

**Inspiring a positive  
future by connecting  
people and nature**

North Devon UNESCO World Biosphere  
Annual Report 2014-15



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# Foreword



Life is all about connections; between people, between people and nature, between knowledge and action, and between the past, present and future. If these connections break, we put our collective quality of life at risk. If we keep them strong, we build something that can inspire future generations to rejoice in positive connections too. The Biosphere helps to strengthen connections by inspiring and empowering people and creating the conditions for a resilient future for this part of the world.

It is important to keep these long term values in mind when we face the immense challenges of such changing times. Many of the organisations we have traditionally looked to for funding, such as local government, have already sustained, and are facing further, budget cuts. We are hugely grateful to Devon County Council and North Devon and Torridge district councils for their continuing investment in the Biosphere and their support as we seek to diversify our income sources. Looking forward, the local authority funding will inevitably be reduced and much of my role as chair in the past year has been to consider how we might respond to this challenge. There really are no easy answers! Thoughts of finance, especially reduced finance, inevitably lead to thoughts of organisation – our governance arrangements. These have to be fit for purpose in the new climate so these have also exercised our minds. Whatever the outcome of these deliberations, the ‘real’ work of the Biosphere is what matters.

This year has seen an immense amount of marvellous work by all those involved in the final year of two programmes - the Taw River Improvement Project and the Northern Devon Nature Improvement Area. Both have shown that concerted action at a catchment or landscape scale can make a difference. I know the many partners involved in this work and in the efforts to maintain the momentum going forward recognise the Biosphere as the ideal vehicle to host such initiatives. Long may that continue. It certainly could not carry on without the immense dedication of the Biosphere team led by Andy Bell. Despite the uncertainties and challenges of the past year, the whole team has continued to work with great professionalism and enthusiasm. Their commitment to the Biosphere, its landscape, economy and people, makes my job as chair a real pleasure. Thank you team!

As ever, the annual report is a taster and cannot possibly cover everything that the Biosphere achieves in a year. Do look at our website, [www.northdevonbiosphere.org.uk](http://www.northdevonbiosphere.org.uk) for more information.

Professor Michael Winter OBE  
Biosphere Partnership Chairman

With continued thanks to our core funders





# Making a positive future now and everyday

We can't hope to detail everything that is done in support of the Biosphere in this report but here are some of our headline achievements for this year.

1. The Partnership's catchment scale land management projects; the Taw River Improvement Project (TRIP) and Northern Devon Nature Improvement Area Project (ND-NIA), have finished and resulted in an estimated £3.5M in ERDP payments for Biosphere farmers \*
2. Support given to more than 300 farmers representing some 40% of the Biosphere's land area
3. The successful Catchment Sensitive Farming Project is running again in the Biosphere for the 6<sup>th</sup> consecutive year
4. The Biosphere's new Strategy to 2022 has been completed
5. A 3 year Freshwater Pearl Mussel Project has begun that aims to increase the numbers of this rare and iconic species and improve water quality for all
6. The Biosphere Marine Working Group has submitted 2 more Marine Conservation Zones for approval by Defra
7. Submission of a £1m natural health project to the Our Environment Our Future grant scheme #
8. Riverfly citizen science project underway to monitor local river quality with more than 50 volunteers sampling over 50 river sites

Landscape scale projects in the Biosphere have brought more than 1800ha of rare, wildlife rich culm grassland and nearly 200ha of woodland into favourable management. This corresponds to the area of 2486 and 276 football pitches respectively.



Surveying the Torridge to assess habitat suitability for the Freshwater Pearl Mussel



John Balls potting for crustaceans off Clovelly

\* See finance section at the back of this report.

# Awaiting a funding decision at the time of writing.

# Catchment Management

Healthy rivers and streams provide benefits for all. They bring life to our region and are good for the health, wealth and prosperity of North Devon. The Biosphere is leading efforts to find practical and affordable solutions to manage these precious resources at a catchment level which, in a rural area like ours, means supporting farmers to manage the land in ways that help improve water quality, lessen run off and improve biodiversity.

