





CHAIRPERSON'S ADDRESS:

From Dr. Tom Curran

There has been quite a lot of activities in which the ESAI has been involved over the past year since Environ 2014 both in terms of events and planning for the future. The highlights are as follows:

- Environ 2014 - 24th Irish Environmental Researchers Colloquium hosted by Trinity College Dublin, (Feb 26th-28th 2014).
- Natural Capital: Ireland's hidden wealth (April 28th -29th 2014, National Botanic Gardens, Dublin) with Trinity College Dublin
- Dooge Nash International Symposium (April 24th -25th 2014, Dublin Castle) with University College Dublin
- ESAI Postgraduate Researcher of the Year Award
- ESAI YouTube Research Competition
- ESAI Photography Competition

We had a large attendance at Environ 2014 along with the Careers Fair in TCD and this is reported separately. I would like to acknowledge Dr Laurence Gill and his team for hosting Environ and Dr Cara Augustenborg and Aoife Delaney and ESAI colleagues for organising the Careers Fair. ESAI provided administrative support and registration facilities for the Natural Capital conference and this was deemed a great success. Thanks to Cara Augustenborg and Sinead Macken for the smooth running of this collaboration. ESAI administrative support and guidance was again provided successfully through Sinead Macken for the Dooge Nash International Symposium.

Thanks to Dr Martina Prendergast for co-ordinating a new initiative "ESAI Postgraduate Researcher of the Year Award". The applications from postgraduates were evaluated according to the criteria: Scientific excellence and originality; Impact (economic/environmental/societal) and; Dissemination (conferences, outreach, media). Congratulations to the winner Richard Manton from the Ryan Institute at NUI Galway who is working on national cycle route guidance.

Another initiative was the ESAI YouTube Research Competition; thanks to Dr Kevin Ryan and Dr Frances Lucy for working on this. The theme was "Communicating Environmental Science" and it sought entrants who had a flair for communication and who could explain the value of environmental science research to a wide audience. Congratulations to the winner Tracey Lydon from TCD. The video can be viewed on <http://www.youtube.com/esaiweb/>.

The annual ESAI Photography Competition with the theme "Urban Green Infrastructure" was co-ordinated by Mark Nolan. Well done to the winners which are detailed elsewhere in this book.

One of our major initiatives for this past year was to reach out to colleges more than we have done in the past. As part of this, we are welcoming on board an ESAI Liaison in each college. These staff members will act as a contact point for ESAI activities and information flow. We are also offering free membership to all undergraduates in relevant courses in each college. The list of third level environmental education programmes on our web site is being updated as part of this process. We hope that this approach will facilitate more engagement with students and in particular will raise awareness and stimulate interest in environmental research. We have been encouraged by the growing number of non-research based students (e.g. taught Masters) attending Environ over the past few years and we would anticipate that this trend may extend further to undergraduate students through this process.

Another recent development is that we are reviewing our aims and objectives at the core of the ESAI. It is healthy that we should question how we serve our members and can we do things better or differently. Perhaps, the focus needs to be moved more explicitly to a research agenda as many of our members are involved in this area. Furthermore, our membership is also quite diverse in terms of discipline, which is a great strength of the organisation. We are depending on the voluntary efforts of our members, so we must be cognisant of what is possible to achieve effectively. As always, we welcome your input. Remember to keep in touch with ESAI through social media on Twitter, Facebook and LinkedIn.

A key ESAI meeting was held in March 2015 to decide on future strategy. We would like to be the association of choice for environmental researchers on the island of Ireland. We would also aim to provide the best networking opportunities for environmental science research.

While the YouTube and Photography Competitions attracted entries, the ESAI have decided to discontinue these activities to focus more on other initiatives, which may be of more significant benefit to members. A decision was also made to remove the Directory of Expertise from the ESAI web site as it was not being used to any significant extent. In addition, the EPA has a more comprehensive catalogue of experts at <http://erc.epa.ie/h2020catalogue/>.

