



Haltwhistle Burn PhD Project

Introducing community monitoring

27th February 2014



Presenter: Eleanor Starkey (PhD Student)
Supervisors: Dr Geoff Parkin, Dr Paul Quinn & Dr Andy large
TRT CRF Project Manager: Dr Ceri Gibson

Purpose of my talk tonight

Putting the PhD into context



Progress since last RWG meeting



Community monitoring (“Citizen Science”)



Your monitoring preferences and capabilities

Also: data consent sheet & HB notebook

My PhD research project

“Community monitoring and modelling for catchment management and restoration within the UK”



Artwork by Alex Hall

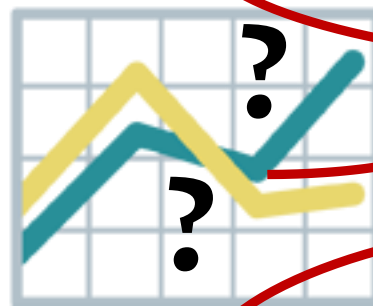


Catchment management and restoration within the UK



3rd February 2014

Weather extremes



**NEED
EVIDENCE
(data)**

“..the highest I’ve ever seen the burn is just 6 inches below the bridge..”



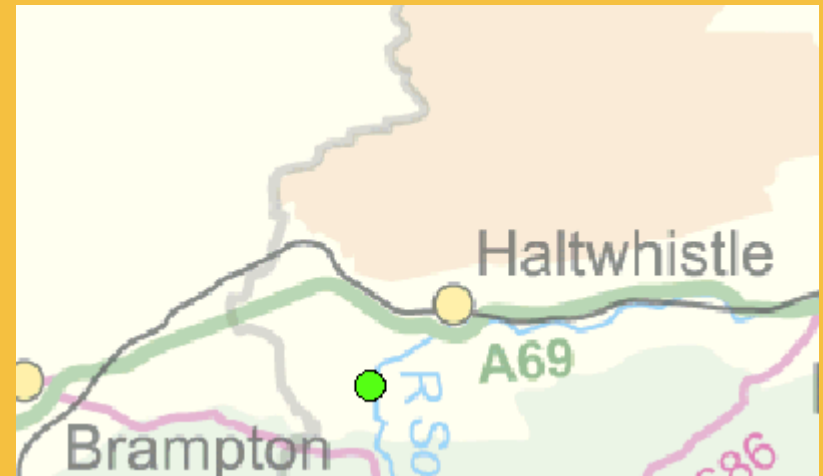
Problems with traditional hydrometric monitoring networks

Advanced technology today but..

- Expensive to buy & maintain
- Travel to get the data
- Poor spatial resolution
- Unlikely in rural catchments
- Who owns the data?
- Is the data used?
- Is the community aware?
- How does the community benefit?



Environment
Agency



Environment Agency
River Level Monitoring
South Tyne @ Featherstone

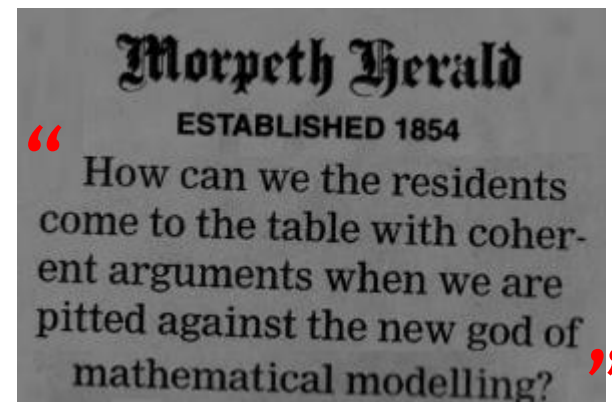
National River Flow Archive
South Tyne @ Featherstone

