

STRIVE

Environmental Protection Agency Research Programme 2007 - 2013



EPA STRIVE News

The Science, Technology, Research and Innovation for the Environment (STRIVE) programme 2007 - 2013

SUSTAINABLE DEVELOPMENT MODEL PREDICTS POTENTIAL ENVIRONMENTAL IMPACT OF FUTURE ECONOMIC ACTIVITY

New research, published by the EPA, shows how economic forecasts can be used to project waste generation and emissions of pollutants across Ireland. The *ISus (Irish Sustainable Development) Model* is based on the work of a three-year study by the Economic and Social Research Institute (ESRI), funded under the EPA STRIVE research programme.

The *ISus* model provides a link between economic forecasting and potential environmental impacts. This enables us to use the expertise of the ESRI, in relation to economic data, and link this with the environmental data produced by the EPA. The results will aid policy and decision makers to diagnose environmental problems, identify pressure points, target policy interventions and assess their success.

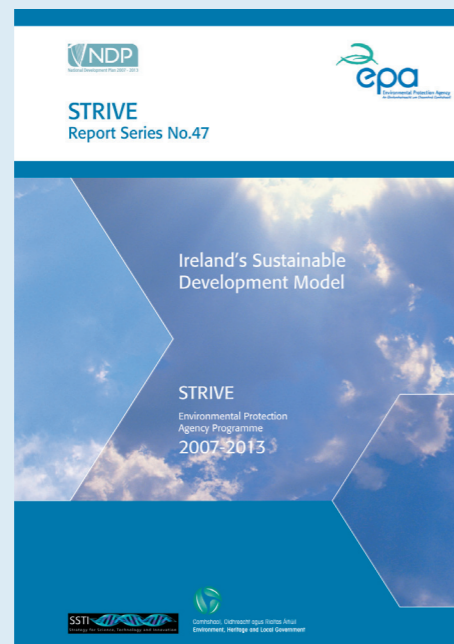
For example, projections on the generation of biodegradable waste – how much and where – could be a very useful tool for planning the location and required capacity for waste management infrastructure in the future.

ISus covers more than 25 potential pollutants (to air, water and waste) emanating from 20 economic sectors.

Some of the findings from the research:

- In relation to greenhouse gas (GHG) emissions: Ireland faces a significant challenge in meeting its target for 2020.
- In relation to waste generation: projections from the model suggest that Ireland will also have great difficulty meeting EU limits on landfilling of biodegradable municipal waste.

The report *Ireland's Sustainable Development Model* is available on the EPA website at www.epa.ie/downloads/pubs/research/econ/.



OFFICIAL OPENING OF EPA-FUNDED NUI GALWAY WATER RESEARCH FACILITY

The new NUI Galway Water Research Facility at Tuam, Co. Galway was officially opened in February by Michael Finneran, Minister for Housing & Local Services and TD for Roscommon-South Leitrim. Core funding to establish the facility was provided by the EPA through its STRIVE Research Programme, and by NUI Galway.

Located on the site of Tuam Waste Water Treatment Plant the facility is a full-scale test-bed for novel waste water and water treatment technologies. There are already a range of NUI Galway research projects on new green technologies underway at the Water Research Facility.

With a rising population and increasing requirements for improved water quality, there is a real need to develop and optimise waste water treatment systems, especially for villages and small towns. This facility will play a strong role in developing new indigenous solutions to protect the environment and deliver economic growth.

In order to minimise the environmental impact of sewage discharges, effective systems are required to treat waste water and ensure clean and safe waters. By using influent taken from Tuam town waste water, the facility provides researchers and manufacturers

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Pictured at the launch of the plant were Minister Michael Finneran, Professor Terry Smith (NUI Galway) and Laura Burke (EPA Director)

with opportunities to evaluate novel technologies under realistic conditions. Operating at a scale equivalent to a village with a population of 400, this system offers high performance at low operating costs. It is estimated that this new technology will allow the plant to operate at approximately 25% of typical running costs for a conventional activated sludge plant of similar size.

