 21     | Tamil Nadu     | 929            | 36.28                           | 38                                                     | Ariyalur, Chengalpattu, Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kallakurichi, Kancheepuram, Kanyakumari, Karur, Krishnagiri, Madurai, Nagapattinam, Namakkal, Nilgiris, Perambalur, Pudukkottai, Ramanathapuram, Salem, Sivaganga, Tenkasi, Thanjavur, Theni, Thiruvallur, Thiruvannamalai, Thoothukkudi, Tiruchirappalli, Tirunelveli, Tirupathur, Tiruppur, Tiruvallur, Tiruvarur, Trichy, Tuticorin, Viluppuram, Virudhunagar |

| S. No. | State/UT      | No. of Samples | % of samples (Nitrate > 45mg/L) | No. of partially affected districts (Nitrate > 45mg/L) | Name of Partially affected districts                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------|---------------|----------------|---------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22     | Telangana     | 1114           | 26.03                           | 33                                                     | Adilabad, Asifabad, Bhadradri Kothagudem, Hanamkonda, Jagtial, Jangaon, Jayashankar Bhupalapally, Jogulamba Gadwal, Kamareddy, Karimnagar, Kb Asifabad, Khammam, Mahabubabad, Mahabubnagar, Mancherial, Medak, Medchal Malkanjiri, Mulugu, Nagarkurnool, Nalgonda, Narayanpet, Nirmal, Nizamabad, Peddapalli, Rajanna Sircilla, Ranga Reddy, Sangareddy, Siddipet, Suryapet, Vikarabad, Wanaparthy, Warangal, Yadadri Bhuvanagiri                                                        |
| 23     | Tripura       | 49             | 2.04                            | 1                                                      | North Tripura                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 24     | Uttar Pradesh | 1333           | 8.03                            | 48                                                     | Agra, Aligarh, Amethi, Amroha, Auraiya, Baghpat, Balrampur, Banda, Bijnor, Budaun, Chitrakoot, Etah, Etawah, Fatehpur, Firozabad, G.B. Nagar, Ghaziabad, Ghazipur, Gorakhpur, Hamirpur, Hapur, Hathras, Jalaun, Jaunpur, Jhansi, Kanpur Dehat, Kanpur Nagar, Kasganj, Kaushambi, Lalitpur, Lucknow, Mahoba, Mainpuri, Mathura, Meerut, Mirzapur, Moradabad, Muzaffarnagar, Pilibhit, Prayagraj, Rampur, Sambhal, Sant Ravidas Nagar, Shamli, Siddharth Nagar, Sonbhadra, Unnao, Varanasi |
| 25     | Uttarakhand   | 248            | 13.31                           | 8                                                      | Bageshwar, Champawat, Dehradun, Haridwar, Nainital, Pithoragarh, Us Nagar, Uttarkashi                                                                                                                                                                                                                                                                                                                                                                                                    |
| 26     | West Bengal   | 875            | 8.91                            | 19                                                     | Alipurduar, Bankura, Birbhum, Cooch Behar, Dakshin Dinajpur, Darjeeling, Hooghly, Howrah, Jalpaiguri, Jhargram, Malda, Murshidabad, Nadia, North 24 Parganas, Paschim Bardhaman, Paschim Medinipur, Purba Bardhaman, Purulia, South 24 Parganas                                                                                                                                                                                                                                          |
|        | <b>TOTAL</b>  | <b>14978</b>   | <b>20.71</b>                    | <b>502</b>                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Annexure II

Annexure referred to in reply to part (e) of Rajya Sabha Unstarred Question No. 3312 for answering on 07.08.2026

District- and parameter-wise groundwater samples exceeding permissible limits in Karnataka.

