Project Briefing Note – July 2014

1. Aim

Scotland's Environment website aims to be the "trusted" gateway to everything you want to know about Scotland's Environment, bringing together the most up-to-date environmental information and data in once place, so that it is easy to find, view, analyse and interpret. The Scotland's Environment Web project is a multi-agency innovative partnership that is moving to a web based, dynamic, digital approach to providing access to data and information held and managed by a wide range of organisations across Scotland.

2. Objective

The project will do much more than provide access to data and information on a website. This current phase of the project (up to August 2015) will extend the partnership of data providers, develop innovative tools and applications, improve data usability and connectivity, and establish a user focussed website that will:

- Provide a platform for shared services that will achieve efficiency savings to the data provider and data user, by developing a range of online applications and web tools to facilitate quicker and easier access to environmental information and data;
- Deliver a single point of access to environmental data and a single "authoritative" view of Scotland's environment, and will streamline reporting to Europe;
- Improve sharing, analysis and presentation of environmental information through an enhanced network of partnerships between interested organisations, businesses, groups and individuals;
- Improve understanding of Scotland's environment through new data presentation, visualisation and analysis tools;
- Improve methods of identifying and prioritising environmental problems, and targeting measures to manage and improve Scotland's environment; and
- Seek to actively involve the public, schools and academics in developing understanding of the environment and improving the way we protect it through citizen science, action and behaviour change.

Scotland's Environment Web is not a data repository. Through a common approach to open data standards (e.g. INSPIRE for spatial data), Scotland's Environment website provides a one-stop-shop to help users find and access the extensive range of information and data that is currently spread across multiple organisations and many different websites. Scotland's Environment website will help users to:

- Get Informed - about the State of Scotland's Environment and the data (trends and indicators) that underpins the assessment;
- Get Interactive - with different data sets through analysis and visualisation tools that will improve understanding;
- Get Involved - in discussion, monitoring and action; and
- Get Communicating - to find out the latest environmental news and share information through social media on environmental topics of interest.

3. Key deliverables and notes

Streamlined and easier access to multiple sources of information/data

Launched a new "user focussed", connected website (5th June 2014)

We've listened to users' feedback
http://www.environment.scotland.gov.uk/media/26612/Scotlands-Environment-Abertay-Visioning-Report.pdf and made some exciting new changes to Scotland's Environment website, which offers a range of benefits to both the general public and environmental experts by providing:

- A trusted source of Scottish environmental data and information
- One-stop-shop gateway to help search, find and access data and information, avoiding the need to search multiple different websites
- It's the only place users will get a single and authoritative view of Scotland's environment in the one place with the ability to view, analyse and interpret multiple data sets, published by a range of different organisations
- The ability to search and view environmental data at different scales from the whole of Scotland right down to your local authority area and postcode

http://www.environment.scotland.gov.uk/media/62101/SEPA-View-RHS-2014-SEWeb.pdf

Linked data and streamlined data reporting

Developing a Regional Shared Environmental Information System (SEIS) with Scottish Partners and Europe (European Environment Agency), with the aim of streamlining reporting obligations. Benefits of SEIS include : Better Regulation, Better Policy; Empowering Citizens; Simplification and Efficiency; Intelligent e.services

Strategic Environmental Assessment, Environmental Impact Assessment, Prevention and Management of Environmental Risks/Harms, prioritising Environmental Issues. Streamlined linked data sharing and reporting within Scotland, to other UK agencies and UK Government and Europe will be considered by this work (e.g. currently working on Water Quantity, Emissions Reporting, and exploring Biodiversity data with SNH)

Linked Data reporting – looking to the work of other agencies (UK and Europe - for example, the Environment Agency bathing waters linked data), and to demonstrate opportunities of developing this in Scotland/for SEPA. The LIFE+ Project has funded the establishment of the technology (first trial using Water Framework Directive -http://data.sepa.org.uk/doc/water/surfacewaters.html), now looking for other datasets. The Project is leading the way on linked data systems development and expertise within the Scotland's Environment Web partnership and held a knowledge sharing workshop on Linked Data.

Academic research search tool

Co-funded partnership project between Scotland's Environment Web and Dot.Rural to develop a product with Aberdeen University that will use Scotland's Environment website to develop a new search tool that will expose more academic data, research and expertise to non-academics.

