भारतीय प्रौद्योगिकी संस्थान रोपड़

Indian Institute of Technology Ropar

OPERATION DRONAGIRI

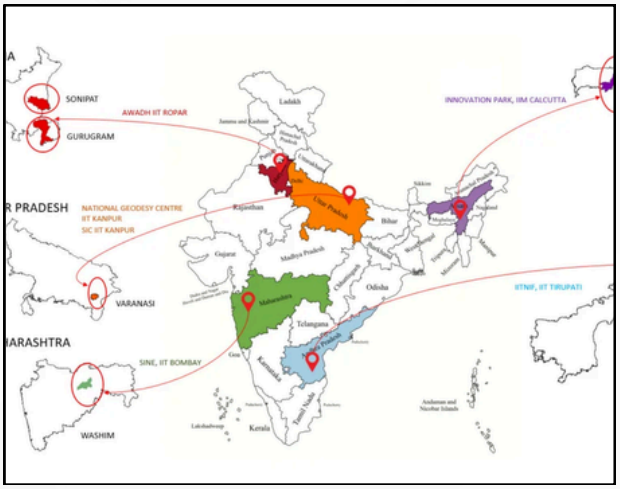
MEETING

Mentor Engagement, Strategic Guidance & Support

16 DECEMBER 2025

About Operation Dronagiri

Operation Dronagiri is a strategic initiative under the National Geospatial Policy (NGP) introduced by the Department of Science & Technology (DST) in December 2022. The NGP aims to make India a global leader in geospatial technology by fostering innovation, liberalizing access to geospatial data, and driving economic and social development through the effective use of this technology. Operation Dronagiri, the first phase of the NGP implementation, is designed to demonstrate the tangible benefits of geospatial technology across three key sectors: Agriculture, Transportation & Infrastructure, and Livelihoods & Skilling.



Operation Dronagiri will be rolled out between November 2024 and June 2025 in six districts in five selected states: Varanasi in Uttar Pradesh, Sonipat and Gurugram in Haryana, Kamrup in Assam, Vizianagaram in Andhra Pradesh and Washim* TBC in Maharashtra. The initiative will focus on district-level implementation to ensure localized solutions and direct impact. Each district will serve as a pilot for deploying geospatial solutions to address sector-specific challenges.

LAUNCH OF OPERATION DRONAGRI

iHub – AWaDH @ IIT Ropar is proud to highlight the successful launch of Operation Dronagiri, a flagship initiative under India's National Geospatial Policy (NGP) 2022, held on **13 November 2024** at the Research & Innovation (R&I) Park, New Delhi. This national pilot aims to leverage advanced geospatial technologies to accelerate development across three critical sectors—Agriculture, Infrastructure & Transportation, and Livelihood & Skilling. By enabling data-driven decision-making and localized interventions, the initiative is positioned to create measurable impact at the grassroots level. The launch event was graced by distinguished leaders, including **Shri Hitesh Kumar S. Makwana**, IAS, Surveyor General of India, and **Prof. K. N. Satyanarayana,** Director, IIT Tirupati. Strategic insights from **Dr. Srikant Sastri,** Chairman, GDPDC, and Prof. Abhay Karandikar, Secretary, DST, **Dr. Radhika Trikha,** CEO, iHub - AWaDH emphasized the transformative potential of Operation Dronagiri in strengthening India's geospatial ecosystem. The initiative is being jointly led by IIT Tirupati, IIT Ropar, IIT Kanpur, IIT Bombay, and IIM Calcutta Innovation Park, enabling collaborative capacity building, knowledge-sharing, and innovation deployment across multiple sectors.

LAUNCH OF OPERATION DRONAGRI

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Operation Dronagiri focuses on sector-specific advancements, including precision agriculture, farm boundary mapping, and aquaculture planning under Agriculture; improved navigation, accident reduction, and EV infrastructure mapping under Transport & Infrastructure; and localized job discovery and market linkages for rural artisans under Livelihood & Skilling. These interventions aim to demonstrate how geospatial data can drive efficiency, enhance safety, and strengthen rural economies.

Key Objectives of the Meeting

The key objectives of the Operation Dronagiri meeting :

- To provide an overview of the Operation Dronagiri initiative and its national relevance.
- To highlight the role of structured geospatial data in planning, governance, and decision-making.
- To facilitate interaction between government stakeholders, TIHs, and startups.
- To showcase innovative geospatial and AI-driven solutions developed by startups.
- To explore pathways for pilot implementation and adoption of solutions within government systems.

