

NORTH DEVON BIOSPHERE STRATEGY FOR SUSTAINABLE DEVELOPMENT

2014-2024

**NORTH
DEVON
BIOSPHERE**



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Foreword by Chairman

Our Biosphere is here to inspire a positive future by connecting people and nature today. It sounds very dramatic but it is true!

North Devon Biosphere is a very special region. You only have to cross the watershed into the river catchment to see it and feel it. It's not just the wildlife but the landscape, the culture and the people that live there that make the area worthy of the UNESCO designation.



Since we led the way as the UK's first UNESCO World Biosphere Reserve in 2002, there have been 4 more sites in the UK that have used our model and emulate our success. North Devon Biosphere remains a leader in the UK on ecosystem scale approaches to caring for an area.

Particularly over the last 6 years the Biosphere Partnership has been successfully implementing projects that have cleaned up our water, supported our tourism, farming, fishing and forestry industries and supported the schools universities and colleges. It has helped thousands of people take great enjoyment in the countryside and generally contributed to the well-being of the people in northern Devon. It has literally brought millions of pounds into the area.

The Biosphere designation is unique in bringing disparate sectors together to collaborate to make north Devon a world class area to live in and to visit and keeping it a special place; a place to be proud of.

This strategy uses the fact that Nature provides for this area a whole set of benefits that we can use wisely to give us that secure our future; it addresses the challenges such as climate change, food security and energy security choices, the structure of our economy and how we can benefit as a society. It places a large emphasis on working with the local community to inspire and deliver the future they want.

I am sure that you share these aspirations and we would like to hear from you to see how this can be achieved together.

Professor Michael Winter OBE



What is a Biosphere Reserve?

Biosphere Reserves are areas of world-class natural value, designated by UNESCO (the United Nations Educational and Scientific and Cultural Organization). They demonstrate the best examples of people working in harmony with nature for the benefit of all and in doing so they show how we all have responsibility for our natural environment. Biosphere Reserves are uniquely modern designations, certainly not nature reserves, but test-beds for sustainable development within areas of high environmental quality.

Biosphere Reserves are 'living laboratories' for testing and demonstrating sustainable development on a sub-regional scale. They have 3 primary functions:

- Conservation
- Sustainable Development
- Knowledge generation and sharing

The Biosphere Reserve designation provides North Devon an opportunity to showcase innovation in how to live sustainably and develop within a world class environment. This designation is modern and unlike any other because:

- It operates at an ecosystem scale – taking in the whole of the catchments of the Rivers Taw and Torridge and the offshore marine areas stretching out to Lundy and beyond
- It includes places where people live and work, and is therefore where all of the different facets of sustainable development can be brought together to develop a thriving economy, to have a good quality of life in a high quality environment
- It is where we can test and demonstrate innovative approaches to caring for and developing our best assets: wildlife, landscapes, culture and people

Biosphere Reserves consist of 3 concentric zones with complementary roles:

- A Core Area(s) managed to conserve a habitat/site of international importance
- A Buffer Zone(s) surrounding and supporting the Core Area that includes adjoining areas with supporting designations
- A Transition Area surrounding the Buffer Zone covering the 'inter-connected' ecosystem area as a whole



Why is North Devon a Biosphere Reserve?

There are 621 Biosphere Reserves in the world, and ours is the first of only 5 in the UK. North Devon is special and that is why the United Nations has given it this tremendously prestigious designation.

Some of the special features of North Devon are:

[Diverse wildlife and landscapes](#)

- One of the best dune systems in the northern hemisphere owned by the Christie family for 350 years
- A marine biodiversity to warrant the UK first Marine Nature Reserve around Lundy and a Voluntary Marine Conservation Area
- Endemic and rare species such as Lundy cabbage, water germander, sand bowl amber snail, golden hair lichen
- Iconic Species such as the European Otter and Atlantic Salmon, greater sea stock, marsh fritillary and dormouse
- Flagship marine species such as common dolphins and porpoises, grey seals, basking sharks, porbeagle sharks and pink sea fans
- Characteristic landscapes such as Culm grasslands, Devon hedgerows, and the estuary basin
- The dramatic coastal landscapes of the North Devon Coast Areas of Outstanding Natural Beauty, Dartmoor and Exmoor National Parks
- Special western oak woodlands with a plethora of pollution-sensitive lichens
- Coastal grazing marshes and biodiversity-rich flood plains
- Important blanket bogs of Exmoor and Dartmoor
- High level of tranquillity and nocturnal darkness in the area



Cultural richness

- Neolithic settlements
- Saxon, Celtic and Viking overlays of settlement
- A strong maritime heritage
- Strong links with the land and traditional farming
- Thriving cultural communities with festivals that celebrate the area's environmental richness

Diverse economy

- Traditional farming and land management, and associated services
- Tourism and increasing sustainable tourism based on outdoor activity such as surfing, sailing, walking and cycling
- Locally significant fishing industry
- A strong manufacturing sector accounting for just under 20% of GDP

- Industries located here because of low pollution, such as pharmaceutical, medical filters and Electromagnetic testing.

