ABOUT US

Detection of illegal fishing activity with limited numbers of maritime enforcement vessels, is a huge challenge. Illegal, Unreported and Unregulated (IUU) fishing exists in part because there are vast areas of ocean to monitor.

ALMA is a 10-month project that at its conclusion shall demonstrate that an Unmanned Air Vehicle (UAV) can be made to autonomously land onto the deck of a vessel underway at sea.

The consortium will together integrate small weight and power radar from Cambridge Sensoriiis, onto UAV platform with flight controller from Callen-Lenz.

The constituent project technologies include SWaP UAS radar, active radar beacon, and UAS flight controller.

Project Consortium:
Cambridge Sensoriiis
Callen-Lenz
Beia Consult

Cambridge, UK

www.cambsensoriiis.com
CONCEPT OF OPERATION

At 100m the RA350 can distinguish between beacon, spatially separated on the vessel by more than 1 degree.

At 300m the UAS can measure the relative heading and range to the vessel landing zone. This heading is used by the flight controller to direct the UAS to the vessel. Independent systems calculate altitude, and control pitch and roll.

DETECTION OF ILLEGAL FISHING ACTIVITY OVER VAST OCEAN AREAS, WITH LIMITED NUMBERS OF MARITIME ENFORCEMENT VESSELS, IS A HUGE CHALLENGE.

On final landing approached the independent beacon measurements allow relative position, and the roll, pitch, yaw of the vessel to be measured, and to control the landing.