## Taw Rivers Improvement Project

The Biosphere Partnership began the £1.8million Taw River Improvement Project (TRIP) in 2012. Its goal was to improve water quality in the river Taw catchment to help meet the environmental targets of the Water Framework Directive. It finished in March 2015 and was a focus for partners from different organisations to provide specialist advice and help. Achievements so far include:

- 43 farm plans drawn up to offer advice on reducing diffuse water pollution from agriculture
- 172 Ha of new woodland established/ woodland brought into management
- Five training events for land/woodland owners
- Nine culm grassland owners given TRIP grant aid to help manage their sites
- 309 Ha of culm grassland restored/ managed
- 18.1km of fencing erected to keep stock out of rivers and streams
- A habitat walkover survey carried out over 14 km of the River Mole
- Three surveys for freshwater pearl mussels carried out on the River Mole
- Six major barriers to fish passage resolved (North Wyke, Rashleigh, Filleigh, North Molton, North Tawton & Eggesford)



Freshwater Pearl Mussel survey with Ian Killeen



New riverside fencing part-funded by the TRIP



### Northern Devon Nature Improvement Area

The Northern Devon Nature Improvement Area (NIA) began in 2012 and is led by the Devon Wildlife Trust on behalf of the Biosphere Partnership. It covers the River Torridge catchment and is one of only 12 NIAs in England. The Defra funded phase 1 of the Project came to an end in March 2015 after delivering bigger and better quality areas of culm grassland, woodland and river habitat, improving water quality and creating more wildlife habitat. It has also strengthened the connections between local people and the landscape and promoted a better understanding of the valuable ecosystem services it provides. Achievements so far include:

- Nearly 1500ha of culm and other grassland, 106 km of hedgerow and 19 ha of undermanaged broadleaved woodland are being restored by working with local landowners
- 49 hectares of wetland, 13 hectares of grassland and 19ha of woodland recreation (planting) underway
- The total cost of the Northern Devon NIA project has been £1,075,339, with £278,114 in addition through in-kind partner contributions
- An estimated £2.7million through ERDP farmer support has been generated through the NIA
- The NIA has attracted over £600,000 through added value projects
- Community engagement as never before in the Project area—see pages 12 and 13 of this report.



Farmer training day focussing on soil aeration



Soil infrastructure workshop focussing on silage management

## Catchment Sensitive Farming

A Catchment Sensitive Farming Partnership has been running in the Biosphere since 2009 with the aim of reducing diffuse pollution from agriculture in priority areas. In 2014-15 the partnership consisted of Natural England, the Environment Agency, Devon Wildlife Trust and the North Devon Biosphere Service.

During 2014—15, 24 Farm Infrastructure Audits were delivered to help farmers reduce diffuse pollution associated with yards and buildings. These specialist reports were frequently used to support applications to the CSF Capital Grant Scheme, 43 of which were successful. Three workshops were held looking at compaction and soils. The issue of pesticides in drinking water was tackled in the Barnstaple Yeo catchment through a pesticide workshop and on-site advice followed by a report.

All these catchment scale approaches are working. Since 2009 when they began in the Biosphere, Environment Agency monitoring has shown an improvement in the phosphate pollution status of nine sub catchments targeted by the measures.

## Catchment Based Approach

The momentum from our catchment projects, together with the breadth of skills and experience on the Biosphere Partnership, has meant that it has been chosen to host the Environment Agency's Catchment Based Approach (CaBA) pilot for northern Devon. The 'Your rivers your views' consultation process began in the Autumn of 2014. The process produced a plan that focusses on water related issues as affected by land use. This plan will be a key part of our work in the Biosphere Reserve over the coming years and is already the basis of some bids for the partnership to continue its work.