This fits well with a new requirement that all research council funded research will need to publish all data as Open Data as well as the research publications (as of 2014 onwards). This should result in much more accessible research data for Scotland's Environment Web to consume and present to a wider network of users. The tool will also provide useful information back to researchers on the reach and impact of their research in the non-academic community.

Data presentation, visualisation and analysis to support policy and decision making

Spatial Data

Over 300 spatial data sets are now viewable on the Scotland's Environment Web Map View, with new functionality including 4 different base layer map options including aerial photography and a geolocator that picks up the users GPS location to search for localised spatial data.

http://map.environment.scotland.gov.uk/seweb/map.htm

Land information search

A collaborative partnership project with SNH, Forestry Commission Scotland and SEPA has developed a new interactive land search mapping search tool that enables the querying and reporting of features which fall within a user defined polygon search area and will produce a report derived from a spatial search of over 30 different data sets published as web map services by multiple partner organisations.

http://map.environment.scotland.gov.uk/landinformationsearch/lis_map.html

The intended use of this first phase is aimed at the existing Forestry Commission Scotland customer base, plus wider agricultural and moorland management stakeholders e.g. landowners, agents working on behalf of land owners, public sector or industry representatives searching for information required for an Environmental Impact Assessment, land and forestry agents applying for Scottish Government (and other) grant funding, and interested members of the general public.

The land search application has taken a shared service approach to development and aims to streamline and improve access to the environmental information that will in turn improve the quality of applications made by developers. Further iterations of same tool for different user groups are planned (e.g. wind farm applications and environmental risk assessment by regulated industry)

Data Visualisation

Scotland's Environment Web has invested in a visual data analysis tool, Spotfire, which can rapidly read data sets published as a web service by multiple data providers. It allows users to interactively interrogate data using various forms of presentation including maps, tables and graphs. All data viewed by the application can be exported for use in reports and presentations.

Spotfire applications on Scotland's Environment website will provide users with a platform which will allow them to analyse and view multiple levels of data on the environment, allowing them to filter the information (by spatial area and data complexity). Current applications available are:

- Household Waste
- Water Body Classification
- Bathing Waters
- Climate trends
- Native Woodland Survey of Scotland (NWSS)
- River Basin Planning, and
- Scottish Climate Projections

These will soon be followed by Groundwater, Surface Water and Scottish Pollutant Release Inventory.... and more.

http://www.environment.scotland.gov.uk/get_interactive/discover_data.aspx

Indicators and Data

This will provide access to the wide range of data sets, held and managed by different organisations, that underpin the State of Scotland's Environment assessment. Making data more transparent, and more useable with different viewing options (raw data tables, maps, data visualisation graphs), and features such as data download, and upload of new data sets that can help to fill any identified data gaps. In 2014, Scotland's Environment website will host the Scottish Government's Scotland's Environment Statistics Online (SESO) – consisting of around 100 datasets. Alignment of Scottish Indicators with European Environment Indicators will also be made during this year.

http://www.environment.scotland.gov.uk/get-informed/indicators-and-data/

Prioritisation of environmental issues and measures

State of Scotland's Environment

Multi agency collaborative approach to assessing and reporting on the State of Scotland's Environment. Scotland's Environment website provides the "authoritative" view of Scotland's Environment in one place. 27 Environmental Topics written by experts from key environmental organisations from throughout Scotland.

http://www.environment.scotland.gov.uk/get-informed/

Prioritisation of Key Environmental Issues for Scotland

The project has engaged with ~140 experts from across Scotland to assess the State of each of the State of Environment topics and the drivers and pressures that put them in that state. The output is an assessment of each topic.

There is an opportunity to use the Scotland's Environment partnership to identify multi-agency strategies for action and intervention measures (Christie Commission)

Effectiveness of measures

This area of work will be carried out during 2014/15 and will work with partners to develop an understanding of the costs and effectiveness of measures and interventions which are undertaken to protect and improve the environment.

Measures to be assessed will include regulatory/enforcement intervention, advice, guidance and engagement with customers including NGO's and the public. The proposed approach has four elements:

(i)   Developing a simple toolkit following a literature review
(ii)   Applying the toolkit – SEPA will run a trial to assess the effectiveness of SEPA's measures.
(iii)   Developing case studies
(iv)   Reviewing effectiveness of measures across Europe (focussing on Air Quality)

Engaging with the public

Public and Youth Discussion

A key objective of this project is to engage the public and young people in the protection of the environment and thereby improve their understanding of environmental issues. The intention is to explore how this might help lead towards behavioural change.

http://www.environment.scotland.gov.uk/get-involved/the-big-discussion/

Scotland's Environment Web worked with IPSOS Mori (social research experts) on engaging the public in discussion about environmental issues and assessing how they respond to different forms of information and discussion techniques.