Key Sectors

Agriculture

Transportation & Infrastructure

Skilling/Livelihood

Guidance from Mentors and Senior Officials

The meeting was attended by senior officials and representatives, including:

Sh. Paramvir Singh, IAS, Government of Punjab, as Chairperson, guided startups on developing scalable, outcome-driven solutions.
He emphasized the government's need for practical, interoperable technologies that deliver measurable impact in governance and public services.

Dr. S. K. Sahoo, Senior Scientist, Punjab Remote Sensing Centre, Government of Punjab, shared technical guidance with startups on geospatial solutions.
He emphasized the need for accurate, standardized data that integrates with official systems for evidence-based decision-making.

Mr. Charles Avinash, Startup Manager, IIT Tirupati Navavishkar I-Hub Foundation, guided startups on innovation and commercialization strategies.
He emphasized support for scalable, technology-driven solutions that can create real-world impact.

Mr. Saurabh Arora, Head – IP & Technology Transfer, IIT Ropar TIF – AWaDH, organized the initiative and coordinated startups' engagement.
He facilitated guidance on intellectual property, technology transfer, and commercialization strategies.

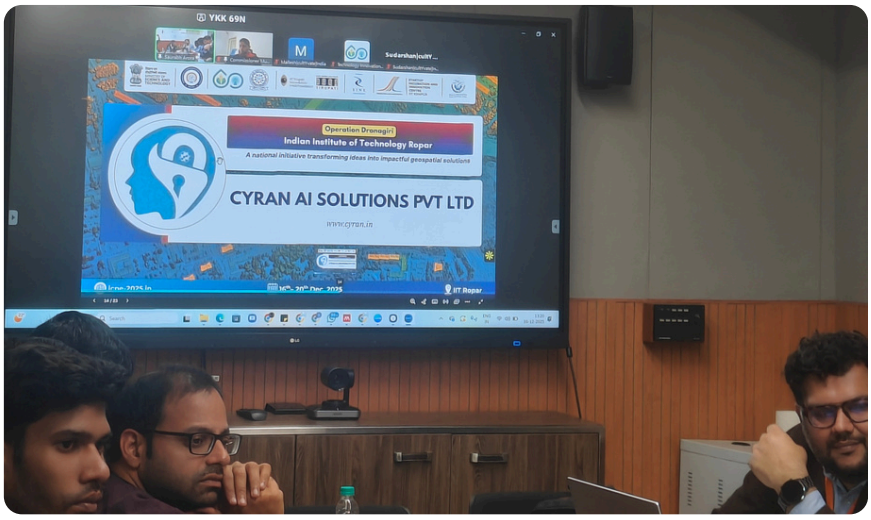
Mr. Aditya Madan, Chief Liaison Officer, iHub – AWaDH, IIT Ropar, guided startups on collaboration and ecosystem building.
He emphasized fostering technology adoption and scalable solutions that address real-world challenges.

Startup Presentations

The following startups presented their solutions, demonstrating practical applications of geospatial and AI technologies:

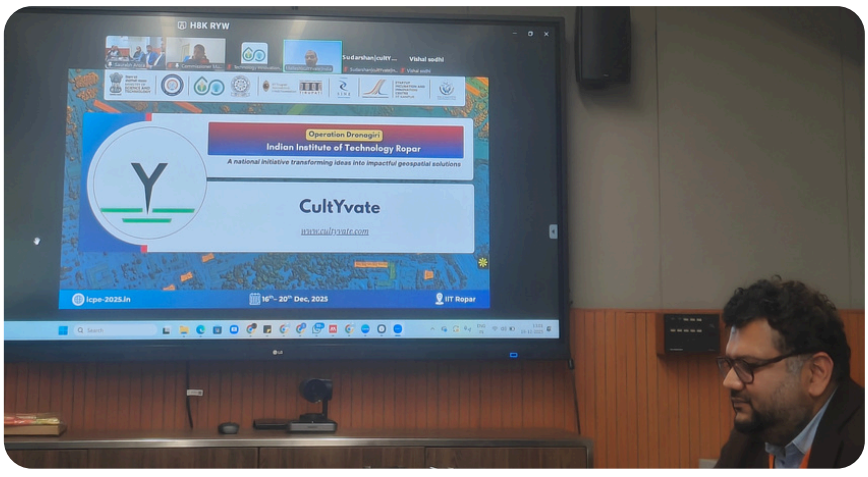
CYRAN AI SOLUTIONS PVT LTD

AI-based real-time geospatial awareness and GIS-enabled smart surveillance enhance decision-making and monitoring. Spatial monitoring of infrastructure, disaster response analytics, and AI-driven mobility insights optimize urban planning and emergency management.