A new initiative is being launched at ENVIRON called a “Grassroots” Workshop Support Scheme in order to assist researchers, particularly postgrads and postdocs at hosting specialist workshops. We are grateful to the EPA for providing funds which will be administered by ESAI. Details can be found on the back page of this book.

As I mentioned in the last edition of Environews, it marked the final ezine under the direction of Honorary Editor, John Wann. On behalf of the ESAI, I would like to thank him sincerely for his input. We are now moving to a new format of newsletter, which will be circulated in the coming months.

On the ESAI Council front, we are seeking new members as always but particularly representatives of our core members to come forward, i.e. 1 PhD representative and 1 Post Doc representative. Please attend the ESAI AGM on Thursday April 9th if you wish to become involved.

Many thanks to Emer Cosgrove who stepped in at short notice in the role of Treasurer of ESAI. We really appreciate this.

On behalf of the ESAI, I wish to say a sincere thanks to Dr Paul Bolger for his contribution to the association as he is stepping down from the ESAI Council after several years of service, including a period as Chairman, which has brought the organisation to a new level in terms of activities and benefits to members. I would also like to acknowledge the ESAI administrator, Sinead Macken, for her excellent work, dedication and support over the past year.

Best wishes to all for the year ahead.

Dr Tom Curran is a lecturer in UCD School of Biosystems Engineering and has been on ESAI Council since 2008, served as vice-chair in 2013 and was conference convenor at the 2012 ENVIRON in University College Dublin.

ESAI GOALS AND OBJECTIVES 2014:

The ESAI (Environmental Science Association of Ireland), founded in 1995, as a not for profit organisation. The membership is drawn from all sectors and disciplines, ranging from biology and ecology to engineering, hydrology and management and from professors to amateur naturalists. The goals and objectives of the organisation are to:

- Provide a forum to facilitate exchange of specialist information and advice amongst environmental researchers, policy makers, environmental management practitioners and other stakeholders, within Ireland and elsewhere.

- Promote a fuller awareness of the role that higher-level education institutions may make in finding solutions for the urgent environmental problems confronting contemporary society.
- Provide a forum for networking amongst environmental researchers both at national and international scales.
- Facilitate an annual conference aimed at providing postgraduate and other researchers with an opportunity to learn about each other's work, and for postgraduates to present and publish papers within a supportive community.
- Promote high professional standards amongst environmental researchers and professionals.
- **To ensure a platform for science-based research on the environment in Ireland.**
- Provide a Code of Ethics for Environmental Professionals in Ireland through its membership.
- To maintain growth in the membership base.



Photographer: Micheal Yulo

MEMBERSHIP:

Make the most of your Membership

Benefits of Membership

By becoming a member of ESAI, you will also have access to:

- Discounted rates at Environ, the annual Irish Environmental Researchers Colloquium, one of the major activities of the Association. It is now one of the largest national scientific meetings in Ireland attracting over 300 delegates each year.
- Discounted rates for selected workshops, seminars, further education courses and conferences.
- Access to ESAI listserver
- Eligibility to apply for ESAI Postgraduate Researcher of the Year Award
- Eligibility to apply for ESAI Grassroots Workshop Funding
- Learn from others and absorb best practice
- Raise the profile of you and your business
- Stimulate new business opportunities
- Innovate and commercialise new products and services

Raise your Profile

- Members of ESAI will receive free-of-charge E-Newsletters, Environews.
- Sponsorship opportunities

Keeping you Informed

The ESAI website – www.esaiweb.org – has now become a valuable resource for environmental professionals in Ireland. The new events area–offers a snapshot of what is happening in the industry nationwide. The website is designed by AttikDesigns.

Social Networking

Network with the growing number of environmental science researchers and practitioners who have joined our online discussion fora on LinkedIn and Facebook. Updates from the ESAI and our members are posted on a daily basis advertising upcoming events, courses, career opportunities, links to matters of national and international interest to the environmental science community.