| Sl. No. | District         | Total No. of Samples | Electrical Conductivity                                    |                                                         | Nitrate                                            |                                                  | Fluoride                                            |                                                  |
|---------|------------------|----------------------|------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|-----------------------------------------------------|--------------------------------------------------|
|         |                  |                      | No. of Samples above Permissible Limit (> 3000 $\mu$ S/cm) | % of Samples above Permissible Limit (>3000 $\mu$ S/cm) | No. of Samples above Permissible Limit (> 45 mg/L) | % of Samples above Permissible Limit (> 45 mg/L) | No. of Samples above Permissible Limit (> 1.5 mg/L) | % of Samples above Permissible Limit (>1.5 mg/L) |
| 1       | Bagalkot         | 15                   | 6                                                          | 40.0                                                    | 7                                                  | 46.7                                             | 5                                                   | 33.33                                            |
| 2       | Ballari          | 4                    | 0                                                          | 0.0                                                     | 1                                                  | 25.0                                             | 2                                                   | 50.00                                            |
| 3       | Belagavi         | 43                   | 6                                                          | 14.0                                                    | 19                                                 | 44.2                                             | 0                                                   | 0.00                                             |
| 4       | Bengaluru Rural  | 9                    | 0                                                          | 0.0                                                     | 6                                                  | 66.7                                             | 1                                                   | 11.11                                            |
| 5       | Bengaluru Urban  | 4                    | 0                                                          | 0.0                                                     | 2                                                  | 50.0                                             | 0                                                   | 0.00                                             |
| 6       | Bidar            | 8                    | 0                                                          | 0.0                                                     | 7                                                  | 87.5                                             | 0                                                   | 0.00                                             |
| 7       | Chamarajanagara  | 4                    | 0                                                          | 0.0                                                     | 1                                                  | 25.0                                             | 0                                                   | 0.00                                             |
| 8       | Chikballapur     | 8                    | 0                                                          | 0.0                                                     | 3                                                  | 37.5                                             | 1                                                   | 12.50                                            |
| 9       | Chikkamagaluru   | 4                    | 1                                                          | 25.0                                                    | 0                                                  | 0.0                                              | 0                                                   | 0.00                                             |
| 10      | Chitradurga      | 21                   | 6                                                          | 28.6                                                    | 12                                                 | 57.1                                             | 3                                                   | 14.29                                            |
| 11      | Dakshina Kannada | 1                    | 0                                                          | 0.0                                                     | 1                                                  | 100.0                                            | 0                                                   | 0.00                                             |
| 12      | Davanagere       | 19                   | 0                                                          | 0.0                                                     | 7                                                  | 36.8                                             | 2                                                   | 10.53                                            |
| 13      | Dharwad          | 11                   | 5                                                          | 45.5                                                    | 10                                                 | 90.9                                             | 2                                                   | 18.18                                            |
| 14      | Gadag            | 22                   | 8                                                          | 36.4                                                    | 18                                                 | 81.8                                             | 13                                                  | 59.09                                            |
| 15      | Hassan           | 6                    | 0                                                          | 0.0                                                     | 4                                                  | 66.7                                             | 0                                                   | 0.00                                             |
| 16      | Haveri           | 9                    | 0                                                          | 0.0                                                     | 3                                                  | 33.3                                             | 1                                                   | 11.11                                            |
| 17      | Kalaburagi       | 24                   | 0                                                          | 0.0                                                     | 13                                                 | 54.2                                             | 2                                                   | 8.33                                             |
| 18      | Kodagu           | 2                    | 0                                                          | 0.0                                                     | 1                                                  | 50.0                                             | 0                                                   | 0.00                                             |

|    |                |            |           |             |            |             |           |              |
|----|----------------|------------|-----------|-------------|------------|-------------|-----------|--------------|
| 19 | Kolar          | 25         | 0         | 0.0         | 8          | 32.0        | 4         | 16.00        |
| 20 | Koppal         | 10         | 4         | 40.0        | 6          | 60.0        | 5         | 50.00        |
| 21 | Mandya         | 26         | 0         | 0.0         | 3          | 11.5        | 0         | 0.00         |
| 22 | Mysuru         | 23         | 0         | 0.0         | 13         | 56.5        | 1         | 4.35         |
| 23 | Raichur        | 20         | 6         | 30.0        | 6          | 30.0        | 9         | 45.00        |
| 24 | Ramanagara     | 5          | 0         | 0.0         | 3          | 60.0        | 1         | 20.00        |
| 25 | Shivamogga     | 9          | 0         | 0.0         | 0          | 0.0         | 0         | 0.00         |
| 26 | Tumakuru       | 13         | 2         | 15.4        | 2          | 15.4        | 4         | 30.77        |
| 27 | Udupi          | 1          | 0         | 0.0         | 0          | 0.0         | 0         | 0.00         |
| 28 | Uttara Kannada | 2          | 0         | 0.0         | 0          | 0.0         | 0         | 0.00         |
| 29 | Vijayanagara   | 3          | 1         | 33.3        | 1          | 33.3        | 0         | 0.00         |
| 30 | Vijayapura     | 39         | 12        | 30.8        | 20         | 51.3        | 7         | 17.95        |
| 31 | Yadgir         | 8          | 3         | 37.5        | 4          | 50.0        | 4         | 50.00        |
|    | <b>Total</b>   | <b>398</b> | <b>60</b> | <b>15.1</b> | <b>181</b> | <b>45.5</b> | <b>67</b> | <b>16.83</b> |

