

The Institute of Ecology and Environmental Management



The main talking point within IEEM is how to evaluate the impact of the current economic recession. It is really too early to assess and although observations abound, no coherent pattern is obvious. On one hand the private sector, especially those

companies with large exposure to the housing sector, is suffering – site surveys are in reduced demand. On the other, large scale infrastructure development to boost the economy should certainly create some demand for ecological work. Some of the larger companies employing ecologists are reporting redundancies but not on a grand scale. Some report that recruitment is now easier and that people are prepared to take reduced salaries. The Prime Minister has stated that he sees the creation of green jobs as being part of the economic recovery and there are likely to be fewer restrictions of the development of wind farms. Does this mean less need for impact analyses and ecological surveys?

Membership of IEEM is so far holding up very well. Some of the other professional Institutes with which IEEM has contact put the case that at a time of recession, membership of professional bodies increases because membership is seen as an aid to employability. We shall have to see. Our very successful training workshops programme seems to be less well supported this year as organizations cut their training budgets.

But life goes on and there are still important ecological issues to address. The very recent IEEM conference in Leeds on Wildlife Crime was a successful event, if not the best supported. Whether this specialized theme would have been expected to attract large numbers is doubtful in any case but it is still a very significant issue. The excellent speakers shed considerable light on this wide-ranging subject. The day started with an overarching legal view, and led on to detail the range of crimes and how these are dealt with by the respective authorities. Examples of crimes in the marine, freshwater and terrestrial sectors were all covered. Appreciating the viewpoints of the Crown Prosecution Service and the role of the National Wildlife Crime Unit was very useful. It was also very revealing to hear examples of wildlife crime from a local police officer's experience. Powerpoint abstracts of the presentations will shortly be available on the IEEM website.

IEEM has just completed the final stages of the establishment of the full range of Geographic Sections – National in Scotland, Ireland and Wales and regional within England (following the government regional boundaries). New Sections in the East of

England and the North West of England mean that there are now 11 separate branches of IEEM, all with their more locally based programmes. We see much of the activity of IEEM being located at that level – it allows for good networking and also there is less commitment on time and travel.

Our next main event will be the 2009 Autumn Conference which will be on Protected Areas and will be held at Centre Parcs at Thetford on November 10 – 12. This will cover the full range of issues from the wider landscape – the National Parks and the Areas of Outstanding Natural Beauty – to nature conservation within the SSSI's. The meeting will also consider such issues as whether in the context of climate change protected areas will necessarily be in the right places, and how protected areas link into the wider countryside and countryside networks. On line booking will be available on the IEEM website.

I am very pleased to report that the IEEM Council, at its meeting on 2 April approved five new Fellows. These were Dr William Latimer, Regional Director, Environment, for the consulting engineering firm Faber Maunsell, Dr Peter Cosgrove, Principal Ecologist with the Envirocentre, UK, Mr Peter Jepson, Specialist Ecological Advisor with Lancashire County Council, Mr Paul Doyle of Alba Ecology Ltd and Dr Roland Randall of Cambridge University. This brings the total number of Fellows up to 35, a number which has steadily increased over the years. This honour should not be confused with the IEEM Medal, a recent annual event and so far awarded to Dr David Attenborough, the late Professor Tony Bradshaw and Professor Charles Gimingham.

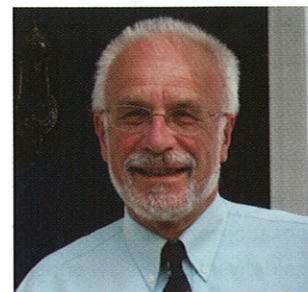
For all information about the activities of IEEM please refer to the contacts below.

43 Southgate Street, Winchester, Hampshire, SO23 9EH

Tel: 01962 868626 Fax: 01962 868625

Email: Enquiries@ieem.net

Website: <http://www.ieem.net>



Jim Thompson
Executive Director, IEEM

Essays

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Is 'monitoring' a dirty word?

John A. Wiens



mon-i-tor; mon-i-tor-ing *v. trans.* to watch, keep track of, or check¹

When I was a university Professor, I rarely thought much about 'monitoring.' The notion of keeping track of something was scarcely exciting, and certainly not something worthy of a grant proposal. The duration of my studies was largely determined by when the funding ran out, when some new, terribly interesting, questions superseded the previous ones, or (rarely) when the original question was answered. But after I left academia to work in the trenches of conservation, I soon became aware that 'monitoring' suffered a stigma beyond merely being unexciting. It is actually viewed with disdain, not just by many academic scientists (who see it as generating answers in search of a question), but also by some of those responsible for providing the funding to manage and conserve natural resources. 'A waste of time,' I have heard more than once. The perception of monitoring often is of birdwatchers or butterfly collectors going out on a fine spring day, making observations that, if recorded, end up in worn notebooks on dusty shelves. Monitoring, to paraphrase the American comedian Rodney Dangerfield, 'gets no respect.'

Yet it is monitoring that tells us about changes in the environment and alerts us to their potential causes. It is from monitoring that we learned about the relationships between eggshell thinning, declines in bird populations, and DDT. It is how we learned that atmospheric levels of CO₂ at Mauna Loa have been steadily increasing since the late 1950s, alerting us to the linkages to climate change. This is how we are learning that songbirds are arriving and breeding earlier in the spring in Britain, or that the distributions of some butterfly species are shifting northward in Europe.

