



“CaBA: Strategic Future Delivery Priorities”

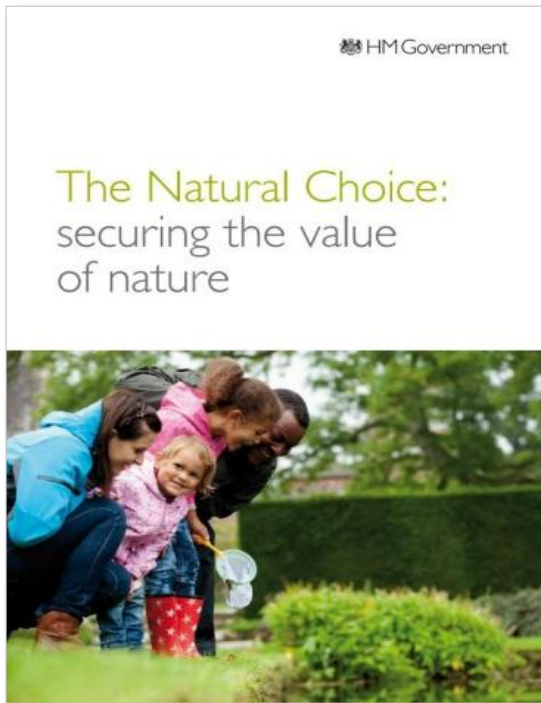
Arlin Rickard (CEO of RT & Chair of CaBA NSG)

www.theriverstrust.org

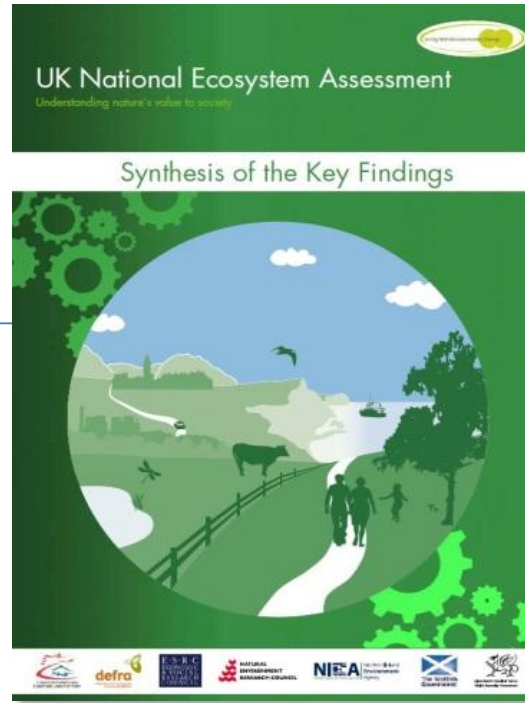
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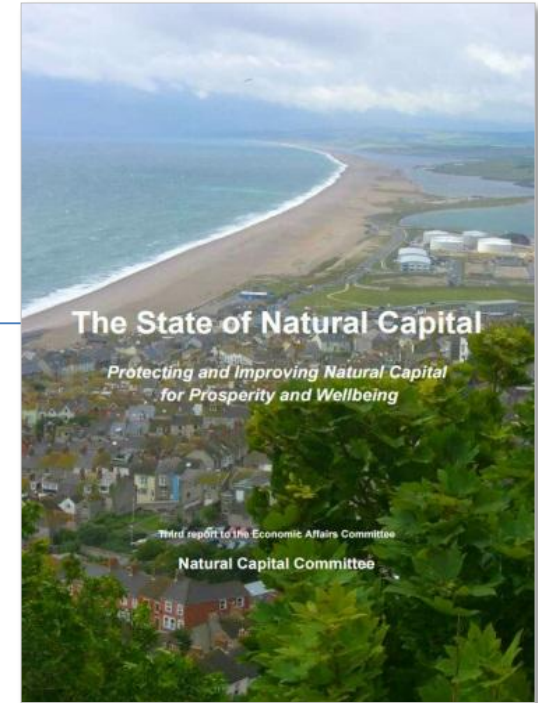
Some context...



The 2011 **Natural Environment White Paper** noted that a healthy natural environment is the foundation of sustained economic growth and wellbeing, initiating the concept of valuing nature. **Established Catchment Based Approach (CaBA)**, LNP's, NIA's & Natural Capital Committee.



The 2011 **National Ecosystem Assessment** provided the first analysis of the benefits of our natural environment for society and economic prosperity, indicating that benefits have been under-valued in economic decision making.



The **Natural Capital Committee's** third State of Natural Capital report (2015) recommended that Government produce a clear 25 year plan to enhance the environment (natural capital).

