

# MARINERS BUOYED UP BY NEW WAVE SENSORS FOR SAFER NAVIGATION

Met Éireann and Irish Lights have collaborated on a trial project to improve safety for mariners and those living along the coastline, which will involve adapting existing navigation buoys with new wave sensors and providing quality control near real-time meteorological and hydrographic data.

The safety of mariners and the public has been at the heart of Irish Lights and Met Éireann since both organisations were established over 235 and 85 years ago respectively. With the seas around the island of Ireland changing due to the impact of climate change, they are adapting by developing new additional services.

They have cited the need for a better understanding of Ireland's adjacent seas, including the wave conditions around the Irish coast, to keep in line with the Government's Climate Action Plan and the Status of Ireland's Climate Report 2020.

Launched on 1 February (St Brigid's Day – the Patron Saint of Sailors), the trial project will involve adapting existing navigation buoys operated by Irish Lights with new wave sensors, providing quality controlled near real-time meteorological and hydrographic data for the benefit of stakeholders in coastal areas.

Ronan Boyle, Director of eNavigation & Maritime Services for Irish Lights, said that "the trial with Met Éireann is closely aligned with our vision of protecting lives, property, trade and the environment by delivering next generation maritime services. We look forward to a successful completion of the trial period and a possible future expansion of this monitoring

network for the safety of all".

The data from Irish Lights navigation buoys will be used by Met Éireann's Flood Forecasting Division to develop coastal predictive modelling systems for tidal, storm surge and wave forecasting for Ireland. The acquisition of near-real-time data aims to prove beneficial to the Flood Forecasting Division before, during and after coastal flood events.

This meteorological and hydrographic information provided by Irish Lights aims to support stakeholders when making impact-based decisions and taking actions that protect against the loss of life. And to also mitigate against damage to property and the environment.

Rosemarie Lawlor, Hydrometeorologist at Met Éireann, described the capacity building collaboration as "an exciting first step in building on our understanding of Irish seas and coasts" and she added that it continues the essential work of improving safety of Ireland's coastal and marine areas.



Irish Lights navigation buoys are located in Ballybunnion (Shannon Estuary); Finnis (Galway Bay); South Hunter (Larne) and Splaugh (Rosslare).

## The project is divided into three stages

- 1. Procurement & Testing:** Met Éireann procured and provided Irish Lights with wave sensors, data loggers and modems for their navigation buoys. It also developed a new quality control process in collaboration with Irish Lights and the Marine Institute for testing the data during stage three. Irish Lights has installed, tested and commissioned the sensors on each buoy over recent months to enable the transmission of the data.
- 2. Deployment:** In stage two the equipment has been deployed by Irish Lights.
- 3. Trial:** With data transmission from the buoys initiated, the new sensors are measuring wave height, wave period and wave direction. The data will be tested, verified and quality controlled to ensure it is fit for purpose.

This data can be viewed on [www.met.ie/forecasts/marine-inland-lakes/buoys](http://www.met.ie/forecasts/marine-inland-lakes/buoys) <https://cilpublic.cil.ie/metocean/>. The near real-time wave data will provide current wave conditions at the deployment locations to end-users.



Ballybunnion Buoy unhooked from crane in Dun Laoghaire, ready to be towed to Irish Lights ship ILV Granuaile.