

Yorkshire Dales Rivers Conference - 1 November 2013

Workshop Notes

CATCHMENT LAND MANAGEMENT

Chair - Deborah Millward

YDBF rapporteur - Mark Hewitt

Present - Philip Austin, Lee Brown, Nick Buck, Briony Davey, Martin Davies, Adam Hejnowicz, Ruth Reaney, Steve Rose, Pete Turner, Andrew Walker, Chris West, Marian Wilby

- Discussions initially centred on the need to ensure that there is a clear definition of 'headwaters' and to then quantify those headwaters.
- There are differences between BAP Rivers and WFD 'good ecological status' rivers, and these need to be recognized and acknowledged when developing projects in association with the rivers.
- Targets are fine but delivery is what is required and this is dependent on stakeholders and therefore is also restricted by what stakeholders can and are willing to do.
- There are conflicts with timescales - river based works involve long term processes and don't readily fit in to short term cycles often associated with funding and staffing.
- The nature of the work to improve river catchments is not 'fixed', by which we mean that we can say we are improving conditions, but that a specific completion point is not necessarily met.
- The previous points led to the observation that education is required on timescales and the processes involved in catchment land management; that the public and stakeholders, whilst being the main audience, are not the only audience; professionals across the board needed to keep up to speed on new work.
- Mapping was often mentioned as a key tool in identifying obstacles and modified sections on rivers.

When looking at the issues that need addressing with regard to catchment land management, generic points were raised which were appropriate for a number of specific issues.

- Grip blocking has been increasing and should continue.
- Grazing pressure, in general, needs to be reduced.
- Erosion needs reducing significantly.
- Catchment Sensitive Farming (CSF)-type initiatives contribute significantly to the improvement of catchments.
- In the Upper Aire catchment the EA have undertaken some capital works which are used as demonstrations to promote management techniques and by doing this the EA are not paying to fix problems across a whole catchment but giving people the tools to do it themselves.

- Work should be prioritised to address the most significant problems, such as gills transporting gravel to main rivers.
- Education and engagement is crucial, but funding is an issue.
- In one of the catchments in the Severn Trent region farmers were challenged to improve water quality rather than the water company pursuing improvements directly, and if the farmers achieved the improvement then they received a payment as a collective.

A key message was: identify, engage and deliver (in partnership).

The workshop moved on to look at addressing the large areas of catchments that don't have projects on them.

- Lateral thinking is required to find solutions.
- Look outside of conservation, land management and ecology for ways of achieving the desired results, such as tapping in to industry based programmes not directly aimed at catchment land management but which will still deliver results.
- Establish 'pilots' to show that the project or technique works, and then go for wider, more significant funding with the evidence base from your pilot.
- It is important not to duplicate work being done by others and it is important to avoid various groups and project officers contacting the same stakeholders over and over again as this often alienates them. Consider using one lead organisation to access stakeholders and channel all the various elements and projects that various other organisations want to implement through this organisation.
- There are issues with schemes such as CSF and the artificial boundaries associated with them which don't necessarily follow catchments or take in specific problems. Finance is a major obstacle rather than any ignorance of the issues or reticence to engage.
- Mapping multiple data sets on a field by field scale to target works may allow for smarter deployment of resources.
- 'Re-naturalising' rivers and connecting these with woodlands and habitats will have multiple catchment land management benefits.
- Work on valley floor wet woodlands is very important but faces many challenges with regard to land use and stakeholder perception.

There were no specific actions or targets that came out of this workshop but key general points were common across the discussions.

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Post workshop addition:

I forgot to flag up soil compaction amongst the issues discussed and interestingly no-one else mentioned this important aspect which affects both water quality and farm economics.

