

Scotland's Environment Web (SEWeb) LIFE Project SNH, Battleby Auditorium, Perth 30th September 2011

1. Introduction to SEWeb Life

This paper highlights workshop outputs from the Scotland's Environment Web (SEWeb) LIFE Project launch event held in Battleby on the 30th September 2011. The overall aim of the event was to formally launch the project and to bring together the key organisations to gather views and ideas that will inform the work to start scoping the project deliverables. The delegates (listed in *Annex 1*) were invited from a diverse range of relevant stakeholders and project partners including Scottish Government, British Geological Society, SNH, Transport Scotland, Scottish Agricultural College and other public sector organisations and Non Governmental Organisations (NGOs). During the event SEPA gave a commitment to write up the 3 workshop outputs, to produce a synthesis report to share with the delegates and other interested parties and to identify recommendations for actions which can be taken forward in the development of the SEWeb LIFE project.

SEPA has been working closely with partner environmental organisations to develop an online State of Environment Report for Scotland – Scotland's Environment Web (SEWeb – phase 1) that launched in November 2011. SEPA has secured £2million funding from [LIFE](#), the EU's funding instrument for the environment, plus £2 million match funding from SEPA, to deliver phase 2 of the SEWeb project (SEWeb Life). This project proposes an expansion of the capability and functionality of the pilot web site, working in partnership to bring together a wide range of environmental data and analyses on Scotland's environment, providing a one stop shop for up-to-date and relevant environmental information in a suitable form for all users. It will be "*The gateway to everything you want to know about the environment*". The project will also be engaging with members of the public in environmental monitoring and improvement projects, and will ultimately seek to encourage positive environmental action through increased awareness of the environmental impacts of activities.

The SEWeb LIFE project objectives are:

- To develop an inclusive partnership programme bringing together the key data providers and data users to develop the SEWeb Life.
- To help promote the expansion of a European SEIS (Shared Environmental Information System) that makes available data on Europe's environment. Scotland will implement SEWeb Life, as regional SEIS, an example of European best practice in reporting which, in particular, will provide information required by the European Environment Agency (EEA).



- To measure the effectiveness of policy development and the targeting of environmental measures by providing a better understanding of the wider impacts of environmental change. SEWeb Life will develop a means of prioritising environmental problems based on environmental, economic and social information (eg. for climate adaptation).
- To engage the public in the protection of the environment and thereby improve their understanding of the environmental issues at a Scottish and European level. SEWeb will develop a programme which will promote the involvement of the public using the SEWeb as the focal point. This approach will foster improved understanding of EU environmental priorities.

2. A Partnership Approach

Scotland's Environment Web partners include:

[Scottish Government](#)

[Scottish Environment Protection Agency](#)

[Scottish Natural Heritage](#)

[Historic Scotland](#)

[Forestry Commission Scotland](#)

[James Hutton Institute](#)

[Marine Scotland](#)

[LINK](#)

[RAFTS](#)

[NHS](#)

[COSLA](#)

[Foods Standard Agency Scotland](#)

Other organisations will also be closely involved in providing information and supporting the web. For example, phase 1 SEWeb has been indebted to the contributions of organisations such as the British Geological Survey, Glasgow City Council, Health Protection Scotland and the Met Office, as well as the [CAMERAS](#) partnership (Coordinated Agenda for Marine, Environment and Rural Affairs Science). All of the key partners involved in Phase 1 SEWeb have provided an invaluable contribution to the development of the pilot project and their continued involvement and ownership of the SEWeb Life project will be critical to its future success.

3. The SEWeb Life Event

A full list of invited delegates and the organisations they represented is included in *Annex 1*. The event opened with an introduction from the event hosts, Scottish Natural Heritage. It then proceeded with two presentations on the phase 1 SEWeb pilot project, followed by an introduction of the SEWeb Life project as this was the first time that most delegates had heard about the proposed phase 2 project. During the breaks, a video presenting the SEWeb (phase 1) functionality was available for viewing along with a demonstration of the



“spotfire” environmental data analysis tool. This provided delegates with a practical insight into the proposed increased data presentation and analyses functionality that the SEWeb Life project is planning to develop. There was extremely positive feedback on the “spotfire” tool and it helped delegates to see for the first time how their environmental data could be integrated with others and used to present some very powerful and understandable environmental information to a wide audience. *Annex 2 includes a copy of the Agenda for the event.*

3 workshops were developed to initiate face-to-face discussions with the very organisations that the SEWeb Life project will be working closely with, to gain an understanding of their initial thoughts, hopes and fears relating to the project, identifying where SEWeb Life can start to prioritise the integration of existing data sets and where there might be data gaps that need to be filled, and finally to gather views on where SEWeb Life can add value to the presentation, reporting and management of data held by the key sectors represented at the event.