National Ecosystem Assessment (2011)



- UK benefits of inland wetlands to water quality - up to **£1.5billion** per year
- UK amenity benefits of living close to rivers, coasts and other wetlands - up to **£1.3billion** per year
- INNS one of the 5 primary drivers of change in ecosystem services in the last 60 years...
- Next step - to capture the value of our rivers and waterways and express them in terms of '**Natural Capital**'

Catchment Based Approach (CaBA) -



Background

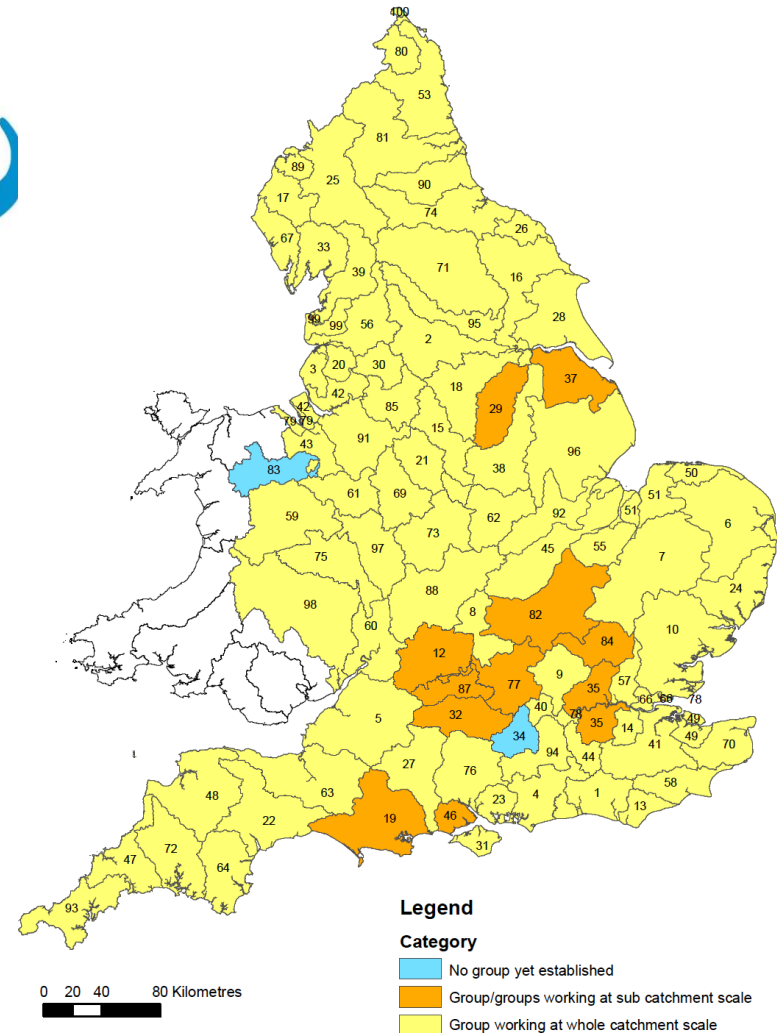
CaBA began life as a **Defra Policy Framework** initiative that arose, like the **Natural Capital Committee** from the Natural Environment White Paper “**The Natural Choice**” in 2011.



Catchment Based Approach (CaBA)



- Catchment partnerships established in all 100 WFD sub-catchments across England – supported by EA Catchment Coordinators



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The Problem



- Only 14% of rivers and lakes in England are at WFD “Good Ecological Status” (chalk streams ~20%)
- Over 50 serious pollution incidents a year still caused by water companies
- Population growth & abstraction (rising to ~70m in a decade)
- Climate change - temperature rise, rainfall patterns, floods, droughts
- Agriculture - soil erosion, sediment, diffuse pollution
- Invasive Non Native Species (INNS)

But, Defra budget cut by 50% in the last 10 years...

Climate Change and Flooding



Climate Change and Drought



Issues – abstraction!



Issues – pollution!



Issues – eutrophication!



Issues – agricultural impacts!



Healthy soils provide, food, plentiful clean water, flood risk reduction & biodiversity



- **Estimated 2.9m tons of soil eroded annually in the UK**
- **Soil losses are >20x the rate of recruitment**
- Soils hold > third of the worlds organisms
- Typical “cricket ball” of soil has;
 - 100 billion bacteria;
 - 10 x 1000’s small organisms; 100’s km of hyphae fungus
- 25 species of earthworms in the UK (Darwin’s plough)
- Healthy soils have >2m earthworms/ha releasing 80kgsN/ha
- Worlds soils hold 10x more carbon than worlds forests
- UK signed up to Paris COP 2015 “4 per 1000” – increase soil OM by 0.4% per annum to combat climate change

National CaBA Support Group (NSG)



SALMON & TROUT ASSOCIATION
Game anglers for fish, people, the environment



Community Engagement is key to CaBA success!



Catchment Plans

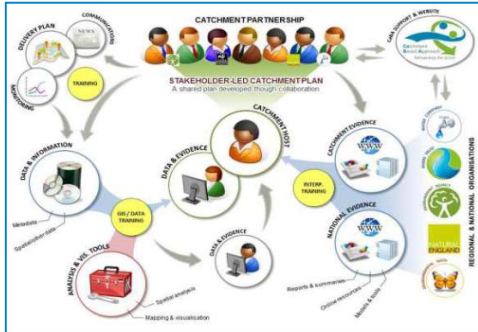


- 1 A joined-up common strategy for managing catchments based on restoring ecosystem function
- 2 Locally managed integrated catchment management plans (local evidence and data to target delivery of improvements, advice, incentives and regulations). Plans are linked to RBDMP's through 'Catchment Pages'