Problems with traditional catchment-based modelling



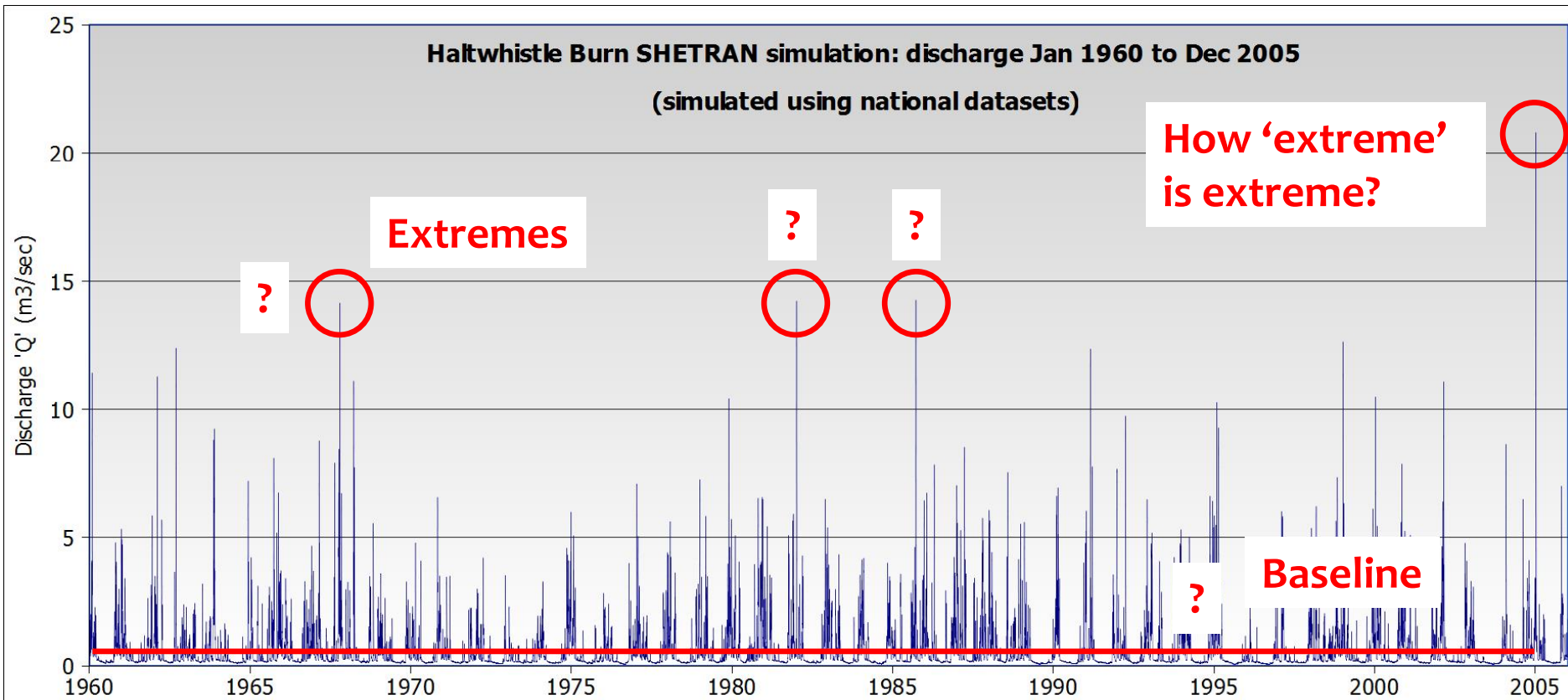
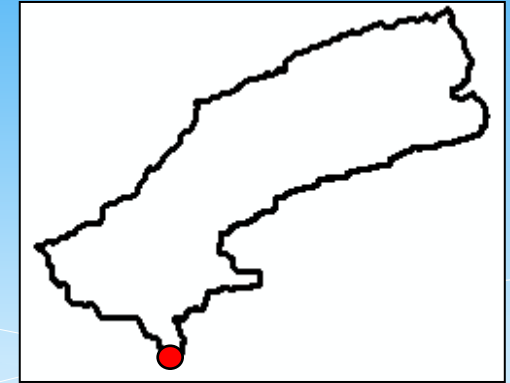
Again, advanced techniques exist but..

