10am   Registration, tea and coffee

10.30am   *Welcome and introduction to UCD*
            – Professor Des Fitzgerald, Vice-President for Research, UCD

            Introduction to INTERREG 4A
            – Mr Simon Baily, Head of Unit, Ireland Wales Programme

            Session 1 – *The 2006 Bathing Water Directive – the Irish Context*
            (Chair: Dr Bat Masterson, UCD)

10.45am   *The new Irish Bathing Water Regulations*
            – Mr Paul Dunne, Principal Officer, Water Quality Section, Department of the Environment,
            Community and Local Government

11.05am   *Bathing Water in Ireland – Challenges and Opportunities*
            - Dr Mícheál Lehane, Programme Manager, Office of Environmental Assessment,
            Environmental Protection Agency

            Questions

11.40am   Tea and coffee

            Session 2 – *Use of Smart Measures in Managing Bathing Water Quality*
            (Chair: Dr John O'Sullivan, UCD)

11.55am   *Ireland's SmartOcean Cluster: Developing ICT enabled products and services for the Global
            Marine Sector*
            - Dr Barbara Fogarty, National Co-ordinator, Advanced Marine Technology Programme,
            Marine Institute

12.15pm   *Smart Coasts = Sustainable Communities – Overview and the Irish Experience*
            – Professor Wim Meijer, Associate Professor of Microbiology, School of Biomolecular and
            Biomedical Science, UCD

12.35pm   *Smart Coasts = Sustainable Communities – The Welsh Experience*
            – Professor David Kay, Professor of Environment and Health, CREH, Aberystwyth University

            Questions and discussion

1.15pm   Lunch

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Marine Institute
Foras na Mara

Bathing Water Management in Ireland: the Smart Coasts Initiative
Part-funded by the European Regional Development Fund

www.smartcoasts.eu   **Wednesday 20th July 2011**

UCD is delighted to take part in another collaborative partnership with Aberystwyth University. The Smart Coasts project which is being launched today builds on the strong relationships formed during previous collaborations.

At the heart of UCD's research strategy is an ambition to address the challenges that will shape our future. Our research programmes provide the foundation for more ambitious and challenging horizons. In recent years, we have grown our capacity and capability in the emerging areas of environment and energy, drawing on strong disciplines in microbiology, hydrology and computer science.

UCD is one of Europe's leading research-intensive universities where undergraduate education, postgraduate masters and PhD training, research, innovation and community engagement form a dynamic continuum of activity. Working with international partners, we achieve a unique capability in finding solutions to key challenges, which are not only relevant for Ireland, but contribute to global solutions.

Today UCD is Ireland's largest university with almost 25,000 students, ranking 33rd in Europe and 94th in the world. We are the national leader in research funding, consistently attracting quality investment that has helped establish a reputation as a world-class destination for leading researchers and collaboration, helping to drive change and discovery.

On behalf of UCD, I wish all participants in the Smart Coasts project continued success.

Professor Des Fitzgerald
UCD Vice-President for Research

Professor Des Fitzgerald is Vice-President for Research at University College Dublin. Since joining UCD in 2004, he has led the development of research within the university through the establishment of UCD Research, an office that focuses on building the university's research capacity and reputation.

Mr Simon Baily is the Head of Unit of the Ireland Wales Territorial Co-operation Programme's Joint Secretariat based at Waterford. He is responsible for the administration and technical implementation of the Programme.

Dr Bat Masterson is a Research Associate of the School of Biomolecular and Biomedical Science of University College Dublin. Bat has had a long-standing involvement in research on the microbial pollution of recreational waters and water resources, including the SMART, iCREW and Smart Coasts = Sustainable Communities Interreg funded projects. He advised the Irish Government on the technical aspects of the revision of the EU Bathing Water Directive, and is continuing this consultation on the regulatory implications of the ensuing Irish Bathing Water Regulations.

Mr Paul Dunne joined the Department of the Environment, Community and Local Government in November 2008 and has worked in the Marine Environment Unit with responsibility for the Bathing Water Directive, the Shellfish Water Directive and the Marine Strategy Framework Directive since then. Prior to joining the Department Paul worked in the Forest Service of the then Department of Agriculture, Fisheries and Food.