A culture of innovation and learning

- Lundy was the first MCZ and No Take Zone
- The Tarka Trail and SW Coastal Path
- Experimentation with habitat management and creation on Braunton Burrows and in the estuarine areas for new saltmarshes and recreating Culm Grassland
- Piloting Biodiversity Offsetting
- Applying ecosystem approach into Land-use planning
- One of England's 12 Nature Improvement Areas
- North Wyke as part of Rothamstead Research is based in the area, Exeter and Plymouth Universities invest in the area also.



The previous strategy

Our last strategy which ran from 2008 to the end of 2013 had 8 strategic aims and 42 actions. Many of the targets in this strategy were achieved largely through the work of the partnership coming together and collaborating in their development and execution.

The strategy delivered a broad and deep range of actions across the sustainable development sector. These include;

- Successful habitat recreation programmes in the Nature Improvement Area
- Taw River improvement project
- Improvements gained through 5 years of catchment Sensitive farming
- Far-reaching education programmes
- Engaging the community through art projects
- Progress in designating Marine Conservation Zones
- Influencing land-use planning
- Significant progress in adapting and mitigating climate change
- Supporting the local economy with accreditation charters
- Marketing with other UNESCO sites in the south west



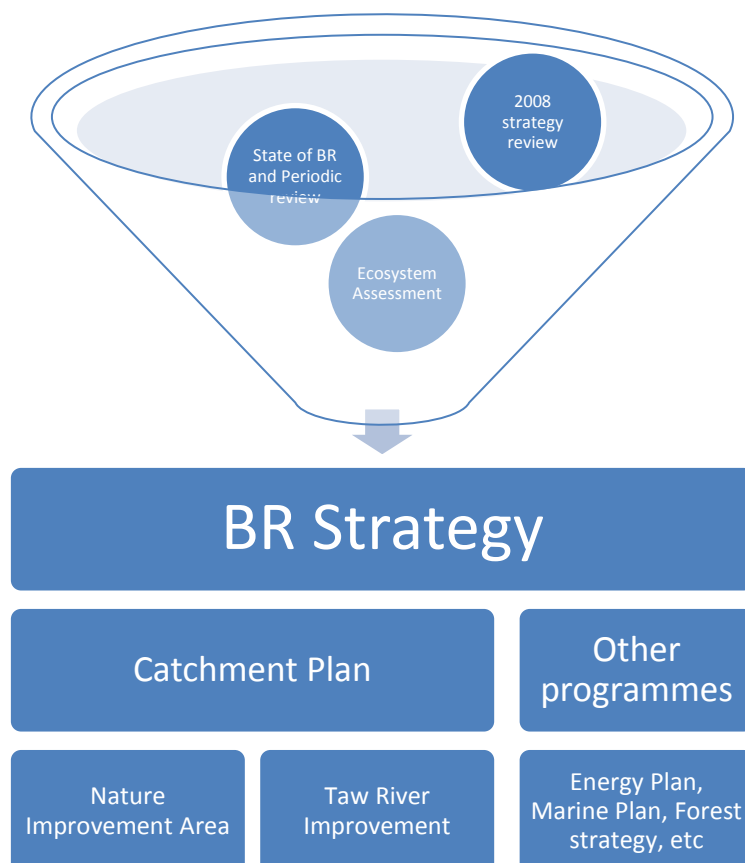
About this strategy

The new 10 year strategy is produced by the North Devon Biosphere Reserve's Partnership to guide its work and to provide a context for partners and stakeholders to deliver programmes and projects in support of the sustainable development of the Biosphere Reserve.

It has been developed as an ongoing iterative process reviewing previous strategies and working with stakeholders and the community to identify priorities. The strategy has been informed by a review of the "State of the Biosphere Reserve" which identified the condition

and trends of natural habitats, economy, land use change, energy use, cultural participation, health, and education behaviours.

The strategy synchronises with the development of a number of finer grain plans and the production of statutory plans such as Local Development Plans, River Basin Plan for the Water Framework Directive and the elaboration of the European funded programmes in the area.