- Simplification
- Data intensive (limited in rural)
- Real data required to calibrate
- Modellers are isolated
- Would you understand models better if you were part of the process??



Morpeth Herald 12 December 2013

Problems with traditional catchment-based modelling



‘Local knowledge’ ‘Communities’ ‘Volunteers’.. It’s all contemporary stuff..



Graham Stuart MP @grahamstuart · Feb 7

I'm on @SkyNews at 12.20 @EnvAgency decisions should be made at local level on dredging and flood control. We need 2 harness local knowledge

[Collapse](#)

↩ Reply ↻ Retweet ★ Favourite ... More

RETWEETS

2

FAVOURITE

1



4:01 am - 7 Feb 2014 · Details



Retweeted by Phil Brewin

Farming banter @Farming_bants · 13 hrs

This flooding has brought the Farming community together, and shown what great things we can achieve #Forageaid pic.twitter.com/y9hbWa4edN



Major IzWater (@MajorIzWater)

09/02/2014 20:59

[@Number10gov](#) please get rid of useless Environment Agency and return power to local people who have local knowledge. The EA is a liability.



Allsquare (@mc_dgm)

10/02/2014 11:21

[@meaglemp](#) Local residents in Somerset have far more accumulated knowledge than EA

‘Local knowledge’ ‘Communities’ ‘Volunteers’.. It’s all contemporary stuff..



Retweeted by Flood Volunteers

ravinder singh @RaviSinghKA · 55 mins

My boys helping in the flood hit Burrowbridge last week. Very different and productive half term holidays. Proud pic.twitter.com/tvNFSfstIE



SHEFFIELD FLOOD
RESILIENCE NETWORK

‘Local knowledge’ ‘Communities’ ‘Volunteers’.. It’s all contemporary stuff..



Ethiopia – participatory approach to hydro-meteorological monitoring
(Zemadim *et al.*, 2014)

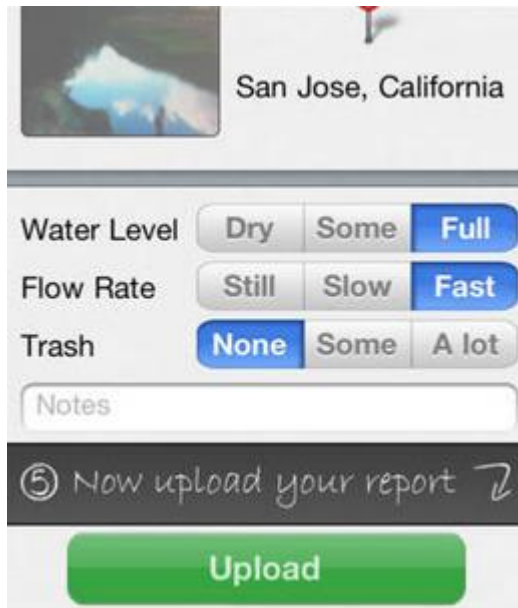
‘Local knowledge’ ‘Communities’ ‘Volunteers’.. It’s all contemporary stuff..



Ethiopia – participatory approach to hydrometric monitoring
(Photos: Dr Geoff Parkin, Newcastle University February 2014)

‘Local knowledge’ ‘Communities’ ‘Volunteers’.. It’s all contemporary stuff..

