

enviroNews

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The ESAI aims to promote the environmental sciences and the profession of environmental practice and to encourage its members to maintain the highest standards of ethics, personal honour, scientific integrity and professional conduct in their personal and professional activities. To this end, the ESAI is currently working on developing professional membership status for the association.

Below, John Clifford, President of the Institute of Geologists of Ireland (IGI), outlines how and why the IGI attained professional certification for its members. The article contains many interesting parallels with issues facing the ESAI and its members.

Geologists get professional certification

How the ESAI can learn from the geologists' experience

John Clifford, president of the Institute of Geologists of Ireland (website: www.igi.ie), describes the workings of the professional certification body for Irish geologists

The Institute of Geologists of Ireland (IGI), which was founded in 1999, is the self-regulatory body for professional certification of geologists in Ireland. The genesis of the IGI can be dated back to 1986 when the Irish Association for Economic Geology (IAEG) became affiliated to the European Federation of Geologists (EFG). This was done so that Irish qualifications might be recognised in other European jurisdictions.

In 1992, the IAEG set up a Professional Membership category to cater primarily for the needs of mineral exploration and mining geologists. Shortly thereafter, the International Association for Hydrogeologists (IAH) (Irish Branch) approached the IAEG to become affiliated so that their members might avail of the Professional Membership category. This led to a debate to include the wider geological community. From that debate a committee with representatives from all disciplines of the earth sciences was established in 1997.

Over the following 12 months, this committee drafted a 5-Year Plan which set out the objectives of, and financial projections for, a professional body. This plan was presented at a public meeting in November 1998, and debated by the membership of each of the earth science associations. Five national associations opted to support the concept. These were the IAEG, IAH, Irish Mining and Quarrying Society, Geophysical Association of Ireland and the Geotechnical Section of the Institution of Engineers of Ireland. An Interim Council was established with representatives from each of these bodies. The primary task of the Interim Council was to draft a constitution and code of ethics for the Institute and to process the transfer of all professional members from the IAEG. An Inaugural AGM was held in April 2000 to formally adopt the Articles and

Memorandum of Association and the Code of Ethics, thus bringing the Institute into being.

One of the main aims of the IGI is to promote the professional practice of geology: this is driving its development. The IGI has, after much research and discussion, devised a Continuing Professional Development (CPD) Scheme which is mandatory for its members. The scheme requires each member to custom-design a CPD plan, to implement that plan and maintain a development record, and to report annually. A Standing Committee of the IGI audits a percentage of the annual returns.

The ultimate sanction for failure to meet the CPD requirement is loss of membership.

As part of its drive to improve standards, the IGI has adopted, and is developing, codes and guidelines to assist the membership, statutory authorities and the general public. In June 2001, the Code for the Reporting of Mineral Exploration Results, Mineral Resources and Mineral Reserves was adopted. This code was developed in

conjunction with the Institution of Mining and Metallurgy, the European Federation of Geologists and The Geological Society of London. As such, it is part of an international initiative to produce consistent standards for reports prepared to inform investors or potential investors and their advisers, or to satisfy regulatory requirements. Guidelines on the preparation of geological reports for inclusion in Environmental Impact Studies are being drafted at the moment and should be released as a Consultative Document in late January 2002.

To achieve high quality standards in geological reporting (as well as in other specialised areas) the IGI considers that there should be a requirement that a 'Qualified Person' (QP) sign off each specialised report. In the geological area this person should be a



Eugene O'Kelly

Bridges of Ross, Loop Head, Co Clare (Photo courtesy of Eugene O'Kelly, NatureQuest Ecotodge, Tel (065) 905 6789)

professional member of the IGI, or an equivalent professional organisation, with a minimum of five years' experience relevant to the issues that are being reported. As a general guide, persons being called upon to act as QP should be clearly satisfied in their own minds that they could face their peers and demonstrate competence in the matter under consideration. If doubt exists, the person should either seek opinions from colleagues or should decline to act as a QP. A professional member of the IGI is answerable to the Ethics Committee if a complaint is made in respect of his or her professional work. The Exploration and Mining Division of the Department of the Marine and Natural Resources has announced that from 1st January 2002 all geological reports lodged in connection with state mining facilities must be signed by a QP.

The IGI recognises that in pursuing these objectives it is part of an international trend. To remain in the mainstream of these international developments the IGI has entered into reciprocal recognition agreements with professional associations in other jurisdictions and, in addition, has assumed the responsibility for affiliation with the EFG. As a result the PGeo and EurGeol titles are providing a technical passport which are being increasingly recognised as a quality mark internationally.