Summary of State of the Biosphere Reserve 2014

Environmental Issues: The Biosphere Reserve partnership has delivered an extensive range of environmental improvement projects since the designation was made. The protected sites are in favourable or recovering condition and several hundred hectares of unprotected habitats have been restored. However despite this work and the long list of environmental jewels in the Biosphere Reserve, the overall state of habitats is poor. The water bodies in the area are mainly of moderate to poor quality and need significant investment and research for activity to bring them to good condition. The carbon emissions per head from the area are marginally better than the UK average. Marine and coastal water quality is good with the exception of the estuary which suffers from eutrophication. Invasive species such as Himalayan Balsam, Japanese knotweed and Grey Squirrel are spreading.

Social Issues: The area suffers from high deprivation according to national indicators. There are urban and rural clusters of areas that have high incidence of coronary heart disease, mental stress and respiratory problems. These can often be linked to poverty. The population change expected over the coming 20 years indicates a massive increase in the old age through inward migration of retirees and an aging local population. Affordability of buying and running homes continues to be an issue with many of the existing housing stock being inefficient to heat and all homes being expensive to buy. The reduction in public funding for social and healthcare could lead to a worsening of the condition of the area without creative and

cost effective interventions. The crime rate is amongst the lowest in the country.



Economic Issues: The economic performance of the area is low on the standard measurements with much being around 75% of the EU average. However, being a small area on regional development perspective, it is overlooked in the allocation of extra grant support to alleviate the situation. Manufacturing in the area has remained reasonably strong throughout the recession. Farming incomes have improved as they have nationally, although certain sectors such as dairy remain challenging for the smaller scale farms. The livelihood of farmers is still largely at the mercy of the major corporate buyers and the Common Agricultural Policy. Although the data indicates a broadly sustainable fishery in the seas off north Devon, very little added value arises from the fish that are landed in the area. Energy is a major leakage from the local economy; representing around £300M spend which almost entirely leaves the region.

A picture of the Biosphere Reserve in 2030

The UNESCO World Biosphere Reserve designation will be well-known to the local community and visitors, who value this global accolade. The area's brand is so strong that it drives a shift in behaviour that supports all aspects of the Biosphere Reserve's Strategy.



The Biosphere Reserve's natural system of habitats will be restored and functioning and will be in a position to show resilience to climate change and other forces. Large areas of Culm grassland and upland mires will be restored, working as a sponge for the large rainfall events and ensuring a better summer flow of water down the rivers.

The rivers will be clear of diffuse pollution and threats of point source incidents. There will be healthy populations of otter, salmon and sea-trout visiting the streams and spawning. The coast will be managed by enabling natural processes to function

that will facilitate adaptation to climate change including the impacts of sea level rise.

The water quality around the coast will be of the highest category consistently meeting the current guideline standards allowing wildlife to thrive and humans to enjoy at any time of the year. The marine area of the reserve will be providing high sustainable yields of fish for the local fishing industry and support a bio-diverse community of marine life due to careful management by fishermen and other stakeholders. The invasive species will be under control.

The North Devon AONB, Exmoor and Dartmoor National Parks will be conserved and enhanced ensuring that they continue to be amongst the finest landscapes and seascapes and are valued by all. The landscape outside the protected landscapes will be of good quality with a large number of farmers still working on the land maintaining the features that distinguish the area culturally. The landscape will have more woodland than today, better managed optimising the mix of benefits that they provide.

The Biosphere Reserve is an attractor to investment driven by the world class environment. There will be a greater resilience in the economy through local circulation of funds and business will see the link between added-value and increased environmental capital. The businesses are flexible to respond to changing circumstances (regulations and markets) within safe environmental limits supported by an eco-literate workforce. Energy efficiency, renewable energy, wise resource use and paid ecosystem services will be used as tools for creating and enhancing circular economies. The area will be a sustainable tourism exemplar and have a high component of social enterprises within the economic structure. Access to super high speed broad band will be universal allowing rural communities to thrive and compete.

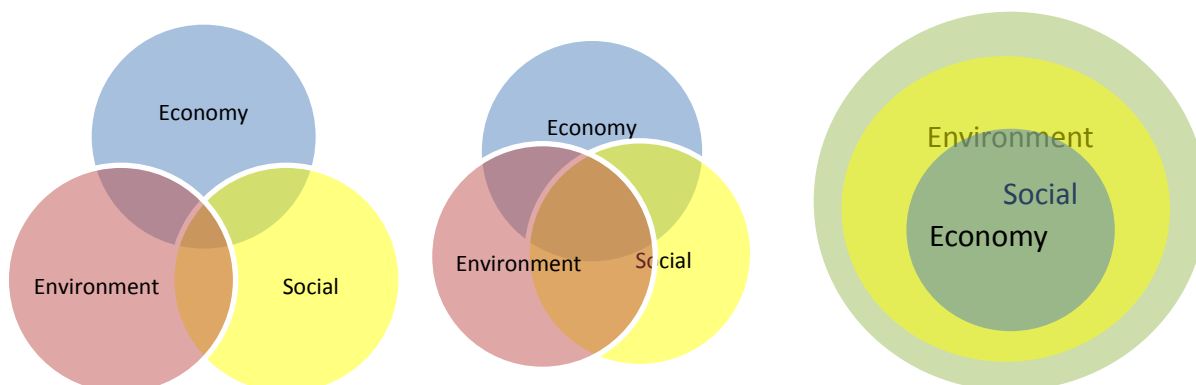
The community will be highly active in decision making about its future, drawing on good scientific and local knowledge. Every resident or visitor will contribute to the wellbeing of the area through a wide range of sustainable activities and choices, strengthening their local social networks and building community cohesion.