Overall, the SEWeb Life project team received some very positive and helpful comments with respect to the project and organisations were keen to support its onward development. A key point which became clear during various pertinent discussions was the extent to which the SEWeb Life project team were going to establish all of the relevant connections between similar environmental data programmes that would be of benefit to the project, for example, the NERC Environmental Virtual Observatory, the Public data corporation, various Living with Environmental Change Initiatives. These and other initiatives will be investigated further by the project partners as part of project development work.

3. The Workshops

The following section provides a summary of the 3 workshops (with further detail contained in *Annexes 4, 5, and 6*).

Workshop 1 : Strengths, Weaknesses, Opportunities, Threats, (SWOT)

The delegates were split into one of three groups. A handout of the SEWeb Life project objectives and actions was provided (*Annex 3*) and the aim of this first workshop was to give delegates an opportunity, through discussion, to become more familiar with the project. The delegates were then asked for their views on the SEWeb Life project relating to:

- Strengths
- Weaknesses
- Ppportunities
- Threats

Annexe 4 provides detailed information on all of the comments received from the 3 delegate workshops and a summary is provided below.

The “strengths” and “opportunities” provide a useful insight into some of the positive communication messages that could used when promoting the benefits of the project to a



wider stakeholder audience, The noted “weaknesses” and “threats” will be considered for the projects Risk Management Strategy and mitigating actions to prevent or minimise these risks will be developed and tracked.

The project was seen to have many **strengths** not least the fact that it is a “one stop shop” of up to date information for a wide range of users, enabling consistency across a wide range of data. This data can be accessed by a range of stakeholders or organisations via a “single (brand) portal”. As there is no perceived individual “owner” of the website one strength is that it was not considered to be primarily a government owned vehicle for information and delegates pointed out that a cross sectoral partnership could engender a wider public trust. The strong partnership basis to the project was seen by delegates to be a very positive attribute. It is envisaged that environmental data could be better analysed and interpreted through this website that is ultimately focussing on Scotland’s Environment.

Potential **weaknesses** of the project included the fact that the website will only be as good as each organisation’s own contribution (SEWeb Life will be link to data that is held by each organisation and will not provide a single repository for all of Scotland’s environmental data) and the challenges of ensuring that the information/data held by other organisations is of a consistently high standard. Of relevance to this is the importance of ensuring that any web links provided through the portal are managed effectively by relevant partner organisations. Delegates raised the risk of “project creep” and the need to be aware of over ambitious outcomes, for example the number of project actions and what the project can realistically deliver in the relevant timescales. It is important that the project outcomes are clearly defined and delegates pointed out that care should be taken so that the project was not “too many things to too many people” resulting in a loss of the project focus and aims.

There were a number of **opportunities** highlighted including aspects such as increased public engagement, and potential for improved awareness and understanding of issues by politicians and policy makers. It was also noted that the web site, and in particular the data presentation and analysis functionality, as demonstrated by “spotfire” had significant potential to be an extremely powerful education tool that would compliment a range of national curriculum objectives as well as increasing the awareness of young people on Scotland’s environment. The project provides opportunities to host a wide range of environmental data. If innovative new tools such as mobile application developments are undertaken there is also scope to improve access to information for communities and individuals whilst also providing a tool for collecting data from a much wider network of data sources. This website could also be used as a tool to establish what type of environmental communication is the most effective to change behaviours and influence decisions.

Delegates identified a number of **threats** which could potentially impact on the project, such as, the concern that if there is no single ownership of the website then, there is a question as to who is ultimately responsible for the maintenance of the site and the monitoring of data quality etc. In these times of austerity, delegates identified that the project activity must have demonstrable benefit to participating organisations and provide value for money. If for example budgets are constrained then what effect will this have on the project outcomes. A concern raised by participants was whether there is a potential



for the user to “misinterpret data” or to not reflect public expectations of the environmental issues detailed on the site.

Workshop 2 : Where can SEWeb Life add value?

In this workshop the delegates were asked to identify and prioritise the significant environmental topics that SEWeb Life should be taking into consideration during the project development. The delegates were asked to assess this not only from their own organisations perspective but in addition, of importance and relevance to wider stakeholders and communities (e.g. resource management, low carbon economy, biodiversity, ecosystem services, air quality, environmental human health) and then further categorising into:

1. **Good** – where ‘we collectively’ have quality information and understanding of the environmental topic.
2. **Average** – Where ‘we’ could do better. For example we may have started to collect the data, but we could do more to improve our understanding
3. **Poor** – Where we know it’s a topic we need to understand, but we do not currently collect the data / info.

The 3 groups identified and categorised 90 different data sets. These have been grouped into 23 themes plus 1 “other” theme for more general environmental data topics.

30 data sets were identified as having good data – these are categorised under the themes of forestry, species, climate change, land and soils, water, recreational, good, health, buildings, resources, transport, biodiversity, species, planning, and industrial emissions.

34 data sets were identified as having average data.

30 data sets were identified as having poor data.

Some data sets were allocated more than one category where the quality of sub-data sets were variable.

This indicates a good baseline of potential “quick win” data sets on which to focus immediate data integration action into the SEWeb Life Project.

Annexe 5 collates all the comments received from the 3 delegate workshops and a sample of key issues is provided below.