CaBA Working Groups



Ca Data User Gp



Urban



Agriculture



Forestry



Funding & Benefits



Fisheries



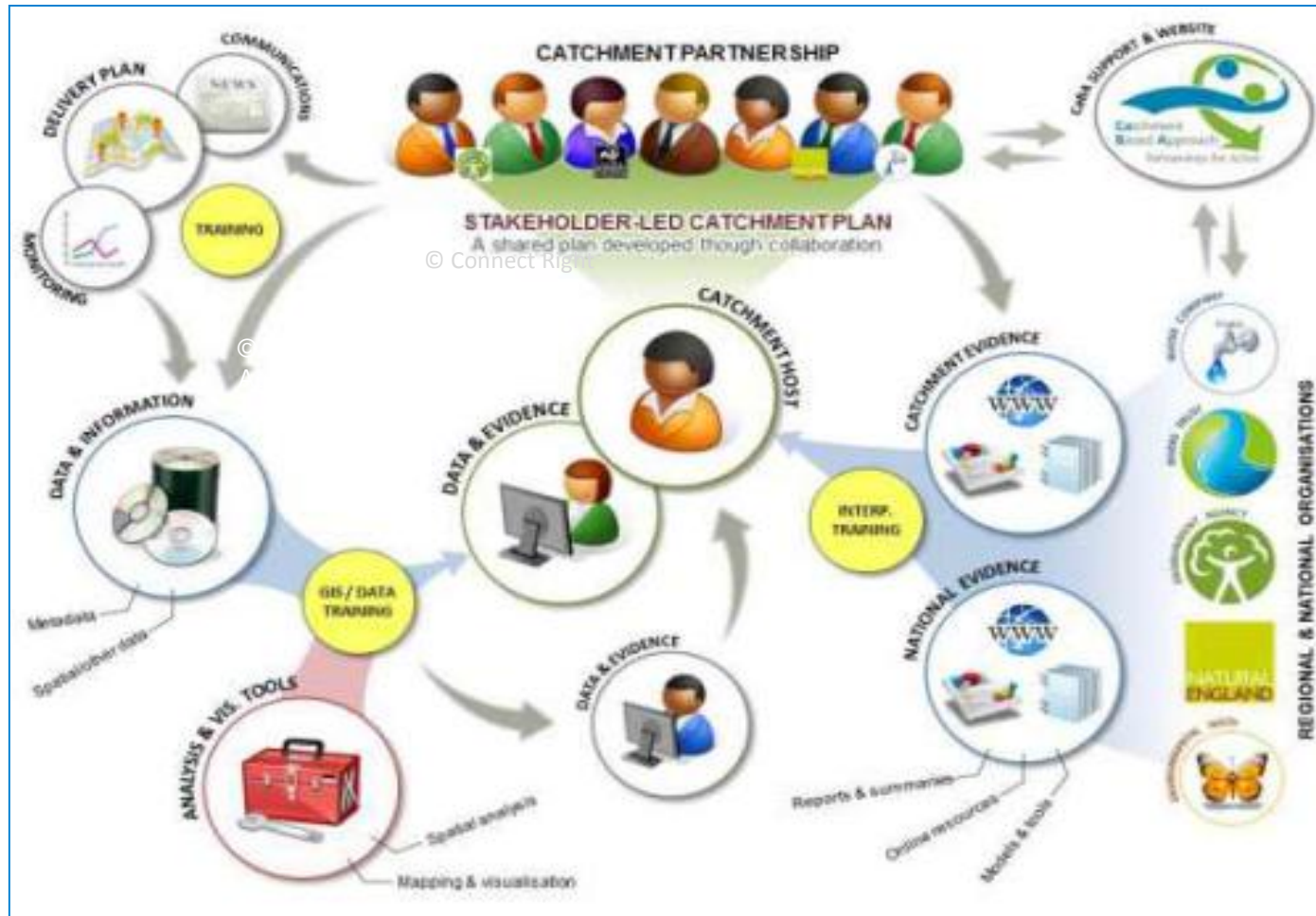
Biodiversity



TraC Waters

CaBA Working Groups

CaBA Data User Group



CaBA Support Tools

Catchment Data User Group



Evidence Sharing Platform

<http://bit.ly/CaBAESP>

The Environment Agency, The Rivers Trust, Ribble Rivers Trust and Westcountry Rivers Trust are trialling Microsoft SharePoint to facilitate information sharing and collaboration between EA and CaBA partnerships. The team are developing data licenses, protocols, recommendations and guidance to help CaBA more effectively input to government consultations and catchment planning processes.

- Secure online platform
- Share and discuss evidence
- Coordinate fieldwork

CaBA Website

www.catchmentbasedapproach.org

The CaBA Website is the primary location where the CaBA partnerships can showcase their work, network with each other and access tools, best practice, technical support and news.

Collaboration Through Evidence Sharing

Introducing some of the tools and projects which have been developed by the Catchment Data User Group to support the Catchment Based Approach.

Catchment Data Explorer

<http://environment.data.gov.uk/catchment-planning>

A data download and visualisation tool supporting the consultation on the update to the river basin management plans. Users can search for catchments of interest using a map or by postcode, grid reference and place name. Data can be downloaded as CSV.

CaBA Best Practice Guide

Westcountry Rivers Trust produced a useful compendium to best practice tools and approaches.