• EurGeol John A Clifford PGeo, FIMM, FAUSIMM, CEng (UK) is president of the Institute of Geologists of Ireland (IGI).
IGI website: www.igi.ie ■

Views, opinions welcomed

The ESAI Council welcomes views and comments from all members on any submissions made on behalf of ESAI. If you would like the council to include your views on any future submissions, keep an eye on the website and listserv for details of forthcoming submissions.

In Brief

Biodiversity report

Biodiversity in Ireland - A Review of Habitats and Species
By Lucey, J and Doris, Y (2001)
Published by Environmental Protection Agency, Wexford

In July 2001, the EPA published this report on Ireland's biological diversity. It provides a timely review of biodiversity in Ireland and will be welcomed by the many ESAI members, and others, who attended the ESAI biodiversity workshop in November 2000, at which an outstanding level of concern and interest in this issue was raised (see *EnviroNews* No 9, Winter 2000/2001).

The report provides a general overview of the state of Ireland's plants, animals and their habitats at the beginning of the millennium. It is an extended version of a chapter in *Ireland's Environment - A Millennium Report*, published by the EPA in 2000.

The report outlines the legislative framework in place to protect Ireland's natural heritage. It provides a brief overview of key habitats and species and a discussion of the main threats to biodiversity in this country.

• Copies from: EPA Publications Office, St Martin's House, Waterloo Road, Dublin 4 Tel: (01) 667 4474. Price: €10 (E7.87).

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Articles welcome

EnviroNews welcomes articles and photographs relevant to the environmental sciences in Ireland. *EnviroNews* also welcomes your letters, comments and suggestions. Please write to the editor.



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- Representing the interests of geologists in Ireland
- Continuing professional development amongst members (PGeo)
- Promoting the profession of geology
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The IGI is working for you

For further information please contact:
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c/o Department of Geology,
University College Dublin, Belfield, Dublin 4.
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Download an application from the IGI website

The value of professional membership

Dr Mary O'Connor, a self-employed botanical ecologist, outlines the need for a professional representative body for environmental scientists in Ireland



D Mac Gowan

There has been a major development in the career scope of the professional environmental scientist in Ireland over the past ten years. This expansion in career opportunity has come about largely as a result of the implementation of EU environmental legislation (eg the EIA Directive, Habitats Directive) and due to updated national environmental and planning legislation (eg Environmental Protection Agency (Licencing) Regulations (SI No 85 of 1994), the Planning and Development Act 2000, etc) which put a much greater emphasis on the protection of environmental quality than former legislation did.

The legal requirements for environmental assessment and monitoring, together with the unprecedented growth in infrastructural projects in recent years, has seen the profile of the professional environmental scientist shift broadly from that of a permanent employee of an academic institution or statutory body to that of a privately employed or self-employed consultant - although a considerable number of environmental scientists continue to be employed in permanent capacities.

Generally speaking, the self-employed or privately employed environmental scientist does not have ready access to large-scale resources or strong professional representation. It is difficult for an individual to keep up-to-date with technical advances or to absorb work-related changes in legislation. Also, regulation of the profession is difficult without the guidance of standards as outlined by a recognised professional representative body.

A considerable benefit of a professional body would be to offer a unified voice for the concerns of Irish environmental scientists. In addition, a recognised professional body such as an institute would have the right of representation to government on issues facing the profession.

Archaeologists' perspective

Irish archaeology has recently seen the establishment of a professional institute, the Institute of Archaeology of Ireland (IAI), which is to act as a self-regulatory body for Irish professional archaeologists.

The IAI evolved from the former IAPA (Irish Association of Professional Archaeologists), which was founded in 1973. In 2000, the membership of IAPA mandated the association to seek the status of institute and limited company, and this came about in September 2001, when the IAI was granted such status.

The chairman of the IAI, Maurice Hurley, has credited the rapid changes in professional archaeological practice in the past 10 to 15 years with the decision of the IAPA membership to sanction the change to institute status. He points out that the majority of IAI members are now contract archaeological professionals as compared to the former IAPA membership, the majority of whom were permanently employed archaeologists.

The career destination of the Irish professional archaeologist has by and large changed from that of being a permanently employed academic or state-employed archaeologist to one of being a privately

employed or self-employed professional. This parallels similar trends among environmental scientists.

Maurice Hurley further points out that, in setting up the IAI, Irish archaeologists believed that the stronger and more legally-regulated format of a professional institute would best represent both contract and permanently employed archaeologists. It would do so by providing the standards and resources of a strong cohesive body and the mechanisms for the dissemination of relevant information to the membership. The membership of the IAI is now approximately 350.

Conclusion

The concrete benefits of a professional representative body for Irish environmental scientists cannot be ignored. In my opinion, there are no disadvantages to the setting up of such a body, but only advantages. These advantages have been embraced by other sectors with professionals working under similar conditions, viz the recent foundation of bodies such as the Institute of Geologists of Ireland (IGI), founded in 1999, and the Institute of Archaeology of Ireland (IAI), founded in 2001.

