Indian Naval Academy develops a twin-drone maritime rescue system that spots people at sea and drops lifebuoys

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News

On 27 Oct 2026 a team of the Indian Naval Academy (INA), Ezhimala (Kerala), unveiled an indigenous twin-drone maritime search-and-rescue system (Midshipman Sudhanshu Tanwar, one of the developers, spoke to ANI). The search drone – a quadcopter – scans the sea with 2K optical and thermal cameras; a 'YOLO' AI model analyses its live feed and flags a person in the water. Linked by long-range RF, a hexacopter then flies to the spot using GPS, drops a lifebuoy only on the operator's command and returns on its own. Developer figures: quadcopter – 45 min, 0.5 kg payload, 50 km/h; hexacopter – 25 min, 2.5 kg, 40 km/h; both have a 10 km operating radius. Uses: man-overboard cases and fishing-boat accidents. Full open-sea trials and formal induction are not yet publicly confirmed.

Key facts

Developer	Indian Naval Academy, Ezhimala (Kannur, Kerala)
Search drone	Quadcopter (4 rotors) – 2K optical + thermal cameras; YOLO AI; 45 min
Delivery drone	Hexacopter (6 rotors) – 2.5 kg payload; GPS; 25 min
Operating radius	10 km for both; long-range RF link
Human control	Lifebuoy drop only on the operator's command

Status	Open-sea trials and induction not yet confirmed

Background

- Indian Naval Academy: at Ezhimala, Kannur district, Kerala; inaugurated by PM Manmohan Singh on 8 Jan 2009 (foundation stone by Rajiv Gandhi, 1987). The naval academy was first set up at Kochi in 1969. It received the President's Colour on 20 Nov 2019. Indian Military Academy – Dehradun; Air Force Academy – Dundigal (Hyderabad); National Defence Academy – Khadakwasla (Pune).
- Science: a thermal camera senses the infrared radiation given off by warm bodies, so people can be found at night and in poor visibility; William Herschel discovered infrared in 1800. YOLO – 'You Only Look Once' – is an AI model that detects objects in real time in a single pass over an image. A quadcopter has 4 rotors; a hexacopter has 6 and can lift more.
- International: the International Convention on Maritime Search and Rescue (SAR), 1979 was adopted at Hamburg under the International Maritime Organization (IMO) and came into force in 1985. IMO is a UN specialised agency headquartered in London. In India's region, the Indian Coast Guard coordinates maritime search and rescue.
- Related: in 2021 the Navy signed a ₹13 crore iDEX contract with Visakhapatnam-based Saif Seas for robotic lifebuoys – these move on the water surface, whereas the INA concept is aerial.

Tamil Nadu link: such drones could help in fishing-boat accidents along Tamil Nadu's long coast. INS Rajali, the naval air station near Arakkonam in Ranipet district (commissioned 11 March 1992), is the base of the Navy's P-8I maritime patrol aircraft and has one of Asia's longest military runways. INS Parundu, another naval air station, is at Uchipuli, Ramanathapuram district.

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