Contact us for more information on the work of the Catchment Data User Group or the CaBA Support Programme.

info@catchmentbasedapproach.org
www.catchmentbasedapproach.org

Signup to the CaBA mailing list: <http://bit.ly/CaBAMail>

Other CaBA Support projects which CDUG members are delivering:

- EU Riverwiki & Data Sharing**
The River Restoration Centre and CDUG members are working to streamline information exchange between catchment management project databases. <http://riverwiki.eu>
- Downstreams**
An online platform to build connections between communities along rivers. The first trial will be with Lune Rivers Trust. www.downstreams.org
- Scimap Online**
An online version of Scimap - the useful sediment risk mapping tool will be more accessible to CaBA partnerships. <http://www.scimap.org>
- Integrated Local Delivery**
GloUCEstershire INWAG published a guide to community water management. <http://www.inwag.org.uk>
- GIS eLearning & Training**
eLearning portal for CaBA partnerships. <http://www.caiba.org.uk>



Catchment Mapping Portal

<http://maps.riverstrust.org>

Web-based mapping tool for CaBA partnerships to access and share mapped information with their partnerships and stakeholders.

- Widely accessible - no GIS skills needed
- Interactive map - easy to use
- Combines local and national CaBA information in one place

CaBA Mentoring Programme

The aim of this programme is to build capacity and resilience within the CaBA family and make an evidence-based approach within the CaBA movement sustainable in the long term.

A small multi-organisational mentoring team is helping over 20 CaBA partnerships move forward in their catchment. Drawing out solutions from the team itself and from partners' own experience and that of other catchments. Common issues and barriers are being resolved to the national CaBA Support Group. Neighbouring catchments are being encouraged to work together.

CaBA GIS Data Package

A convenient package of 70+ key datasets in common desktop GIS formats, clipped to CaBA catchments, licensed for CaBA use and distributed to all CaBA partners. Backed up by interpretation guides, training resources, discussion forum and regular updates.

- Detailed data for desktop GIS
- Time saver for CaBA partnerships
- Supported by GIS training, mentoring, guidance and online forum

CaBA GIS eLearning & Training

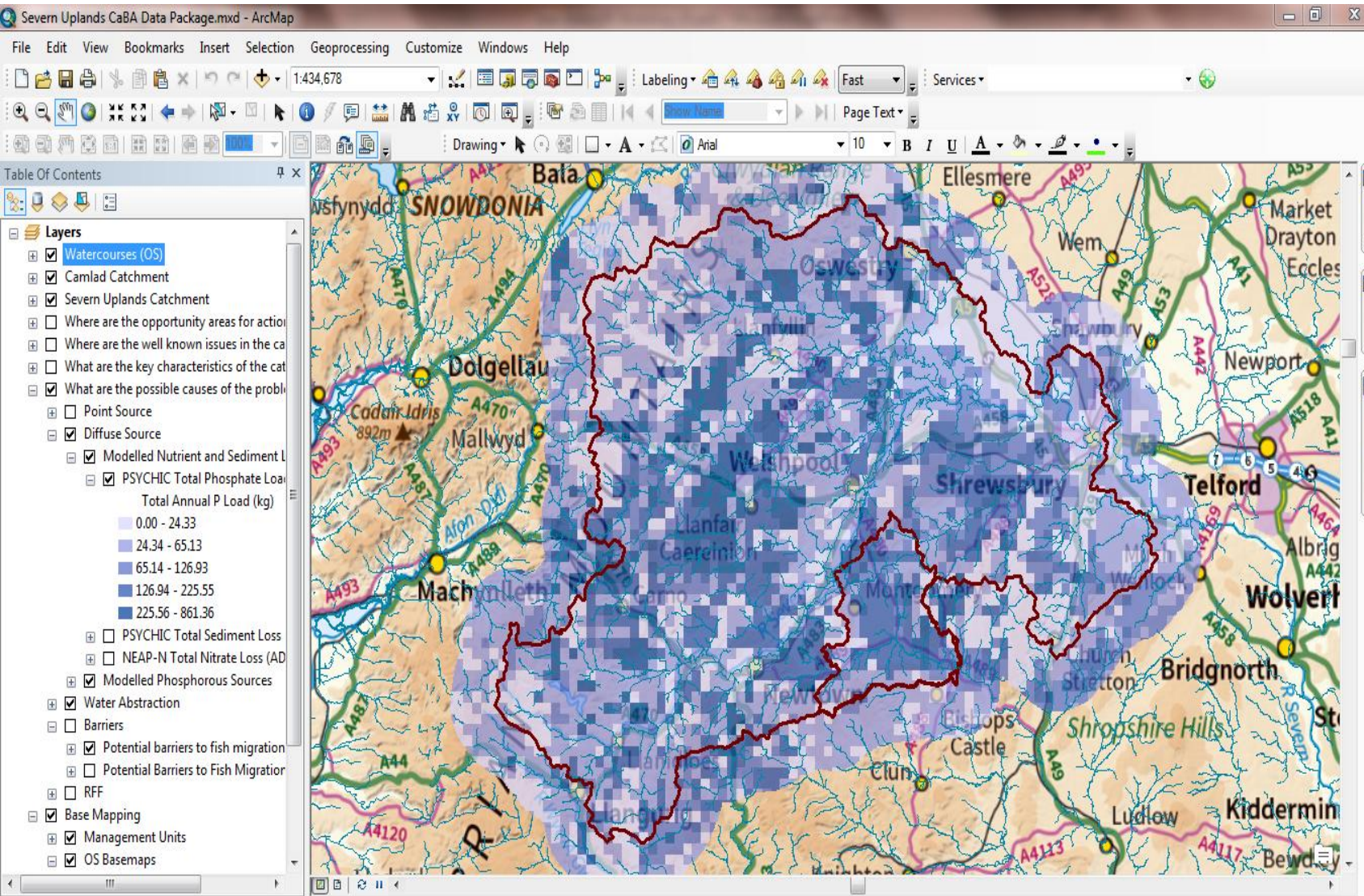
eLearning portal for CaBA partnerships. <http://www.caiba.org.uk>

