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Prototype Ocean Monitoring Sensors Show Revolutionary Potential

The EC-funded COMMON SENSE project is successfully developing prototypes for innovative, next generation sensing technologies that will support the protection of the marine environment in Europe. Progress on the development of these sensors, which will contribute to the implementation of the Marine Strategy Framework Directive (MSFD) by enabling effective monitoring of our marine waters, was presented at the project's recent partner meeting held in Terrassa, Spain, from 22-23 April 2015.

The meeting, hosted by the project's coordinating institute, LEITAT Technological Center, brought the COMMON SENSE consortium together to discuss the progress of the project and to decide on future actions as the project approaches its halfway point.

The advances made in the development of the sensors include interesting results such as those arising from testing by project partner CSIC's Centre of Nanotechnology and Molecular Materials (NANOMOL) group of a prototype thermometer for highly sensitive detection of temperature changes. Performance tests carried out with the first prototype have shown that the sensitivity of the developed thermometer is two orders of magnitude higher than that of the commercially used platinum thermometer.

Another interesting development, courtesy of project partner DropSens, is the development of screen-printed technology that can be used to fabricate miniaturised, inexpensive sensors to detect heavy metals. These sensors show fast responses, require low maintenance, and can be used for onsite measurements. They are currently undergoing validation and optimisation with CSIC's Nanoparticles and Nanocomposites (NAPCOM) group.

Sensors being developed by the COMMON SENSE project will increase the availability of standardised data on: eutrophication; concentrations of heavy metals; micro plastic fraction within marine litter; underwater noise; and other parameters such as temperature, pH and pressure. These cost-effective sensors directly respond

to current marine monitoring challenges and will be a key tool for EU Member States in meeting their MSFD requirements and achieving Good Environmental Status (GES).

Sergio Martinez, COMMON SENSE Scientific Coordinator, said: 'As we approach the midpoint of the project it is timely to reflect on the progress of COMMON SENSE and how we as a partnership can ensure the project goals are successfully achieved. It was gratifying to see the developments presented at this meeting and the energy and enthusiasm of the participants to meet COMMON SENSE targets. The next 22 months promise to be intense, given the challenge posed by developing and deploying sensors in real environments. Of course, the difficulties during this phase, which are always to be expected when conducting research in marine environments, will be complemented by excitement. Hopefully COMMON SENSE will contribute to a new, revolutionary way of monitoring our oceans.'

During the meeting, partners reviewed and evaluated the progress of each of the project's activities. The partners also discussed how to maximise effective collaboration and knowledge sharing with other EC-funded projects with a similar focus on marine environmental monitoring, in particular with the SCHeMA, NeXOS and SenseOCEAN projects. For further information about COMMON SENSE, please contact COMMON SENSE Scientific Coordinator Sergio Martinez (smartineznavas@leitat.org) or visit the project website at: www.commonsenseproject.eu.

Notes for Editors

COMMON SENSE will run until February 2017 with an overall budget of EUR 6.07 million. The project will receive a total of EUR 4.66 million of EU funding under the OCEAN 2013.2 area of the Seventh Framework Programme (FP7). This is a cross-thematic call reflecting the EU's focus on major sea-related challenges. The projects involved will work towards delivering sustainable and innovative solutions to fully reap the potential of our oceans.

COMMON SENSE is coordinated by Spain's LEITAT Technological Center, which leads a diverse consortium of fifteen partners from Ireland, Italy, Poland, Former Yugoslav Republic of Macedonia, Germany, Spain and the UK. The consortium's expertise and geographical distribution will enable multidisciplinary marine environmental monitoring of key marine regions, including the Baltic Sea, the north-east Atlantic Ocean and the Mediterranean Sea

Pays

Austria, Belgium, Cyprus, Czechia, Germany, Denmark, Estonia, Greece, Spain, Finland, France, Croatia, Hungary, Ireland, Italy, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Poland, Portugal, Romania, Sweden, Slovenia, Slovakia, United Kingdom

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COMMON SENSE

**COST-EFFECTIVE SENSORS,
INTEROPERABLE WITH
INTERNATIONAL EXISTING OCEAN
OBSERVING SYSTEMS, TO MEET EU
POLICIES REQUIREMENTS**

4 Septembre 2022

PROJET

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