Workshop 3 : What can SEWeb do for you?

The aim of this workshop was to establish sector priorities for SEWeb Life. The delegates were reallocated into 3 groups that represented the sector that they operate in – science and research, public sector, and third sector - and asked to consider issues such as.

1. What can SEWeb do for your sector?
2. What are the priority topics?
3. How do you see your role in developing SEWeb?

Further detail on responses are provided in *Annex 6* and a summary is noted below. The notes below provide extremely useful information to the project team on issues to take into consideration when scoping up the next developmental phases of SEWeb Life to ensure it



is addressing the specific issues and priorities of the key sector partners, and provide a good basis for future engagement.

Public Sector

This group represented: Convention of Scottish Local Authorities, Fife Council, Historic Scotland, Scottish Enterprise, Scottish Government, North Ayrshire Council, , Scottish Natural Heritage, Transport Scotland, Forestry Commission, Education Scotland, and the National Health Service Health Scotland. Royal Commission on the Ancient and Historical Monuments of Scotland, Scottish Government and SEPA

Opportunities for SEWeb Life to link to other web based environmental information were identified. These included: business gateway, “eye-spot” and “record-It” citizen science information, and e.planning.

It was noted that robust information is essential, and that SEWeb Life should focus first on the national data sets that were considered easier to collate with more readily available information. To get the support and buy-in from partner organisations, it was noted that it would be useful to have some standard/template information that could be used to inform a business case to managers within organisations that would be deciding on their commitments to providing data to SEWeb Life. Some organisations weren’t fully clear on how SEWeb Life would add value to their current data, and would require further consideration/discussion

Priority data topics for this sector include: layered data maps (look back, and develop future trends), environmental data that can be linked to health e.g. mapping bacterial content of water, reductions in air quality, provide e.learning tools, record of planning permissions and outcome of the planning decision, data on woodlands, SRDP, noise level assessments (collated by road developers), local information (“fix my street”, noise and air quality phone apps), development plans, performance indicators.

Third Sector

This group represented: British Trust for Conservation Volunteers, British Trust for Ornithology, Buglife, Butterfly Conservation for the UK, National Farmers Union Scotland, Perth and Kinross Council, Rivers and Fisheries Trusts of Scotland, Royal Society for the Protection of Birds, Scottish Natural Heritage and the Scottish Wildlife Trust, Scottish Government and SEPA.

This sector were very positive about the benefits they thought SEWeb Life could bring to their sector e.g. useful in raising profile and wider scope of audience of the organisation and engaging volunteer effort in projects and feedback to volunteers the impact of their efforts, increasing membership, make better use of 3rd sector data – educational use, influencing decision making to improve the environment.

Priority data topics for this sector included: conservation of biodiversity, raising awareness of environmental issues, and integration of conservation management with other land-use sectors.

The sector would like to actively contribute to the steering and working groups that are established to further define the project for their sector, felt that this is important as a future customer of SEWeb Life and work on this should be initiated as soon as possible.

Science and Research

This group represented: British Geological Survey, Centre for Ecology and Hydrology, Foods Standards Agency Scotland, Health Protection Scotland, James Hutton Institute,



Marine Alliance for Science and Technology, Marine Scotland, Met Office, Royal Botanic Gardens Scotland, Scottish Agricultural College, Scottish Government, Scottish Natural Heritage, and SEPA.

The group was very positive about the potential for SEWeb Life to be “The Place” to find and showcase Scottish environmental research data and provide a real incentive for academics to display their data on the web portal. They were keen to maintain a Science and Research topic / advice group that will help to shape and define SEWeb Life for this sector and warned the project team against engaging with the “usual suspects”.

Priority data topics for this sector included: layering of monitoring sites across Scotland, SNH habitats map, BGS iapp, agricultural census data, water balance counting model for Scotland, excellent education tool (Environmental Science), water framework directive datasets



