

North West Water Quality Monitoring Workshop



Simon Browning



**Catchment
Based Approach**



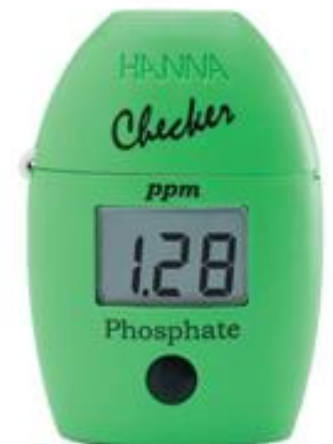
Managing and Resourcing a Monitoring Programme



Managing and Resourcing a Monitoring Programme

Westcountry CSI – Citizen Science Investigations

- The 'River Buffs' project – Postcode Lottery Funded project to engage with volunteers on the River Lyd
- River Buffs was much more 'hands on' – different activities with a small group of volunteers
- School workshops, building otter holts, redd surveys, river walks and water quality monitoring



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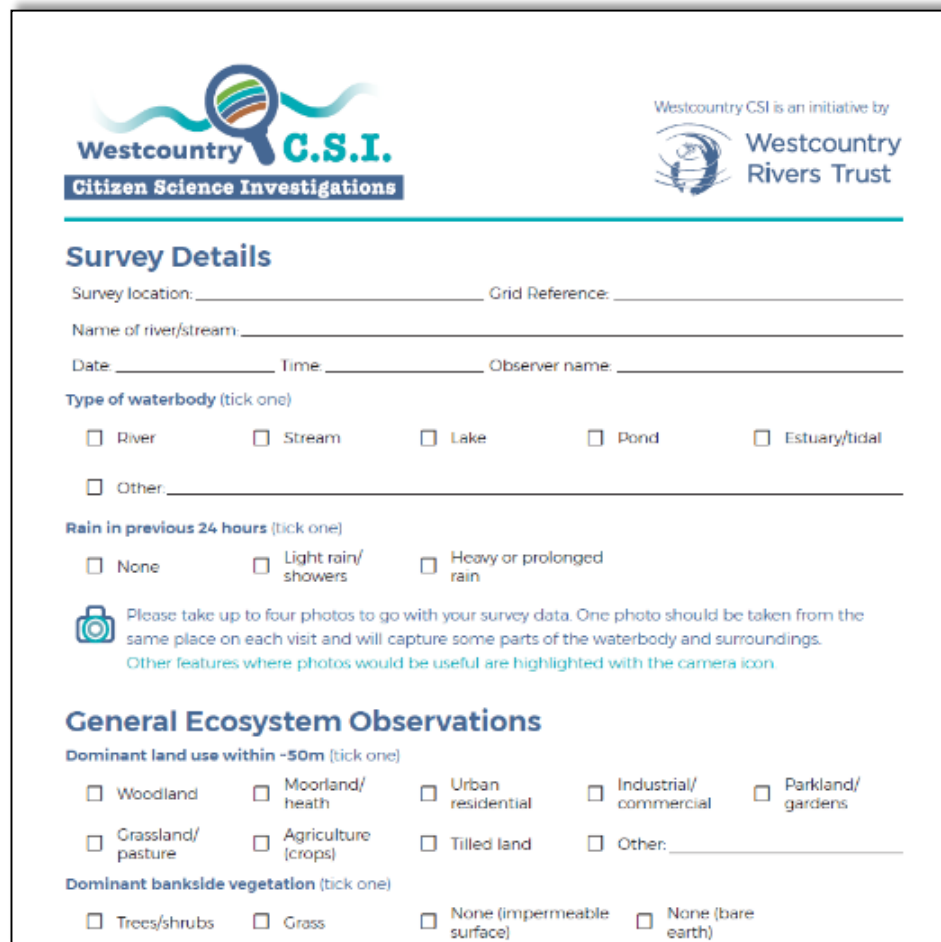
Westcountry CSI – Citizen Science Investigations



