



# TECHNOLOGY DEVELOPMENT FUND (TDF) SCHEME



## TITLE: DEVELOPMENT OF UNDERWATER LAUNCHED AUTONOMOUS UNDERWATER VEHICLE (ULAUV)

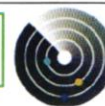
1. **Description:** The ULAUV is planned to meet the tactical requirements of underwater platform by supplementing them in undertaking various roles namely Intelligence, Surveillance and Reconnaissance (ISR), Mine Counter Measures (MCM) Deception Operations. The objective of the project is to design and develop technology to produce ULAUV and its associated support equipment to enable operations from an underwater platform.
2. **Functional and operational requirements:** It should be capable of detection of surface and sub surface contacts using integral sensors. Based on specific mission requirement, the ULAUV would require to pass the target information to other underwater platform using acoustic communication link. It should be capable of recording acoustic and visual data of targets for analysis. It should have homing features to home on to the distress frequency of disabled underwater platform.

Parameter	Values
1. Maximum Speed	: $\geq 5$ kn in nil currents conditions
2. Endurance	: $> 24$ hours at cruising speed
3. Operation cycle	: Not less than 18 months
4. Propulsion	: Electric motor & propeller optimized for high hydrodynamic efficiency & low acoustic noise.
5. Navigation	: Inertial Navigation system and differential GPS with anti- jamming features.
6. Power & battery management	: To be provided

**--End of Document--**



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### **FEASIBILITY CUM RFI RESPONSE FOR THE PROJECT REQUIREMENT UNDER TDF SCHEME (PROFROMA)**

1. **Name of the Institute** (Industry/Academia):
2. **Contact details:**
  - a. Email
  - b. PoC
  - c. Address
3. **Title of the project requirement:**
4. **Project Description** (Define broad understanding of the project requirement and proposed solution under the project).
5. **Briefly detail the proposed technical solution in terms of subsystem/submodule levels.**
6. **Road map for achieving the proposed outcome (Development Plan Phase wise -Max 5 phases).**
7. **Development and production Estimates:**
  - i. Estimated time required for development of the proposed technology /product (In Months).
  - ii. Estimated cost required for the for development of the proposed technology /product (BQs of submodules/subsystems if any pls attach).
  - iii. Estimated production cost of the end product after successful development ( per unit or batch cost).
  - iv. Whether the industry has already done any Suo moto design and development of the proposed product/technology at Technology Readiness Level – Yes/No
  - v. Details of Suo moto design and development done if marked Yes in previous question (within 250 words).
  - vi. Essential infrastructure required for development of the proposed product/technology for which funding is required.
8. **Technical strength in terms of manpower.**
9. **Relevant Work Experience.**
10. **Any other relevant information**

Queries if any and the reply in PDF FORMAT to be submitted online addressing to;

TO,

THE DIRECTOR TDF, DRDO

DRDO BHAWAN, RAJAJI MARG, NEW DELHI 110011

Email to, [arjunk.hqr@gov.in](mailto:arjunk.hqr@gov.in), CC to [dir.tdf-drdo@gov.in](mailto:dir.tdf-drdo@gov.in),