



## MESTECH Research Project



**Project Title:** Microfluidic chip based miniaturised analytical devices for use in marine monitoring

**Project Researcher:** Aine Moyna

**Funding Body:** Beaufort Marine Research Awards

**Project Summary:** The research in this project builds on strengths in our existing research in designing and investigating miniaturised and portable analytical devices, incorporating micro-fluidic integrated technologies, such as on-chip low cost micro-pumps and analyte targeted micro-columns for analyte preconcentration and/or separation. The project will focus on the development of robust and low power separation and detection technologies suitable for long term deployment and selective analyte(s) monitoring.

### **Key Outputs:**

- Creation of IP
- Journal publications in high IF journals
- Publications at conferences
- Media releases when appropriate

### **Key Impacts:**

- The ability to monitoring the marine environment from in-situ devices which are robust and selective to target analytes is currently not an established technology.
- The impact this may have on monitoring and improving the marine ecosystem over time is of considerable importance and affects the quality of life of all users of the marine environment
- Sustainability of the environment is acknowledged as one of the key factors in defining sustainability in general