You can join us on:



<http://www.linkedin.com/in/esaiweb>



<http://www.facebook.com/esaiweb>



http://twitter.com/esai_environ

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2014 EVENTS:

Jan 16th	Public Lecture ESAI ERI An Evening of Climate Change 18:30 Western Gateway Building, UCC, Cork
Feb 26th-28th	Environ 2014 - 24th Irish Environmental Researchers Colloquium Co-hosted by Trinity College Dublin & ESAI, Museum Building, Trinity College, Dublin 2

Feb 26th	Workshops @ Environ <ul style="list-style-type: none"> · How to run a green campus? · Communicating Science
Feb 27th	ESAI YouTube Research Competition - Launch
Feb 27th	Public Event ESAI Career Expo at Environ 2014 13:00-17:00, Burke Theatre Concourse, TCD, Dublin 2
Feb 27th	ESAI AGM
Feb 28th	ESAI Student Competition Prize Giving Ceremony at Environ
Apr 24th-25th	Conference Co-Sponsor; Dooge-Nash International Symposium in conjunction with UCD Dublin Castle, Dublin
April 28th-29th	Conference Co-Sponsor; Natural Capital: Ireland's Hidden Wealth National Botanic Gardens, Glasnevin, Dublin 9
May 25th	Conference Brownfield and Contaminated Land Conference 15% Discount for ESAI members Belfast
June 13th	ESAI Postgraduate Researcher of the Year Competition Winner Announced
July 31st	ESAI 9th Annual Photography Competition Launch Open to all amateurs
July 31st	ESAI Ezine Environews Summer Edition Available Online www.esaiweb.org
Aug 1st	ESAI YouTube Research Competition Winner Announced
Dec 31st	ESAI 9th Annual Photography Competition Closing Date

nviron 2014

ENVIRON 2014

The 24th Irish Environmental Researchers' Colloquium, ENVIRON 2014, was held on 26th to 28th February in Trinity College Dublin, organised jointly by the School of Engineering, School Natural Science and ESAI. Trinity College last hosted the Colloquium in 1993 and as were very pleased to welcome

The theme of this year's *and Solutions* which provoked research either investigates human environment and/or the succession of winter that multidisciplinary needed to address the challenges of environmental pollution, energy security and sustainability of natural resources.



one of the original hosts of this event, we the colloquium back in 2014.

colloquium was *'Environmental Challenges* the delegates into considering how their contemporary threats to the natural and contributes towards finding solutions. With storms fresh in everyone's minds it is clear approaches from scientists and engineers are

The conference began on Wednesday, 26th February 2014 with two workshops during the afternoon on the following topics: *How to Launch and Run a Smart Sustainable Campus* delivered by Noel McCann, Joe Borza, Kieron McGovern, David Hackett and Michael Keigher from the TCD Buildings Office and Energy Elephant and; *Presentation and Technical Report Writing Skills* delivered by Bruce Misstear from the Department of Civil, Structural and Environmental Engineering. Many thanks to all those involved in the organisation of both these events.

Wednesday evening then featured a debate in the Science Gallery held around the provocative topic, *"Is green technology good for the environment?"* which attracted a good crowd of around 100 people. The energetic debate chaired by Dr Paul Butler of Enterprise Ireland, featured some brief initial thoughts from the panel of Prof. Pete Smith (University of Aberdeen), Bob Ursem (Delft University of Technology), Eamon Ryan (leader of the Green Party) and Rory O'Donnell (National Economic and Social Council) before the motion was opened to the floor. The focus of the debate was very much dominated by the issue of Climate Change (and not other contemporary issues of environmental concerns) which in itself is an interesting reflection.