- Capacity building and resilience
- Direct 1:1 and 1:Many support
- Leaving external funding for CaBA
- Sharing best practice
- Rapid progress for partnerships

More... <http://bit.ly/CaBAmentoring>

Members of the Catchment Data User Group

CaBA Open Data Package



2016-17 Online Mapping Developments

Templates to enable CaBA partnerships to publish their catchment plans as interactive maps

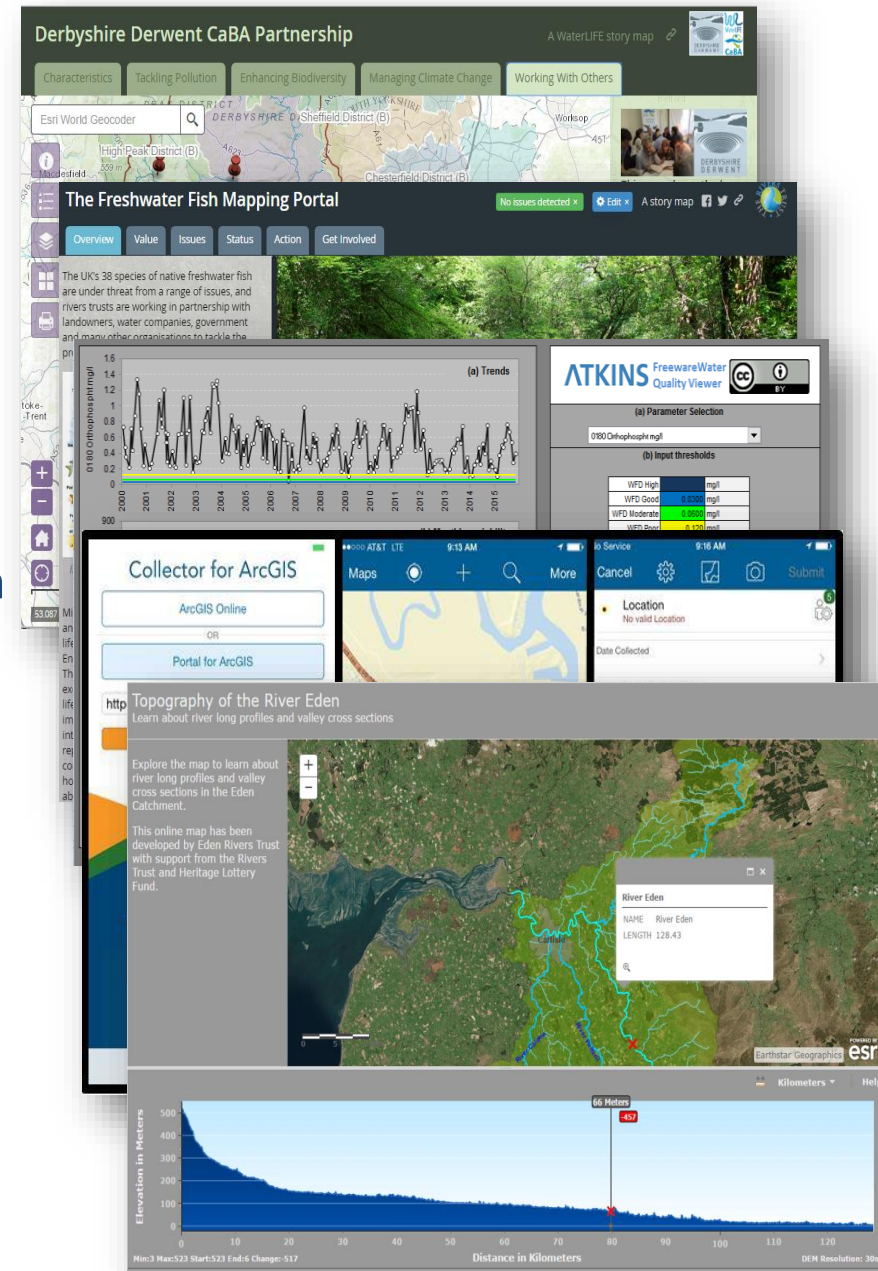
Training, webinars and tech support to help CaBA partnerships make the most of online and mobile data sharing technology

Using Story Maps to engage different audiences and stakeholders around catchment management

Combining government Open Data with local data to create a weight of evidence for collaborative action

Using mobile data capture technology to fill evidence gaps and report issues

GIS-based education resources linked to the national curriculum to link schools with local CaBA partnerships