Demonstrating a soil slitter at Deptford Farm



Map of catchment 43, the area of the Biosphere's CaBA pilot



# Woodlands

Many people don't realise that our woodland economy is worth over £16M every year to the area. Even so, the potential for a greater economic impact from sustainably managed woodland is huge, particularly when so many are currently unmanaged. When we stack up all the known values of the services woodlands provide (carbon storage, flood attenuation, tourism, etc) the value is in the order of £58M per annum.

The Biosphere Partnership has produced a programme for regenerating the woodland industry in the Biosphere Reserve with a proposal to make the entire Biosphere a Woodland Enterprise Zone with the following themes:

- Woods for Business; safeguarding and expanding the current economic activity, expanding into new markets
- Woods for Nature; improving and safeguarding the woodland biodiversity
- Woods for People; improving the social benefits provided by woodland and increasing a woodland culture in the area.
- Woods for Ever; making our woodland resilient and dealing with climate change

The Biosphere Partnership has started woodland management training for landowners through both the Nature Improvement Area and Taw River Improvement Projects reaching over 112 land owners.

Using commercial woodland management as a driver, we have reduced the costs of managing the Tarka Trail by £3k over the last two years.

Using satellite data and other hydrology and soils information, we have identified where we can best regenerate woodlands for the benefit of the community and the landowners. These will be used to help target the new grants from Defra.



Woodland workshop near Week



Highlighting the value of firewood—Hatherleigh 2014



# Marine Management

Just like the land, the Biosphere's seas deliver a range of valuable social and economic benefits such as providing food, taking up carbon dioxide, providing habitat and being a magnet for leisure. We have been working hard with the fishermen, the conservation sector and our Biosphere communities to care for them. Fishing data shows that catches in the Biosphere are sustainable. Whilst recognising and rewarding this achievement, it's important that we work with all concerned to keep our seas healthy with Marine Conservation Zones and a marine management plan backed up by good data.

## Marine Conservation Zones

Over three years ago the Biosphere Partnership designed the set of potential Marine Conservation Zones (MCZs) for the Biosphere area. So far only the one around Lundy has been confirmed by government but two others that we put forward are being considered in the second site confirmation process currently underway; Bideford to Foreland Point and Hartland to Tintagel.

The Marine Working group, which includes fishermen, recreational users, divers, scientists and conservationists, originally suggested the approximate areas for the MCZs. Since then we have collected more information about the important species like the honeycomb worm, pink sea fan and spiny lobster that these zones are meant to protect. Therefore, as part of the second stage confirmation process, the Group has suggested some minor changes to the boundaries. These changes provide more wildlife protection but also respond to fishermen's concerns about some important fishing grounds being included in the original proposals.

*John Balls, Chair of the North Devon Fishermen's Association*

"Local fishermen are under a lot of pressure these days from quotas, increased landing sizes for spider crabs and other shellfish, foreign competition and other users of the sea. Despite this we have done a lot of conservation measures in the past, and are happy to work with the Biosphere Reserve to secure a sustainable fish stock for the future of the North Devon fishing fleet."