The Colloquium was formally opened on Thursday morning by the Provost Dr Patrick Prendergast followed by keynote lectures by three speakers: Profs. Balz Kamber, Pete Smith and Bob Ursem. Balz Kamber, the Chair of Geology and Mineralogy in Trinity College Dublin, gave a fascinating talk on the use of trace elements and isotopes to identify aspects of changing climates in the past and previous land uses from work carried out in New Zealand and Australia. Pete Smith is the Professor of Soils & Global Change in the Institute of Biological and Environmental Sciences, University of Aberdeen as well as Science Director of Scotland's ClimateXChange, and a lead author on the recent IPCC report. His talk focussed on food security and climate mitigation, particularly in relation to the choices we make with respect to our diet and the resulting impact on land use and is Scientific Director of the Technology, specialising in the technology. His wide ranging, many different ideas and and develop new technologies, by mimicking and adapting their engineering disciplines.



greenhouse gas emissions. Finally, Bob Ursem Botanic Garden Delft University of application of plants in the development of thought-provoking presentation covered examples on how we can learn from nature both by using the plants themselves as well as processes for the materials science and

The parallel technical sessions then started which featured a total of 99 papers as oral presentations in addition to 45 poster presentations. The range, diversity and quality of the papers showed how interest in issues of environmental concern and incisive research in Ireland are flourishing. There were 7 prizes on offer this year, including the Best Oral

Presentation (€500) and Best Poster Presentation (€250) both in memory of Maximilian Von Sternburg who was a PhD student in the Herbarium of the Botany Department, School of Natural Sciences, TCD until he was killed in a road accident in his native Germany last year. The prizes were presented during lunch amongst the impressive marble columns in the spacious Victorian lobby of the Museum Building. The winner of the Best Oral Presentation was Fergus McAuliffe (University College Cork) for his presentation, *"The application of a commercial mycorrhizal inoculum in a willow wastewater treatment system"* whilst the winners of the Best Poster Presentation were Siobhan Atkinson and Charlotte Dennehy (University College Dublin) for their poster entitled, *"Rehabilitating aquatic macroinvertebrate and macrophyte communities after control of alien invasive plants using geotextile matting as a benthic barrier."*

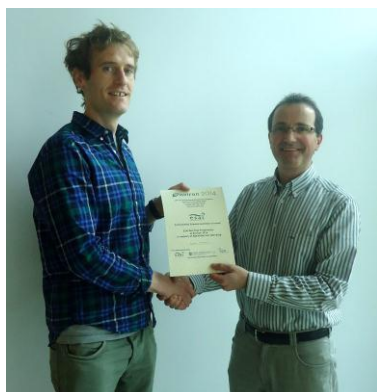
Running in parallel to the technical sessions on Thursday afternoon was the Environ Career Expo and CV workshop which proved to be very popular. Attendees met with representatives from NGOs, environmental consultancies, research institutes and semi-state bodies to discuss job opportunities; internships; post doctorate and PhD programmes; and also receive career advice. Many thanks to Cara Augustenborg and Aoife Delaney for organising this year's event again. Finally, the conference dinner held in the Alexander Hotel on Merrion Square, featured the North Strand Kontra Band who's Romanian / Bulgarian influenced, high energy infectious tunes got everyone up and dancing late into the night.

In general the Colloquium went very well and provided an opportunity for cross fertilisation of ideas between almost 300 delegates over the three days across their different fields of environmental related research. A big thank you to Ian Douglas (TCD) and Sinead Macken (ESAI) as well as the local TCD organising committee for all their efforts in organising the colloquium.

Laurence Gill, TCD ENVIRON 2014 Colloquium Convenor

Student Prize Winners 2014

There were over 140 presentations in total made at the Environ 2014 colloquium and the ESAI ran their annual student competition, judging all student talks and presentations, making the difficult decision to find the best posters and talks. The ESAI would like to thank the many judges that assisted with the competition. The winning student presentations chosen by the ESAI were as follows:



ESAI Best Overall Oral Presentation went to Fergus McAuliffe, UCC for his talk *"The application of a Commercial Mycorrhizal Inoculum in a Willow Wastewater Treatment System"* (pictured above).