CaBA Working Groups



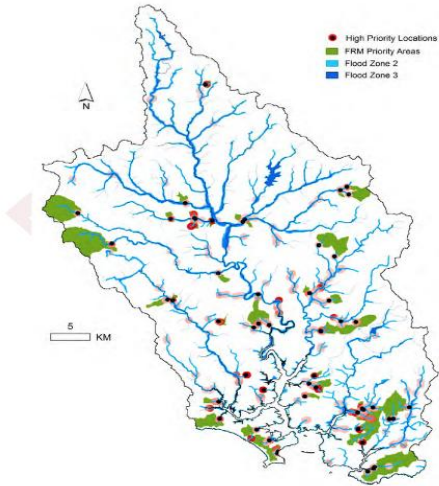
Agriculture & Water Resources Working Group

- ✓ Protection of SAC's
- ✓ DWPA
- ✓ Abstraction Reform
- ✓ Natural Flood Management

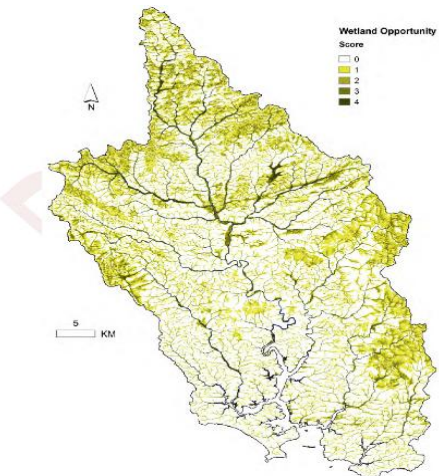


Mapping Ecosystem Services

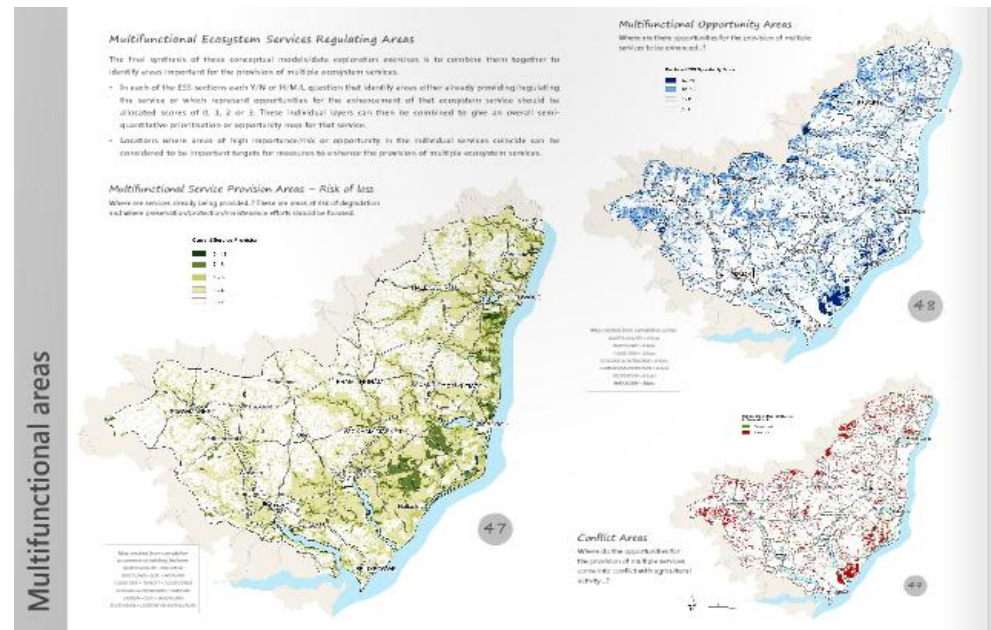
<http://bit.ly/SevernESS>



Priority areas for catchment-based flood risk interventions



Areas suitable for restoration or creation of wetland



Managing Flood Risk at the Catchment Scale



CaBA Partnerships provide an ideal vehicle to mobilise debate and action bringing together flood threatened communities and those organisations (& individuals) able to enact mitigation

FRAMES – Flood Resilient Areas by Multi-layered Safety



- Interreg VB North Sea Region
- 3 year project: 2016 – 2018
- Total project budget: €6.9M
- UK Trusts & NFF budget: €1.5M
- ERDF Grant Rate: 50% (effective rate ~46%)
- 3 Pilot Areas in UK
 - Tees
 - Trent
 - Kent

Multi-Layered Safety Concept

Layer 4: recovering the consequences of a flood.