Sunset coral © Mike Deaton

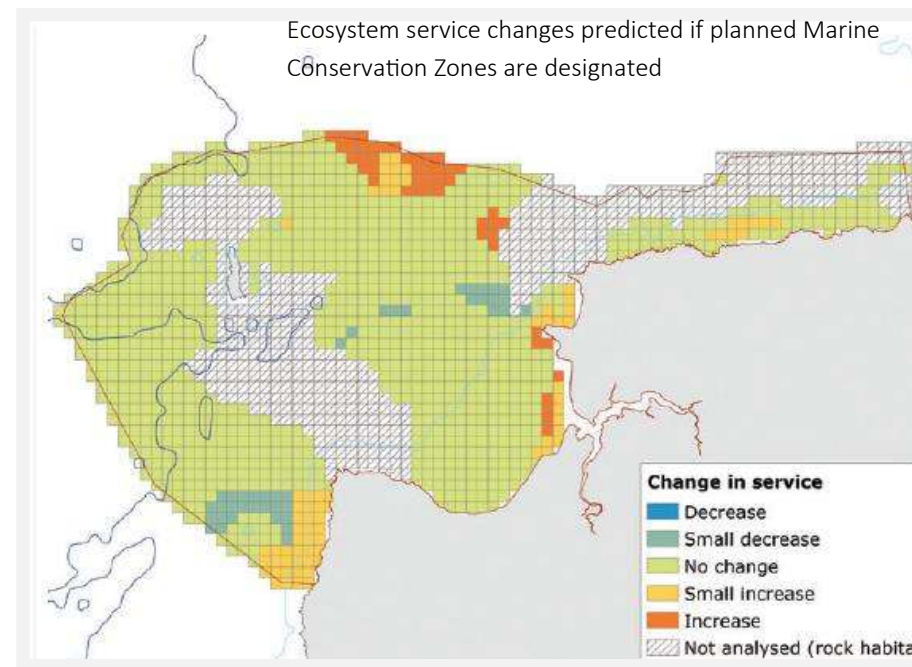


Sustainable potting off Hartland

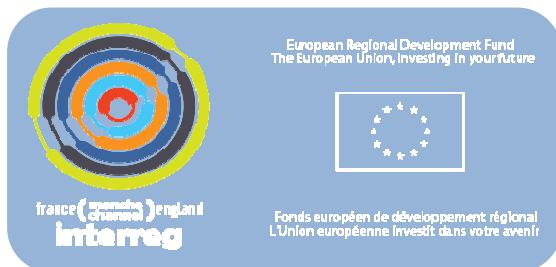
## ValMER project

ValMER is a European Union funded project designed to quantify the value of marine ecosystem services. The Biosphere's seas were chosen as a case study area focussing on the extensive seabed muds, sands and gravels, and the role they play in storing carbon, processing waste and providing nursery grounds for commercial fish and shellfish.

The ecosystem services in these areas were determined and mapped and then the effect of different potential activities on them was modelled. The results and maps identify important fish nursery areas which the Inshore Fisheries and Conservation Authority are interested in using to inform their activities. They also show how changes to marine activities affect the value of different ecosystem service types. This is particularly useful in informing the Marine Conservation Zone process including the development of management plans for the sites that progress to designation. We will be using this approach and some of the ValMER information to inform marine spatial planning in the Biosphere and to support fisheries improvement.



The Estuary from Westleigh



# Sustainable Energy

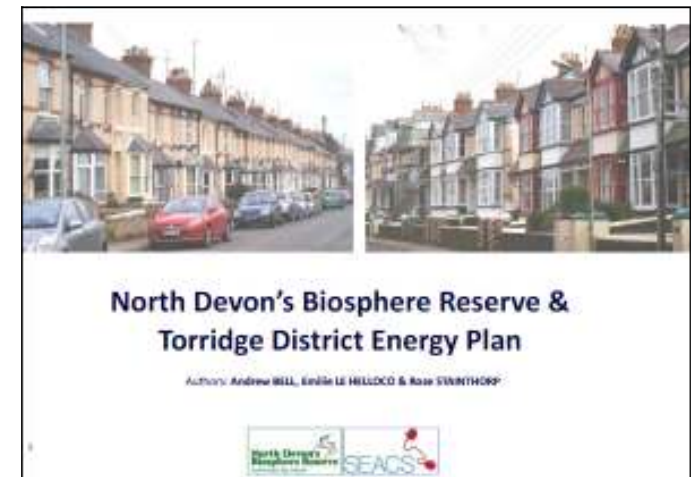
From domestic heating to transport, industrial processes to wood fuel production; how much energy we use and where it comes from is a major factor that helps determine this area's carbon footprint and contribution to climate change. North Devon's Biosphere Reserve is leading the way in tackling one of the world's biggest challenges at a local level.