ESAI Best Overall Poster Presentation was awarded to co-presenters; Siobhan Atkinson & Charlotte Dennehy, UCD, with their poster entitled *"Rehabilitating aquatic macroinvertebrate and macrophyte communities after control of alien invasive plants using geotextile matting as a benthic barrier"*.

Best Soils Presentation went to Conor McGee, UCD for his talk on *"The dose dependent effect of nano and micro-sized silver particles on microbial community structure & function in grasslands soil"*. Erin Tiedeken, TCD, received the prize for **Best Biodiversity Presentation** for her talk on *"The impacts of Rhododendron nectar toxins on Ireland's bee population"*.

New prizes this year included; **Best Water Related Presentation** which was presented to Anna Rymaszewicz, UCD, for her talk on her research *"Challenging of Monitoring of Suspended Sediment Fluxes: Turbidity Surrogate Method"* and **E3 Prize for Best Presentation spanning Engineering, Energy and Environment**. This was awarded to Richard Manton, NUI Galway

with his talk entitled “Carbon Footprint of Travel to the Great Western Greenway; Lessons for the sustainable design of walking and cycling networks”.

Finally, **Best Waste and Resource Management Presentation** was awarded to Tara Duggan, UCC based on her talk “Amendment of peat based and peat reduced growing media with vermicompost: Effects of plant growth, development and fruit yields of tomato”.

Our sponsorship for prizes was greatly appreciated with €2,000 to present to students this year. Many thanks to the continued support from our sponsors EPA, TCD, Family of Maximillian Von Sternburg, CIWEM, CIWM, BEC Consultants and SSSI.

Sinead Macken, ESAI Administrator

PHOTOGRAPHY COMPETITION 2014

The theme of the Ninth Annual ESAI Photography competition was “**Urban Green Infrastructure**” and was opened to all amateur photographers on the 31st July 2014.

The winning photograph was Dublin, entitled “Urban copy of her photograph voucher, kindly sponsored by Institute at University College

The two runners up in the Unison” by Leon James Murphy, Michael Gavin, Dublin who both a one year membership to the picture quality, composition, and appropriateness of caption.



taken by Ms Catherine Bushe from Waterfall”. She received a framed together with a €200 One4all the Environmental Research Cork.

competition, “Planting and Graffiti in Dublin and “The Luas Green Line” by received a €50 One4all voucher and ESAI. Photographs were judged on



The winning photographs will be displayed in the Photo Competition Gallery section of the ESAI website at <http://www.esaiweb.org/gallery/photo-competition> and will be on display at the ESAI annual conference, Environ 2015, 25th Irish Environmental Researchers Colloquium, 8th-10th April 2015. Many thanks also for the assistance of the photography competition judge, Nutan. He has a long established reputation in photographic journalism. Check out www.nutan.ie for examples of his work.

ESAI INCOME AND EXPENDITURE ACCOUNT**For the year ended 31 December 2014**

Opening balance as at January 1st 2014*		10442.51
	€	€
<u>Income</u>		
Membership	6945.70	
Environ 2014 - Delegate Fee	24820.01	
- Sponsorship	7900.00	
Environ 2014 Prizes	1956.50	
Environ 2015 Sponsorship	500.00	
Nat Capital Workshop - Delegate Fee	4000.00	
Total Income	46122.21	
<u>Expenditure</u>		
Environ 2014 (inc prizes)	33033.14	
Nat Capital Workshop	4231.90	
Invasive Species Catering	392.40	
Stationary (Branded ESAI Pens)	655.37	
Website	1701.86	
Administration	8137.00	
Travel	688.44	
Bank Charges (inc. Merchant banking)	1233.60	
Ezine	840.00	
Insurance	837.50	
Photography Competition	201.25	
Total Expenditure	51952.46	
Excess Expenditure over income		-5830.25
Closing Balance as at 31st December 2014		4612.26