CultYvate

- Works for all major crops across diverse climates and soil conditions.
- Uses IoT, weather, and satellite data for accurate, real-time insights.
- Provides precise irrigation, nutrient, and pest management support across irrigation systems.

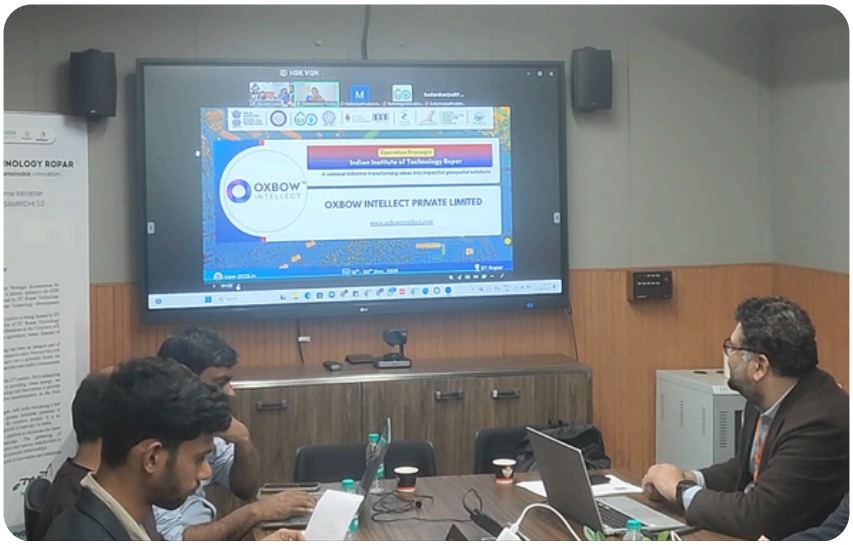


Navariti Innovation Private Limited (Heliot AI)

- HELIOT.AI – AI & IoT-Enabled Smart Farming Solutions for Resource Optimization and Climate Resilience
- Enables precision and climate-resilient farming through smart irrigation, soil health monitoring, and mapping.
- Provides flood and drought early warnings with data-driven decision support at Panchayat and district levels.
- Seamlessly integrates with digital governance platforms for effective planning and implementation.

Oxbow Intellect Private Limited

- AI-Enables agricultural land identification, cadastral mapping, digital land records, and drone/satellite-based crop mapping.
- Supports land suitability assessment, transparent transactions, and informed decision-making for government agencies and investors.



Testimonials

Dr. Sashikant Sahoo
Senior Scientist,
Punjab Remote Sensing Centre, Govt. of Punjab

ਪੰਜਾਬ ਰਿਮੋਟ ਸੈਂਸਿੰਗ ਸੈਂਟਰ
ਪੰਜਾਬ ਸਰਕਾਰ ਇੰਟਰਪਰਾਈਜ਼
ਪੀ.ਏ.ਯੂ. ਕੈਂਪਸ, ਲੁਧਿਆਣਾ-141 004

PUNJAB REMOTE SENSING CENTRE
A Govt. of Punjab Enterprise
PAU Campus, Ludhiana-141004

No. PRSC / ਨੰ. ਪੀ.ਆਰ.ਐਸ.ਸੀ.

Dated / ਮਿਤਿ: 5/1/2026

To Whom It May Concern

Operation Dronagiri is transforming how India uses geospatial data. This initiative unlocks vital information for startups, empowering them to solve real-world challenges in infrastructure and governance with precision. More than just a data repository, it creates a unique **collaboration hub** where government authorities and tech innovators work together.

This convergence of data custodians, solution builders, and end-user departments is both a critical enabler and a timely necessity for building integrated, trustworthy, and scalable digital public infrastructure in the geospatial domain. This synergy is the "missing link" needed to accelerate impactful, data-driven solutions and build a more resilient national digital framework.

Signature:
Name: Dr Sashikanta sahoo
Designation: Senior Scientist & I/c Capacity Building Program
Organization: Punjab Remote Sensing Centre, Ludhiana

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Way Forward

The Operation Dronagiri meeting held on 16 December 2025 at IIT Ropar successfully brought together key stakeholders to advance the objective of leveraging geospatial data for governance and public good. The deliberations and startup demonstrations reaffirmed the importance of collaborative innovation ecosystems in translating data into impactful, real-world solutions. The outcomes of the meeting are aligned with the national vision of digital governance and technology-enabled development.

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