Report from the "Getting the Most from Data" State of the Environment Reporting Stakeholder Workshop

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78 delegates attended the "Getting the Most from Data" Stakeholder Workshop on 15th November 2012 to address three main objectives:

- **Explore the uses of environmental data, interfaces and opportunities**

- **Identify gaps and issues with existing environmental indicators**

- **Help develop the provision of accurate, accessible information in a useable form**

Delegates were assigned to one of 12 discussion groups, with a range of stakeholder organisations and sectors represented within each group. Plenary presentations and case studies were given to introduce the workshop's purpose and aims, followed by two discussion sessions. A brief "round up" of key points raised by each group was made following each discussion session. The discussion sessions provided the mechanism by which stakeholder's views could be sought and recorded.

The plenary speakers introduced the key role and requirements of State of the Environment (SOE) reporting, both in a regional NI-wide context and within the broader European context. Key challenges in terms of expectations and requirements of stakeholders – the data users – and the existing reporting mechanisms, use of Official Statistics, presentation formats and environmental indicator datasets were outlined.

Case studies were presented outlining the role of environmental indicators in: (1) policy development; (2) research; (3) business planning; and (4) raising awareness within Northern Ireland. In each case region-wide statistics play an important role in both contextualisation of more specific, detailed or local statistics, and in providing a "hook to hang off" to give an overarching indicator of "direction travelled" with respect to progress against key environmental policy targets.

The breakout discussion sessions focussed on two main themes: (1) examining existing and predicted future use of SOE reports and environmental indicators, and identifying the gaps in indicator/reporting

coverage; (2) the existing accessibility of SOE and environmental indicator reports, and future ideas to improve accessibility and awareness of these datasets.

Key messages from stakeholder discussions

Existing use of NI-wide environmental indicators currently annually reported:

- The participants consisted of a majority of data providers, rather than users: this indicates an "outreach" issue and the fact that the public are not currently using the datasets and reports as extensively as would be desired.

- SOE reports and the NI Annual Environmental Statistics Reports are used mostly to "set the scene" in more specific projects, and provide a vital context for more detailed analyses. In terms of policy development they give an indication of overall performance at a strategic level but additional detail is required in specific areas. SOE reports could play an important role in education and outreach to raise awareness of NI-wide environmental issues and progress.

Indicator gaps:

- Notable indicator gaps were discussed: to enhance use and applicability of SOE/annual reporting other environmental statistics are vital to allow more holistic assessments. Indicators from agriculture (land use, productivity), fisheries and marine, water abstraction and use were noted across groups.

- Biodiversity indicators were noted as being particularly sparse and currently do not allow progress against policy targets to be assessed. Suggestions of species-based indicators where data are held by external (non-NIEA) organisations were made.

Accessibility of environmental indicator reporting: moving forward

- The PDF format of reports is deemed accessible; however the importance of being able to access the constituent data was highlighted, and is currently not readily available.

- The potential for a substantial increase in uptake/use and public awareness of SOE and environmental indicators has been noted by all stakeholders, with the suggestion to move to an environmental indicator web portal/"hub".

- The importance of cross-departmental input to an environmental indicator web portal was emphasised in order to provide a more comprehensive and holistic portfolio of indicators (and interpretation). In particular, linking resource production, consumption, sustainable behaviours and environmental indicators is vital to monitor movement towards a resource efficient, green economy while enhancing ecosystem services.

- The possibility of hosting and managing a web portal/information hub outside of DOE was raised, in order to promote cross-departmental collaboration and access. A non-departmental public body or NGO may be an option.

- A multi-layered approach was emphasised – a dashboard style giving a summary of the status of key indicators which can then link to additional detail and supplementary indicators, through which the actual data can be downloaded in a common data format was strongly advocated. Additional links could be made to non-Official Statistics available from non-governmental sources and "citizen science" was also emphasised.

- Spatial representation of datasets in a web portal would be highly valued, with strong links to INSPIRE/Spatial NI and web-based GIS.

- The ability to download charts and maps was deemed important, through user "toolkits" available on the web portal, as was plotting of multiple indicators on one chart/map to permit examination of interactions.

- The importance of the interpretation commentary was re-iterated by all groups. Setting indicators in their policy context, such as flagging progress towards targets (and use of symbols such as the RAG system), was emphasised, in addition to the importance of a holistic analysis of groups of indicators, for example to examine status of ecosystem services and progress towards a Green Economy. Setting the commentary in its UK- and EU-wide context was also suggested.

- Currently data providers submit datasets to a range of UK-wide and Europe-wide initiatives which are often incorporated in web portals, however as yet there is no "one stop shop" type website for all environmental indicators in NI. If common data formats and programming allow could it be possible to submit data to an NI-portal that then feeds in to the UK-wide and EU-wide programmes? ("Publish once, use often" rather than "Publish often, use once").