In short, the Biosphere Reserve will be a model for sustainable living in the 21st Century.

The Strategy

The Biosphere Reserve is a means for promoting sustainable development in the area. This requires that the partnership influences and acts where appropriate on social, environmental and economic issues. The role is to maximise the overlap between social, environmental and economic gains for the area through the application of this strategy to the point where the economy and social fabric operate within environmental limits.



The Aims

A Driver, Pressure, Status, Impact and Response (DPSIR) analysis has been carried out for the area by the partnership. This, coupled with an ecosystem assessment generates the programmes and areas for intervention have been identified to achieve this strategy.

Environmental Aim:	To improve the environment of north Devon to reflect its world class status
Social Aim:	To support a more equitable, vibrant and thriving community within the Biosphere Reserve
Economic Aim:	To have a resilient economy in Biosphere Reserve that contributes to its environmental and social wellbeing
Knowledge Aim:	To create and share knowledge within Biosphere Reserve that improves our wellbeing and benefits others

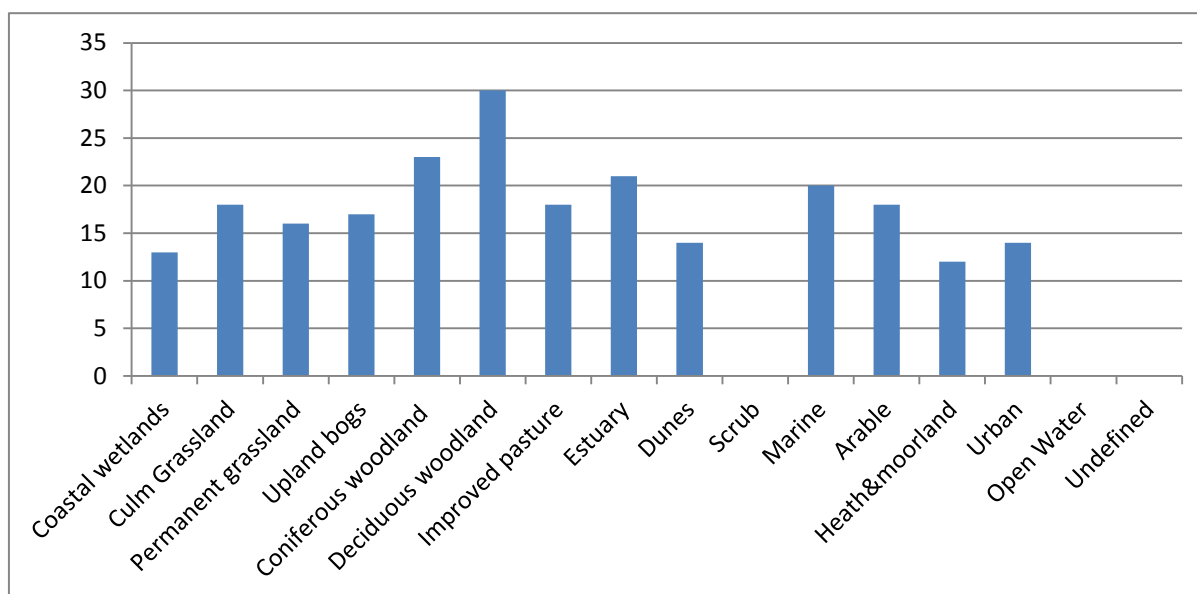
Using ecosystem services approach

The partnership carried out an assessment of the service provided by nature in the area, to identify the status and trends and the relevance of the service and habitat to this strategy. The scores are derived from allocating low/medium or high relevance.