Creek Watch



San Jose, California

Water Level: ☐ Dry ☐ Some ☒ Full

Flow Rate: ☐ Still ☐ Slow ☒ Fast

Trash: ☒ None ☐ Some ☐ A lot

Notes

⑤ Now upload your report ↗

Upload

CoCoRaHS

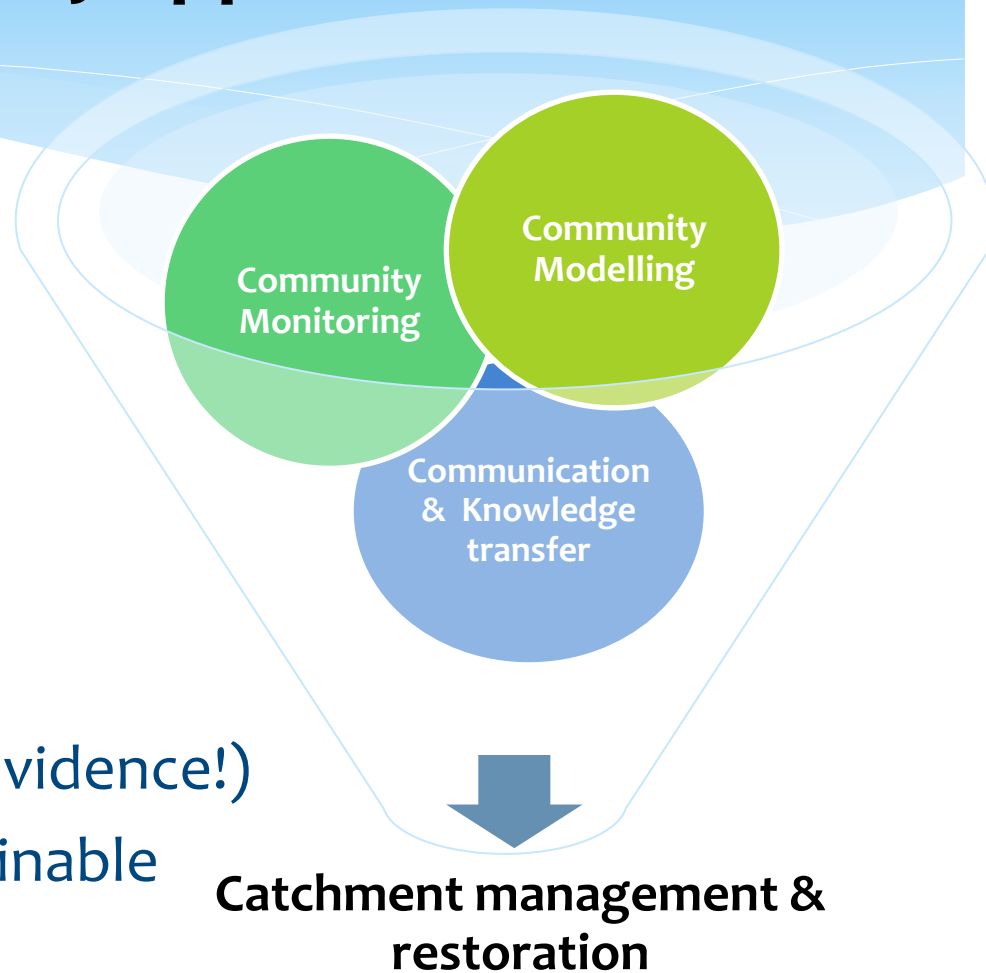


Fluker Post Project

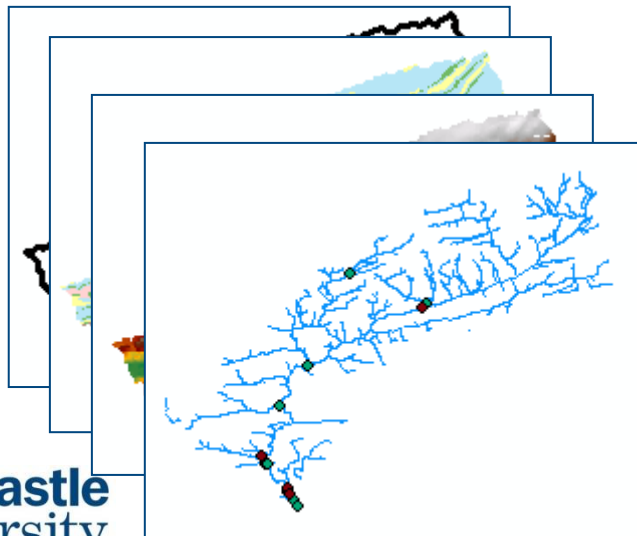
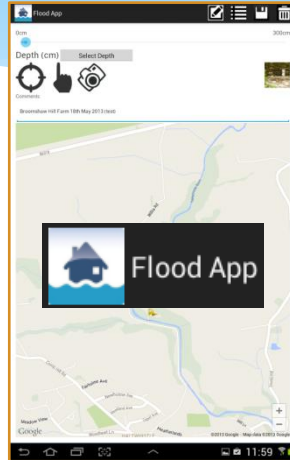


The benefits of 'citizen science' or a 'participatory approach'

- Technology
- Involve anyone
- Public engagement
- Knowledge exchange
- Learning experience
- Simple & low-cost
- Mass participation (lots of evidence!)
- Feasible, innovative & sustainable



Progress to date – Haltwhistle Burn Project



Progress to date – Haltwhistle Burn Project



Retweeted by Haltwhistle Burn



My Weather @My_Weather · Jan 13