## Sustainable Energy Action Plan (SEAP)

Our study sets out a baseline for energy consumption and generation in the Biosphere and shows how different energy types are used in the domestic, transport and commercial sectors. It explores strategies to reduce energy demand and increase appropriate renewable energy production.

### Biosphere headlines

- Nearly £300m is spent on energy each year. Most leaves the area and goes to national energy companies
- 31% of energy use goes on domestic heat and light, 20% on private cars
- Nearly a tenth of our homes are in fuel poverty with the hotspots in rural areas. This is higher than the Devon and National averages. Therefore reducing energy demand will help to tackle poverty
- 141MW of renewable energy has been installed in the area, providing approximately 7% of energy demand. National targets call for 40% renewable energy generation by 2030
- More community led renewable schemes are needed and will reduce the loss of funds from the area



The Energy Group has been trying to bring funding to the area by encouraging customer take-up of national Energy Company Obligation funding. This has been problematic, and therefore new funding solutions are needed.

The Group has been developing projects for wood energy to tie in with the Woodland Enterprise Zone proposed by the Biosphere Partnership as a key rural development policy for this area. Whilst we assemble the funding to take this forward, we have been using remote sensing technology to explore the potential sustainable wood fuel yield for farmers who manage hedgerows sensitively.

The Biosphere has supported the application for Barnstaple's Car Club as a tool to reduce transport emissions in the area.



# Cultural heritage

Be it the food we eat, the places we live, the communities we belong to or the cultural life we take part in; it is all strongly linked to the Biosphere environment. In north Devon we celebrate this link through artistic creativity and cultural awareness and the Biosphere frequently works with artists, crafts-people, historians and communities to inspire, entertain and educate.

Throughout the Nature Improvement Area Project Beaford Arts, the primary arts partner, developed a number of interactive community arts shows based around NIA objectives. These culminated in the winter of 2014 with a theatre piece called "The Common" produced by the China Plate theatre company. This reached more than 250 people in shows at Dolton, Hatherleigh and Okehampton and has now begun a tour of other Nature Improvement Areas in England.

*Catherine Courtenay, November 2014*

"Utterly captivating and working on so many different layers, The Common gave us real food for thought; so many facets revealed through these 10 characters and you never lost sight of the biggest character of them all, the one enveloped in darkness outside the hall, our very own, special part of the Devon countryside".



Performance of "The Common" © Beaford Arts.

The Biosphere is always looking for different ways to tell our story. During 2014 The Nature Improvement Area Project worked with landowners, communities and schools to produce a number of short films. They have been viewed by more than 1500 people on YouTube.



Short film about farming in the Nature Improvement Area



Short film about a winter walk at Meeth Nature Reserve made with children from the Messy Meeth Monkeys community group.

# Participation, Community and Engagement

Biosphere Reserves are about inspiring a positive future by connecting people and nature. They are a focus for finding creative and effective ways for people and nature to thrive together and that means involving people in all that we do.

A good example of this approach in practice is the outreach work that supported the Biosphere's Nature Improvement Area Project in the River Torridge catchment. During the Project over 150 community events were held including walks, talks, agricultural shows and fairs. In 2014-15 alone, 24 events were held involving over 2000 people. A further 21 volunteering activities with 186 volunteers contributed over 3000 volunteer hours.

With support from the NIA, 15 parishes have started environmental projects whilst at least 20 community 'pathfinders' are contributing major energy and time to their local projects. One new community woodland has been established at Sutcombe and communities in Cookbury and Torrington are trying to create two new Local Nature Reserves.

## Education:

52 school groups were taken out on site to experience the natural environment at first hand including visiting the 'Giants in the Forest' on the Tarka Trail. Primary school curriculum materials on ecosystem services called 'Nature Works' have been developed and are used by schools across the NIA.



