

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 3091
ANSWERED ON 19/03/2026

DEPLOYING DATA MANAGEMENT SYSTEM IN INCOIS

3091. DR. FAUZIA KHAN:

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) the details of factors due to which the Indian National Centre for Ocean Information Services (INCOIS) lacks a Data Quality Management System, strategic IT plan, and disaster recovery protocol since 2022;
- (b) the details of IT security policy and physical access controls instituted post-audit;
- (c) the timeline for deploying an enterprise-wide data management plan and operational disaster recovery site; and;
- (d) the measures adopted to prevent future data breaches and ensure system resilience?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a) The Indian National Centre for Ocean Information Services (INCOIS), an autonomous institute under the Ministry of Earth Sciences is recognized as a National Oceanographic Data Center (NODC) by International Oceanographic Data and Information Exchange (IODE) programme of IOC/UNESCO to facilitate global oceanographic data sharing. Accordingly, it has been receiving and archiving data from heterogeneous platforms like Argo floats, XBT/XCTD, Drifters, Wave Rider Buoys, Automatic Weather Stations, Acoustic Doppler Current Profilers (ADCP), Moored Buoys, Tsunami Buoys, Tide Gauges etc. and has a Quality control and management system separately for each of these. Quality control and data management principle as proposed by international community dealing with similar observations are followed and have been maintained. These datasets are being regularly disseminated to various stakeholders like research scholars, students, and commercial users as per the policy in place. Dissemination of this data is only possible by effective data management and quality control. All the in-situ data is maintained in databases like Oracle and MySQL and remote sensing and model outputs are maintained as flat files with indices being generated to be used for recovering the passes as and when required. Thus, there is data management and quality control system in place with INCOIS.

- (b) Post audit, INCOIS has instituted a comprehensive framework of IT security and physical access control measures through the implementation of key policies, including the Physical Access Control Policy, Password Policy, Network Security Policy, IT Asset Management Policy, Storage Media Handling Policy, Identity and Access Management Policy, Vendor Information Security Control Policy, Mobile Device Policy, Malware Control Policy, Change Management Policy, Information Backup Policy, Classification of Information Policy, Secure Authentication Policy, Information Transfer Policy, Remote/Teleworking Policy, Threat Intelligence, Data Leakage Prevention, Data Masking Policy, Privacy and Protection of Personally Identifiable Information (PII) Policy, Web Filtering Policy, E-mail Policy etc. These measures collectively ensure secure physical access protection of information.
- (c) Data Management Plan (DMP) for each of the heterogeneous platforms deployed and maintained by INCOIS has been prepared. The process followed for the DMP is as suggested by National Oceanic and Atmospheric Administration (NOAA, USA). All the fields required to be populated in the respective DMPs are being generated now. It is planned to complete the implementation of the enterprise-wide data management plan by end of Financial Year 2026-2027. Further, INCOIS has already implemented Data Centre-Disaster Recovery (DC-DR) for its data and Tsunami Early Warning Centre and the same is now fully operational.
- (d) To prevent future data breaches, the critical IT infrastructure has been identified by INCOIS and it has been decided to relocate them to the central Data Centre area. For resilience strict implementation of physical access control at the designated data centres, without hampering the ongoing operational activities has been instituted. Additionally, the maintenance of such critical infrastructure is being handled through Comprehensive Annual Maintenance Contract (CAMC).