@HaltwhistleBurn The #Weather in #Haltwhistle is currently Partly Cloudy and
6.1 Met 5.0 Mph 60% #HaltwhistleWeather



Retweeted by Haltwhistle Burn



Marjorie Baillie @WalkHaltwhistle · Jan 19



westjes @westjes

@HaltwhistleBurn #HaltwhistleBurn #RiverLevel Townfoot 7/2/14
10.17am twitpic.com/duosrc

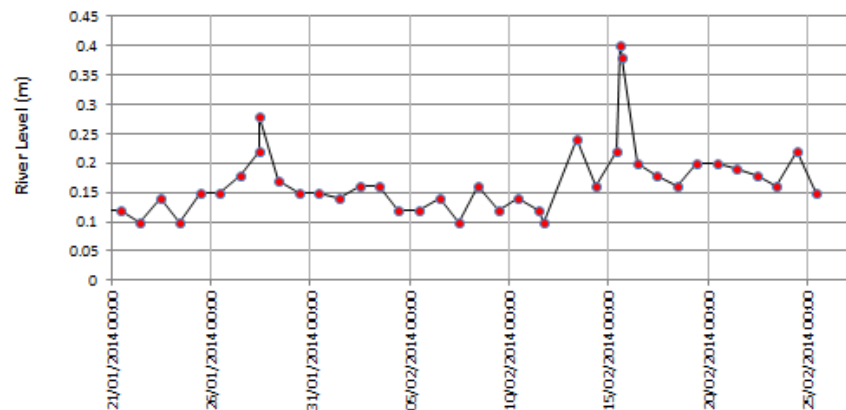
Retweeted by Haltwhistle Burn



Haltwhistle Burn
@HaltwhistleBurn

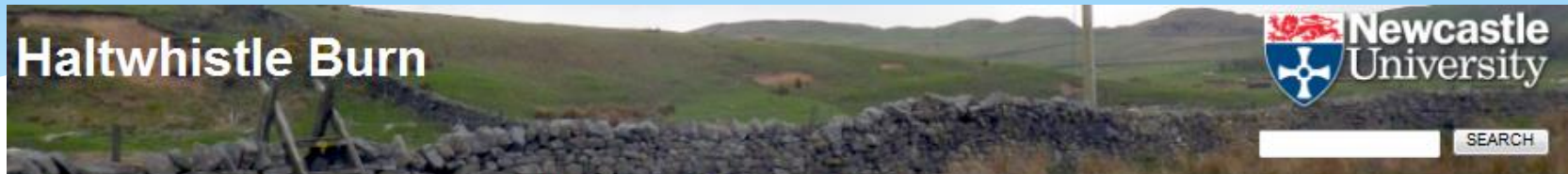


#HaltwhistleBurn at Townfoot, Haltwhistle #RiverLevel
January & February 2014*



Show Photo Details

Progress to date – Haltwhistle Project



[Project Background](#) [About the Catchment](#) [COMMUNITY HUB](#) [Volunteer](#) [Gallery](#) [News & Events](#) [Further Links](#) [Contact](#)