A pupil from Fremington School at the 'Giants in the Forest' near Torrington



Volunteers showing off their first go at hedge laying at Volehouse Moor



Volunteers clearing invasive weed from Hatherleigh Moor Pond



Pupils from Torrington Bluecoats school sorting river samples



In partnership with a whole range of different communities and organisations, the Biosphere continues to support a range of engagement activities such as apple pressing at Instow and at Chulmleigh Primary School, countryside skills training such as steeping, work to look after the community orchards alongside the Tarka Trail at Bideford and habitat management at the Biosphere’s six Local Nature Reserves.

**Riverfly Citizen Science programme:**



The NIA Project established the Riverfly monitoring network in the Torridge in 2014. Volunteers were trained to regularly monitor stream insect life as an indicator of river health and to provide useful data for the Environment Agency to act as a deterrent to potential polluters. 34 volunteers took 69 samples at 28 sites in 2014. A further 18 volunteers were trained in March 2015 bringing the total up to more than 50. To date, Riverfly volunteers have taken just over 100 samples from nearly 50 different sites.



**Planning support for local authorities**

The Biosphere is in the Joint North Devon and Torridge Local Plan as a key policy driver to keep the special characteristics of the area. The partnership is grateful to the local authorities for recognising the benefits of the designation. The approach has been so ahead of the curve that it has been a case study in national research on how to include ecosystem services in town and country planning.

Biodiversity Offsetting has been contentious nationally, however, the approach in North Devon Biosphere addresses the shortcomings of other schemes.

To date we have used the tool on at least four major developments to improve their sustainability.



The Taw Torridge Estuary and the Westward Ho! pebble ridge



Volunteers at Ford Woods LNR, Bideford



Instow Apple Day



# Participation, Community and Engagement

In the Biosphere we are fortunate to have the South West Coast Path and Tarka Trail; fantastic places along which to explore and to make that connection with nature. Both are a focus for community action and engagement and real assets to the area.

## South West Coast Path National Trail

The Biosphere Service has responsibility for nearly 77 miles of the South West Coast Path in North Devon\*

As well as general maintenance to National Trail standards, the Biosphere Service has planned and secured funding for sea defence repairs at Appledore and a new £12K bridge at Mouth Mill (opened in May 2015)

## The Tarka Trail

The North Devon Biosphere Service has managed the Tarka Trail to balance recreation by various users (pedestrians, horse riders and cyclists) with wildlife enhancement and social benefit\*

In 2014, automatic cycle counters embedded in the Tarka Trail recorded over 700,000 cycle passes. This can be doubled to include pedestrians to give 1.4 million Trail uses each year. Since 2002 when the Biosphere began managing the Trail there have been nearly 7 million recorded cycle passes between Braunton and Meeth giving an estimated total traffic of 14 million.

During 2014 Trail-side coppicing on 600 metres of Trail between Yarde and Bagbear opened up views and improved the habitat for wildflowers and associated wildlife. By way of payment, the contractor who undertook the work did so on the basis of keeping and selling the firewood. Fencing was erected at Fremington Cuttings to allow stock grazing to keep scrub down and benefit wildflowers on this important County Wildlife Site.

New tarmac was laid between Torrington and Weare Giffard to replace the 15 year old worn out surface and Trail widening work was completed south of Yarde. Extensive ditching and drainage improvements were also completed at Penhill whilst, thanks to Councillor Locality Grant funding, new LED lighting was installed in the tunnel at Landcross to replace the original lights that were continually failing.

*\*Since May 2015 this function has been transferred to the County Council's Public Rights of Way teams*



The new bridge at Mouth Mill.



New tarmac surface at Weare Giffard



New LED lights at Landcross.

# Governance and Management

The Biosphere Reserve Team coordinates the work of the Partnership as well as developing and delivering projects and activities in support of the Biosphere Reserve Strategy and Action Plan

In this section we report not only at the direct work of the team but also on the project funding brought into the Biosphere through coordinated partnership working.