- Frequency of indicator updates was addressed, with the suggestion that a web portal would allow live updates (though the frequency of updates varies substantially between indicators, which would need to be flagged on the website).

- A suggestion was made by many groups to learn from other environmental indicator web portals, such as the Scottish Life+ project, and the ROI's Environmental Protection Agency's website. Could such technology be exchanged and reduce some of the set-up costs?

- An ongoing financial commitment to a web portal is vital to ensure it is well maintained, updated and as publicly accessible as possible.

- A well-designed web portal could save time/resources currently spent by government departments in dealing with Freedom of Information requests.

Workshop Feedback

Feedback was sought at the end of the workshop regarding the event organisation and outcomes via a feedback form that was submitted to the event organisers. 44 participants completed the form, of which 100% rated the organisation of the workshop as "Good" or "Very good" (68% as "Very good"). 100% rated the choice of venue as "Good" or "Very good" (84% as "Very good"). Positive comments were made about the mix of participants and opportunities for networking, and the structure of the day. 100% felt that format of the workshop in terms of breaks, plenary sessions and discussion sessions were "Good" or "Very good", and 95% of participants felt there was adequate opportunity to contribute their views during the discussion sessions. 82% felt that the workshop met its objectives, with the remainder neither agreeing nor disagreeing.

General comments included:

- "Very full program which set the scene in both a NI context nationally and in Europe".
- "Careful pre-selection of mixtures of people at the tables made the discussions more interesting and productive".
- "Well organised, tables and stakeholders were organised well. Well thought out with facilitators and note-takers".

- ▪ "Useful info on the range of uses of the Environmental data".
- ▪ "Very stimulating day – good wide ranging discussion on issues. Difficulty will be in distilling this down".

There was some criticism (two participants) of the amount of information conveyed in the plenary presentations (potentially too much), and some difficulties with the noise level during the discussion sessions (two participants), however the vast majority of comments were very positive.
 It was generally agreed that if ideas from this workshop are to progress additional stakeholder "task groups" would be beneficial to address specific work areas, such an indicator reviews within and across sectors, requirements of a web portal etc.

Appendix: Group discussion notes (by key question and group)

Workshop Session One: *Exploiting data potential: What can indicators do for you?*

1. **Current use of indicators:**
   a. **Which environmental statistics or other parts of the State of the Environment Report/Annual Environmental Statistics Report do you use?**

Goldeneye
Natural Heritage NIEA – producing statistics for Natural Heritage section.
Water Management Regulatory Group - produced statistics (Industrial and Water Utility Discharge) and used Waterbody Quality Data, NH designated sites, Bathing Water and other directive indicators.
Use of Built Heritage indicators – Building at Risk register.
EEA – useful for both EU level indicators and local/regional indicators.

Pochard
SOE seen as a reference document - an overview that provides links to where you can find more detail.

Azure dragonfly
The most of the delegates at this table where contributors to the SOE and NIES Reports rather than users. As a result would tend to use the raw data directly or if necessary contact other raw data holders for access as opposed to referencing SOE and NIESR. However it had been used by:
- DOE Environmental Policy Division to inform the NI Biodiversity Strategy development and Report due to be published by the end of the year;
- NI Water to inform their business planning processes;
- DARD for educational and high level presentation purposes;
- NIEA Natural Heritage to set priorities and determine what management measures needed;
- NIEA Strategy Group to inform NIEA Strategic Priorities 2012-2022, National Ecosystem Assessment, and EU SOE2010.

The SOE and NIESR were seen as 'public facing documents' of more interest and use to NGOs, academia and the general public. The main reason being that historical data dates so quickly and public bodies generally had access to the most recent data.

Teal
Generally not read or used. Information is provided by delegates at this workshop rather than used by them.
Will be used in the future to bid for funding.
Used by policy division to show if policy is getting results.

Stoat
Demographics – social, opinions of the public. Where there is a social nature of users, but also teemed up with economic, e.g. visitor numbers
Specifics of Climate, Water, Biodiversity, Soil (more to lesser)
        BUT used as trends, so are local/regional trends also positive or negative?
Biodiversity – when in environmental sector and also water quality, especially nature designations, Priority habitats and species

Useful to see where gaps exist for lobbying

Tufted duck
- Most participants were contributors rather than users of SOE.
- Housing Executive rep has used SOE report for training and will use again.
- Council Biodiversity Action Plan rep. uses SOE report for baseline and context setting but has not used the annual stats reports.
- CEDaR representative has not used reports to date but plans to use to assist in interpretation of data received from a wide range of sources.
- All users agreed that they intend making more use of both reports in the future. Some reps noted lack of awareness of annual stats report but recognised value. Wider awareness necessary.