Habitat	Provisioning			Regulating					Supporting		Cultural		
	Food	Timber	Energy	Carbon sequestering CO2e	Water quality	Surface water attenuation inland	Flood protection coastal	water supply	Resource protection	Pollution attenuation	Biodiversity leg Critical nursery or breeding for commercial spp	Visual amenity	Recreation and tourism
Coastal wetlands				2			1			2	1	2	
Culm	1			2	2				2		2	1	
Grassland													
Permanent grassland	1			1					-1		-1	2	
Upland bogs				-2		-1			-1		-1	1	
Coniferous woodland		1	-1	1	1		2		2		-1	1	
Deciduous woodland		-2	1	-1	1	1			2	1	1	3	
Improved pasture	2				-2	-2			-1		-1	2	
Estuary	-1			-2			3			2	2	3	
Dunes		1		2	1		3				2	3	
Scrub													
Marine				-2	2	2				2	2	3	
Arable	3				-1	-1			-1		-1	1	
Heath&moorland	1				1	1						3	
Urban	1		-1	-2	-1	-2					1	-1	
Open Water													
Undefined													
Condition													
Trend													
	-2 Very Bad Service is barely being provided according to expectations								Down				
	-1 Bad Service is being provided but underperforming								Same				
	0 OK Service is acceptable								Up				
	1 Good Service is being provided but could be improved												
	2 Very Service is very good and meeting NEA benchmark												
	3 Good												
	Excellent Service is highly valued and performing well												

Trends in ecosystem service provision identified by the partnership

This information indicates where the activity might be focused. However the trend data alone might also hide the fact that something being “Same” might be in a poor state that may be enhanced. However, trade-offs between services need to be taken into account.



Aggregated relevance scores for the habitats across the Biosphere Reserve.

Ecosystem Service and Policy Links

Ecosystem Service	Relevant Policies
Food	ENV2, ENV5, ECON1, ECON5, ECON6
Timber	ECON1, ECON4
Energy	ENV5, SOC3, ECON1, ECON7, ECON9
Carbon Sequestration	ENV1, ECON4
Water Quality	ENV2, ENV4, ECON5
Flood prevention	ENV4, SOC1
Water Supply	ENV4, ECON5
Resource Protection	ENV3, ECON5
Biodiversity supporting functions	ENV1, ENV3, ENV6
Visual Amenity	ECON3, ECON4, ECON7
Recreation and Tourism	ENV1, ENV3, SOC2, SOC4, ECON3, ECON4

This table shows how the policies in this strategy relate to the ecosystem services addressed in the ecosystem assessment.

Environment

To improve the environment of north Devon to reflect its world class status

DPSIR summary

Key drivers that were jeopardising the natural capital of the area were shown to be climate change, pressures for food security and pressure from development. The international obligations to halt the loss in biodiversity are captured in the UK Biodiversity 2020 plan. The Biosphere Reserve is a key tool to help deliver the UK's obligations and also to improve the ecosystem services for human well-being.

Policies and Targets:

The semi-natural habitats are fragmented throughout the landscape which leads to low resilience for adaptation through climate change and supporting viable populations.

ENV1: Support and facilitate land-use and land-use change that will maximise functional connectivity between semi natural habitats and optimise hydrological systems recognising the financial implications of such changes.

Targets: Ecological connectivity is improved by 50%. Frequency of 2% hydrological flooding events are reduced to 1.5%

The marine areas are subject to increasing pressure from a variety of different uses. The marine zone is host to a variety of biotopes which are sensitive to climate change.

ENV2: Develop fishery management and methods in conjunction with a sustainable sea area management programme that includes Marine Conservation Zones that will effectively support both fisheries and conservation of marine ecosystem services.

Targets: At least 10% of marine area is covered by protection and fishery economy is sustained.

Development pressures account for a significant loss in land and biodiversity. To date there has been no efficient mechanism to compensate for these losses.

ENV3: Ensure that development should not be permitted that removes critical natural sites and land-take by development is subjected to a programme that ensures no net loss of ecosystem services and biodiversity through on site design and offsite offsetting.

Targets: No net loss of biodiversity from developments, and enhancements are achieved where possible to ensure ecosystem service function.

Many of the water bodies in the Biosphere Reserve's catchments do not meet good ecological status under the Water Framework Directive. Good, cost effective compliance

with the Water framework Directive is needed to ensure that society and biodiversity benefits from clean water and functioning rivers and flood plains.

ENV4: Catalyse cross-sectoral activity that will support achievement of good ecological status of the Biosphere Reserve water bodies and sustain good ecological status thereafter.

Targets: Good ecological status achieved by 2021 and sustained thereafter

Carbon emissions arising from energy use in the area are marginally better than the UK average. However, in order to comply with the emission reduction targets to avoid dangerous climate change, work needs to be done on energy efficiency and energy production in ways that support the local economy and do not harm the seascape and landscape.

ENV5: Implement the Biosphere Reserve Energy policy to reduce energy demand and produce renewable energy to ensure that appropriate balances are needed for food, fibre, energy, biodiversity, landscape and ecosystem services.

Target: carbon emissions from the Biosphere Reserve are reduced by 50% by 2025

Invasive species are on the start of the exponential expansion of coverage of the area. The grey squirrel is making regeneration and viable production within woodland very challenging.