A toolkit has been produced to provide support and guidance to other organisations who are seeking to engage the public in environmental discussion.

The Youth Discussion competition closed on 31 March 2014, with over 100 entries received from schools, youth groups and individuals from across Scotland. The majority of entries have come from primary aged groups. Entries can be viewed at www.youngreporters.org.uk

Awards ceremony was held on 17 June at Our Dynamic Earth, Edinburgh. Young Scot co-ordinated the organisation of the awards ceremony that was run by and attended by young people from throughout Scotland.

Citizen Science Toolkit

Pulls together a number of freely available resources for volunteers and organisations to use as part of their citizen science project. A quick summary of each tool and an example of how other projects have used them successfully is provided.

http://www.environment.scotland.gov.uk/get-involved/toolkit/

Citizen Science register – "Project Finder"

An online searchable register of citizen science projects active in Scotland has been developed, providing information on the scope, geographical coverage, target audience etc. It is intended to provide a "one-stop-shop gateway" to help volunteers find projects of interest. It is intended that the register can also help projects to "advertise" for volunteers, and for potential volunteers to see what projects are running (at a national and local level), providing a "match making" online platform to facilitate contact between projects and volunteers.

http://apps.environment.scotland.gov.uk/project-finder/

Citizen science projects – INNS and Air Quality

Investigating the benefits and issues relating to bringing together data produced by agencies and Scottish Government, and data produced by citizen science projects. Two projects are currently under development in the areas of:

- Air quality – two air quality monitoring trials are completed. One involving school children monitoring pollution at the school gate, the other monitoring air quality by cycle couriers. The project reports are viewable (Air Quality Citizen Science) http://www.environment.scotland.gov.uk/about-us/lifeplus-project/lifeplus-project-news-and-updates/
- Scottish data entry portal for Invasive Non-Native Species (being developed with Non-Native Species Framework of Responsibilities Group and Scottish NNS Working Group)

Environmental Education

Scotland's Environment Web is co-funding an Environmental Education/Citizen Science development officer post with Education Scotland. The officer will be working on:

- Structured engagement with schools to shape Scotland's Environment Web Product development to meet needs of schools including for national qualifications
- Support for extension of citizen science project to 15+ local authorities ensuring that sustainable structures are created within each authority
- Liaising with Citizen Science Steering Group to form high profile national campaigns to encourage participation in citizen science activities and use of Scotland's Environment Web
- Support for new citizen science/ Scotland's Environment Web pilots to encourage innovative use of the website and products and to model for others how it can be effectively used to support learning and teaching.

What's In My Area?

Further develop the existing Scotland's Environment Web post code map search, to develop "What's In My Area" (WIMA) where users can view a dashboard of local scale information and data, for example:

- information about their local place e.g. outdoor spaces or historical buildings to visit
- the state of their local environment e.g. quality of local rivers
- information on where to go to enjoy the environment e.g. local path networks and clean beaches
- what activities are happening in their local place e.g. citizen science and action projects.

Communicating

Social media and mobile technologies

Digital technologies have developed at increasing rate and uptake across the UK. Digital media, and particularly social media, are now key components of the communications mix and must feature in any effective communications delivery plan.

Social media is an extremely powerful tool for increasing web presence and engagement with potential users. Currently nearly 60% of people, over the age of 16, in the UK are members of and regularly use some form of online social network (e.g. Facebook, Twitter etc.). This rises to 94% for those aged between 16 and 24 (ONS 2011). The need for information 'on the go' forms part of many people's everyday lives now with the rise of smartphones and tablet computers. In Scotland, 43% of all adults now own a smartphone, with the 15-24 year olds having the highest uptake. During 2014, the use of mobile devices to access information on the web will overtake the use of desktop computers.

Scotland's Environment website has created a one-stop-shop mobile app recommended list for users.

http://www.environment.scotland.gov.uk/get-involved/

The Project is also growing its social media profile, to extend the reach and scope of Scotland's Environment Web communications and key messages to 1000's of social media users e.g. through Facebook and Twitter. The new website has also been design with mobile device users in mind, and the format of the pages render themselves to suit the mobile device that the website is being accessed from.