Annexe1 – Delegate List

Name	Organisation
Hugh Barron	British Geological Survey
Seumas Campbell	British Geological Survey
Kerry Riddell	British Trust for Conservation Volunteers (Scotland)
Stevie Jarron	British Trust for Conservation Volunteers (Scotland)
Chris Wernham	British Trust for Ornithology
Craig Macadam	Buglife
David Dennis	Butterfly Conservation for the UK
Bernard Dudley	Centre for Ecology & Hydrology
Douglas Shirlaw	Convention of Scottish Local Authorities
Ian Menzies	Education Scotland
Stuart Nichol	Fife Council
Anna Whyte	Food Standards Agency Scotland
Gordon Patterson	Forestry Commission Scotland
Colin Ramsay	Health Protection Scotland
James Steel	Historic Scotland
Willie Towers	James Hutton Institute
Mark James	Marine Alliance for science & Technology Scotland
Jens Rasmussen	Marine Scotland
Alan Motion	Met Office
Andrew Bauer	National Farmers Union Scotland
Louise Rennick	NHS Health Scotland
John Esslemont	North Ayrshire Council
Moira McKirdy	Perth & Kinross Council
Callum Sinclair	Rivers and Fisheries Trusts of Scotland
David Knott	Royal Botanic Gardens Scotland
Mary Gibby	Royal Botanic Gardens Scotland
Alistair Wilkie	Royal Commission on the Ancient and Historical Monuments of Scotland
Paul Walton	Royal Society for the Protection of Birds
Davy McCracken	Scottish Agricultural College
Steve McGowan	Scottish Enterprise
Colin Gray	Scottish Environment Protection Agency
Eleanor Strain (facilitator)	Scottish Environment Protection Agency
Ingrid Baber	Scottish Environment Protection Agency
Jo Muse (facilitator)	Scottish Environment Protection Agency
Lindsey Green (facilitator)	Scottish Environment Protection Agency
Martin Marsden	Scottish Environment Protection Agency
Nathan Critchlow-Watton	Scottish Environment Protection Agency
Paula Brown	Scottish Environment Protection Agency
Paula Charleson	Scottish Environment Protection Agency
Pete Birrell	Scottish Environment Protection Agency
Peter Singleton	Scottish Environment Protection Agency



Scot Mathieson	Scottish Environment Protection Agency
Andrew Dailly	Scottish Government
Ben Dipper	Scottish Government
George Burgess	Scottish Government
Graham Jones	Scottish Government
Iona Macpherson	Scottish Government
Joanna Drewitt	Scottish Government
Liam Kelly	Scottish Government
Linda Kosciwicz-Fleming	Scottish Government
Neil Richie	Scottish Government
Sally Thomas	Scottish Government
John Landrock	Scottish Government
Alan Cameron	Scottish Natural Heritage
Alan McKirdy	Scottish Natural Heritage
Rachel Hellings	Scottish Natural Heritage
Susan Davies	Scottish Natural Heritage
Gill Dowse	Scottish Wildlife Trust
Drew Hill	Transport Scotland