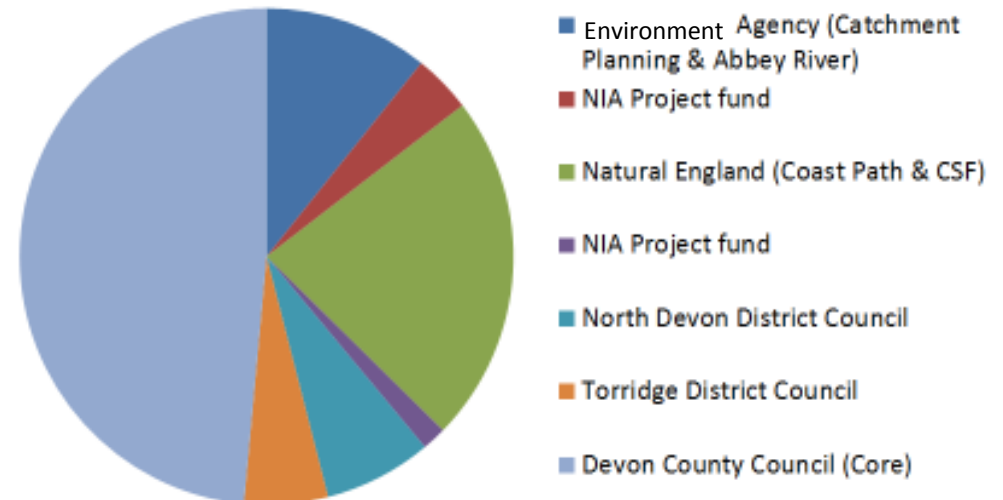
Biosphere Partnership have invested over £3.4m during the 2014-15 financial year in the following projects:

- Nature Improvement Area: £1.2m
- Catchment Sensitive Farming: £1.2m
- Taw River Improvement Project: £650K
- Abbey River Project: £31K
- ValMER: £400K

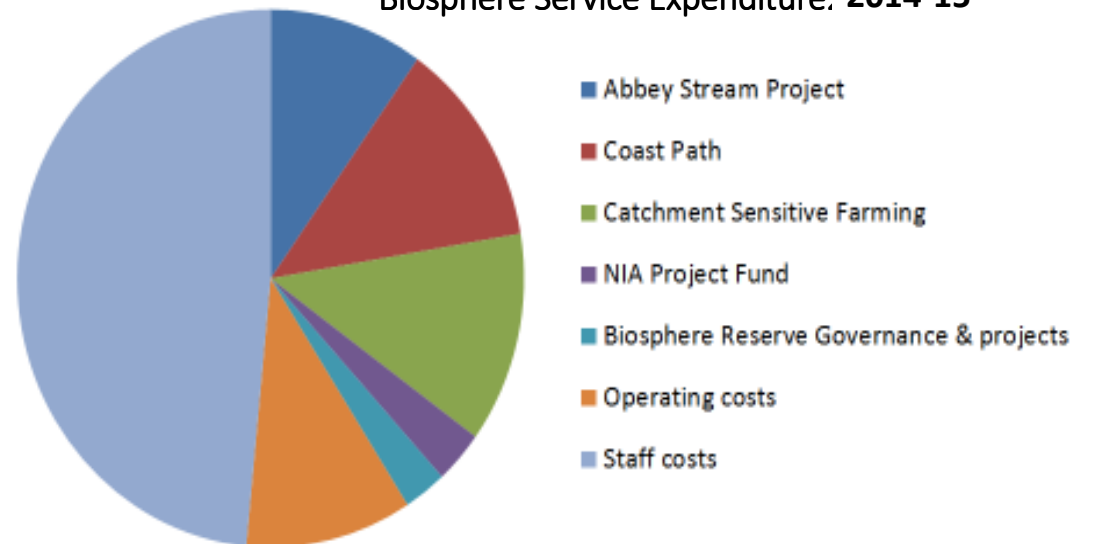
Based on the £164k the core team receives from the Local Authorities, this is a return of £21.2 for every £1 they invest in the Biosphere.