Whooper swan
Climate change risk assessments
Data providers:
- water management
- coastal monitoring
Some indicators in the annual report are not particularly relevant

Cormorant
Water quality information – data delivered from research to support compliance at EU level – complimentary data.
Contribute to collecting the data.
NGOs and charities – take home messages.
Rarely used in day to day work.

Hen harriers
Mainly data providers.
Used water quality and designated sites. Used biodiversity and air quality.
Used for training presentation, introductions, commentaries. Business decision making/economic spending.
It gives a regional/bigger picture, very strategic.
It can give you a "hook to hang on" – good for contextual use.
Used for identifying an area or starting point.

Coot
Used for SEA, strategic planning and development of ecological/carbon footprints (all indicators) Also for marine plan and biodiversity strategy (specific groups plus others in a wider context. All familiar with SOE/indicator reports.
Importance of advice from statisticians, consistency in methods, metadata important.
Better links and awareness of statistical services available to departments is important.

Swift
Generally only use indicators specific to job e.g. Biodiversity man generally only looks at that type of data.

Google can generally be quicker.

Lough Neagh Eel
- Waste Statistics
- Demographics
- Public Opinion
- Air & Climate indicators
- Marine

b. What are the outcomes or benefits from using these statistics?

Goldeneye responses
Able to assess performance of individual groups.
Stakeholders are able to direct staff into policy areas.
Essential information from one part of NIEA to draw up future regulatory documents of sites/businesses.

Pochard
One outcome is that it identifies gaps. The benefits include that it provides a holistic overview and provides national monitoring networks.
Monitoring & recording data help us assess and focus on risks and targets e.g. for managing built heritage. Bird data can be used to build cross cutting reports e.g. on land use policy/CAP reform.
Quantitative data is used for modelling/consent compliance.

Azure dragonfly
It was thought that the SOE report in particular would be of more use in the future to measure progress.
The 2008 report was a baseline report which when updated could be used to compare like with like.
Annual statistics updates have already proved useful; to measure progress against targets and objectives, to inform the Public, and as collated presentational pieces to specific audiences.

Teal
Funding requires robust black and white facts and figures – this can provide it.

Stoat
Empowerment of people, raising awareness and then personal application – Action in their own lives.
Feeds into management systems and decision making – evidence based.
Being able to see what interests people (at a data provision level) – interest in new data and easily accessible information. "Instant" data/access, e.g. via Smartphones
Expectation of high quality.

Tufted duck
- Stats provide a valuable reference point for high confidence environmental data.
- Some discussion on ownership of Government stats. Normally available to all but some access restrictions are necessary.
- Environmental Policy rep noted that they are aiming to be more outward looking and to engage more with data users.
- Council rep uses general Government stats to justify new initiatives and decisions. SOE report helps provide clarity and context to some raw stats.

- CEDaR representative plans to use next year to guide assessment of records / trends / training and focus. SOE and stats provide useful framework for data analysis.
- Housing Executive rep will use to inform baselines and for target / objective setting.
- SOE has been valuable for training, enhancing environmental awareness and making key data more accessible.

Whooper swan
Can identify which factors are priorities for NI Climate Change.
Number of data providers/contributors in this group.
Some projects may use this information to create baselines.
The WMU facts & figures booklet uses statistics from the annual report.
Raise awareness in general public about water management issues.
Can be used to secure future funding in Water Management.

Cormorant
May not be used everyday – but still valuable resource, e.g. volcanic ash cloud – real time air quality data monitoring
Although we may not use it should continue collecting the data – maybe used in unexpected ways.

Hen harriers
Awareness raising of issues
Guidance documents
Get the bigger picture
Shows trends
Gives credibility

Coot
Use to hold govt to account on progress.
Identifies where more monitoring is required, e.g. for priority habitats and species

Swift
Vital for underpinning policy.
Vital for directing Government spend towards conservation.
Quick and easy for basic presentations.
Good link document.

Lough Neagh Eel
As an educational resource for children in schools
As a source to enhance geographical data analysis within the themes

2. **What future requirements may you have of environmental indicators/SOE reports?**

Goldeneye responses
The report is very short of biodiversity indicators.
There should be two sets of indicators:
- One to show compliance with regulations
- One to show indicators for the future that can be use to draw up new policy.

Pochard

Developing thematic reports. On the European level there is increasing emphasis on environmental issues related to health and especially noise. Improved data on archaeological condition.

Azure dragonfly

Future reports could help address emerging legislation, improve data quality/conclusions and identify gaps in NI knowledge and expertise. There is also likely to be further use as an educational resource and source of information for presentations. Indicators could also be used to cross reference cause and effect e.g. air quality with bird populations.