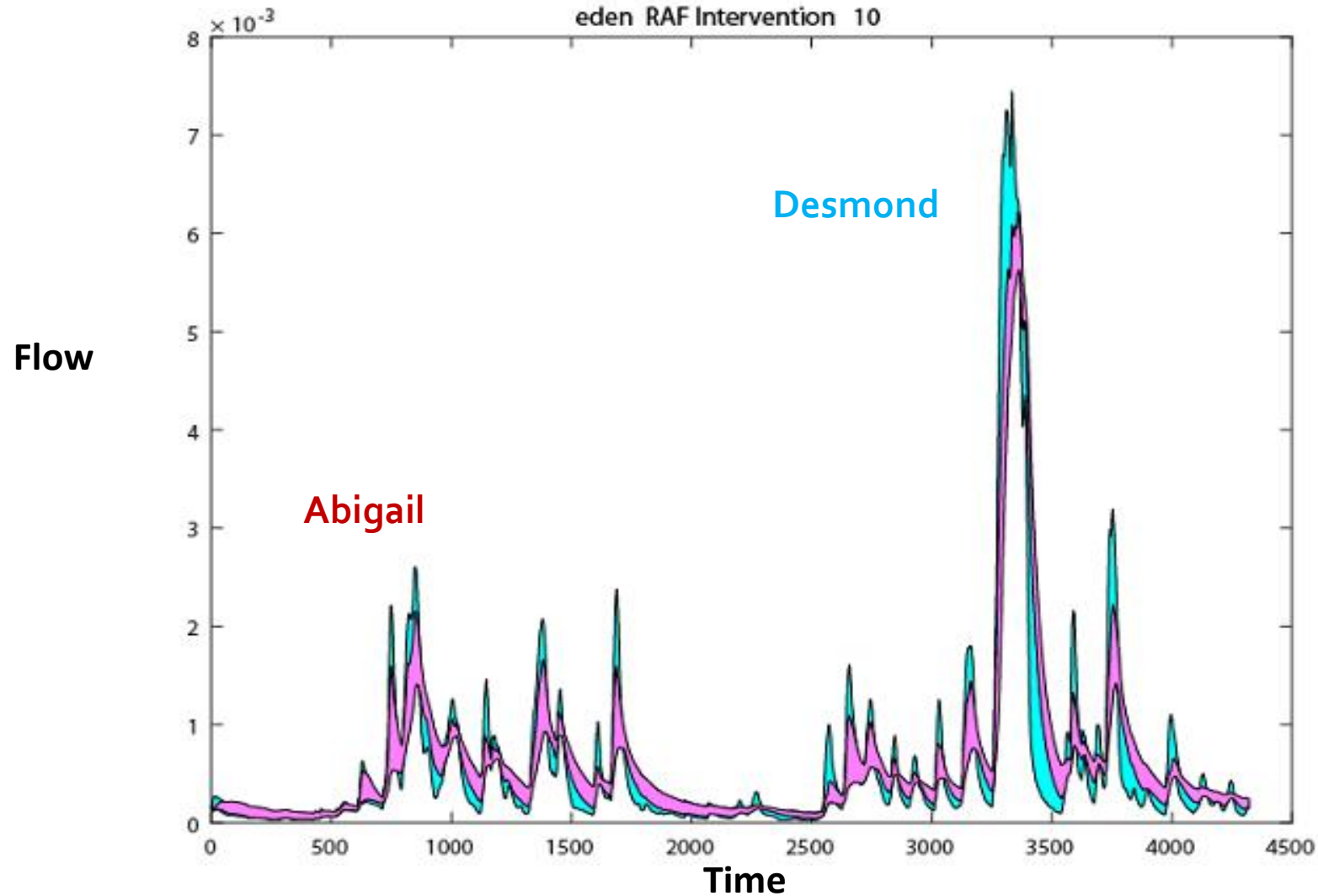
Layer 3: emergency response (including notification, crisis recommendation, operational management, evacuations in high water);

Layer 2: spatial planning measures - climate resistant organisation of the area that can limit the consequential damage;

Layer 1: prevention measures that prevent flooding;