- Tamar CSI pilot developed a web app under Tamar CaBA with funding from Heritage Lottery Fund
- Encouraged volunteers to report unusual sightings with photo, location and notes
- Data collated and evaluated by Westcountry Rivers Trust – then shared with Environment Agency and/or South West Water as appropriate
- Flexible platform – allows us to add in other parameters and observations (e.g. water quality, pollution sources, invasive plants)

A screenshot of a mobile web application interface for 'Tamar CSI Draft'. The interface is titled 'Westcountry Rivers Trust' and 'Tamar CSI Draft'. It includes a 'Surveyor' field with the name 'Simon Browning <simon@wrt.org.uk>' and a 'Hide guidance' button. A green message states 'The surveyor is a registered user of Cartographer.' Below this is a question 'Who was the surveyor (leave blank for none)?'. The 'Number of participants' field contains the number '1'. A question asks 'How many people, including the surveyor, were involved taking the readings?'. The 'Date and time' section has two input fields: 'dd/mm/yyyy' and 'hh:mm'. An orange message says 'You should specify the survey date.' Below this is the text 'Date and time the survey data was collected in the field.' At the bottom, there are logos for 'Tamar: CSI CITIZEN SCIENCE INVESTIGATIONS' and 'LOTTERY FUNDED'.

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Westcountry CSI – Citizen Science Investigations



Westcountry CSI is an initiative by
Westcountry Rivers Trust

Survey Details

Survey location: _____ Grid Reference: _____

Name of river/stream: _____

Date: _____ Time: _____ Observer name: _____

Type of waterbody (tick one)

River Stream Lake Pond Estuary/tidal
 Other: _____

Rain in previous 24 hours (tick one)

None Light rain/showers Heavy or prolonged rain

 Please take up to four photos to go with your survey data. One photo should be taken from the same place on each visit and will capture some parts of the waterbody and surroundings. Other features where photos would be useful are highlighted with the camera icon.

General Ecosystem Observations

Dominant land use within ~50m (tick one)

Woodland Moorland/heath Urban residential Industrial/commercial Parkland/gardens
 Grassland/pasture Agriculture (crops) Tilled land Other: _____

Dominant bankside vegetation (tick one)

Trees/shrubs Grass None (impermeable surface) None (bare earth)

Based upon a survey form that captures observational information about:

- Plants
- Wildlife
- River condition
- Diffuse pollution
- Litter/fly-tipping
- Flow
- Substrate
- Photos / notes

Intended to be much easier to administer than River Buffs – potential to reach mass audience

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Westcountry CSI – Citizen Science Investigations

Water quality testing element is optional, we try to get volunteers to demonstrate commitment by carrying out observational surveys first, before we give out test equipment.

Testing kit is cheaper and easier to use than River Buffs (£25 each vs £180)

But still enables characterisation of useful water quality parameters

- the amount of **dissolved solids** in a sample
- the amount of **suspended solids** in a sample
- the amount of **phosphate** in a sample





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Westcountry CSI – Resourcing

- Now in our fourth year we have 317 volunteers signed up with around 70 – 80 of them active, approaching 3,000 surveys
- Up until recently we have not had much resource dedicated to the CSI project – we have included funding for kits and training events in other project bids (usually less than £1000)
- ‘Cartographer’ is an annual fee that can be split across projects that use it
- New volunteers don’t cost anything until we send out kits
- Locally focused projects e.g. Connecting the Culm, enable a recruitment drive in those areas





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Westcountry CSI – Communication with volunteers

- We've always been keen to maintain a personal level of engagement and support where volunteers want it (email / notes field)
- We've tried email newsletters in the past but found them hard to maintain with no dedicated staff time
- Also tried using Twitter, Instagram and Facebook – with varying degrees of success
- Westcountry CSI Facebook Group is building steadily – 91 members now and starting to see members posting content
- We're increasingly reaching out to existing community wildlife / river interest groups





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Westcountry CSI – Maintaining volunteer engagement