COMMUNITY HUB

Know Your Catchment

Evidence of Catchment Issues

Archive: Catchment Data Records

MONITORING - Catchments Current Status

Weather & Flood Forecasts

Download Maps

Please use this COMMUNITY HUB to share your data and local knowledge, network, communicate with everyone else, learn and benefit from each other. This is your space...

Follow Haltwhistle Burn on Twitter to receive project updates and be part of the knowledge regeneration project!

We will look out for the following hashtags and key words (so please use them too!):

#Haltwhistle #Cawfields #HaltyBurn #HaltwhistleBurn #Flood #RiverLevel #WaterQuality #Rainfall #Sediment #Weather #Ecology #Habitats

Tweets

 Follow



Walk along [#HaltwhistleBurn](#) footpath [#Haltwhistle](#)? Look for river level gauge boards & Tweet [#RiverLevel](#) time location pic.twitter.com/doP2z6C7hg



Website: <http://research.ncl.ac.uk/haltwhistleburn/>

Community monitoring

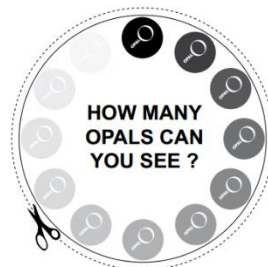
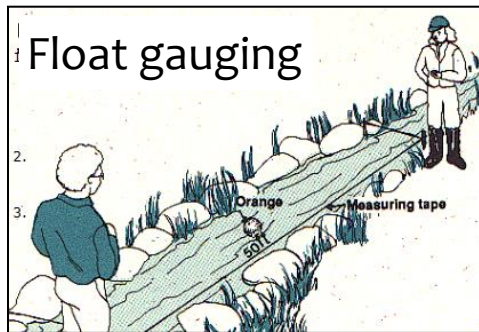
Volunteer and become a citizen scientist



- Monitor the whole catchment, as often as possible
- All catchment issues & any interventions
- Most valuable information – extreme events
- Opportunities for additional fieldwork research days

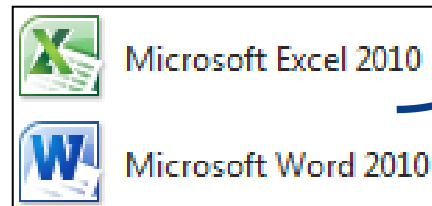
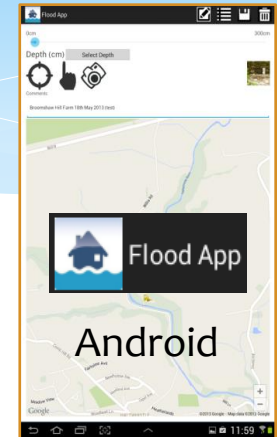
Community monitoring – volunteer and become a citizen scientist

- Examples of monitoring activities..