Annex 2 – Agenda

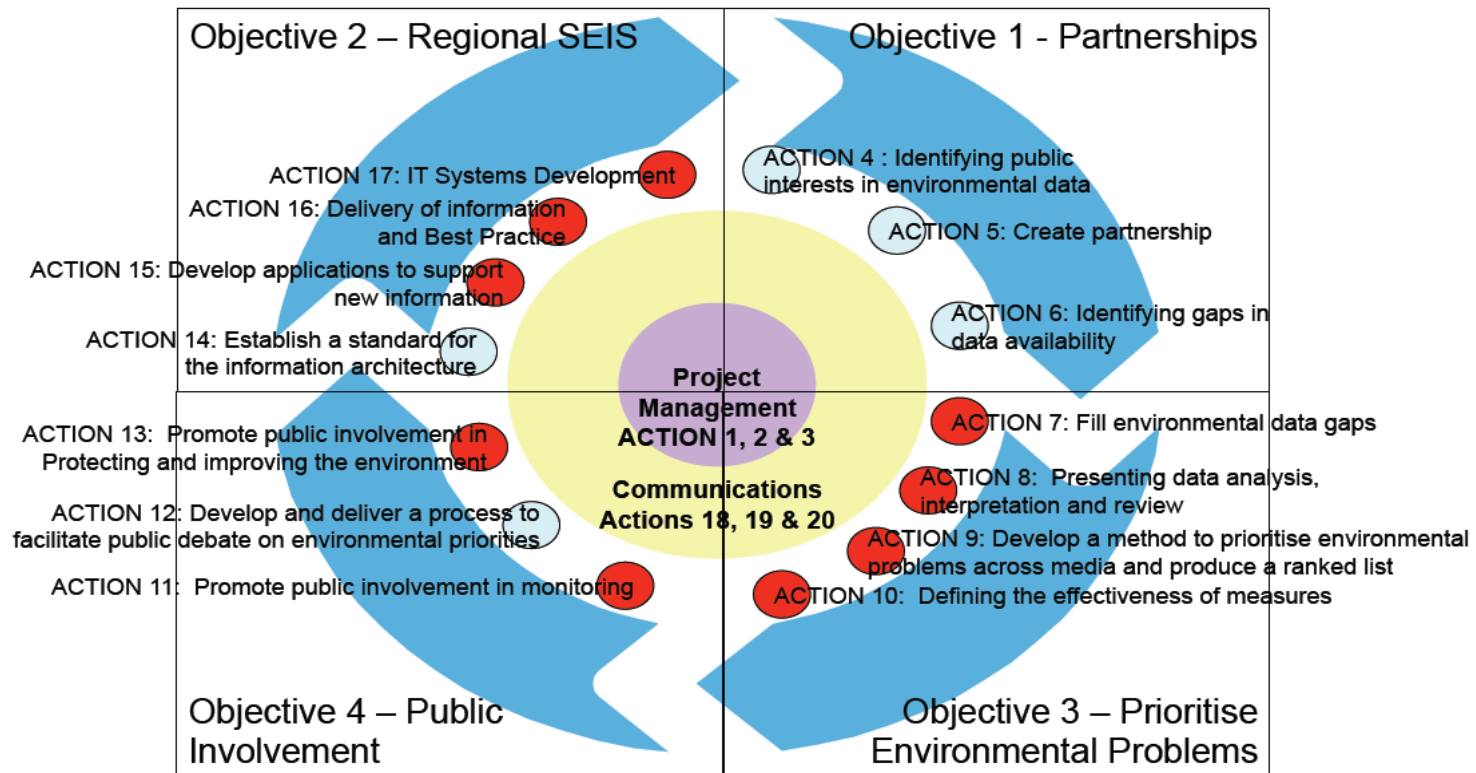


Scotland's Environment Web (SEWeb) LIFE Project AGENDA

Time	Item
10:00	Registration, tea & coffee Demonstration of 'Spotfire' analysis tool.
10:30	Welcome & Introduction, Susan Davies, SNH
10:40	Presentation on current SEWeb pilot, Alan McKirdy, SNH
11:00	Presentation on SEWeb LIFE Project, Peter Singleton, SEPA
11:20	Q&A session, chaired by Martin Marsden, SEPA
11:40	Workshop 1: SWOT on SEWeb LIFE Project
	LUNCH
12:30	Continuous video presenting on website functionality loop to play in the auditorium & demonstration of 'Spotfire' analysis tool.
13:15	Workshop 2: Where can SEWeb add value?
14:15	Tea / coffee
14:30	Workshop 3: What can SEWeb do for you?
15:15	Closing remarks George Burgess, Scottish Government
15:30	Close



What is it?



Annex 4 - SWOT Analysis (workshop 1) collated comments

Strengths

- Provides better access & use of data
- Consistency of presentation
- Knowledge transfer & retention
- Data will always be current
- Assists in the identification of data gaps
- Data accessible by any organisation
- Good fit with INSPIRE
- No single ownership – not perceived as a government vehicle for information and therefore influence. Cross sectoral partnership engenders wider public trust.
- Will highlight those organisations that don't buy-in and “conspicuous by their absence”
- Data can be better analysed & interpreted
- Synergies with Curriculum for Excellence Science
- Integration of data into one consistent set of data
- Attracts audience – single brand is a good communication tool
- Strong partnership basis to the project
- Availability of a broad range of data to suit wide range of information needs
- User friendly
- Access to localised information
- Get a better understanding of SEWeb “traffic and usage”
- Link based(rather than hosting lots of data) makes it easier to maintain
- Focus on Scotland's environment
- One portal providing a range of services

Weaknesses

- Can only be as good as each organisations' contribution
- Challenge to work across disciplines
- Danger of trying to do too much in too little time (recommend clarity of project outcomes and remaining with these to avoid potential project creep)
- The right organisations are not in the partnership that already effectively engages with the public, eg. Friends of the Earth
- Portal – lack of control of information (produced, updated, maintained by host organisation)
- Be clear on audience (try not to be too many things to too many people, lose focus of what trying to do)
- Are the data headings on the right places
- Don't just focus on bringing data together in one place, do something with it
- Likely to just attract the usual audience



Opportunities

- Increased public engagement & knowledge
- Citizen science & Citizen action
- Improved awareness & understanding of environmental issues by politicians & policy makers
- Support local planning processes – overlay of diverse information on sites proposed for development.
- Increases the value of biodiversity
- Increases information access for the urban environment
- Scottish taxpayers often pay agencies to collect data (via taxes) and therefore should have access to what they have funded
- Use resources already established, e.g. iSpot, woodland trust phenology site
- Test what types of environmental communication work
- Enabling the website for mobile devices will improve access to information for communities and provides a system to collect data from communities :reciprocal flow of information
- Enables innovation
- To engage with Business customers and users
- Identify correlation between data sets
- “Your Place” – generic local information
- Local Authority data
- Encourage individuals to contribute, use “different” creative media (e.g. cartoons)
- Single resource is more efficient
- Scale, geography, localism – State of Environment on a more local basis
- New ways of presenting data and telling a story about the Scottish Environment – figures, photos etc
- Needs to “add value” to what is currently available
- Local information will engage local communities
- Lead in Europe
- Share template for web
- Provide tools for local reporting
- New ways to measure response to web
- Provide info on policies to change the environment – demonstrate action
- Avoid duplication and identify data no longer required
- Provide data in raw GIS form
- Very strong educational tool
- Good meta data required
- Link into other initiatives? Euro portal Management of local info

Threats

- No single ownership – who is ultimately responsible for maintaining the site, content management, ensure disaster recovery, monitor data quality, etc?
- In the current economic downturn recommend that project activity is of real benefit to participating organisations and can demonstrate value for money
- Insufficient buy-in
- Integrating social & economic data is difficult
- Some people misuse data, e.g. Single issue campaigners (however group consensus was that we live in a ‘data-age’ and have to facilitate ‘mature’ public access to environmental



information)