Indicator data should be as current as possible and in a downloadable format such as currently available on Data.gov.uk . Indicators with GIS elements should be presented in a format that is know and easy to use by the public. For example, everyone is used to Goggle Maps but if it isn't as good it won't be used.

Teal

Does not go into the detail required for operational decisions
Bathing water system used in the rest of the UK was suggested as a good template
More user friendly – use as an info tool

Stoat

Agri-environment outcomes – quality of outputs rather than whether money is simply spent.
In general what are the outputs? What is reaction? What is consequence?
Cross Border – homogeneity of data, can compare across countries
Conditions reported on – Biodiversity action plans – what is happening?
Economic implications – large scale message? Better links in our understanding.

Tufted duck

- SOE report could be used more for education in schools. Annual stats report possibly too detailed for this use?
- Report awareness could be incorporated into the annual young persons survey carried out by Stats Branch.
- Data access increasingly important. A GIS element would be valuable.
- More specific themes and more breakdown of data contained in annual stats would help CEDaR data analysis.
- Council and Housing Executive reps both agreed that they should make wider use of both reports but awareness of annual stats report is low. Need to re-visit report circulation and make policy makers in particular more widely aware.
- Both reports remain valuable to training and awareness raising.

Whooper swan

Climate change will need to tweak some of the indicators. Want broader indicators than just temperatures, e.g. indirect indicators. Could propose additional indicators, e.g. flood risk, biodiversity, flooding, agriculture/forestry

Lake classification changing at the moment. In line with Europe. More detail – sub-regional.
Marine: expand indicator list, but meeting Official Statistics requirements. Can we link to evidence that might not necessarily be National Statistics?

Links to other departments and stats reports. Wider context. Layered approach.

Cormorant
More information on carbon emissions/energy production/industry/transport – more monitoring and measurement.
How do we measure changes in the way we are living? Indicators of more sustainable behaviour?
Marketing of the data and integration with other data sources e.g. BBC website.
Cross reference with employment/postcodes etc. e.g. measures for implementation of CNEB and FPNs.

Hen harriers
Used at a government/departmental levels for strategy etc.
Could use if the data underneath was available.
Value in Ecosystem Services approach, overall view, provides interaction. Trends in other work areas could be useful.
Current format would need improvement – more access to detail.
Link and trigger to information from source (the provider).
A spatial representation/GIS would be useful, with links to datasets/sources and sub-regional data.

Coot
Importance of data available in spatial context, GIS, regional and sub regional.
More information on trends, measure against baseline, how well we are doing
Need to be flexible in changing structures, e.g. RPA and planning stats will need to better reflect sub regional data.
Importance of continuity noted.

Swift
Offshore renewables.
Marine info generally.
CAP Reform – farmland monitoring.
Lots of bird information gaps.
Comparisons with ROI.
Information too narrow and bland to inform decisions.

Lough Neagh Eel
- Educational aids & guidance as to how these data can be used by schools
- Excel version of tables & charts available online
- Links to more detailed data
- More maps/geographical representation of data

3. With reference to the environmental indicators/SOE, what are the gaps?

Goldeneye responses
Need to have the report as an overview but it would be good to have embedded links to more detailed information e.g. Built Environment listed buildings should have a link to a breakdown of the various grades of listed building. Buildings at risk should have a link to more details on BHARNI of the state of buildings. Early warning system of listed buildings, or buildings at risk that will be up for sale.

EEA suggestion – Target overview table – score card comment. Comparison to other areas of UK and/or ROI. "Look at indicators through different lenses" e.g. Use Biodiversity indicators to show ecosystem services.

Pochard
SOE is never, nor is it fully intended to be, fully comprehensive.
Gaps exist in areas such as bird species where there is a severe shortage of surveyors with appropriate skills. Need for more volunteers. Farmland/wetland are particular areas of interest at present.
Condition of monuments and buildings and use of historic sites in state care.
For rainfall need to guard against potential complacency in the continuity of data supply.
No other species than birds.
No raw water quality data – but not necessary for the SOE overview
Nothing on planning conditions. Noise should be included (in European data recording but not in NI SOE)

Azure dragonfly
• Biodiversity – Pollenators, invasive species, Sea birds
• Statutory Nature reserves
• Fisheries – e.g. Commercial
• Land Use – Soil Fertility, satellite data on long term land use, field pattern data to indicator loss of stone wall and hedgerow habitats
• Early Air Quality and Climate Change indicators – e.g. Litchens and northwards movements of Haddock

Teal
Public perception and awareness
Noise
More specific indicators on renewable energy, and electricity usage
Need to increase awareness that the report exists
Needs to be web-based and interactive to drill down into the detail