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RIVER RESTORATION

Chair - Jack Spees

YDBF rapporteur - Kate Wilding

Present - Paul Atkinson, Ian Fleming, Aidan Foley, Jana Kahl, Sarah Littlefield, John Milne, Peter Nailon, Pat O'Brien, Tom Pagett, Gareth Pedley, Kathryn Turner, Don Vine

Key issues (general):

- Too much non-specific information available e.g WFD - data highlights that there is a failure, what this is suspected to be is sometime based on judgement rather than evidence. Additionally the data can be high level (not identifying specific issues in specific locations) making it difficult to determine what is important, can often be complicated.
- Need visibility and transparency from the 'competent authorities' - who hold data referring to governmental policy, directives and legislation - in order to understand all the issues.
- Datasets - need to be kept up to date including collation, but also include data from other sources than just large organisations - who is responsible?
- Issues with duplication of efforts - too many people visiting the same landowners from different organisations.
- It was discussed if a top-down or bottom-up approach was best. In some instances, where there is no local organisation or there is a young organisation, bottom up may not be as quick or effective. However, top down may miss opportunities for local knowledge and ability to drive delivery.
- Lack of places to store examples of good practice or share the evidence base - need a central resource base that everyone can share data from. There may be a need for a standardised, simple and low input method of gathering this data. Examples: River Restoration Centre and Catchment Management Hub were mentioned, however awareness was low and inputting into these could often be taxing.
- Each organisation uses different methodologies to identify issues within a catchment, some use national datasets, some use EA data, some use local knowledge, or just undertake walkover surveys to identify issues.
- Surveys not standardised, so data often not transferrable between organisations. Discussion on whether standardisation was beneficial, or could lead to loss of flexibility/innovation. Collation of data and sharing is crucial.
- How is local knowledge fed in to organisations to improve on existing datasets? Is there a resource of local knowledge that is potentially not being utilised?
- Landowners attitudes are important and outcome can be negative (not supporting or understanding need for environmental works), but also positive (can demonstrate and advocate environmental improvements).

Key issues that need to be addressed (in terms of practical river restoration):

- Fish passage - barrier removal to consider (need to be careful of movement of non-natives) - different fish pass designs and impacts can sometime be negative on certain river species e.g. invertebrates.
- Need better flood plain connectivity and naturally functioning ecosystems.
- Reduce summer water temperatures - need to increase riparian habitat.

- Undertake further grip blocking.
- Keeping livestock away from rivers (discussion on impact and suitability of drinking troughs - no simple solution).
- The question was asked 'how to deal with river banks with water voles?' This needs to be considered.
- Eel and Lamprey populations - how do we tackle the decreasing populations?
- How do we work better with landowners and engage with them?
- Need to tie in the River Basin Management Plans and Catchment Action Plans

Information sharing:

The group spent considerable time during the workshop sharing different practices that work for different organisations. Including how the different organisations deal with the datasets available to them, and how problems within a catchment are targeted. It became clear that the different organisations have different constraints on them and partnership working can be more difficult for some organisations. For example, the large companies are unable to work with partners as much as they would like, due to their procurement procedure. There are also major time restrictions, for example, having only one biodiversity officer for the whole of Yorkshire. For other organisations there seemed to be varying levels of partnership working. The various Rivers Trusts for example seem to work closely with the EA, and various other organisations, they also seem to maintain good relations with the landowners.

In terms of collaboration and partnership working, it seemed that the various Rivers Trusts provided a very good 'middle man' that most organisations can work with - an 'ethical broker' for river improvements as this is at the core of all Rivers Trusts. It seems they have a key role to play in the future management of river catchments. It became apparent that the Catchment Based Partnerships will be a great way to engage with all the different organisations.

BAP targets:

None were specifically determined during the workshop although there was a series of common problems that the group felt needed addressing, all of which would aid in delivering improvements to BAP species and habitats.

Examples of potential solutions or ideas include:

- Creating a central resource for sharing data on good practice or examples of interesting or innovative restoration techniques or methods.
- Where possible, all organisations should feed in to the Catchment Action Plan and River Basin Management Plan through the Catchment Partnerships.

BIODIVERSITY ASSESSMENT AND MONITORING

Chair - Andrew Borwn

YDBF rapporteur - Hannah Fawcett

Present - John Altringham, Paul Bradley, Andrew Colley, Ian Court, Anita Glover, Gareth Jones, Allan Pentecost

Current assessment and monitoring

At present there is no direct BAP assessment and monitoring of rivers. All current assessment is generally monitoring as part of the Water Framework Directive, data collection by Rivers Trusts or through projects such as the Riverfly Partnership (<http://www.riverflies.org>) or RICT (River Invertebrate Classification Tool).

