Scotland's environment EcoHack

About

[Scotland's Environment Web](#) wants to help people discover and understand more about the environment. Environmental data is really important – to provide context to reports on the state and quality of the environment, to improve our understanding of the challenges and opportunities our environment faces, and encourage communities, school children and individuals to investigate their own local environment further, observing what is happening around them, collect their own data and take action to protect and improve their local environment.

Data can help us in this journey of discovery and understanding. We are looking for fresh new innovative ideas to make better use of available data, to collect new local environmental data that can help further our

understanding, and encourage people to get interested and get involved in Scotland's Environment – observing, monitoring, taking action, and educating.

Challenge

What makes a good Hackathon Idea? Whilst it's the idea that counts rather than having a finished product by the end of the event, your idea should focus on a concept that the judges think has real potential to ultimately be developed into a working product. We want you to think about who your target audience is, come up with solutions that could easily be used by them and can make a real difference in helping people to observe, monitor, take action and educate about the environment.

We're holding a Hackathon with prizes for :

- Innovative data mash ups to explore new data relationships to help analyse the state of our environment and the impact it has on us
- Infographics, visualisations and games using data to help explain environmental issues and/or view 'my environment'
- Prototype designs for new data collection and data entry equipment/apps

In particular, we're really interested in your ideas around the themes of **Climate Change** and/or **My Environment** – but don't worry, if you have ideas on another environmental theme then we still want to see them.

Inspiration and Ideas
We've gathered together some videos and tools to help inform and inspire our students.
Air - <u>VIDEO: Air pollution is one of the biggest risks to human health</u>

Water - [VIDEO: We still need to worry about our water](#)

Soil - [VIDEO: Why are soils so important to our environment?](#)

Education - [VIDEO: Young people and citizen science](#)

Community Engagement - [VIDEO: Why is environmental data so important?](#)

Nature -[VIDEO: Wild Scotland](#)

Sustainability City Visualisation Tool - Abertay - [Sustainability City Visualisation Tool](#)

Sustainability City Visualisation Tool - Abertay - [VIDEOS: Sustainability City Visualisation Tool](#)

Keep Scotland Beautiful - Eco-Schools - [Ten Environment Topics](#)

Climate Change - [VIDEO: What is it? The changes in climate that we are experiencing and the responses of different organisations, businesses and communities.](#)

Climate Change - [How local communities are getting involved and taking action on climate change](#)

Climate Change - [How weather data is analysed to investigate patterns of climate change in Scotland. The Climate Trends handbook](#)

Mobile Apps - [Mobile apps are a great way to get people interested and involved in their local environment](#)

Infographics - A picture says a thousand words: [Air](#)   [Ecosystems](#)   [Land](#)   [Water](#)

Prizes:

- Amazon Vouchers or 12-month subscription to STUFF magazine
- Pebble watches

Resources

The data list is now available to view online. It has been compiled to include data made

available by our partners and also other sources of data available online that have an environmental, social or scientific theme. It is important to note that participants of EcoHack are not limited to the listed data sources. Download the datalist here.

Register

If you're at University and interested in the environment, gaming, app development, graphic design, product development, data analysis, then this event is perfect for you. The event is free to attend and we are looking for you to register as an individual. At the event, you'll get the chance to team up with others (teams of between 2-6). It's a great way of meeting new like-minded people on new challenges.

Sign Up Now

Mentors

Dr Emily Creamer

Emily is a researcher in the School of Geosciences at the University of Edinburgh. She is currently a UK partner on R&Dialogue, an EU project operating across 11

european countries, seeking to widen public engagement in low carbon innovation. **Find out more about Emily...**

Iain Elder

Iain is a software engineer at **skyscanner**, he has five years experience as a data professional with expertise in data collection, data quality management, and automating business processes. He graduated with a BSc in internet computer science from the University of St Andrews and has recently completed an MSc in Business Intelligence at the University of Dundee. At the EcoHack you will have the chance to learn from his technical experience in a fast-moving business, and get tips on how to present your ideas effectively.

Tim Foster

Tim is interested in citizen science, particularly helping with **Clyde River Foundation** website and **OpenStreetMap Scotland**. He is the **SEPA** Ecology Data Manager and has some experience with using R for data analysis and QGIS /postGIS for spatial analysis.

