Slide 1

pGIS tools for applying an ecosystem approach - case study from Strathard using map-me

ialeUK student workshop, May 2016

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Slide 2

Forest Research — The Strathard Project

* Partnership project established in 2015, led by SEPA
* Applying an ecosystems approach to identify natural water and land management solutions in an attempt to reduce flooding and improve ecosystem service delivery
* Improve joined up thinking and delivery
* Co-development of plans with the community to ensure these meet local aspirations as well as Scottish Government goals
* Use this as a demonstration project to develop best practice guidelines

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Slide 3

Forest Research

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2015 Ordnance Survey 100021242

LOCH LOMOND & THE TROSSACHS NATIONAL PARK

Community Partnership boundary
5 km community Partnership buffer

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Slide 4

Forest Research — Mapping cultural values

* Forest Research are working on gathering data on ecosystems (types & conditions), what management is already happening or planned, and what benefits people derive from the landscape
* With this information we will be developing opportunity maps that identify potential locations for action
* We have detailed maps that predict the delivery of some services e.g. carbon and timber, but how do we collect important local information & measure cultural ecosystem services?

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Slide 5

Forest Research — Mapping cultural values

Strathard
a landscape to live, work and play

Calling all residents, businesses, visitors & landowners in Aberfoyle, Kinlochard, Stronachlachar & Inversnaid

Strathard: a landscape to live, work and play is a collaborative initiative giving you an opportunity to influence how the land, forest and water within Strathard is managed.

Drop into the community launch event & get involved!
Community film premiere, interactive workshops & refreshments!
Everyone welcome!

Community Launch Event
Sat 27 Feb 10am –12pm
Kinlochard Village Hall

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Community events

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Slide 6

Forest Research — Community events

What do you envisage for the future of the landscape?

How do you support the landscape?

How does the landscape support you?

What roots your community to the landscape?

Strathard: a landscape to live, work and play is a collaborative initiative giving you an opportunity to influence how the land, forest and water within Strathard is managed.

Strathard: A landscape to live, work and play

What can nature do for us?

https://youtu.be/vML9a1Wu9eU

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Stakeholder interviews

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Community events

Interviews
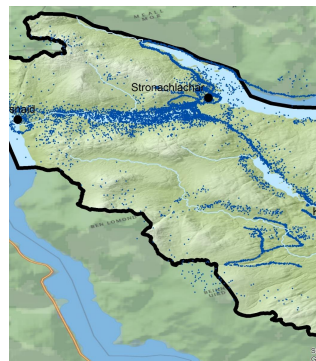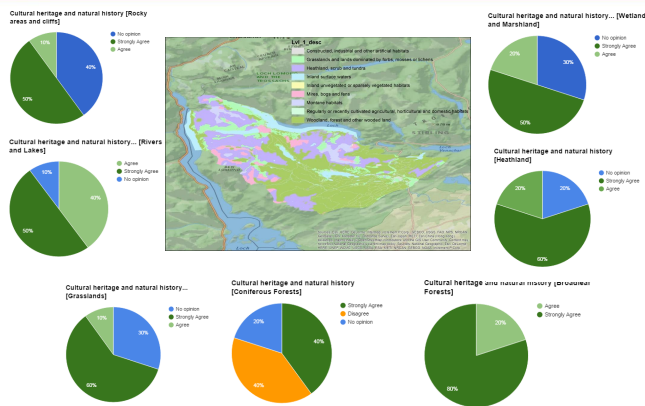

Questionnaire

Strathard: a landscape to live, work and play

Nature provides us with many things, from products such as food and timber; to opportunities for outdoors recreation and benefits that are not always obvious, such as removing pollutants from the air and water. These contribute to humanity's security, health and well-being.

We would like you to tell us what you value about Strathard. The results will be used to help protect and improve the Strathard Landscape.

There are 3 sections to this survey, the first part contains questions about the benefits you get from the different natural environments in Strathard, and in the second section we would like you to tell us about what you value about Strathard. A final short section includes a few questions about you. This has been included for us to check that the reponses are representative of the range of visitors that come to Strathard. This survey should take approximately 20 minutes.

Privacy statement:
Data privacy is an important issue, no personal data that can be used to identify you will be collected.