There are concerns that there is insufficient coordination of survey effort and poor data sharing. To avoid duplication Agencies, Rivers Trusts and other interested groups need to work more closely and communicate what surveying/monitoring is ongoing and what parameters are being used. It is vital that all data is shared through use of either NBN or other data centres.

Possible BAP targets:

1. Something which drives increased coordination of survey and monitoring, for example, annual event to exchange information and results and coordinate activity for year ahead
2. Specific identification of data sets that should be made more accessible through LRC, NBN, or other web based mechanism

Future assessment and monitoring:

Future BAP targets remain undecided. Until these targets and what constitutes good or favourable condition have been specified assessment and monitoring cannot be clearly defined.

There was discussion about the employment of different techniques and the merits of tools such as RICT in providing a true assessment of watercourse health. Any survey or monitoring work should be sufficiently accurate with appropriate sample size to measure parameters such as changes in population, diversity, biology. All data needs to be adequately interpreted before it can be used in any decision making process.

Future surveying and monitoring could use a catchment based approach using indicators of watercourse health (both good and poor) as a proxy. This could be a suite of species either plant or animal, however, all indicator species will require a full appraisal to determine their value. Factors including seasonality, ease of identification will also need to be taken into account. Other indirect techniques could be explored such as the use of Breeding Bird Survey (BBS) squares to assess bird diversity; or aerial photography to assess tree cover along watercourses.

In light of core funding cuts there may be a desire to use more volunteers. Any person conducting surveys or monitoring requires adequate training and methodology needs to be straight forward.

In order to encourage the general public to assist with surveying, tools such as smartphone apps could be employed using a range of easy to identify riparian species such as dipper, common sandpiper, grey wagtail, brown trout and mayfly. This could provide additional data but is largely dependent on public access. In addition there is scope to increase the contribution of fisherman through promoting projects such as the Riverfly Partnership, the use of smartphone apps and ensuring that fish catch data is shared.

Technological advances are also likely to play a larger role; the EA (Environment Agency) is currently developing flat screen printing technology to mass which could significantly reduce the cost of monitoring different parameters. There are also increasing opportunities for the public to be engaged using software including Creative Commons and open source GIS (e.g. QGIS).

Possible BAP targets:

3. Agreed position on what is favourable condition from a BAP perspective (should be based upon existing obligations under WFD or protected sites or be a development of these)
4. Explore catchment based approaches to assist assessment of river 'health'
5. Increase use of volunteers for survey and monitoring
6. Development of river based smartphone app

Headwaters

It was felt that the definition of headwaters needs revising to take account of the hydrology of upland watercourses. An alternative is to use the calculation of headwaters being >70% of all flowing waters.

Possible BAP targets:

7. Revise the current definition of headwaters

BIOSECURITY AND INVASIVE SPECIES

Chair - Lucy Anderson

YDBF rapporteur - Gordon Haycock

Present - Geoff Bates, Stephanie Peay, Tom Doherty-Bone, Nigel Taylor, Adam Walmsley, Paul Greaves, Alison Dunn, Jamie Bojko, Edd Greenwood

Participants were invited to talk about what is going on in their area with regard to invasive species noting issues and discussing solutions. Subsequently participants were asked to offer suggestions for new BAP targets.

The following issues and themes were discussed:

Signal crayfish - Adam said that whilst Ribble Rivers Trust are aware of the population in YDNP (the largest in the Trust area), no practical eradication solutions had been found to date. Anglers are being alerted to the 'Stop the Spread' campaign. In YDNP signal crayfish occur throughout the Wharfe catchment and are on R Ure spreading upstream as far as Aysgarth Falls. Anglers view cleaning of kit as too onerous, and consequently risk transferring invasive non-native species and related pathogens. There are also issues with using detergents which damage anglers' equipment. In Yorkshire Dales white-clawed crayfish are predicted to become extinct in river systems in the next ten to fifteen years.

All agreed that a current focus is 'Stop the Spread' campaign aimed at anglers and boaters. This is pursued through fixed signs at strategic locations, and awareness-raising when opportunity allows.