Stoat
Follow up and review of plans?
Achievement of outputs/targets – e.g. Biodiversity Action Plans, Agri-environment schemes
- Timescales – are long data runs needed
Obsession with high level data, whereas sometimes a "quick and dirty"
CROSS DEPARTMENTAL ENVIRONMENTAL MONITORING
        -React fastest to change, and yet least monitored and understood
Invertebrates – water inverts well understood and built into reporting, but terrestrial ones not.
Habitat and species outside designated areas – little information on condition, amount etc. – old data from Countryside Survey
Fish – Lough Neagh populations, shellfish etc.
Collected across councils therefore can't be a national statistic due to misaligned methods/reporting
Environment and Health – Not brought together, vague, more cohesion as data may exist but not currently brought together
Cars – high interest in type
Tax = Purely economic decision that has an environmental benefit.

Tufted duck

- Would be useful to break down into Council areas. This could raise profile and help decision makers / policy developers / politicians to relate better to data i.e. what's in my backyard?
- Inclusion of local case studies would also help to enhance engagement e.g. river quality in 'my' Council area is worse than in other Council areas.
- Could include more land use / brown field indicator data

Whooper swan
Climate change indicators limited in report.
Wide range of data available, e.g. NGOs, that not currently used.

Marine: large gaps with e.g. zooplankton, noise – no policy driver to collect but necessary to enact ecosystem approach
Marine Division are identifying data gaps. DOE's Analytical Services Branch to liaise with Marine Division?
Erosion.
Birds – first arrivals
Wind climate – significant economic consequences
Sea trade, energy, agriculture
Energy
Water abstraction?
Freshwater usage.

Cormorant
Greenhouse gas emissions – more detail for sectors which are the main sources – to reflect breakdown of industry sectors.
Roles of sinks/sources of carbon exchange
Greater use of spatial and geo-referenced data
Waste to landfill and links with economy
Measurement of different range of chemicals including aerial emissions to water quality, soils etc.
Pesticide/herbicide levels in food.
How do we prioritise which indicators are important and for which we need to collect supporting data??
How do we promote the information and create awareness?
Making the information more accessible to the general public – dissemination of the data.
Quality of the data also important – confidence intervals.
One stop shop for data on all types of indicators.
Measure for public engagement/action on environment.

Hen harriers
Fish data – data there already/available
Water quantity/flooding – data available
Agricultural indicators and land usage – data available. Arable land, CMS data, trends, km2 usage.

Not enough on Biodiversity, especially in context of ecosystem services, e.g. pollinators
EU species – e.g. bats – data being collected
Other species – butterflies (shows climate change)
Invasive species – being collected

Environmental installations – Separate out the types of renewable energy into windfarms/single turbine/solar/hydro – would show the differing pressures.

Coot
Land use (rather than number of farmers in schemes, areas) and status. Noted that different from land cover. Links to DARD statistics.
SLNCIs relevance questioned – no longer in PPG 2 – but still important?
Context in global environment , e.g. C /green house gases – NI improvements at costs of what is being exported
Socio economic and environmental economic indicators, links to value of environment, ecosystem services, value to the economy; cultural value e.g. visitor experiences
Data on consumption , e.g. food, materials, MVA
Modelling to make the best use of data.

Swift
As above –
Offshore renewables.
Marine info generally.
CAP Reform – farmland monitoring.
Lots of bird information gaps.
Comparisons with ROI.
Information too narrow and bland to inform decisions.

Lough Neagh Eel
- Agriculture indicators
- Marine litter

4. **Who may be able to provide data/information to fill the gaps and help meet future requirements?**

Goldeneye responses
Indicators that point to future stresses can be used to re-frame discussions of environmental policy.

Pochard
A particular problem has been identified with lack of rainfall data with the threat of Met Office withdrawal from NI for financial reasons. NIEA are examining how they could potentially provide a rainfall network.
Use of new technology, remote sensing, GSM cameras etc for survey – may provide solutions for birds especially if access constraints can be overcome.
Use of schools for developing networks, e.g. the rainfall network.

Azure dragonfly
Other Gov Depts. – DARD & Roads Service invasive species data and AFBI Commercial Fisheries data
NGOs
Consultants – Atkin's e.g. holding Lagan monitoring data
Academics – Invasive species and all Ireland pollinator data from Queens
Citizen science / Public Participation – CEDAR etc.

Other Issues:
- There is a lack of awareness of what other Agency's / Departments are doing, what data they hold and the different formats it is available in.
- Issues around use of Citizen Science and academic data and its ability to meet official statistic constraints, and retention of data ownership. However it is still of value and could be presented on the same platform as general indicator data with appropriate caveats.
- Issues around how the raw data when available on the web will be used and interpreted.
- Concern that info currently submitted has been manipulated to fit the current publications format.
- Raw data submitted to ASB to be presented on the web next year. Users need to understand the methodology used to gather and collate.