- Potential to set high public expectations through public survey e.g. public may expect to see 'pet issues' represented at a national level (need clarity of purpose of the public baseline survey).
- Focus on Scotland's environment (excluding UK)
- Join up with systems and technology – out with Scotland
- Good meta data required
- Link into other initiatives? Euro portal
- Management of local info (who is responsible for this)?
- Shut down other innovation systems if not linked in
- Increase in expectation of more action, as a result of more data
- Prioritise as budgets get tighter – can all partners contribute as expected? Is this work a priority for everyone?
- Analysis of data by lots of different users
- Robustness of data in the public domain
- Time bound data (snap shot access to info), different data sets might be recorded over different time periods
- Licensing and cost of accessing private sector data
- Managing private sector data – IPR boundaries
- Lots of existing web sites – will this further clutter the environmental data web landscape?
- More resource will be required for local reporting



Annex 5 – Environmental Topics and Categorisation (Workshop 2)

Environmental Topic	Data Theme	Good	Ave.	Poor	Notes
SW/Public investment and the Impact it has had on environment and human health in Scotland *	water				
What are the impacts and outcome of agri-environment schemes?	agriculture			✓	
What are the impacts and outcome of agri- environment schemes for designated site?	agriculture		✓		
Invasive non-native species distribution and abundance	species		✓	✓	
Quality/condition of habitats outside designated sites	habitat				
Habitat connectivity	habitat			✓	Can it be mapped? Link to National Ecological Network?
Environmental health	health		✓		
Native and Ancient woodlands	forestry	✓			Condition, A.W. loss/changes, habitat networks good information by 2013/2014
Ecosystem Services	ecosystems services			✓	Mapping and qualitative ranking
Status of all pollinators in Scotland	biodiversity		✓	✓	Not just honeybees
State of Scotland's (anthropogenic) urban and peri-urban environmental.	biodiversity		✓		Soils : impact regeneration/brown fields development and regeneration – data sets, E.g. biodiversity on eco-systems services
Anglers Monitoring Initiative	species				Extent of invertebrate surveys + distribution; findings and results of survey
Invasive and non invasive species	species		✓		Distributions, management and survey coverage, trends in distribution, data -patchy but improving
National/Regional summary analysis of electro – fishing survey/fish population	species	✓			Data good, good coverage, standard method, standard storage database
List of environmental data required to make improvements (CAMERAS)	other			✓	
“Citizen” collected data.	other	✓			
Why is CO2 but not part of the air quality monitoring systems?	air				
Type – Amount quality of derelict/underused land used with cities and potential for restoration	land and soils				



Collate measures of food security in Scotland	food				Data sets: food production, food waste - home/industry, food losses in the field, food consumption, land use for food
Effect of the SG renewable energy policy on the marine environment data: average?	marine			✓	
Illegal waste and impact of pollution incidents	resources			✓	
SEPA holds environmental emissions data on regulated entities, Scottish Pollution Release Inventory (SPRI)	industrial emissions		✓		The detailed data inputted by registered users may be comprehensive but access and overall analysis of the data is not very public/user friendly.
Health data (life expectancy), illnesses at local area level to plot against environmental "bads", *	health				E.g. pollution sources
Nitrogen deposition	land and soils		✓		
Mortality of quarry species (hunting)	species			✓	
Impact of coastal seabed trawling.	marine			✓	
Scotland's peatland especially carbon storage.	land and soils			✓	
Linkages of health (in social deprivation) with soil quality, air quality. Data sets .	health		✓	✓	
Climate trends,	climate change	✓			Good, just for data on climate
Climate change,	climate change	✓			
Weather patterns/trends	climate change	✓			
Climate change impacts (interpretation)	climate change		✓		Good, but not clear on causes of climate change
Rare species,	species	✓			Information on birds is good, but other species less so
Common species	species	✓			
Invasive species	species		✓		Average data, measuring more and more and likely to increase amount of available information
Land use and land management	land and soils	✓			Good information on land cover, less on how it has changed. There are data sets on agricultural uses e.g. what is grown on the land. Spatial element is missing, limited access to information on where agri-improvement actions have been carried out



Landscape character,	land and soils	✓			Complete data set. Historic land use mapping is good
Vacant derelict land,	land and soils	✓			
Ownership of land	land and soils			✓	
Urban green space	urban		✓		Average, as quality is not great
Urbanisation impacts	urban			✓	
Townscape quality and character	urban			✓	
Water amount	water	✓			Flow data used by fishermen
Water quality	water	✓			We have a large area of water and good data
Bathing water	water	✓			Linked to tourism, recreational information user
Recreational Woodlands & forests	recreational	✓			
Recreational Paths, sites	recreational	✓			Core path networks, cycle paths
Food production	food	✓			
Food quality	food		✓		E.g. nutrient levels, bacterial levels (need to be careful with regards to the relevance of this data)
Health	health	✓			
Health linked to environment	health		✓		
Ecosystem services	ecosystems services			✓	
Biodiversity	biodiversity		✓		
Subsurface biodiversity	biodiversity			✓	Poor, know very little about life below the surface
Wider countryside biodiversity change (especially at local level)	biodiversity			✓	Difficult at local level, information on particular species may be good, but not holistic local picture
Habitat quality	habitat			✓	Hard to access information on interconnectedness of habitats. Good on protected areas, but do not understand the areas in between, when trying to make a decision about whether the habitat should be preserved.
Air Quality	air		✓		A lot of it, but of average quality