My organization, PRBO Conservation Science, has built its reputation largely on the careful collection and analysis of long-term data on bird populations – keeping track of things. Yet we are increasingly challenged by funding sources to justify why they should support monitoring. 'Why gather more data?

Surely a few years is enough!' Our continuous monitoring of annual reproductive success of Cassin's auklets on the Farallon Islands of California over nearly 40 years, however, has revealed fluctuations that can be associated with El Niño episodes and, more recently, complete reproductive failures that may be linked to oceanographic changes and disruptions in marine food webs. There are intriguing indications that salmon recruitment may be affected by the same changes, raising the possibility that monitoring of auklet reproduction might be used to predict salmon stocks in subsequent years². These relationships would not have emerged had the monitoring stopped after 5 or 10, or even 20, years.

So why does the contradiction between the perception of monitoring and its clear value in revealing changes and relationships persist? Monitoring suffers from the sameness that comes with keeping track of something. It strikes some as dull, especially those who do not go into the field to monitor things (and even some of those who do). It is often regarded as not 'real science,' something that is perhaps best left to consultants, technicians, or 'citizen scientists.' There is often no overarching question, no hypothesis that relates to the issues at the forefront of scientific discussions. Consequently, monitoring is not viewed as research. It is difficult to publish the results of monitoring, so it does not contribute to the reward system of scientific cultures. Monitoring is not the stuff of which scientific careers are made.

Monitoring is also expensive, and its value may not be apparent in a culture that emphasizes short-term returns on investments. Monitoring funds in agencies are especially vulnerable to being raided by managers whenever more immediate needs arise, as they always will. Documenting trends or responses to environmental changes may take years or decades, especially if there are delayed or indirect effects. Enthusiasm for gathering the observations wanes, the patience of funders wears thin, and attention shifts elsewhere.

It would be wrong, however, to conclude that the attitudes about monitoring held by some scientists and managers are pervasive. In his compendium of everything one would want to know about monitoring, Ian Spellerberg³ lists dozens of national and multinational programs and organizations that explicitly focus on monitoring the environment. Numerous governmental and non-governmental entities publish reports on the 'state of the environment;' the Intergovernmental Panel on Climate Change (IPCC) even won a Nobel Prize for their work. Programs such as the Long Term Ecological Research (LTER), the fledgling National Ecological Observatory

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Network (NEON), or the Breeding Bird Survey (BBS) are dedicated to gathering monitoring data over networks of sites across the United States over many years.

We need to recognize, however, that the value of monitoring extends well beyond the occasional insights that emerge. The environment is changing rapidly, in unanticipated ways. Surprises occur often enough to no longer be so surprising. Management practices of the past may not work in the future. Managing or conserving resources in a changing world requires managing adaptively, and that cannot be done without the information to tell us whether our actions are working as intended, whether the investments are yielding returns.

Our commitment to ecological monitoring needs to be strengthened rather than diminished. Monitoring is how we keep track of how Nature is doing, and the indications right now are that Nature is not doing so well. There is much at stake, and monitoring is too important to be relegated to the backwaters of science. It demands the same attention to design, data quality, analytical rigor, and objective interpretation that are the fabric of mainstream science. And it should merit the same respect.

REFERENCES

- 1 Merriam-Webster Online Dictionary
- 2 Roth, J.E. et al. 2007. *Can. J. Fish. Aquat. Sci.* 64: 1080-1090.
- 3 Spellerberg, I.F. 2005. *Monitoring Ecological Change*, 2nd ed. Cambridge: Cambridge University Press.

John Wiens is Chief Conservation Science Officer at PRBO Conservation Science, a non-governmental organization based in Petaluma, California.
Email: jwiens@prbo.org

A public servant speaks – pick your favourite sci-fi scenario....

Keith Kirby



'It is an ancient mariner and he stoppeth one of three'. I could go on about the plight of albatrosses and conservation calls to ban crossbows, but there is some good news for a change. The campaigns to reduce losses of these glorious birds to long-line fishing are having an effect – well done those guys. However what about our own albatrosses, our unsustainable consumption patterns – how are we going to deal with them?

I recently attended some future scenarios workshops. We looked at the drivers of change – demographics, increased competition for resources, climate change and so forth – but also social issues such as possible changes in governance or people's values. Amongst the important questions raised were whether there was going to be a technological fix by 2060 in energy or food production terms. Will we still be living with a Western European paradigm of individual values or have moved towards some sort of more collective social governance? Will people have embraced one planet living or be striving for ever more personal consumption (or even just retaining their current levels of consumption)?

While we might identify indicators for each of the above questions (and more), and start to look for trends in those indicators, ecological studies emphasise that trends are rarely linear over long time periods. Events derail them – as in human affairs. So a big uncertainty was what it would take to get people to move towards the more (apparently) sustainable scenarios and the fear that it will take major disasters for such substantial changes to happen.

For example how big an area of flooding would it take for us to really be serious about not just stopping development on floodplains, but perhaps even start to roll-back past developments? For all the talk of 'food security', are we looking at the sustainability of production and distribution in energy and transport terms – how long would even most organic farms survive without tractors and oil? There has long been concern that large-scale plantations of introduced