**Annexure – III**

**Annexure referred to in reply to part (e) of Rajya Sabha Unstarred Question No. 3312 for answering on 07.08.2026**

**District-wise target distribution of organic inputs in the State of Karnataka during 2026–27**

| (Physical-Hectare, Financial-Lakhs) |                  |                    |           |                                   |           |                |           |
|-------------------------------------|------------------|--------------------|-----------|-----------------------------------|-----------|----------------|-----------|
| Sl. No.                             | District         | Green Manure seeds |           | Micronutrients & Soil Ammendments |           | Organic Inputs |           |
|                                     |                  | Physical           | Financial | Physical                          | Financial | Physical       | Financial |
| 1                                   | Bagalkote        | 2480.32            | 68.73     | 3340                              | 77.50     | 614.60         | 15.36     |
| 2                                   | Bangalore Rural  | 284.98             | 7.76      | 763                               | 19.08     | 78.99          | 1.98      |
| 3                                   | Bengaluru Urban  | 88.48              | 2.44      | 373                               | 9.33      | 22.15          | 0.55      |
| 4                                   | Belagavi         | 5096.39            | 132.54    | 5435                              | 129.88    | 1258.53        | 31.46     |
| 5                                   | Vijaynagar       | 1821.57            | 51.06     | 2516                              | 56.90     | 412.69         | 10.32     |
| 6                                   | Bellary          | 1524.51            | 43.93     | 2108                              | 46.70     | 260.40         | 6.51      |
| 7                                   | Bidar            | 2330.05            | 64.63     | 2210                              | 55.25     | 572.87         | 14.32     |
| 8                                   | Vijayapura       | 3423.18            | 93.37     | 4637                              | 109.93    | 958.90         | 23.97     |
| 9                                   | Chamarajanagar   | 750.87             | 21.69     | 1130                              | 28.25     | 128.81         | 3.22      |
| 10                                  | Chikkaballapur   | 607.55             | 16.79     | 1390                              | 32.75     | 147.25         | 3.68      |
| 11                                  | Chikkamagaluru   | 1749.15            | 45.16     | 1311                              | 32.78     | 123.29         | 3.08      |
| 12                                  | Chitradurga      | 1632.04            | 44.45     | 2822                              | 68.55     | 455.68         | 11.39     |
| 13                                  | Dakshina Kannada | 472.45             | 11.26     | 189                               | 4.73      | 11.83          | 0.30      |

|    |                 |                 |                |                 |                |                 |               |
|----|-----------------|-----------------|----------------|-----------------|----------------|-----------------|---------------|
| 14 | Davanagere      | 1659.62         | 47.54          | 1627            | 38.68          | 308.40          | 7.71          |
| 15 | Dharwad         | 1951.08         | 53.65          | 2309            | 57.73          | 512.73          | 12.82         |
| 16 | Gadaga          | 2024.75         | 54.05          | 2626            | 65.65          | 638.15          | 15.95         |
| 17 | Kalaburagi      | 2995.55         | 79.10          | 3944            | 98.60          | 1003.85         | 25.10         |
| 18 | Hassan          | 1908.53         | 55.21          | 2303            | 51.58          | 319.02          | 7.98          |
| 19 | Haveri          | 2904.79         | 72.17          | 2960            | 68.00          | 665.58          | 16.64         |
| 20 | Kodagu          | 436.46          | 9.98           | 168             | 4.20           | 20.32           | 0.51          |
| 21 | Kolar           | 449.63          | 12.43          | 847             | 21.18          | 104.22          | 2.61          |
| 22 | Koppal          | 2344.25         | 63.67          | 3419            | 85.48          | 665.85          | 16.65         |
| 23 | Mandya          | 2024.35         | 52.47          | 1992            | 49.80          | 267.55          | 6.69          |
| 24 | Mysore          | 1894.93         | 52.48          | 2311            | 57.78          | 483.25          | 12.08         |
| 25 | Raichuru        | 2462.81         | 66.21          | 3589            | 89.73          | 746.53          | 18.66         |
| 26 | Bangalore south | 431.03          | 12.09          | 910             | 22.75          | 93.05           | 2.33          |
| 27 | Shivamogga      | 1717.02         | 43.85          | 870             | 21.75          | 140.81          | 3.52          |
| 28 | Tumakur         | 1614.45         | 44.67          | 2312            | 57.80          | 393.51          | 9.84          |
| 29 | Udupi           | 528.65          | 12.48          | 291             | 7.28           | 47.40           | 1.19          |
| 30 | Uttara Kannada  | 944.92          | 22.00          | 463             | 11.58          | 78.86           | 1.97          |
| 31 | Yadagir         | 2304.36         | 57.43          | 2750            | 68.75          | 464.84          | 11.62         |
|    | <b>Total</b>    | <b>52858.69</b> | <b>1415.30</b> | <b>63915.00</b> | <b>1549.88</b> | <b>11999.90</b> | <b>300.00</b> |

\*\*\*