Community monitoring – volunteer and become a citizen scientist

- How to submit the data... you decide!
- Training / support will be available

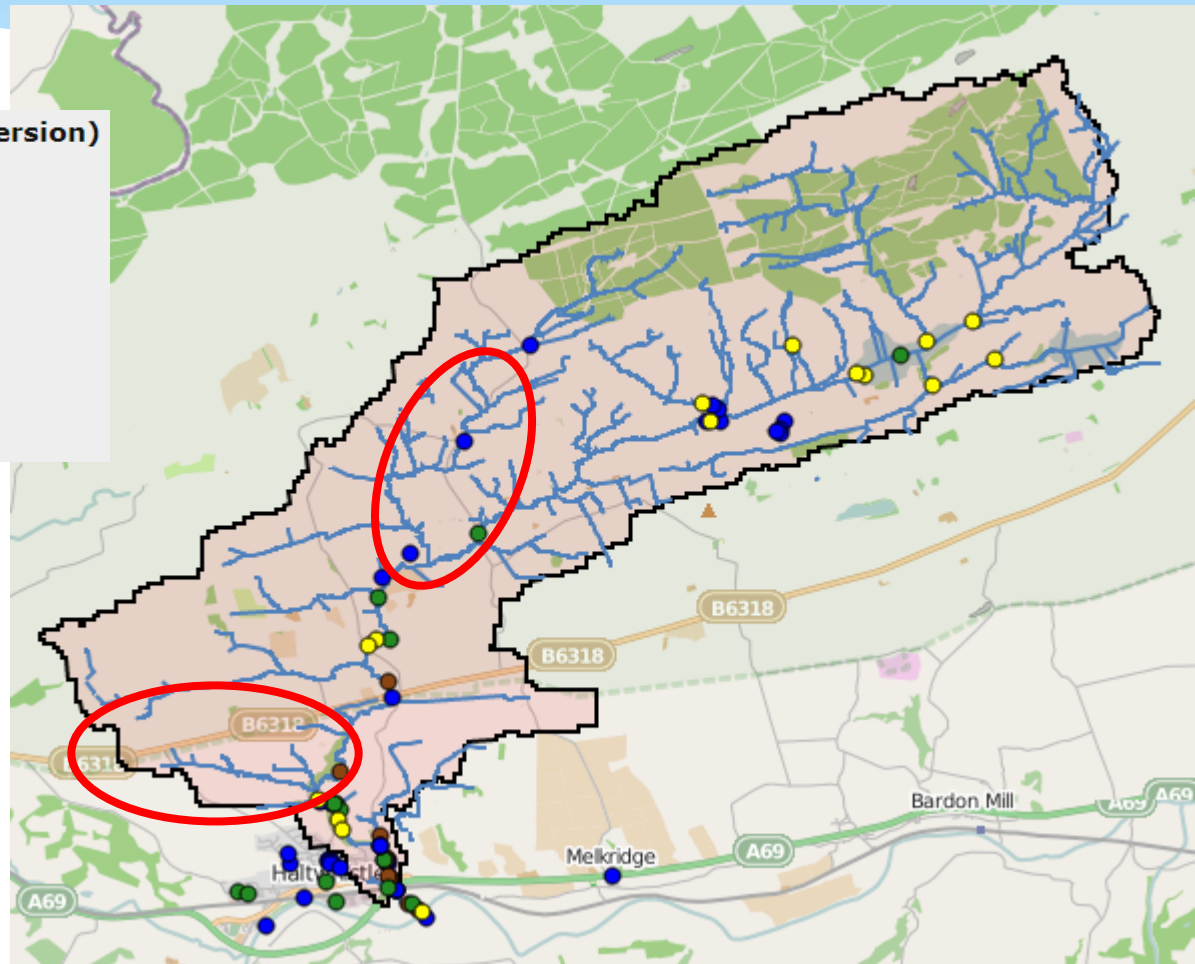


Where should we monitor?

Areas of interest which you have highlighted

HB Catchment Issues (Feb14 version)

- Ecology_Habitats
- Flooding_Weather
- Pollution_Water Quality
- Sediment_Morphology



Next steps..

- Request for volunteers - Informal discussions to follow
- March/April: Distribute equipment and training guides
- Next River Watch meeting – share your monitoring experiences
- Please keep in touch & spread the word!

Email: eleanor.starkey@ncl.ac.uk

Website: <http://research.ncl.ac.uk/haltwhistleburn/>



Follow @HaltwhistleBurn

