



Title: The Wave Sensor Project 2023

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Executive Summary : The Wave Sensor Project, a collaboration between Met Éireann and the Commissioners of Irish Lights (Irish Lights), aimed to enhance coastal data collection for meteorological and oceanographic purposes. By deploying wave sensors on Irish Lights' Aids to Navigation (AtoN) buoys, the project sought to provide near real-time data crucial for stakeholders' decision-making processes. This report evaluates the performance of the wave sensors mounted on navigation buoys compared to established measurement techniques. The findings indicated strong agreement in significant wave height, maximum wave height, mean wave period, and mean wave direction across most trial locations. While discrepancies were noted in peak wave periods and mean wave direction at some sites, they were within acceptable ranges based on previous studies. The study underscores the effectiveness and cost-efficiency of integrating wave sensors into Irish Lights' AtoN network. Recommendations include expanding sensor deployment to enhance coastal flood forecasting capabilities, particularly in high-risk areas.

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