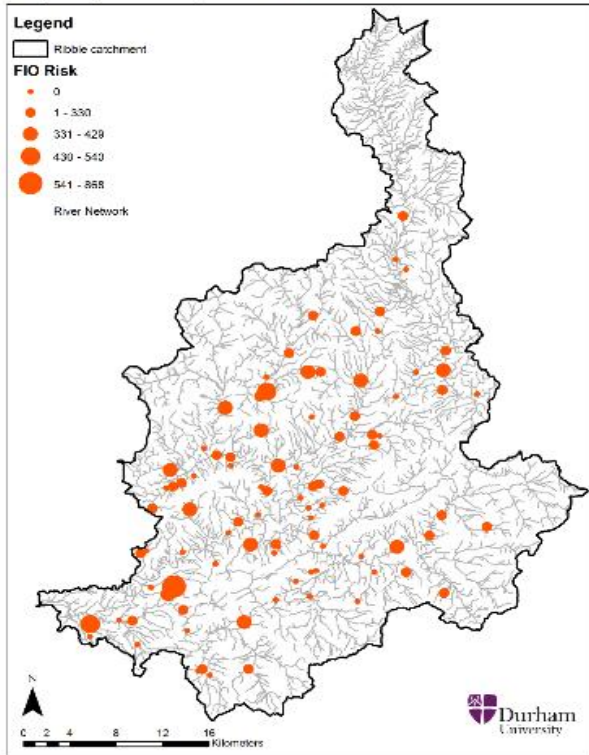


Large scale NFM could deliver significant flood benefits even in extreme events

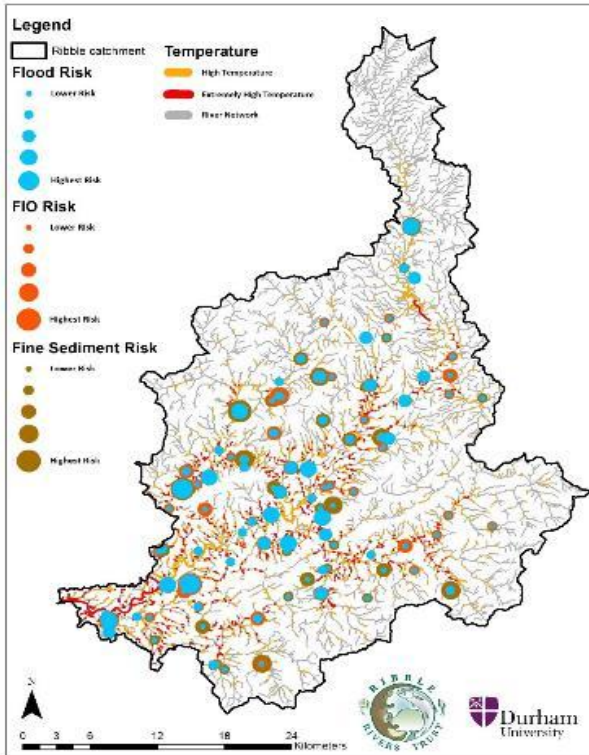


Targeted tree planting based on multiple opportunities

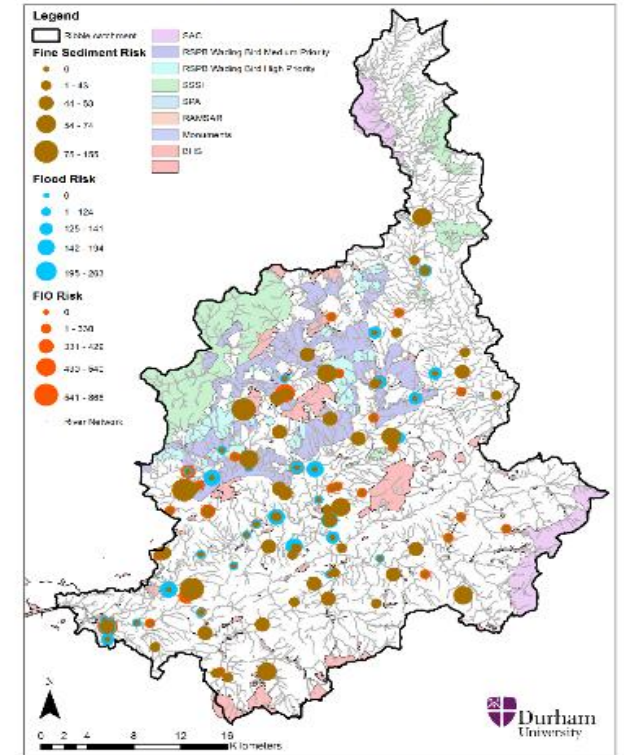
Top 50 pressure points for FIO risk



Top priority locations to plant trees to address - flood risk, faecal indicator organisms, sediment inputs, and water temperature.



Top 50 pressure points for sediment, flood and FIO risk



CaBA Working Groups



Funding & Benefits Working Group



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CaBA Benefits – 2016-17



- **CaBA partnerships achieved:**
 - ✓ > 36,000 individuals engaged
 - ✓ > £18m raised from lottery funds
 - ✓ > £30m raised from EU funds
 - ✓ > £37m invested by water co's
 - ✓ > £41m match funding
 - ✓ > £7m in-kind contributions

For every £1 directly invested by government, CaBA partnerships have raised £8.63 from non-governmental funders.

Cost : Benefit 1 : 8.63

Strategic Future Delivery Priorities



- 1 Agriculture; NFM; Water Co's PR19; Natural Capital
- 2 Develop & Secure Funding Mechanisms

Brexit - a critical time...

- **Risks?**
 - Potential loss or weakening of EU environmental regulation (HD, WFD, UWWD, etc) & grant funding (EU Life etc)?
 - Replaced by new government funding streams?
 - Who will hold government to account?
- **Opportunities? - Defra 25 Year Environment Plan / Agricultural Reform**
 - Water Co's and PR19
 - Integrated Catchment Based Approach?
 - Natural Capital – measures of success
 - Mechanisms for sustainable innovative funding?
 - ✓ Hypothecated taxes
 - ✓ Cap & Trade
 - ✓ Paid Ecosystem Services, etc

PES, Cap & trade opportunities ...

- Empowering stakeholders to reduce their demand and 'trade' resources
- ***If you can measure it - it could be applied***
 - ✓ Phosphates
 - ✓ Nitrates
 - ✓ Pesticides - '*remove spikes*'
 - ✓ Sediment
 - ✓ Water abstraction v On farm winter-fill
 - ✓ Flood Risk Management



Some indicators of success?



- ✓ **WFD – Good Ecological Status**
 - Fish, Invertebrates, Macrophytes, Diatoms, chemicals
 - Restoration of natural river flows and channels
- ✓ **Soils – O M, carbon, organisms, limit erosion & sediments**
- ✓ **Building Natural Capital**
 - Natural and semi-natural features – wetlands, hedges, woodlands, scrub, permanent pasture etc
- ✓ **Delivering sustainable Ecosystem Services**
 - Sustainable drinking water supply
 - Reduced risk of flooding
 - Bathing waters protected
- ✓ **Improving Biodiversity – reducing INNS**





Thank You!

www.catchmentbasedapproach.org

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