Acknowledgements

For their comments, my thanks to Maurice Hurley MIAI, chairman of the Institute of Archaeology of Ireland, and to Clare MacCutcheon MIAI.

• Mary O'Connor (mjoconor@iol.ie)



Water Mint *Mentha aquatica*

Ken Farrar

New water pollution law

New water quality standards for pesticides, solvents and metals come into force



Ken Farrer

Discharge to water

The Water Quality (Dangerous Substances) Regulations (SI No 12 of 2001) came into force in the Republic of Ireland in July 2001. These regulations give effect to EU Council Directive 76/464/EC (on Dangerous Substances) and to certain provisions of EU Directive 2000/60/EC (the Water Framework Directive).

The regulations set standards for named pesticides, solvents and metals which will apply to all waters (other than groundwater), ie rivers, lakes and tidal waters. The local authorities (or sanitary authorities) and the EPA are required to take these standards into account when considering any new application for licence to discharge to water, or other activity under the EPA Act (1992).

Under the regulations, the EPA is required to review all licences granted since 1996 and determine the review on the basis of the specified standards applying within five years of commencement of the regulations, ie by July 2006. Likewise, where a review is being undertaken by a local authority, it must determine the review on the same basis. However, if the local authority or EPA is satisfied that at least the best available technique is being implemented to treat any discharge to water, then the five-year limit may be extended by a maximum of an additional five years.

It is the duty of the EPA and the local authorities to take all steps to ensure that:

- where the existing condition of a waterbody does not meet the specified standard for a substance, there will be no improvement in quality ('existing condition' means the condition most recently

determined by the EPA/local authority prior to implementation of the new regulations, or, where this is unknown, the condition as first determined after the implementation);

- compliance with the specified standards will be reached not later than 31 December 2010.

Each local authority is obliged to submit a report to the EPA by 31 July 2002 setting out measures to be implemented to comply with the regulations. By 31 July 2004, each local authority is obliged to submit a report to the EPA on the progress made in relation to implementation of these measures, and subsequently reports are to be submitted on a two-yearly basis. The EPA is obliged to publish reports on progress within nine months of these dates.

A specified standard shall not apply where the EPA is satisfied that the waterbody is so permanently affected by naturally-occurring activities or by past human activity that it would not be feasible, or would be disproportionately expensive, to remedy it.

- Copies of the regulations are available from the Government Publications Sales Office, Molesworth Street, Dublin 2, price €2.54.

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Sixth of a page: €63.49 (€50)
Brochure: €95.23 (€75) (weight permitting).
Contact: Dearbhala Ledwidge.

Change to the euro

From 1st January 2002, all ESAI membership subscriptions will be payable in euros. The rates in euros are: €25 (waged); €12.50 (unwaged). The treasurer asks members to ensure that their standing orders for membership are for the correct amount. Cheques should be made payable in euros.

Conference on Intertidal Systems

The Royal Irish Academy (RIA) is hosting a conference on Intertidal Systems in TCD, Dublin, on 21-22 March 2002.

The conference is being organised by the RIA National Committee for Biology. Speakers will include: Dr Dave McGrath (rocky shores), Dr Mark Costello (habitats and classification), Prof David Jeffrey (partitioning of primary productivity), Dr Gavin Burnell (intertidal aquaculture), Carlo Heip (coastal systems), Dr Oscar Merne (coastal birds and the EU Birds Directive), Dr Jim Wilson (sustainability and long-term indicators) and many more, both from Ireland and abroad.

- Further information from: RIA, Academy House, 19 Dawson Street, Dublin 2 phone: (01) 6762570, fax: (01) 6762346, email: r.hgarty@ria.ie

Research register

One of the world's largest registers of research projects on the environment is available at:
http://www.mcbsp.com/research_register/s/emh/sponsors.asp

Along with the senior researchers who have taken advantage of the register so far, Masters and Doctoral students who are undertaking environmentally-related research are invited to submit details of their work, free of charge, to this website.

- For further information contact the List for the SOCRATES Thematic Network of Environmental Sciences in Europe, email: essence@nic.surfnet.nl, or Prof Walter Leal Filho, leal@tu-harburg.de

EPA publications

Information on recent EPA reports is available from:
www.epa.ie/Press%20Releases/default.htm. The site includes their recent excellent report on Irish biodiversity. Regrettably, the reports are not downloadable.

A question of proof

Jim Wilson discusses the difficulties of conveying different levels of scientific proof

The recent bushfires around Sydney in New South Wales attracted much media attention, and as usual climate change - and El Nino - was brought up in the debate.