ENV6: Implement programmes to control invasive species such as Himalayan Balsam, Japanese Knotweed, Himalayan Knotweed, Giant Hogweed and Montbretia.

Target: Extent of invasive species is known and area reduced by 15% by 2020



Social

To support a more equitable, vibrant and thriving community within the Biosphere Reserve

DPSIR summary

The key drivers in the social sector have been identified as demographic change i.e. an increasing urban population and an aging population. There are issues highlighted around the communities' resilience to climate change impacts such as flooding and potential high summer temperatures leading to episodes of risks to physical and mental wellbeing. There is a chronic issue around the impacts of fuel poverty leading to respiratory illnesses due to damp homes in pockets of deprivation. New opportunities are brought with the digital age to enable better communications about the social benefits of a good environment and improve people's access to natural sites for their wellbeing. Providing cultural activities and events will enhance social capital and human wellbeing.

Policies and Targets:

Improving the resilience of a community to natural and / or economic disasters has been identified as a key need. Foot and Mouth epidemic was a classic case where the economy and the social fabric of the area were severely impacted. Flooding and other natural disasters have similar effects.

SOC1: Advocate for community resilience and implement measures that enhance ecosystem services which will serve to reduce the impact of extreme events.

Target: The social capital in the area is known, and community-based volunteering increases by 10%.

The use of the environment as a public health tool is increasing acknowledged as being of good value to the public purse. Evidence is growing that it improves physical as well as mental wellbeing in most cases.

SOC2: Develop and promote enjoyment of the environment as a tool for public health improvement

Target: Reduce the incidence of mental and physical illness in the Biosphere Reserve by 10% by 2024

The work carried out in the sustainable energy project identified that the areas has many homes which are inefficient energy users, therefore tend to be cold and damp. These tend to be the poorer households.

SOC3: Facilitate the improvement of environmental performance and heating technology of homes to reduce poverty

Target: Reduce the number of homes classed as fuel poor by 20% by 2019

The social capital of an area is measured in various ways such as the connections people have with other people in the community or the numbers and types of activities that are participated in. Trends in the State of the Biosphere Reserve 2014 show a recent fall in participation, this might be due to the digital era putting people more in touch with a global community; this may lead to a decline in the local social capital. Much of the social capital can be linked back to the culture of the area, such as traditions, identity, and physical cultural assets.

SOC4: Promote active communities in rural areas around themes of sustainability and promote the development and continuation of cultural activities and be an advocate for lower impact lifestyles

Target: Participation in cultural activities is increased by 10% by 2024

The bedrock of much of the locally distinctive cultural activity centres on the use and access to the countryside, historic sites and museums.

SOC5: Promote the conservation and enhancement of cultural assets and sites and the public participation in their management.

Target: All current listed sites are conserved and 20% are enhanced for public enjoyment



Economy

To have a resilient economy in Biosphere Reserve that contributes to its environmental and social wellbeing

DPSIR summary

The economy of the Biosphere Reserves has suffered from the 2008 recession and remains one of the lowest economies in the country. The classic growth agenda and the reduction in public sector will have some implications for the economic infrastructure for the area. It creates both opportunities, such as the development of social enterprise, and threats such as poorly controlled or unsustainable economic development.

The Local Economic Partnership recognises the area's outstanding environment as a driver in the economy for not only providing an attractive place to live but also to use ecosystem services to protect assets and to be a key economic activity in its own right.

Policies and Targets:

The local circulation of funds is the most efficient way for an economy to work, where leakages out of the economy are stopped. The association with and between local producers also increases the social capital of the area and sustains the distinctiveness in the high street.

ECON1: Develop and support programmes for the promotion of local goods and services and develop local supply chains for green economy sectors.

Target: To have a range of local produce (fish, woodland produce and farm produce) specifically supported as made/sourced in the Biosphere Reserve

The specialness of the UNESCO World Biosphere Reserve designation is something to be treasured and used as a tool to reward and highlight the best practices in sustainable development. This can apply in the traditional sectors such as land-based goods, fishing, tourism and the more modern manufacturing industries. Often the businesses need some technical support or advice to switch to more energy and resource efficient measures.

ECON2: Promote the use the Biosphere Reserve as an Environmental Quality assurance marque advised by the partnership board and part of an aspirational brand and to attract inward investment, backed up by technical support.

Target: To have a Biosphere accreditation system in place that is adopted by local businesses

Tourism relies heavily on the natural environment and in some places the pressures are at a critical level, especially within the coastal areas. Many businesses are now seeing the benefit of being greener in their approach for the discerning customer.

ECON3: Develop a strong sustainable tourism policy and programme that improves the year round tourism activity, disperses the tourism pressure and improves inland tourism offer.