Stoat
EUROPEAN FUNDING – we don't have a mechanism within or without government to draw down funds – need to help develop dedicated unit.
Local councils – more commonality so at RPA make regulation, methods, measurements cohesive across to develop better National Stats.
Departments e.g. DETI on tourism numbers and focus
NGOs – better handling of data
       -CEDaR – analysis/reports. More abundance/monitoring rather than simply range
All of us!! Need to raise our awareness and EMPOWER others to be involved, to be interested, to see consequence.
If data is for public good e.g. EIA should it not go into public domain – data is "lost" through economic ownership.

Tufted duck
- Housing Executive does many surveys on e.g. housing condition / household survey. It works with local universities and holds data (including GIS) centrally. Could be useful to e.g. river basin planning.
- Housing Executive also works with Rivers Agency to collate flooding data that may be useful.
- Councils have data on e.g. social trends that could be included. Data agreements would need to be in place to control.

Whooper swan
Marine indicators/freshwater
Zooplankton – Interreg collecting. Links top and bottom of food chain.
Water abstraction and uses of freshwater – data does exist.

Cormorant
Research delivered through commercial contracts – data may not be made available – confidentiality issues.
Public engagement and partnership – community groups – Eco-schools – possible option for gathering data on behavioural change.
"Crowd sourcing" – how do we examine data quality?
Citizen science – generating large volumes of data/sample size – more representative.
Making the most of lots of different data sources, gathered in different ways.
NGO sector can perhaps provide volume of data but possible trade off against data integrity.

Hen harriers
DARD – land use
Rivers Agency – Flooding (links to Strategic Flood Maps), Water quantity
NIEA – NH – bats, cetaceans / NI Countryside Survey
DCAL/Loughs Agency – Fish data
NGOs, e.g. Butterfly conservation: wider butterfly country survey (WBCS). May be a standard repeatable method.
Invasive Species Irelands
BTO surveys.

Coot
NITB for visitor information
Links to other Departments and Sustainable development indicators
NINIS (?) NI Neighbourhood statistics ' local info'

Swift
Commercially collected data – consultants.
Volunteers.
IT specialists to help translate volunteer collected information into user friendly material.
Indicators need to have a more explicit relationship with economics!

Lough Neagh Eel
Government departments and agencies

Workshop Session Two: *Accessing Data: Systems and Sharing*

1. **Current accessibility of data:**

   a. **How easy is it currently to access the data from SOE/Annual Environmental Statistics Report?**

Goldeneye responses
It is not easy to access. Data cannot be interrogated on a PDF.

Pochard
Site is easy to access but is a little confused by what's on other Departmental websites, i.e. Joe Public might not know where to start. The level and detail of data that can be accessed is the more important issue.

Azure dragonfly
Tend to access SOE from hard copy and pdf versions of NIES Reports via the web. Access to raw data normally via original data providers.

Teal
Not very easy to access.
Web needs to be interactive rather than read only download

Stoat
Not currently obvious.

The report online is only a summary.
To get information you need to contact the source body
 - Incurs charges, confusing, raw data given but not an interpretation of this, and not in the format you want.

You need to know exactly what you want to access data (no "browsing"), and data can be lost within large, complicated raw datasets.

Tufted duck
- Having hard copies is important.
- Participants have not attempted to access raw data. CEDaR rep will consider assessing raw data but Council rep more interested in high level interpretive info.
- Housing Executive researchers e.g. in Energy Unit will now look more closely at raw data.

Whooper swan
Future excel required.
Scope for duplication of data.
Complex datasets. Risk of hosting in >1 place.

Cormorant
Paper copy easy to access – not sure about underlying data (not tried this)

Hen harriers
PDF of report easy to access
The data is much more difficult especially for the public, e.g. water quality only refers to NIEA but it is a very big organisation so hard to know where to start.

Coot
PDFs for each chapter inhibits usefulness.
Agreed still needed some hard copies for libraries
Better information resources for schools and education
Data usually asked for directly from teams, not via NISRA.

Swift
Data should be integrated into digital copy – Requests to ASB should only be used as a last resort.

Lough Neagh Eel
PDF Report is easily accessible but data are not easily obtainable

b. **How would you improve accessibility? (e.g. hosting datasets on the web)**

Goldeneye responses
A web page that has a series of links to webpages and reports of NIEA/Marine areas that report to SOE.
An online report that has different layers would be useful.

Pochard
Have a dedicated environmental website. Would also need a hierarchy which would identify pathways to the location of further more detailed information.

