



## THE UNDERWATER REMOTELY OPERATED VEHICLE (ROV)



Andaman and Nicobar Islands of India are the hot-spots of biodiversity with their unique Coral Reef bio-reserve. In recent decades, they have been under constant threat due to global warming and sea level rise. Coral reef biodiversity at Andaman region, roughly around 11,000 sq.km., was seriously affected during the 2004 Tsunami event and also are undergoing the stress from the increasing sea surface temperature.



Currently, there is no mechanism other than Scuba diving to examine the corals and assess the extent of damage or rejuvenation that might be taking place since the great damages happened earlier. Deep water electric work class remotely operated vehicle (ROV) ROSUB6000 (capable of operating up to 6000m water depth and 500m depth rated for shallow water applications).

The ROV can effectively map 4-6 sq.km. of coral reefs in a day, whereas the same job takes about a week for a Scuba diver. The images of corals recorded by the ROV are useful to study the biodiversity of coral reefs and their evolution. The water temperature ranged between 31oC at surface and 30.5°C at 1 m water depth. It further decreases in deeper waters as recorded by the ROV based sensor. The radiometer attached on the ROV provided the spectral signatures of different types of corals in Andaman. The ROV's can be used not only for research and scientific exploration purposes but also for several engineering applications.

This technology is developed by **National Institute of Ocean Technology**, Ministry of Earth Sciences, Govt. of India and seeks to stimulate the use of technology by commercialization under Make in India Initiative and **National Research Development Corporation** will facilitate for smooth transfer and licensing of the technology with affordable Licencing terms and conditions.

---

*Any company or organization interested in the technical know-how and to get more details about the technology please refer the contact details below.*

### Contact Details:

Dr. Tata Sudhakar  
Scientist – G & Head

**NATIONAL INSTITUTE OF OCEAN TECHNOLOGY**

Velacherry-Tambaram Main Road, Narayanapuram,  
Pallikaranai, Chennai - 600 100, Tamil Nadu, INDIA.

Email: [tata@niot.res.in](mailto:tata@niot.res.in); Mobile: 9444399844 Phone: 044 - 66783525