Eden Rivers Trust also recognise that Environment Agency, their contractors and Rivers Trust staff are all likely vectors of spread both for signal crayfish and associated diseases, and stringent biosecurity measures are enforced.

Biosecurity features in staff handbooks for most Rivers Trusts, and the idea of making sure this was the case for all conservationists and others whose work means they are a potential vector was discussed.

Events are a particular concern in Lake District with participants (runners, triathletes, canoeists etc) crossing catchments and transferring material. Event organisers need to be alerted to possible implications.

Dinghies were identified as a significant risk with boats arriving from many parts of the country to holiday / participate in events. Commercial marinas appear unhelpful at present, however, Ullswater Yacht Club and other membership clubs are much more sympathetic. Commercial organisations do appear to see biosecurity as a cost-effective investment, preventing non-native species/pathogens from arriving which could subsequently cause significant financial damage. There is an air of "No one else is doing anything, so why should we?" Evidence of the cost-savings of biosecurity vs. eradication may need to be gathered and presented to motivate these groups.

Stephanie discussed research from Great Lakes in N America where work has been carried out showing that recreational activity correlates well with arrival of invasive non-natives. Water bodies at high risk of invasion were predicted and enforcement of boat and equipment washing proved useful in reducing risk compared with control lakes where no enforcement was undertaken.

Whilst enforcement of environmental legislation and best practice is necessary in some instances, all agreed that long term success is more likely where the carrot is used more than the stick.

It was noted that easy access to boat washing facilities helps, but that changing people's habits takes a long time. Royal Yachting Association (RYA) is on board.

There are upwards of 3000 non-native species established in the wild in UK, not all are likely to become invasive. International spread of invasive non-natives is not helped by lax border controls in UK (compare with Australasia, Iceland and others).

Invasive non-native plants were discussed briefly with a focus on Japanese knotweed, Himalayan balsam and giant hogweed. All have good dispersal mechanisms and tend to distribute themselves along water courses. It was recognised that action to eradicate these species needs to start in the headwaters and work downstream. This is only possible where land-owners are amenable, and one stubborn land owner can hold up an entire catchment programme.

It was noted that getting advice on eradication of Japanese knotweed can be problematic as tubers can become dormant when treated with herbicide which then grow back a few years later when triggered by environmental conditions.

Human vectors can also be important with plant propagules being carried in mud on 4x4 vehicles, horse boxes, motorbikes etc. Construction vehicles and forestry plant are especially vulnerable due to the nature and location of their operation.

Killer shrimp and other small crustaceans can also travel in mud adhering to vehicles as a study of red swamp crayfish in Portugal has shown.

Why should land managers and landowners care?

Regarding invasive non-natives as Biological Pollution:

Stephanie related a method she has used to engage with water bailiffs where their focus may be on fish poaching; starting with the seriousness of fish poaching (ie a number of salmon taken), relate this to a pollution incident (e.g. milk tanker crashing into a bridge and shedding its load) which will kill many fish for a short period, and then consider 'biological pollution' where an invasive non-native is inadvertently introduced by an angler. Not only will many fish die in the short term, but the effect doesn't decrease with time, it actually increases as the invasive species takes a hold. Once introduced the invasive species will

wreak havoc forever with an ever increasing cost to fisheries on the river. This is a great responsibility for the water bailiff should the source of an invasive non-native become apparent.

Monetising the impacts of invasive non-natives:

This has been attempted by SNH whereby computer modelling is used to chart the spread of a species in a catchment, and then an estimation of impact on fish stocks is made. This is then related to the notional cost of re-stocking the river to levels which would be expected in the absence of the invasive species. As the spread takes place the cost increases, until the whole catchment has been invaded and an annual cost to local fisheries is apparent.

In both cases these costs can be avoided through preventative measures.