Paul Georgie

Since 2005, Paul has been designing, building and promoting the use of geospatial technologies across low income areas both at home, and around the globe. In 2012, Paul co-authored the Glasgow's winning TSB Future City Demonstrator bid, leading the technology platform development. At the AGI GeoCommunity Conference in 2013, Paul was awarded 'Best Paper' for his designs on the use of GIS for a Future City

Glasgow. His commitment towards community development was recognised in 2014, after receiving Commendation at the Scottish Government's Quality in Planning Awards for a pilot Citizen Science Mapping project in the Carse of Gowrie. When not teaching and building open source geo-solutions, Paul takes to the sky (with CAA approval of course) to 3D survey the world's landscapes.

Patrycja Graczyk

Patrycja is currently working towards completing her MSc degree in Carbon Management at the University of Edinburgh. Her passion for tackling complex climate change issues and transition towards low carbon economy has inspired her to organise a global sustainability jam. Seeing how open data and technology will support this transition is one of the reasons why she is involved with the ecohack. personally patrycja has interest in smart cities strategies, living labs and public engagement in the climate change issues.

John Isaacs

I am currently a Lecturer in the School of Computing Science and Digital Media at Robert Gordon University. My original background is in biology where i first discovered how useful computers were in other disiplines. I then went on to do another undergraduate degree in computing, which progressed into a PhD in interactive visualisation in virtual environments. My main research interest now is in engaging people with the world around them, mainly through interactive visualisation, but i also have a strong interest in mobile devices, web applications and embedded systems.

Billy MacRae

Billy works with the landscape interpretation team at **The Royal Commission on the Ancient and Historical Monuments of Scotland.** His team compile HLA dataset and he is interested to see what happens when new users from various backgrounds get to use our data in novell ways.

Stuart McGrath

Stuart is currently on secondment to **Education Scotland**, national body in Scotland responsible for supporting quality and improvement in learning and teaching, as their Development Officer for Citizen Science. Whilst working in his substantive post at primary school in Stirling, he lead outdoor learning and science and developed the school grounds as a place for learning and teaching. He is currently promoting citizen science within schools, holding professional learning sessions for teaching staff, visiting local authorities and encouraging young people and teachers to collect and engage with data.

Peter McKeague

Peter is the Database and GIS Project Manager at **The Royal Commission on the Ancient and Historical Monuments of Scotland**. He is interested in seeing how people can make use of the wonderful information RCAHMS holds about the archaeological and built heritage of Scotland in new and exciting ways. For instance how historic environment information can be combined with data about the natural environment and ecology of Scotland to encourage its appreciation.

Judges

Tim Fogarty

Tim is the European Commissioner of **Major League Hacking**, the student hackathon league. Every year MLH helps students organise 150 hackathons with 50,000 participants worldwide. Most weekends, you can find Tim at a hackathon, giving a hand to organizers or helping participants with node.js, git, or rubber ducking.

Bruce Gittings

Bruce is a pioneer in the use of web-based geographical information, who is Director of the **Geographical Information Science (GIS)** programmes at the University of Edinburgh. Bruce is also Chair of the **GIS Research UK** conference series, Vice Chair of the **Association for Geographic Information in Scotland** and until recently, Vice Chair of the **Royal Scottish Geographical Society**. Bruce is a regular public-speaker, experienced consultant (working with organisations such as Google and the National Trust for Scotland), has built online services such as the Gazetteer for Scotland, worked with the Scottish Government to demonstrate the benefits of open geo-data and is a capable UAV pilot.

Sally Kerr

Sally is the Digital Services Manager for the **City of Edinburgh Council**. She has a wide portfolio of digital responsbilities which include managing the council's digital estate and its digital strategy. She is the lead for open data. Edinburgh Council is recognised as one of the leaders in scotland for this area and just completed its data portal which will be the gateway to city data,

offering opportunities to share data stories, solutions to challenges and promotion of open data and its benefits. She runs Edinburgh Apps, the council's civic challenge competition where winners have the opportunity to work with the council to deliver their proposals. Sally is keen to promote the importance of sharing data to improve the quality of living in edinburgh for citizen, visitors and businesses and supports sepa's hack as a new example of how this can be done.