Dr Mícheál Lehane is currently Programme Manager in the EPA's Office of Environmental Assessment where he has responsibility for a wide range of functions. These include the EPA's laboratories; State of Environment assessment and reporting, air quality, REACH, Strategic Environmental Assessment, bathing water, noise, and the EPA's informatics and Geographical Information Systems. He is also the Irish National Focal Point for the European Environment Agency.

Dr John O'Sullivan is a lecturer in the School of Architecture, Landscape and Civil Engineering at UCD. Dr O'Sullivan's current research is focused on river hydraulics, hydrology, flooding and the future sustainability of Dublin's water resource requirements. Dr. O'Sullivan has led national and European projects in these areas that form part of the Irish Flood Studies Update programme and the ERA-Net CRUE research initiative to develop resilience in flood risk communities.

Dr Barbara Fogarty co-ordinates the National Advanced Marine Technology Programme on behalf of the Irish Marine Institute. Her responsibilities include the creation of a national multi-disciplinary and industry-orientated national research activity in the area of information and communication technologies (ICT) for marine related sectors. Key programme initiatives include supporting the development of flagship marine testbed infrastructures such as SmartBay and advancing Ireland's SmartOcean Strategy (ICT for the Sea).

Professor Wim Meijer is Associate Professor and Head of Microbiology in the School of Biomolecular and Biomedical Sciences at UCD. His research focuses on pathogenic bacteria in relation to animal and human health. Currently funded research focuses on real time prediction of bathing water quality, development of technologies to identify the biological and geographical origins of water pollution and techniques to detect Cryptosporidium.

Professor David Kay is Professor of Environment and Health at Aberystwyth University researching microbial dynamics and epidemiology in catchment and coastal systems. He co-authored the microbial standards chapter in the recent WHO recreational water guidelines and has advised: EU, WHO, USEPA, EPA Ireland, SEPA, Environment Agency, DEFRA and Scottish Government in this area in recent years. David has led directly related research projects for Interreg, EU FP6 and 7, EPSRC, NERC water companies and UKWIR valued at over €10m.

Professor Gregory O'Hare was the Head of the Department of Computer Science at University College Dublin (UCD) 2001-2004 and is one of the Principal Investigators and founders of the Science Foundation Ireland funded (€16.4M) Centre for Science and Engineering Technologies (CSET) entitled CLARITY: The Centre for Sensor Web Technologies (2008-2013). He has published over 330 refereed publications in Journals and International Conferences, 6 books and has won significant grant income (ca €28.00M).

About Smart Coasts = Sustainable Communities

Why
Real-time prediction of coastal water quality can ensure protection of public health and produce more bathing waters in Wales and Ireland that are classified as 'excellent' under the revised Bathing Water Directive. It is recommended by the World Health Organisation.

DEFRA estimates UK-wide cost savings using the real-time management of Stg£1.4billion.

How
Smart Coasts = Sustainable Communities will develop practical management models at two exemplar sites in Ireland and Wales. At these sites, we will collect high quality data to underpin credible model design. Two types of models will be investigated: i.e., (i) simple black-box models where compliance is related to, for example, rainfall or river flow thresholds; and (ii) more complex process-based models linking land surface runoff with near-shore flow patterns producing pollutant concentrations at impacted bathing sites. The modelling tools will be designed to be generic, transferable and incorporate considerable practical operational input to their design from our Contributing Stakeholders in Wales and Ireland.

As a spin-off of the work, the new data acquisition will provide excellent information on the relative contributions of different pollution sources to the receiving waters at the two demonstration sites. In Wales, this data resource will be used by DC/WW and EA Wales to ensure cost effective and evidence-based decisions are taken on any future improvement strategies that must target both 'point source' infrastructure and 'diffuse source' pollution loading from catchments draining to the sea.

Where
We have specifically chosen Swansea Bay and Bray Beach for this project, i.e., bathing waters which are currently not considered excellent. Swansea Bay and Bray are ideally suited for this project, since they are not industrialised, have beaches within walking distance of thousands of residents, are popular destinations for tourism and watersport activities and have received significant investment to improve infrastructure and recreational facilities.

When
The project commenced in July 2010 with completion and reporting in 2013.

Lead PIs
Professor David Kay (Aberystwyth University)
Professor Wim Meijer (University College Dublin)