*This survey works best in Firefox and Chrome. A hard copy is available if you would prefer. Please contact info@thecommunitypartnership.org.uk for more details.
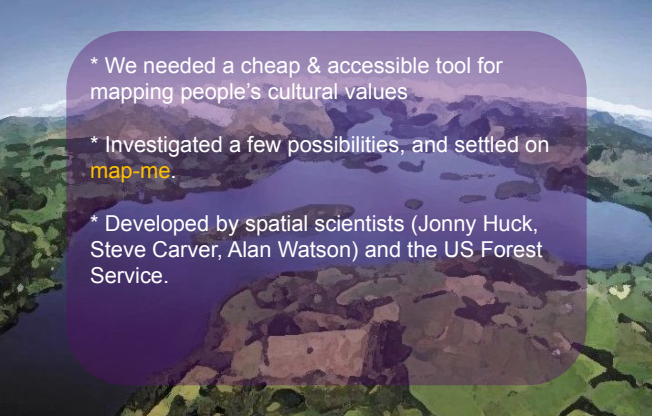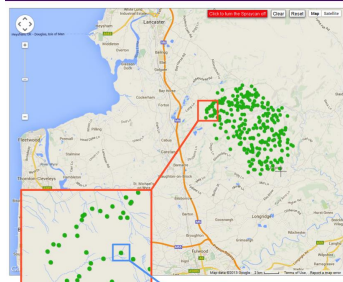
*Required

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Community events

Interviews

Online questionnaire

Questionnaire

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pGIS

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Community events

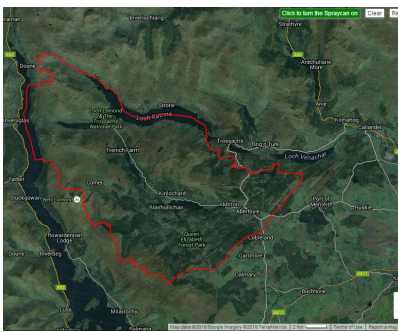**Online questionnaire**

Interviews

pGIS

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pGIS

* We needed a cheap & accessible tool for mapping people's cultural values

* Investigated a few possibilities, and settled on map-me.

* Developed by spatial scientists (Jonny Huck, Steve Carver, Alan Watson) and the US Forest Service.

Map-me

* Online pGIS tool

* Designed to be 'place' based rather than space based

* A 'spraycan' allows users to map fuzzy areas rather than outline specific locations

* Collects information about the spray dot locations & the user

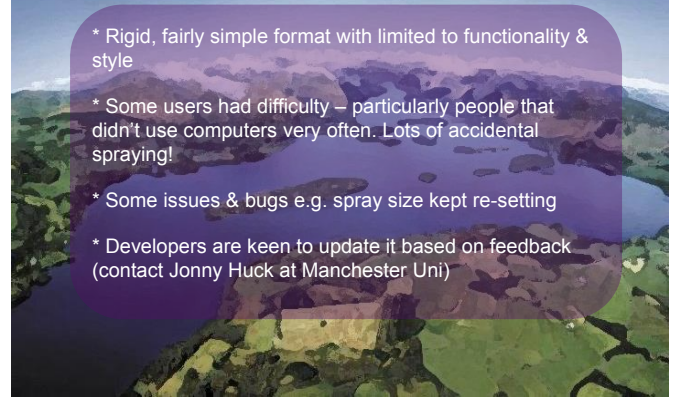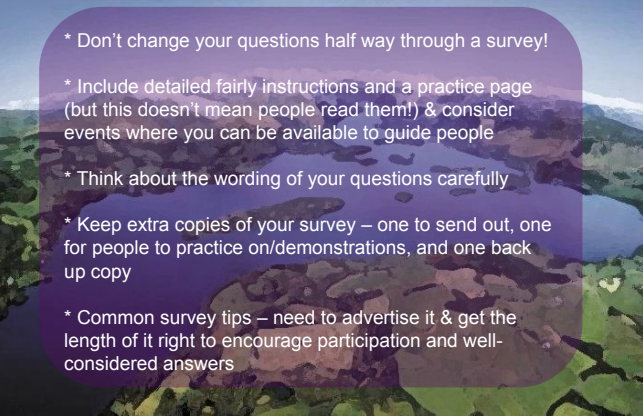* Has been 'set loose in the wild' to uncover its applicability and limitations

Dot	Participant
Latitude	Demographic Information
Longitude	Timestamp
Timestamp	Browser
Zoom Level	IP Address
Map Bounds	Free-Text Comments

Applied Geography 38 (2013) 229-235

Applied Geography

Spraycan: A PPGIS for capturing imprecise notions of place
J.J. Huck, J.D. Whyatt, P. Coulton