Target: Sustainable Tourism strategy in place by 2015 and major programmes in place supporting the work by 2016

Although the woodland cover of the Biosphere Reserves is higher than the national average, the level of activity in managing forests is very low. This is a missed economic, social and environmental opportunity. An active forest sector can provide fuel wood, local building timber, wildlife resource and recreational resource for the area.

ECON4: Reinvigorate the forestry industry in north Devon underpinned by an approach for multiple benefits for the public and commercial interests.

Target: The Biosphere Reserve is designated and operating as a Woodland Enterprise Zone with 85% of woodlands in management and 20% increase in economic benefit from woodland produce.

Food security is a major concern. This is not just for volume but also safe provision. The major food production is in the agriculture and fisheries sectors. The competition for space in both land and sea is increasing. The need to sustain the ecosystem services, including food provision is important to human wellbeing.

ECON5: Develop and apply of agricultural systems which maintain productivity but reduce harm on the environment.

Target: Application of sustainable intensification concept to boost productivity and reduce polluting effects leading to improved food security and enhanced ecosystem services on non-farmed land.

The sea fisheries sector in north Devon is also facing major changes with the landing obligations, other marine interests such as energy and the risk of being out competed by other fleets. It is one of the sustainable industries in the area and shows many elements of good practice and should be supported.

ECON6: Develop fisheries management measures linked to more local processing that will sustain a fishing industry in North Devon and enhance the marine biodiversity of the area and underpin with the Biosphere Reserve brand.

Target: The Marine area out to 12 nautical miles is covered by an operation fisheries improvement plan linked to marine conservation zones and other fisheries management measures.

One of the biggest leaks from the economy is energy. Over £300M is spent on energy that does not stay within the local economy. Energy conservation and locally funded energy production will reduce that leakage.

ECON7: Support energy conservation in new and current buildings and apply a renewable energy programme developed that meets the local demand and minimises the impacts on the landscape especially if it is locally funded.

Target: At least 80% of local energy work is serviced by local contractors and domestic energy efficiency is improved by 20%

The changes in the public expenditure are prompting a large change in the local economic structure. The opportunities afforded by environmental and social finance and different service delivery are leading to creation of social enterprises.

ECON8: Promote the development and ongoing support for local social enterprises that work in sympathy with the Biosphere Reserve strategy.

Target: Support the recruitment of social entrepreneurs to be contributing to more than 7% of the local economy by 2025.

Analysis in the local enterprise partnership economic strategy highlights the lack of transport and trade connections between the Biosphere Reserve area and the rest of the country. Actions should be developed such that this is not a disadvantage or address the issues without causing greater environmental impacts.

ECON9: Advocate and support universal superfast broadband coverage and facilitate transport solutions which boost local trade and reduce emissions

Target: To have 100% coverage across the Biosphere Reserve by 2018 and reduce transport emissions by 20% by 2020.



Knowledge

To create and share knowledge within the Biosphere Reserve that improves our wellbeing and benefits others.

DPSIR summary

A key function of the Biosphere Reserve is to research, monitor, and disseminate the learning from our approaches to sustainable development. There is also the need to communicate with and provide training for our communities for them to make their chosen progress in sustainable development. The need for skills development at basic and advanced levels has been highlighted in other sectors to sustain the environmental and economic activity that match the vision of sustainable development. The major drivers in this sector relate to the use of new technology and to use it to our advantage and try to filter out the disadvantages of too much bewildering information.

Policies and Targets:

The Biosphere Reserve has generated and holds a large amount of data and information that should be available for local use (and is indeed required by the Aarhus Convention on access to environmental data).

KNO1: Develop knowledge base for the Biosphere Reserve and further research on critical themes and disseminate.

Target: Publicly searchable knowledge base in place by 2017

Communicating with the community is paramount. It needs to ensure that people are aware of the Biosphere Reserve, what it does and how to get involved.

KNO2: Substantially raise awareness of the Biosphere Reserve through targeted communication strategies; optimise and selectively use social media to build support and communications about programmes and projects, develop new tools for engagement with the community including the arts.

Target: 50% of the community recognising the Biosphere Reserve by 2018, 75% by 2020.

The Biosphere Reserve is part of the UNESCO Man and Biosphere Intergovernmental Science Programme. A research agenda is needed to demonstrate how we effectively contribute to that programme on issues relevant to our area.

KNO3: Develop a research and monitoring agenda to support adaptation to emerging needs including social and environmental issues.

Target: Research programme in place with at least 2 PhD projects per year, 6 MSc theses and a citizen science programme in place.

There is concern that the fundamental sectors in the economy are losing skills whilst at the same time there are many young people leaving the area because there is a lack of employment.