Azure dragonfly

NIESR is good but would be more useful in more interactive formats. For example, a good first step would be to produce the reports in e-book or interactive pdfs formats which would allow users to find sections of interest much quicker. Access to raw data on the web in excel format would be especially useful for schools and colleges. The group also agreed we should have dedicated web portal access to SOE information and GIS maps. To reduce duplication these should be closely aligned with GIS information available on SpatialNI and web mapping facilities already available on the NIEA site.

Teal

Publicity – use of external organisations

Stoat

Portal sites – "Environment NI" etc.

Use ROI as a model – easier to access than NI data

Spatial alignment and projections: different datasets out of line with one another

Summarised datasets – linking GIS in order to spatially represent information

Tufted duck

- A dedicated web site for environmental information would be useful and the RAG (Red, Amber, Green) traffic light system is helpful. RAG is particularly useful to communicate environmental data and trends to the wider audience.
- More embedded links in reports to sources of raw data would be helpful.
- Need to take care not to duplicate already existing data e.g. SpatialNI but important to include relevant links.
- More detail would be valuable if available in electronic format.
- Need to be aware that data provided through the reports can be used 'badly' i.e. mis-interpreted or used to support positions that DOE does not support. Need to accept that this could happen and control the risk as far as possible. Disclaimer?

Whooper swan

SOE interaction with INSPIRE very important.

Avoid duplication.

Cormorant

Hosting datasets on some interactive web-mapping tool – best way forward.

Two platforms – some simple tools for defined data queries (FAQ) and also facility to download the raw data to own system for more complex formats.

Hen harriers

Apps for mobiles

Dedicated webpage – but dashboard systems so can quickly get to data.

Issue of updating? Annual reporting?

Portal with GIS/ Spatial representations.

Need for some sub-regional data.

Coot

GIS and spatial data sets as above
Using Spatial NI.
Need to ensure free and easy access, no charging for licences or reproduction (e.g. OSNI)
Better information resources for schools and education

Swift
Web portal would be good.
Website designed for Tablet Format.
Live document updated as and when data available.

Lough Neagh Eel
Provide excel version of tables & charts

2. Which specific formats or features would permit greater use of and benefit from SOE / environmental indicator reporting?

Goldeneye responses
A possibility of an "app" that links to SOE.

Indicators that show future potential problems and environmental stresses. Designed to be read by non-scientists. Biodiversity surveys would be particularly useful to have in layers below a summary report.

Pochard

Being user-enabled to manipulate data.
Possible use of open source software.
But some information is dangerous if easily available, e.g. may encourage theft or raids on pearl mussel communities.
Incorporate real-time monitoring data, e.g. river water level information.

Azure dragonfly
Mapping facilities should include access to the data behind it. Issues of access to local level information which identify individual sites could be addressed by Geo Tagging i.e. geo references which would allow the user to query by county and doesn't identify individuals. Currently there are too many disparate systems. There is a need for a single Corporate GIS resource that can be tweaked for department's individual needs. Greater access to mapping data could change a lot of what departments do and help identify gaps and holes in data.
The introduction of a RAG system would be beneficial as it would be easily understood by the public.

Teal
- Stakeholder groups with the correct people
- Apps for external organisations
- Internal- would rely of availability of tablet technology
- Cloud computing is being used elsewhere in the UK
- App for reporting data and feedback from the public

- Public kiosks (solar powered)
- Text messaging with an opt in
- Internal template reports app to upload
- GPS on smart phone is specific
- Web-based with links to more detailed data and ability to download to GIS and Excel
- Ability to access the correct person/department

Stoat
Use plain English!
Real-time of more up-to-date aerial maps/images for comparison
Images – Water Framework Directive graphs of "in suitable condition"
Start at the end: What do you want to see before you decide. Who would be using this website? How? What do they need?

Tufted duck
- Dedicated web site as above.
- Councils are making greater use of iPads and Apps. These formats could be useful for Council Officers looking to access localised data e.g. habitats and species.

Whooper swan
GIS portal.
Linkages very important.
Spreadsheets.

Cormorant
What are implications of charging for data and accessibility
All SOE data could be made available through SOE portal.
One stop shop format website – with headlines and signposted to more detailed information
Better use of graphs, charts and pictures etc.
Query functionality – ways of interrogating the data
Availability of historical information to compare trends etc.
Limited number of indicators available by phone app. E.g. flooding details
Functionality of dragging data into widely available mapping services e.g. Google Earth

Hen harriers
Change to a spatial representation that can be drilled down into.
RAG in addition to trend data (not a replacement) – must be very carefully monitored with changes in targets etc.
Dashboard to allow specific data search.
External bodies links/stakeholder usability – encourage use.
Compatibility issues? Common formats for easily accessible/downloads page.
Formats – let public be able to cut graphs out for presentations
PR – needs to be more attractive Greater use by public, research, educational tools.