Map-me for Strathard

Asked the users to spray on locations…

* Where they enjoy the sights, sounds or smells (sensory)
* Where they carry out recreational activities
* That contribute to their general well-being
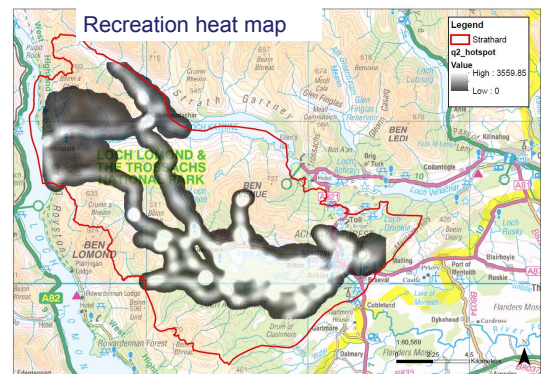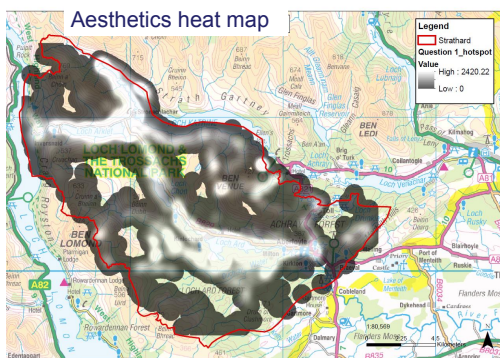* Where they would like to see improvements
* That they valued for other reasons

http://map-me.org/sites/FRSTest

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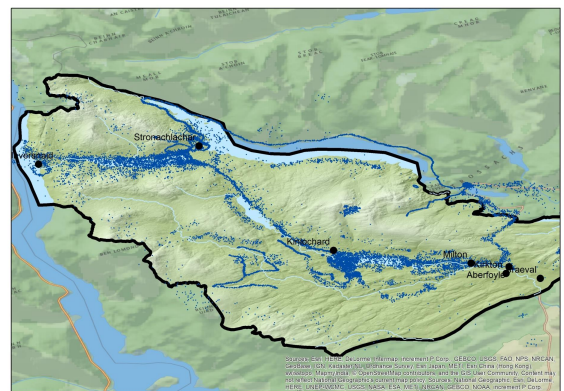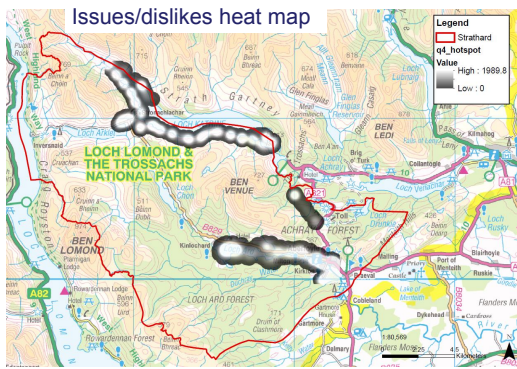
Map-me limitations & issues

* Rigid, fairly simple format with limited to functionality & style

* Some users had difficulty – particularly people that didn't use computers very often. Lots of accidental spraying!

* Some issues & bugs e.g. spray size kept re-setting

* Developers are keen to update it based on feedback (contact Jonny Huck at Manchester Uni)

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Lessons learnt/recommendations

* Don't change your questions half way through a survey!

* Include detailed fairly instructions and a practice page (but this doesn't mean people read them!) & consider events where you can be available to guide people

* Think about the wording of your questions carefully

* Keep extra copies of your survey – one to send out, one for people to practice on/demonstrations, and one back up copy

* Common survey tips – need to advertise it & get the length of it right to encourage participation and well-considered answers

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Map-me Strathard outputs

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Map-me Strathard outputs

Aesthetics heat map

Legend
Strathard
Question 1_hotspot
Value
High : 2420.22
Low : 0

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Map-me Strathard outputs

Recreation heat map

Legend
Strathard
q2_hotspot
Value
High : 3559.85
Low : 0

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Slide 19 — Map-me Strathard outputs

Issues/dislikes heat map

Slide 20 — Map-me Strathard outputs

Slide 21 — Next steps

* Lots of options for further analysis (e.g. using data as inputs to predictive models)

* Natural Language Processing (NLP) tool to identify positive, negative or subject specific comments associated with the spray

* Developing a paper version of the survey for visitors (low take up online from visitors)

* Using the outputs to encourage further participation with stakeholders

* Integrating the outputs in the wider ecosystem service assessment to identify opportunity areas

* Applying it to other projects e.g. perceived biodiversity across Edinburgh for GREEN SURGE

Slide 22 — Benefits

* It's free!

* It's easy and quick to set up & maintain (user guide provided)

* It provides an accessible PGIS format – users just need a web browser

* Fairly detailed outputs are provided

Slide 23 — Have a go!

Do you think you might be able to make use of map-me for your research? It's very easy to set up – have a go!

1. Go to http://map-me.org/
2. Create a login
3. Choose 'create a new site'
4. Start filling in information to create a site (can be for an existing or made up project)
5. Play around with the settings
6. Answer it as a user and examine the outputs