The Tuam Water Research Facility employs solutions generated by Irish researchers to deliver high performance results at low operating costs. As work progresses at the facility, it will also contribute towards implementation of the Water Framework Directive in Ireland.

Whilst core funding was provided by the EPA and NUI Galway, additional critical support came from Galway County Council, who provided the site and carried out civil engineering works. A range of industrial partners, including the main contractors Response Group Ltd, also contributed significant resources and equipment.

EPA STRIVE PROGRAMME - IMPLEMENTATION OF ON-LINE GRANT MANAGEMENT SYSTEM

The EPA is responsible for the coordination of research on environmental issues in Ireland and administers the Science, Technology, Research & Innovation for the

Environment (STRIVE) Programme 2007 – 2013. The Climate Change Research Programme (CCRP) and the Cleaner Greener Production Programme (CGPP) are sub programmes of the STRIVE Programme.

In order to improve the administration of the programme and provide increased transparency to researchers, a new online grant application and project management system (<https://epa.smartsimple.ie>) was introduced in late January 2010. This new system will facilitate the online submission and management of research proposals for all STRIVE and CCRP-funded projects.

EPA STRIVE EVENTS

2010 EPA National Research Conference
The 2010 EPA National Research Conference will take place on 23rd June 2010. As Ireland works towards recovery, there is a strong focus on ensuring that future development is sustainable and based on sound environmental policy. The EPA recognises that environmental research and innovation play a pivotal role in this task. This conference will highlight the knowledge developed under EPA-funded research and demonstrate its application to delivering a sustainable Ireland.

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EPA FUNDED RESEARCH PROJECTS CONFERENCES & WORKSHOPS

European Analytical Measurements Competition (EURACHEM COMPETITION) - Limerick Institute of Technology.

26th March 2010:

This competition aimed at focusing attention on the deductive skill and inductive reasoning necessary to produce world class scientists. At a time when all third-level colleges have suffered a downturn in numbers studying science, the competition has been instrumental in generating links between the competing colleges and renewing collegiality among the educators.

Mainstreaming Lime Hemp Bio-Composite Construction Workshop and Consultation BESRaC (Built Environment Sustainable Research and Consultancy) - Annesbrook Hotel, Mullingar.

31st March 2010:

BESRaC under EPA STRIVE funding are commencing a scoping study into the application of lime hemp bio-composite as a mainstream construction technology in Ireland, including issues pertaining to regulatory compliance, certification, research, demonstration projects, alternative construction application / opportunities. BESRaC invited individuals and organisations involved in the built environment to participate in this information and consultation exercise on mainstreaming lime hemp as a construction material.

Green Chemistry in Ireland: including highlights of Environmental Technology projects funded by the EPA – Dublin City University.

15th April 2010:

Showcasing recent advances in the implementation of green technologies in industry in Ireland, this conference disseminated the latest results from the Environmental Protection Agency (EPA) Medium Sized project awards granted in 2008.

EPA projects covered a broad scope from organocatalysis, microphotochemistry, long-term deployment of sensor monitoring systems, upcycling of post consumer polyethylene to a biodegradable plastic and stress induced molecular and ecological changes in soil autotrophs: carbon capture and novel compound prospecting.

Invited speakers included Emma Lavoie (USA EPA Office of Pollution Prevention and Toxics); Frank Bringezu (Merck KGaA) and Michael Kopach (Eli Lilly & Co., USA).

Joint EPA STRIVE and Invasive Species Ireland Forum 2010 – Botanic Gardens, Glasnevin.

13th -14th May 2010:

This year, the Environmental Protection Agency and Invasive Species Ireland are collaborating in a joint two day event hosted by the National Botanic Gardens, Glasnevin.