KNO4: Promote apprenticeships in key sectors such as forestry, farming and tourism and promote skills development in sustainable entrepreneurship in schools and colleges.

Target: Apprenticeship programmes in place by 2016 for 16 to 25 year olds

The Biosphere Reserves presents a wonderful opportunity and experience for people from outside the area to learn about sustainable development and approaches to bioregional planning.

KNO5: Develop the capacity in the area for people to use North Devon as a site for learning to implement bio-regional planning for sustainable development.

Target: To have at least 2 international visits per year from other areas to learn specifically about how North Devon Biosphere functions.



Governance

The Biosphere Reserve is overseen by the North Devon Biosphere Reserve Partnership.

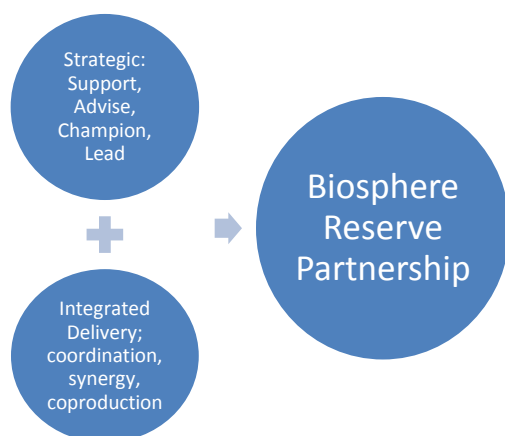
It is a collaboration of over 26 partnership organisations that meet regularly so that its members can work effectively to deliver the aims of the strategy. The partnership works through direct action, through advocacy and providing high quality advice.

The partnerships work is supported by a number of working groups that focus on topic areas, engaging with more stakeholders to address programmes and projects in a participatory manner.

It is supported by a Biosphere Reserves coordination team who help to bring projects and partners together, provide good technical advice and also directly deliver some of the projects and programmes within the Biosphere Reserve.

Mission Statement of the North Devon Biosphere Reserve Partnership:

To ensure that North Devon is globally recognised region for sustainable development by developing and implementing policies and actions with stakeholders to secure a strong healthy environment, a thriving green economy with a community that is actively involved in the sustainable development of the area.



The partnership will also monitor the condition of the Biosphere Reserve and the progress of this strategy through an agreed monitoring framework. This has been and will continue to be on metrics already collected by other agencies as much as possible, which also allows external comparison. Where necessary it will develop metrics to monitor progress where no monitoring exists.

The structure of the partnership is reviewed periodically to ensure that it remains fit for purpose and adaptable to new situations.

Risk Assessment of the Strategy

The Biosphere Reserve designation is still young; this brings some inherent risks; each identified risk in the following register was scored High, Medium or Low according to its Likelihood and Impact.

Likelihood – the probability of the threat being realised:

Low: 30% or less chance of the problem occurring.

Medium: 31-70% chance of the problem occurring.

High: Over 70% chance of the problem occurring.

Impact – the effect of the threat being realised:

Low: Threat would have little impact on delivering the Strategy.

Medium: The threat would have an impact on the delivery of the Strategy, including benefits and time-scales.

High: The threat would jeopardise the entire Strategy.

A cumulative risk score (High, Medium or Low) was then assigned according to the matrix below

		Impact		
		High	Medium	Low
Likelihood	High	H	H	M
	Medium	H	M	M
	Low	M	M	L

Risk Register

Description	Impact	Likelihood	Counter measure	Contingency
Poor stakeholder understanding of the Biosphere Reserve and its aims	H	M	Clear communications with stakeholders and have continual dialogue with the community. Good demonstration by practical actions	Work with Local Authority press and media people to augment the messages, develop strong media links.
Lack of cohesion in the partnership	H	M	Regular meetings. Share information on opportunities arising. Encourage mutual respect	Be responsive to issues as they arise.
Reduction in core funding for coordination	H	H	Secure funding agreements to enable better financial planning. Ensure alignment of strategies	Explore other models of providing coordination function. Fill shortfalls with project delivery income.
Lack of funds available for delivery	H	M	Work with all partners on	Reduce the ambition of the

			collective funding bids. Share capacity in fund raising. Be responsive to funding opportunities where they fit the strategy.	strategy to meet available resources.
Policy conflict with protected areas	H	M/L	Work in close collaboration with the protected areas/landscapes. Address potential points of conflict and seek innovative solutions.	Accept primacy of statutory plans but seek a win-win situation.
Biosphere Reserve is undermined by other authorities making inappropriate development decisions	H	M	Strong promotion of the benefits of the Biosphere Reserves. Close working with the authorities.	Major departures can be modified and improved. The ethos can be “not what is done, but how it is done”





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**North Devon's
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in harmony with nature*