

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.

Ser	Parameter	Values
(a)	Maximum Speed	≥5 Kn in nil currents conditions
(b)	Endurance	>24 hours at cruising speed
(c)	Operation Cycle	Not less than 18 months
(d)	Propulsion	Electric motor & propeller optimized for high hydrodynamic efficiency & low acoustic noise
(e)	Navigation	Inertial Navigation system and differential GPS with anti-jamming features
(f)	Power & battery management	To be provided

3. **Testing and certification requirements.** The prototype should adhere to the MIL grade components in the system COTS items are to be suitably ruggedized for using underwater environment according to TEC standards.

4. **Note.** All replies are to be addressed to DRDO through website <http://tdf.drdo.gov.in>.