The first day of the meeting will act as a dissemination workshop for the results of the EPA Strive funded project 'Alien invasive species in Irish Water bodies'. This is a two year project aimed to address the knowledge gaps identified under the Water Framework Directive for alien invasive species in Ireland's River Basin Districts. This was achieved through a combination of research and policy development comprising of analysis of the impacts of selected invasive species on structure and function of natural ecosystems (primarily by innovative studies of impacted and non-impacted foodwebs using stable isotopes in exemplar waterbodies); preparation of an archived GIS-based database of aquatic aliens in Ireland; and development of a monitoring and reporting strategy and guidance on preventing and containing aquatic introductions.

The second day of the Forum will bring together stakeholders and invasive species experts to discuss and shape Invasive Species Ireland (ISI) – Phase 2. The review of ISI Phase 1 and the recommendations of stakeholders have been taken on board in the development of ISI Phase 2. You can register and view the event programme at: www.invasivespeciesireland.com/forum/default.asp.

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INTERNATIONAL CONTEXT

Framework Programme 7: Environment Calls

The latest Environment calls closed in January 2010. Outcome of the evaluation process should be available in May 2010. Let us know if you are part of consortium which has submitted a proposal! Contact: fp7@epa.ie



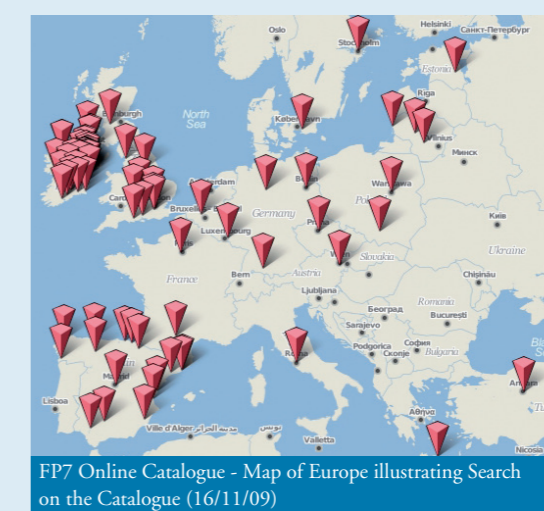
The next Environment call is due to be published in late July 2010. For more information, please contact the representative of your organisation on our FP7-Environment Working Group. (<http://www.epa.ie/researchandeducation/research/europeanfunding/fp7/fp7-envworkinggroup/>).

Do you have a suggestion on topics/gaps that should be included in future calls? Please contact the representative of your organisation on our FP7-Environment Working Group or Contact fp7@epa.ie.

National FP7-ENV Information Day 2010

It is proposed to hold this annual event in September 2010. To help us make this event successful, please send us your suggestions on contents / format. Contact: fp7@epa.ie.

Catalogue of Irish expertise in environmental research



The Catalogue of Irish Expertise in Environmental Research provides an insight into Irish companies and research organisations active in the field of Environmental Research. This online database is provided to support researchers and enterprises in establishing and strengthening international co-operations for research and technological development.

There are now over 145 researchers/organisation profiles in the Catalogue. Since its launch in September 2009, there have been over 12,000 hits!

SKEP NETWORK

The EPA are involved in the SKEP network of Environmental Regulators that support research. Researchers in UCD commenced work in January 2010 on the nanoREACH project funded by SKEP. This project brings together groups from Ireland, Sweden, Finland and the UK to examine the suitability of the REACH framework for regulating environmental impacts of nanotechnology.

RESEARCH RESOURCES

The following websites provide additional resources of interest for researchers:

- EPA Research Publications: www.epa.ie/downloads/pubs/research/
- ERC Environmental Research Data Archive website: <http://erc.epa.ie/safer/>
- National Soil Database Archive website: <http://erc.epa.ie/nsdb/>
- Cleaner Greener Production Programme website: www.cleanerproduction.ie
- FP7 website: www.fp7ireland.com
- Online Catalogue of Irish Expertise in Environmental Research: www.epa.ie/researchandeducation/research/funding/fp7/catalogueofirishexpertise/
- SKEP website: www.skep-era.net/
- ERA-ENVHealth website: www.era-envhealth.eu/