Although climate change is not grabbing the same headlines it was a couple of years ago, people seem resigned to the fact that we now experience great extremes in weather, often the greatest since records began.

However, we are still left with the problem of what actually constitutes 'proof'. Working to a probability level of 95%, as most scientists do, is fine as far as it goes but could be unacceptably low for, say, a medical procedure, and may even be unacceptably high for climate change.

There has been a number of articles in both the scientific and popular press recently about studies claiming to have found 'significant effects,' good and bad, but which, because of the topic they address, have produced an exaggerated public response. These articles criticised the studies for using too small a sample size, or for their lack of controls, or for other scientific reasons.

There is no doubt that there are pressures to publish and to establish and maintain a high profile for funding reasons, yet there is little in the way of counterbalance. Even the journals are not immune from such pressures.

So what should we do? Should we, as responsible scientists and professionals, wait until we are absolutely sure? Or should we, particularly if the common good is directly concerned, alert the public as soon as we have suspicions?

Many scientists are shy of courting publicity, and there is little doubt that the media do like definite statements which are not hedged with the customary cautions and qualifications.

The public, and this includes the paying public who hire consultants, also likes definite statements and finds it hard to understand how the same information can

seemingly support diametrically opposing views. This can, particularly in adversarial situations like court cases or planning cases, result in an either/or scenario where the 'best' truth is the winner when perhaps an agreed compromise would have satisfied both parties and been much closer to the actual scientific verity.

So, can the system cope with science? Are the public - and this includes those who sit in judgement - aware of the different levels of certainty? It has been said that the courts are quite happy to accept eyewitness evidence but will cavil at scientific evidence because it is not 100% certain.

This is certainly an issue for the ESAI. While we cannot make sure everyone arrives at the same conclusions from the same data, and certainly cannot achieve 100% certainty, we can at least try to educate. This is a two-way process, with communication on the one side and comprehension on the other.

- Dr Jim Wilson is chairman of the ESAI



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Dearbhala Ledwidge

enviroNews



MAGAZINE OF THE ENVIRONMENTAL SCIENCES ASSOCIATION OF IRELAND - AN ASSOCIATION FOR PEOPLE WORKING IN THE ENVIRONMENTAL AREA

ESAI web address: esaiweb.org

Research colloquium in UCC this January

The 12th Irish Environmental Researchers Colloquium - *Environ 2002* - will take place in University College Cork (NUI, Cork) from Friday to Sunday, 25-27 January 2002. It will be officially opened by the Minister for the Environment, Noel Dempsey TD, in the Boole Lecture Theatre complex at 7.00pm on the Friday.



The Quadrangle, University College Cork

This annual conference is one of the main activities of the ESAI and attracts around 400 delegates every year. It is now the largest national scientific meeting in Ireland. The colloquium is always held at the beginning of the year. Its popularity stems from the open format of the programme, which encourages a wide range of contributions from all areas of environmental activity.

The conference will be held in the Boole Lecture Theatre complex, which is located on the main campus between the Boole Library and the Crawford Observatory.

This year's keynote address, by Prof Rick Battarbee, Director of the Environmental Change Research Centre, University College London, is entitled *Lakes, Lake Sediments and Climate Variability*. It will be at 8.00pm, Friday, following the Minister's speech, and will be followed by a reception in the Aula Maxima (9.00-11.00pm).

Technical sessions will be held all day on Saturday, and the Conference Dinner will be in

the Gresham Metropole Hotel, Cork, at 8.00pm. Further technical sessions will be held on Sunday morning, with proceedings ending at lunchtime.

The conference will feature a range of oral and poster presentations on the theme of environmental assessment, though presentations on other environmental themes including water, air, waste and waste management, agriculture and forestry, marine and coastal research, and environmental monitoring and analysis will be included.

Registration may take place up to and including the first day of the conference.

- For further details on the conference contact environ2002@ucc.ie or phone (021) 4903430 or (021) 4903232

- Full details are on the ESAI website at www.esaiweb.org, including information on hotel/hostel accommodation in the city, registering for the conference, costs, etc

ESAI AGM

The ESAI AGM will be held at the Environmental Researchers' Colloquium on Sunday, 27th January, 2002, at NUI Cork.

The AGM will elect a new Council and will include an open discussion, providing an opportunity for ESAI members to influence the work of the association. All members please attend.

Call for new ESAI Council Members

Members who wish to play an active role in the ESAI are encouraged to stand for election to the Council. Anyone who has been a member for at least one year and who is nominated by two members is eligible to apply.

If you would like to become a Council member, please speak to any ESAI Council member before the start of the AGM. Any Council member will be happy to answer any queries or questions which you might have regarding nomination, etc.

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