Built heritage environment	buildings	✓	✓		Linked to townscape quality, a lot of data
Use of natural resources	resources		✓		Average but could be better. Natural resources includes air, water, woodland and forests, ecosystem services
Material resources (waste)	resources	✓			Statutory waste data is good
Environmental issues that impact on quality of life	quality of life		✓		Data is not very robust in terms of the link between environment and QoL
Quality of life, Well being – deprivation, housing stock, impacts	quality of life		✓		
Quality of life, Local facilities and services – schools, supermarkets	quality of life		✓		
Quality of life - Sense of place	quality of life		✓		
Quality of life - Wellbeing	quality of life		✓		
Public attitudes, public desire for information*	other				Information on perceived value of the environment (SNH). Need to ask different questions - what do you want from the web, what do you want to know about the environment. Will this be a push or a pull website, how do you get the big impact. Needs to be a balance about what we think people should know, and what they actually want
Noise	noise		✓	✓	Local information on usual noise is good, e.g. noise maps, local authority complaints, traffic noise. Changes in rural noise e.g. wind farms and new sources of noise is poor
Sea bed data	marine			✓	Poor but getting better
Sailing environment – marine maps	recreational			✓	anchorage, location of fish farms and environmentally sensitive areas, environmental data that will inform the "users" of the environment. Possible development of an environmental marine/sailing app
International comparisons	other			✓	Benchmarking in general is poor
Transport (accidents and traffic flows)	transport	✓			Complete data sets, well presented
Environmental health benefits	health			✓	



Environmental rating for locality – but not easy to translate into a quality index	other	✓			
Recreational / environmental resources	other	✓			
Waste	resources	✓			
Climate Change	climate change		✓		
Soils	land and soils			✓	
Biodiversity	biodiversity	✓	✓	✓	Variable dependant upon taxonomic group, location, skill base for identification (eg. Fungi / lichen)
Habitat loss	habitat			✓	
Species diversity	species	✓	✓	✓	Variable dependant upon species
Environmental recreation	recreational	✓			
Local development plans	planning	✓			
Discharge consents	industrial emissions	✓			
Light pollution	light		✓		
Noise mapping	noise		✓		
Fisheries / marine resources	marine		✓	✓	Fisheries data historically politically sensitive – other marine resource data variable
Protected species	species	✓			Hierarchical access, e.g. 1km2 2km2 10km2 50km2 100km2)
Ecosystem services	ecosystems services			✓	
River & coastal erosion	land and soils		✓		
Landslips	land and soils		✓		
Local data gaps	other		✓		
Non native species	species		✓		

**Note some topics cannot be categorised due to insufficient knowledge of data holder etc*



Annex 6 – What Can SEWeb Do For You – Sector Discussions (Workshop 3)

Public Sector	
Scottish Enterprise	<ul style="list-style-type: none"> - Opportunity to join up with Business Gateway – single portal for business advice and support in Scotland - Link to Environment & Efficiency pages : http://www.business.scotland.gov.uk/bdotg/action/layer?site=202&topicId=1079068363
Scottish Government	<ul style="list-style-type: none"> - Land Use – commitment to provide land use information and land use strategy, role for communities to contribute to land use debate and decision making - Citizen Science – query information/format? if we use SEWeb, there is no need to develop a separate tool. - Climate change adaptation – engaging with communities, help to change behaviours to support CC adaptation - Performance Indicators – what will they be? What will be the measures of success/progress?
Local Authorities	<ul style="list-style-type: none"> - Planning – possibly a time saving tool, but already have in-house experts and a high level of inter-operable data. Not too clear where SEWeb will add value to current information Local Authorities hold - NBN – national gateway, “record-it” information-National Biodiversity Network - Local info - Potential mechanism to present local info. Ref. to “fix my street” and noise/air quality phone app’s to collect/present local environmental information - Prioritise – sort out the national database first, before dealing with local environmental information - Development Plans – some local authorities have live, updateable, online constraints maps. - e.planning – consents information - EIA’s – copyrighted. Only public information during the planning assessment. Not necessarily publishable.
SNH	<ul style="list-style-type: none"> - A lot of web based data reporting is available already – “eyespot”, “record it” etc which have a good link to citizen science projects
Transport Scotland	<ul style="list-style-type: none"> - Noise level assessments (road) developers, useful information for the public - Can provide data on – accidents, noise, traffic, land slide - Robust information is essential – range of different interpretations of info, to engage with different stakeholders - Business case for selling the SEWeb concept internally to TS which provides opportunity to engage with the public, academics, scientists and respond to environmental status
Forestry commission	<ul style="list-style-type: none"> - SRDP – layers + constraints and developments. - A record of planning permissions and outcome of the planning decision would be useful (if a development has occurred following planning approval) - Data on woodlands – 5-10 years behind
Education Scotland	<ul style="list-style-type: none"> - Very powerful educational tool - Spottfire – good for geography, analytical skills, science evidence skills – covers all educational levels - Citizen science – ownership of information is a motivating factor. Very important to