Methods to reduce transmission of invasive non-native species and associated diseases:

- Some fisheries do not allow anglers to use their own keep nets, and supply them for all visiting fishermen.
- Broads Authority has a member of staff dedicated to taking measures to limit the spread of killer shrimp. Very successful to date.
- Making Biosecurity an element of RYA training would be a positive step as most dinghy and yacht sailors will do some RYA training.
- Stop the Spread campaign - get invasive non-natives on the anglers' agenda.
- Advise anglers and boaters that strong detergents are not necessary (these may damage equipment), and that mild detergent, or hand-hot water (45°C) is adequate to kill most organisms.
- Getting land-owners on board. Information to ensure landowners are aware what the invasive species are, and then peer pressure from neighbouring land-owners can be key.
- At public sites and along rights of way, engaging with the public can be productive. At Chevin Forest Park in Otley the spread of Himalaya balsam has been halted by mobilising dog-walkers who patrol the site pulling Himalayan balsam up before it sets seed.
- Biocontrol was briefly discussed, with a beetle proving effective at controlling Japanese knotweed in south of UK, and a rust fungus reducing vigour of Himalayan balsam.

Suggestions for BAP targets:

- Contact all landowners in a catchment to advise them of risks of invasive species. This contact could be through awareness-raising at events; get the conversation going at places where farmers and land-owners meet; organise visits to demonstration farms. Use peer pressure to get land managers to ensure they're not letting the side down.
- Biosecurity awareness workshops – target nature conservation staff and other stakeholders who can then cascade information to land managers and others.
- Raise awareness (Stop the Spread) at events where target audiences (ie those who are at risk of spreading invasive non-natives and associated pathogens) will be. Target to engage with relevant organisations at AGMs, annual dinners, equipment fairs etc. Relevant organisations include; Institute of Fisheries Management, CLA, Farmers discussion groups, Boat users groups, sailing clubs, water bailiffs, Wildlife Crime Officers.

- Rapid reaction group for invasive events. Aim at eradicating localised outbreaks of Himalayan balsam, giant hogweed etc. Could involve local naturalists.
- Support research where possible.
- Collect case studies to inform policy at a higher level.
- Target to eradicate a species (Himalayan balsam / Japanese knotweed / giant hogweed) on a number of km of river bank each year. Communicate 'we're winning' each year it's achieved!
- Pond vetting service – offer to visit people's ponds to check for invasive non-native species, and then advise on what to do. Target of number of ponds per year.
- Live maps of invasive species records that people can upload their sightings to (through iRecord or other such vehicle). Use these to track success (or mobilise rapid reaction group!).

ENGAGING LOCAL COMMUNITIES, FARMERS, LAND OWNERS AND RIVER USERS

Chair - Adrian Shepherd

YDBF rapporteur - Peter Welsh

Present - David Bryan, Claire Foster, Ceri Katz, Andrew Lawson, Jane Le Cocq, Carole Lowther, Claire Russell, Chris Ryder, Dan Turner

- The group felt that we, as a community, were not always very good at **communicating and listening!** The importance of taking time to learn from others' experiences was stressed. We considered that this is very relevant to ways of engaging effectively and efficiently on rivers work.
- There was general support for the **Catchment-Based Approach** and for engaging initially at that level - giving interested parties the chance to say what they want and why.
- We liked the experience reported from the Ribble and thought there was much sense in creating some sort of overall **Stakeholder Exchange Group** for a catchment. It is important that the same group of people meet several times to develop mutual understanding and trust, hopefully leading to a reasonable consensus over objectives and priorities.
- It will be very rare for stakeholders at a local level to have similar and shared objectives and we felt that there could be no getting away from the desirability of holding a series of **local meetings** for interested parties. These are likely to work best if there is a good range of opinion and interest represented as it is important for different opinions to be aired. With good chairing, such meetings can lead to shared understanding and local 'ownership' of the solutions.
- **One-to-one meetings** are invariably also required with relevant farmers and landowners.
- The availability of **interactive maps** at public meetings, as used at the Ribble, worked very well.
- **Group visits** to look at successful enhancement works at other river sites can be helpful.
- **Selling the message.** It was suggested that we need to find new and better ways of describing the meaning and 'look' of healthy ecosystems - as this is more challenging than explaining a number of other objectives, such as why we should clean up a highly polluted river.
- **Setting priorities.** It was suggested that it can be helpful, in setting priorities and early work, to go for some big things that provide multiple benefits.

BAP targets:

Ongoing concerns with some definitions (eg of headwaters); need to move to a real biodiversity target and to tie this in with actions on adjacent catchment land.