Professor Jonathan Silvertown

Jonathan is an ecologist, Professor of Evolutionary Ecology and Chair in Technology-Enhanced Science Education at the University of Edinburgh. He has devised several citizen science web projects that crowdsource biological data. iSpotnature.org is a social network that rapidly and accurately identifies observations of any species of wildlife. Half a million observations and 30,000 species have been identified to date. evolutionmegalab.org is an online survey of polymorphism and evolution in banded snails that operates throughout europe. treezilla.org – The Monster Map of Trees – aims to map all the trees in Britain and calculate the value of their ecosystem services. Jonathan is currently working on a new project that will enable students and others to create their own mobile apps based on open and crowd-sourced data of all kinds.

Martin Valenti

With over 25 years' experience in the environmental sector, Martin has worked in the field of environmental and regulatory policy including delivery of major projects with Scottish Government

on environmental noise and contaminated land. More recently, he was instrumental in setting up [Scotland's 2020 Climate Group](#) and served a four-year secondment as project director for the group. Now leading on strategic partnerships for [SEPA](#), working with government and developing political and industry focused networks to deliver on key environmental outcomes, Martin also has a real interest in seeing how future innovators can help Scotland meet its environmental goals, which can only be achieved through involving communities, citizens and school children in protecting and improving the environment. Martin is also a trustee of [Helping Hands Associates](#) who have raised in excess of £350k for a range of local and international charities.

Partners

- [British Geological Survey](#)
- [Centre for Ecology and Hydrology](#)
- [Cleanweb UK](#)
- [Forestry Commission Scotland](#)
- [Historic Scotland](#)
- [Geo Geo](#)
- [The James Hutton Institute](#)
- [Marine Scotland](#)
- [National Biodiversity Network](#)
- [Robert Gordon University](#)
- [Royal Commission on the Ancient and Historical Monuments of Scotland](#)
- [Scottish Environment Protection Agency](#)
- [Scottish Government](#)

- [Scottish Natural Heritage](#)
- [University of Edinburgh](#)

Rules

Before you register for the hackathon, there are some things you will need to know about....

Intellectual property
It's your idea and your work so you have the rights to 100% of everything you create at EcoHack. To be eligible for the competition all code generated from EcoHack should be made available under an Open license that allows reuse and redistribution. The reason for the open licensing of code is because EcoHack is about useful outcomes that anyone can use and build on.

Code and language
No constraints here, you can build in any programming language you like.

Team size
A team must consist of between 2 and 6 people, but no team may have more than 6.

Photography and video
By participating all team members consent to their likeness and voice being recorded by video, audio, photographic or other digital or electronic means. All such recordings remain the property of Scottish Environment Protection Agency.

Personal Information
We will only use your contact details for the purposes of registration, further information and a post event evaluation survey. Your details will not be shared or used for any other purpose and will be deleted after six months. More information on our data protection and

Venue

The Edinburgh Centre for Carbon Innovation is an award winning, green business venue in the heart of the city centre only 10 minutes walk from Waverley Train Station. The unique building opened in 2013 is the first historic, refurbished building in the UK to achieve the building sustainability BREEAM Outstanding Award. The centre offers top-of-the-range technology in first class surroundings with a fascinating and sometimes gruesome history where Mary Queen of Scots and Sir Walter Scott share the billing with tales of murder and mystery.

What will happen over the Hackathon weekend...

Saturday 30th May

Time	Activity	Location
9:00	Get set up, meet and prepare	Conference room
9:30	Welcome, meet the mentors	Conference room
9:45	Formulate pitches/team forming	Conference room
10:15	EcoHack!	The Pod
13:00	Lunch	Break out area
13:45	EcoHack! Continues	The Pod
20:00	Venue closes	

Sunday 31st May

Time	Activity	Location
9:00	EcoHack continues (incl breakfast and lunch)	The Pod/Break out
14:00	Formulate prototype/finish presentations	The Pod/Break out
14:30	Teams have 10 mins to present work +Q + A	Conference room
15:30	Judging begins	
16:00	Awards, prizes and thanks	Conference room
16:30	End of EcoHack	

Contact us

Scotland's Environment Web site aims to be the "trusted" gateway to everything you want to know about scotland's environment,

bringing together environmental information and data in one place, so that it is easy to find, view, analyse and interpret. the scotland's environment web (life) project is managed by [Scottish Environment Protection Agency](#) with support from the [European Commission LIFE Programme](#) , working with [partners](#) to establish Scotland's first environmental data discovery portal, providing access to data and information held and managed by a wide range of organisations.

Please [Contact Us](#) if you have any queries about this event

SinglePaged theme — this site is open source