



**Sensor Technologies for Remote Environmental Aquatic Monitoring (STREAM)**



**Summer School -Dungarvan in association with BIM**

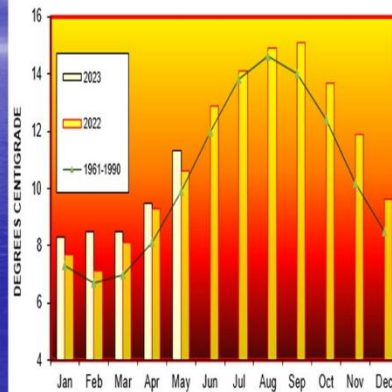
**28<sup>th</sup> August 2023 (Rinne Community Hall)**

The issue of climate change is a major worldwide concern. Its impact is already evident in many regions and nations, as seen in the daily news, and unfortunately, it is

expected to worsen. Met Éireann reports that Ireland's surface air temperatures have risen by over 0.9 C in the last 120 years, and this trend is observed in all seasons. In comparison to the 30-year period between 1961 and 1990, annual precipitation in the country increased by 6% from 1989 to 2012. Our coastal areas are experiencing higher ocean temperatures as can be seen in the Met Éireann graph below and also rising sea levels.



**AVERAGE MONTHLY SEA TEMPERATURES AT MALIN HEAD COMPARED TO THE 30 YEAR AVERAGE (1961-1990).**



The STREAM project is an example of how Ireland is addressing the challenges of climate change. The project is using innovative sensor technologies to monitor the marine environment, and it is developing tools to help coastal communities adapt to climate change. The STREAM project is a valuable contribution to our understanding of climate change and its impacts on Ireland.

The STREAM project is a collaboration between both sides of the Irish Sea to understand climate change's impact better,

lower the cost of estuarine and marine observation, and accelerate data provision. The partner organisations are the South East Technological University (SETU), Swansea University, and Munster Technological University (MTU).

STREAM is developing sensors capable of providing real-time environmental data and disseminating this data via web portals and mobile applications to organisations responsible for protecting and improving Welsh and Irish waters. Data collected will be shared locally to keep coastal communities informed about the local impacts of climate change.

The STREAM project is part-funded by the European Regional Development Fund (ERDF) through the [Ireland-Wales Cooperation Programme 2014-2020](#).

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The School on Water Quality was hosted by the Sensor Technology for Remote Aquatic Monitoring (STREAM) project and explored the importance of monitoring coastal waters. The objective was to show how this type of monitoring can assess human impacts and support localised adaptation plans. It showcased the crucial role of seawater quality monitoring in safeguarding seafood resources, detecting harmful incidents like algal blooms and pollution events, and addressing environmental threats. To provide insights into ocean ecosystems and climate change impacts, empowering more informed decisions about conserving our oceans for future generations. As the Water Framework Directive sets out, the Summer School covered essential parameters: pH, temperature, salinity, dissolved oxygen, and more.

**The objective of this school was to show and explain.**



**13:45 to 15:45 Dr Joseph O’Mahony, Dr Ronan Browne and John Ronan.**

An introduction to the STREAM project

The physicochemical properties of seawater relate to its physical and chemical properties.

Explanations of what is being measured and their impacts on marine life.

Water quality monitoring.

Oyster health.

Water quality sensors.

Weather stations – parameters.

Information being gathered and how to access and use it.

**Dr Mitra Abedini and Benyuan Yu** provided posters on the work that they were undertaking on biotoxins and nutrients respectively.



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