	<p>provide feedback to the public on how their information is being used</p> <ul style="list-style-type: none"> - SEWeb could promote e.learning tools and events
NHS	<ul style="list-style-type: none"> - Supportive of SEWeb, but more thought required on how it would add value specifically to the NHS - E.g. mapping bacterial content of water, reductions in air quality etc which could be linked to localised health issues. - Potential to develop environmental health hazard maps – correlate health and environmental reporting trends
General data discussion	<ul style="list-style-type: none"> - How much historical data will SEWeb hold? - SEWeb will not be a be a data repository – it will be linked to the data held by partners (which is often only current data) - Layered data maps – potential to look “back” and develop future trends from historical data - Who will be paying to provide the data to SEWeb in required format as it will not be covered by the Life+ funding. Do partners have the resources to do this?
Third Sector	
What can SEWeb do for the third sector?	<ul style="list-style-type: none"> - Raise volunteer effort & profile of the organisation - Showcase long term monitoring - Feedback to the volunteer where their input has been used & appreciated - Analyse other data - Identify where there is insufficient info / effort in monitoring and focus future resources to gaps, e.g. Scotland's Rural Development Programme. - Improve analysis of data - Distribute own data more widely - Raise profile of organisations (publicly & politically) - Be better informed when making representation to public sector (ie. More authoritative individually reflecting better access to wider info sources) - Get our data / information used by the public, primary & secondary school education sector - Help organisational engagement with the public - Increase membership - Improve the environment - Improve accountability, scrutiny & transparency of own and others activities / value for money - Promote environmental improvements / celebrate success - Reach a wider audience & involve the media
What are the priority topics for this sector?	<ul style="list-style-type: none"> - Conservation of biodiversity – optimise public spend, identify & steer resource allocation towards important gaps. Improve scrutiny & transparency of activity to drive up cooperation & value for money. Use SMS to help fill info gaps. Improve visibility / awareness of biodiversity in urban areas – use cutting edge planning to facilitate urban communities connecting with nature. - Raising awareness of environmental issues – public, children, SEWeb can be used as a tool to educate & engage. Changing citizenship & improving proactive behaviour. SEWeb has great potential as a tool in the primary & secondary education sectors through the Curriculum for Excellence and science projects. - Integrate conservation management with other land-use sectors, particularly



	agriculture. Focus on the landscape / catchment scale of impact & improvement.
How do you see your role in developing SEWeb?	<ul style="list-style-type: none"> - RSPB noted support for sharing information they hold with SEWeb Life project. - Organisation data units should talk to each other to improve compatibility of data. Data compatibility may require resources. - Assist in building as complete a list as possible - Build upon work of NBN. - BTO maps – technical feeds to SEWeb. - Help define outputs. - Engage the sector to shape the project. - Contributing to steering / working group to further define SEWeb delivery for their sector → deemed to be required urgently - As a customer of SEWeb – help to direct development. - As a recipient of IS support
Science and Research	
	<ul style="list-style-type: none"> - Useful to provide a layer of monitoring sites across Scotland - Needs to become the place to find and showcase your data and this would drive academics to “display” on SE Web - Need to avoid being a “dumping ground” for data - SNH Habitats map is a perfect complement to SEWeb - BGS iapp to allow geology to be “draped” over image - Agricultural census data (at least 4 years of data) could be utilised on SEWeb - Keen to maintain a Science and Research topic /advice group - Health data could be linked to the environment as a way to engage the public - It is important to ensure the correct prioritisation of resources - Useful to develop a water balance counting model for Scotland - Useful to provide a tool for dedicated data provision as if you can get people/organisations to provide information then it can share workload in addition to giving a platform and an incentive to participate. - Must ensure that the project does not just engage with the “usual suspects” - A champion for local authority involvement eg to establish the data that each local authority holds and encourage wider mobilisation (either through web services from the individual councils or though the NBN for biodiversity data). - A champion for school education - subjects such as Managed Environmental Resources (MER) are now quite popular in Scottish schools. In fact, so much so, that this subject is currently being recast as Environmental Science. The SE web has a huge amount to offer this topic and also related disciplines, such as geography and biology. Primary schools are also required to cover science and environmental topics in quite a detailed manner. - Water Framework Directive dataset work. SEPA, SNH and Forestry Commission Scotland already hold relevant data and this is shared and exchanged between each organisation. The information already exists to a large extent. This project could make sharing of the data much easier. Data would cover things like water dependent Natura 2000/SSSI sites, alien species data, measures being taken by partner organisations, pressure information - Group was keen to remain involved possible as some for on line forum or network