Biosphere Service Income 2014-15



Biosphere Service Expenditure: 2014-15



## The Biosphere Partnership

We are immensely grateful to our partner organisations and individuals within the Partnership and its associated working groups. Without them and a wider network of people among our many communities that support our Biosphere, we could not be so successful. Below is a list of Partnership members as at 31<sup>st</sup> March 2015

- **Prof Michael Winter OBE** (Exeter University) Chair of the Biosphere Partnership
- **Mark Wallace** (Director, Beaford Arts) Vice-Chair of the Biosphere Partnership
- **Phil Byers** (Chairman, Barnstaple Chamber of commerce) Vice-Chair of the Biosphere Partnership
  
- **David Appleton** (Natural England)
- **Dave Edcombe** (Acting North Devon AONB Manager)
- **Andrew Butler** (National Farmers' Union)
- **Richard Butler** (Biosphere Reserve Ambassador)
- **John Balls** (North Devon Fisherman's Association)
- **Cllr. Rodney Cann** (North Devon Council)
- **Cllr. Caroline Chugg** (Devon County Council)
- **Sarah Clark** (Devon and Severn Inshore Fisheries and Conservation Authority)
- **Hector Christie** (Christie Devon Estates)
- **Robert Down** (Deputy Chair and Treasurer, Coastwise North Devon)
- **Brian Fraser-Smith** (Devon Association of Parish Councils)
- **Lesley Garlick** (Professional Planner, Devon County Council)
- **Hannah Harrington** (North Devon Council)
- **Prof. Peter Howard** (Bournemouth University Landscape Research Group)
- **Peter Jollands** (Chairman of the Biosphere Foundation)
  
- **Andrew Knights** (Marine Officer for North Devon, Natural England)
- **Kate Little** (Torridge District Council)
- **Mike Moser** (Chairman, NIA)
- **Sue Neary** (U3A)
- **Steve Pitcher** (Chairman of North Devon Areas of Outstanding Natural Beauty Partnership)
- **Tony Pratt** (Taw Torridge Estuary Forum)
- **Stan Pyle** (Bideford College)
- **Emma Richardson** (Devon Wildlife Trust)
- **Jay Rowntree** (Environment Agency)
- **Rob Sekular** (Countryside and Community Projects Officer, West Devon Council)
- **Cllr. Derrick Spear** (Chairman, Tarka Country Trust and North Devon Plus Board)
- **Cllr. Gaye Tabor** (Torridge District Council)
- **Eirene Williams** (FWAG South West)
- **Cllr. Jeremy Yabsley** (Devon County Council)



**Our Biosphere is about bringing people together to build a future we can trust where people and nature thrive. Our success depends on the strength of the relationships and partnerships we create.**





The North Devon UNESCO World Biosphere Reserve exists to connect people; their culture and economy, and nature.

Designated in 2002, it was the first of its type in the UK. Others have followed in Scotland and Wales and last year the Brighton and Lewes Downs was designated. Other Biospheres are being developed on the Isle of Man and in Northern Ireland.

The UNESCO Biosphere designation puts North Devon on a par with other Biospheres such as the Maldives, the Niagara Escarpment and the Serengeti. All are part of a world network of 621 Biosphere Reserves in 117 countries.

All Biosphere Reserves, and North Devon's is no exception, have goals to:

- inspire a positive future by connecting people with nature
- create the conditions for people and nature to thrive together
- empower people through participation
- explore new ways of doing things informed by learning and culture and creating connections between places, cultures and communities.

The Reserve's 1468miles<sup>2</sup> is home to over 160,000 people and important natural sites like Dartmoor, Exmoor, the enigmatic culm grasslands, the outstanding Braunton Burrows dune system and the Taw Torridge estuary.

Its boundaries are defined by the river catchments that drain to Devon's north Coast as well as 568miles<sup>2</sup> of sea including the iconic island of Lundy.



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