Coot
Web based GIS data sets and links to relevant supporting information on trends, context, other Departments and UK/EU/ etc

Need to explore mechanisms for using social media (Twitter & Facebook) to access local information on environmental quality.

Swift
Facebook / Twitter.
Formats accessed through G4 i.e. by phone &/or Tablets
Emails advising of updates.

Lough Neagh Eel
Dashboard feature – graphics for each theme which link to the various indicators held in excel workbooks

3. **Would a dedicated "Web Portal" that brings together all types of environmental data be beneficial?**

Goldeneye responses
A dedicated web portal would be good:
- It should be collated and managed by either a separate Non-Departmental Public Body or by an NGO such as NIEL
- It needs to be fit-for-purpose i.e. on designed on the basis of lowest cost
- It needs to be fully funded, i.e. not try to do it on existing resources.
- Dedicated resources are needed including training for use.
- If a GI system is to be an integral part of information then the system needs to be chosen for all government agencies on the basis of fit-for-purpose not cost. Maintenance, training and use need to be fully-funded.

Pochard
Yes, very much but would need to include a hierarchy of further data availability to other sites where more detailed information may be available.
Needs to be properly resourced as could be very high demand at e.g. times of flooding if real-time river level information was available.
Layered options essential to break down through information types.
Standalone site would be quicker than an embedded one.
Other organisations – professional associations, universities etc. – how do you manage this?

Azure dragonfly
Yes there should be a long term strategy to develop and dedicated system. It would save time, help 'feed consultants', reduce Freedom of Information requests and help NI meet the UK Transparency Agency aspiration to 'publish once, use many times'. Opportunities for cross departmental partnership working (e.g. with DARD, NIEA and the DOE Marine Division) should also be considered.

Teal
- It would if done correctly
- NI Direct for example is not user friendly
- Central point of contact – who knows the answers – FAQ page
- Needs to be spatial

- Needs accurate metadata and comparative data
- Lessons from other Agencies – what they are doing, releasing data in line with Data Protection guidelines
- Integrate information across all departments for a total overview for a specific area
- Multilayered info
- Could measure benefits from all areas quickly
- Create everything in RDF format – standard doc for compatibility

Stoat
Yes!
- Empowerment and awareness raising required to make people aware of the data: existence, relevance, use to them.
- But! Politics – If Negative information is portrayed consequence for Local Authorities, Agencies, groups etc. (by Media, local interest groups etc.)
- We are too Reactive, not Proactive – we respond to negative publicity – will always be time consuming.
- Why all separate? If it's one portal then Everyone together, link by theme, e.g. Biodiversity from DARD (Rivers, Farming, Forests, Fisheries), DOE (Water, Planning, Natural Heritage), DCAL (Freshwater Fisheries).
- INSPIRE – will help to streamline comparison and use.
- We like summaries if key trends, although there's the danger of Raw Data or oversimplification.
- On the website – Data providers to stay away from education it's not really appropriate as a concept
- Citizen Science – YES Involvement and Action = Empowerment
- Must be GIS-related – ability to manipulate and query layers (for those that don't have GIS software themselves)
- Partners: Landscape scale projects, Interreg, Cross Border, Regional Agencies
- Barrier: Data ownership. Verified regular updates.

Tufted duck
YES

Whooper swan
Summaries of key trends:
- Blunt indicators
- Trends and confidence importance
- Two flags: Performance and Confidence

Trends – requires continuum of data, not always available. Important to distinguish difference between status and trends.
Need to keep messages simple.
Scope for further educational resources.
Promote cultural change with regards to environment.
Barriers: cost, analysing information.

Cormorant
YES!
Yes – provided can interrogate and manipulate
Yes – links to spatial and other stats sites also v valuable

Yes – summaries of key trends is useful

Yes – links to citizen science valuable

Will increase availability and accessibility of data.

Educational resources would be valued

Systems already piloted to facilitate use and dissemination of spatial data and use of statistics

Datasets used must be compatible with one another – agreed standards for data collection

Liaise with Agencies who have already done it – learn from their experience across Europe.

Hen harriers

Yes.

Encouraging use.

BUT:

Careful of potential misuse of data. E.g. Protect species/rare species it is important not to present it so that they can be found/located on the ground – NBN Gateway use a maximum resolution of 10km2 to represent species distribution.

The 'level' that data is available is important.

The representation is important as it can be misinterpreted.

Key partners:

DCAL

Rivers Agency

Loughs Agency

DARD

Roads Service

GSNI – Tellus Project

Ordnance Survey

BTO

BCNI

Cross-referencing of indicator datasets – monitoring of ecosystem services?

Coot

YES!

See above

Dashboards would be useful, with traffic lights etc

Swift

Yes!

Lough Neagh Eel

Yes and this could be enhanced with a metadata sheet, spatial data & links for further information.