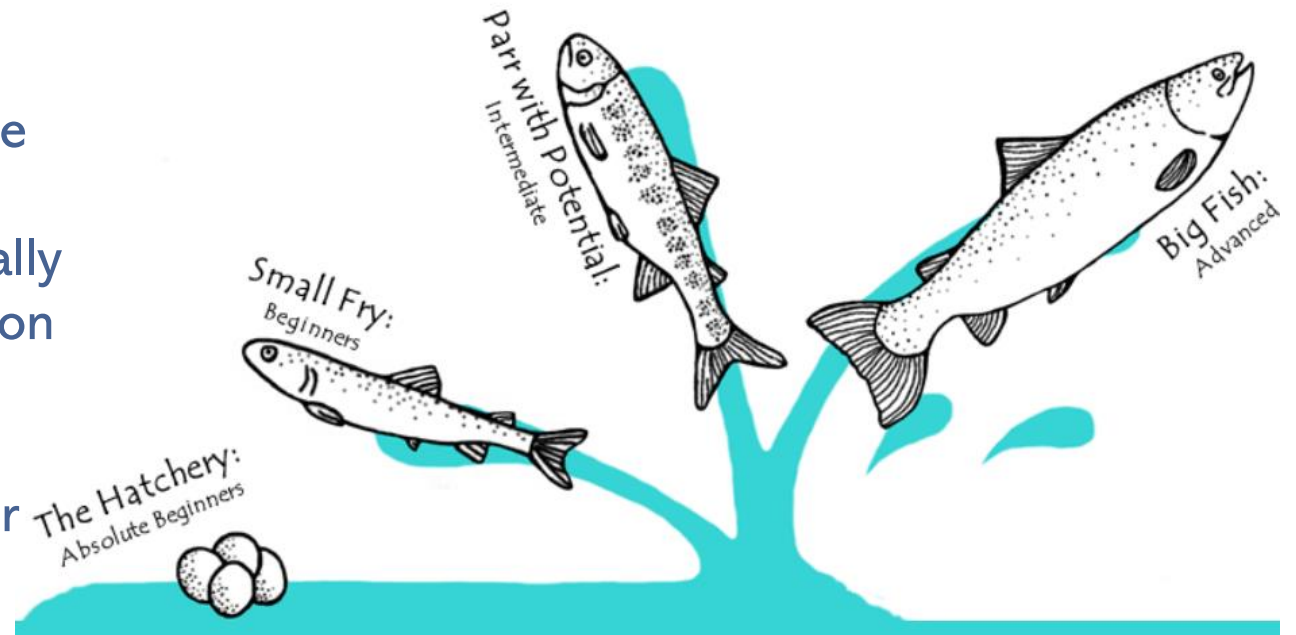
- What is it reasonable to expect? Will people carry on forever?
- With more dedicated staff time now, we are starting to look more closely at further developing the scheme
- We want to keep what is working well for an existing small-ish group of dedicated volunteers, whilst widening the appeal to retain a greater proportion of new members
- It appears that volunteers that stick with the scheme carry out a number of surveys 3 – 4 sites, at regular monthly intervals



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Westcountry CSI – Ideas for further development

- Review of the survey form, make it simpler and clearer – replace categories that are not used. Likely to add dedicated ‘plastics’ element and maybe inverts section
- Tiered scheme – gold, silver, bronze, or small fry, parr, big fish with extra features and / or additional monitoring equipment
- Working more closely with Riverfly scheme
- Maintain and improve comms and especially feedback – personalised data summaries on log in page
- Organise regional events e.g. World Water Monitoring Day – 22nd September!





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Westcountry CSI – Conclusions...

- We're very pleased with the Westcountry CSI scheme so far – we think we have got more right than wrong!
- There are no easy short cuts to engaging volunteers and maintaining their interest levels – it takes time and effort
- Additional resource (staff time and money) will enable us to re-invigorate the scheme whilst maintaining the personal touch
- Westcountry CSI has always been a mix of pollution spotting and engagement / education. We are keen to explore more ambitious objectives (i.e. producing more robust locally / regionally relevant evidence)
- Working with existing groups (which allows more directed monitoring) could be key

