A SHARED VISION FOR SUSTAINABLE REGIONAL LAND USE

IN THE GALLOWAY AND SOUTHERN AYRSHIRE UNESCO BIOSPHERE



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Climate change, biodiversity loss and evolving societal demands emphasise the need to manage our landscapes differently. But conflicting interests and views make it difficult to agree where and how change should take place. UNESCO Biospheres are internationally recognised regions committed to piloting different approaches to addressing these demands. Researchers from *The University of Edinburgh* and *Forest Research* facilitated a collaborative process with a diverse group of twenty-seven stakeholders in the Biosphere to understand common ground for a future land use vision and explore where change could help achieve the vision.

The research identified a shared vision for sustainable regional land use in the Biosphere. The vision combines social, economic, and environmental aspirations for a varied, mixed and integrated living and working landscape that provides an excellent place to live and work with a strong identity and a respected and celebrated natural and cultural heritage. The vision narrative was used to develop spatial criteria to identify where changes in land use or land management should be considered to achieve the vision, such as diversifying agriculture and forestry, restoring peatlands and improving habitats and biodiversity.

Despite broad agreement about the types of changes required, and the landscape functions and benefits land in the Biosphere should provide in the future, attempts to discuss specific land use changes at more local scales were difficult. The challenge is now to develop processes that bring together local stakeholders to understand different perspectives and find ways to identify benefits and negotiate trade-offs that are acceptable to a broad group of people.

A SHARED VISION



Seventeen stakeholders with a professional interest in land use in the Biosphere participated in two workshops to understand common ground and differences in personal hopes and desires for future land use and land management in the Biosphere. While there were different views of the best mechanisms to achieve change, there was overwhelming agreement about the desire to enhance and diversify rural character of the Biosphere to better support both the local economy and the environment. These insights were used to draft a short narrative vision and illustrative sketch, which were tweaked following online consultation with the workshop participants.

BLVE

One workshop exercise involved stakeholders drawing and discussing their desired future landscape



CHALLENGES & TENSIONS

Without trying to dodge responsibility, it was generally agreed that achieving the vision will depend largely on policy incentives and regulation and a wider societal willingness and ability to support sustainable rural businesses and communities. A utopian vision is unlikely to make local land use decisions less contentious, and some stakeholders were sceptical it could be achieved given systemic power imbalances and limited impact of local voices in land use decisions. But bringing people together to understand different perspectives and discuss common ground was seen as important, along with providing easy access to information and tools that demonstrate benefits and trade-offs of changes in land use and land management.



VISION FOR LAND USE AND LAND MANAGEMENT

in the Galloway and Southern Ayrshire Biosphere in 2050

The Biosphere is a diverse, mixed and integrated living and working landscape.

It supports a wide range of innovative low carbon and biodiversity friendly land-based activities including farming, forestry, tourism, and nature conservation. The Biosphere is recognised internationally as a region that demonstrates how sustainable development is good for people, the environment and the local economy.

The Biosphere is an excellent place to live and work. Better digital and physical infrastructure, public transport and affordable low-carbon timber housing will support the local economy, making the Biosphere an attractive and pleasant home for all age groups. Employment opportunities and accessibility retain those who have grown up locally and stimulate inward migration from folk who left the region and outsiders charmed by the Biosphere's reputation as an attractive and innovative rural community.

The Biosphere has a strong identity.

Natural and cultural heritage sites and local traditions and culture are respected and celebrated, strengthening sense of place and inspiring local arts and culture. Pride and knowledge of natural and cultural heritage drives the Biosphere's reputation for naturebased tourism, traditional crafts and local art, and regional food which provide an important contribution to the Biosphere's economy.

Land uses are integrated to provide multiple benefits and support biodiversity and

carbon storage. Environmental protection upheld and conservation targets are achieved. Degraded peatland is restored, and existing forest plantations restructured to increase biodiversity and amenity value. Any additional woodland is carefully considered to maximise benefits (*climate mitigation, biodiversity, jobs, timber, and recreation opportunities*) and avoid negative impacts on the open landscape character and local infrastructure.

Local food, timber and energy provides many local needs. Less imported food and timber reduces carbon emissions from transport and support local employment. A local circular economy maximises value and environmental standards and minimises waste. Energy needs are met with local community and household renewable energy generation. Mixed 'productive' woodlands provide quality timber, including native hard woods that support local industries.

Cooperation, collaboration, and consensus help achieve integrated land use. Regional partnerships identify priorities and help translate national priorities into what is needed and suitable for the Biosphere. Where there are competing land use demands, changes are properly guided, scrutinised, assessed and justified to ensure that the future outcome is greater than before. Regulations, incentives, and support are aligned to favour mixed and integrated land use that provides multiple social, environmental and economic benefits.



WHERE SHOULD CHANGE BE CONSIDERED TO ACHIEVE THE VISION?

The Forland platform is an online mapping resource that enables stakeholders to view a wide range of datasets such as landcover, peatland, designated areas, watercourses, and infrastructure across the Biosphere. These datasets are all open access and provided stakeholders with detailed information to aid discussions on land use change.

The vision narrative was used to develop a set of spatial criteria that could be applied within the Forland platform to identify areas with the potential for land use change that align with the different aspects of the vision. The criteria and assumptions were discussed in a series of stakeholder workshops to check whether our interpretations of their vision were correct, and to take on board suggestions for changes or additions. This helped to identify areas where only small amounts of change should take place, such as management to improve habitat quality, and areas where larger land use change should be considered, such as habitat restoration and planting trees alongside riparian areas and close to communities.

Examples of vision statements that were translated to spatial criteria to determine where change should be considered to achieve the vision are shown in the table *(opposite)*.

Screenshot of the Forland platform, identifying where change should be considered



Vision statement	What change should happen where?
Environmental protection upheld and conservation targets are achieved.	Land in protected areas should be managed to achieve favourable ecological status.
Degraded peatlands are restored.	All land use on peat deeper than 50cm should be restored to open peatland where this does not lead to an increase in carbon emissions.
Any additional woodland is carefully considered to maximise benefits.	<i>Example:</i> Native woodland or wetland creation and restoration along watercourses.
The biosphere supports a wide range of innovative low carbon and biodiversity friendly land-based activities including farming, forestry, tourism, and nature conservation.	<i>Example:</i> Farmland should be managed to increase biodiversity and carbon storage, for example by planting or restoring hedgerows, shelterbelts or creating larger field margins.
Existing forest plantations are restructured to increase biodiversity and amenity value.	All restocking should follow or exceed the UK Forestry Standard and Planted Ancient Woodland Sites should be restored.
Any additional woodland is carefully considered to maximise benefits and avoid negative impacts on the open landscape character and local infrastructure.	New woodland should be considered where it enhances forest habitat networks, without negatively impacting on open ground habitat.
Affordable low-carbon timber housing will support the local economy, making the Biosphere an attractive and pleasant home for all age groups.	Existing settlements should be allowed to expand where appropriate and in relation to the size of the settlement.

LESSONS LEARNED

- Land use stakeholders in the Biosphere accept
 responsibility and are willing to change land
 management to help mitigate the climate and
 biodiversity crises. Many solutions were identified,
 but these would need to be implemented within a
 living and working rural landscape and social issues
 including housing, infrastructure, and employment
 need to be addressed along with land use change.
 This requires appropriate policy and societal support
 from outside the region.
- 2 There is a lot of common ground among land use stakeholders, which could be summarised in a single overarching vision and used to scope where change could contribute to reach the vision. There were, however, different views of the best mechanisms to achieve change and the utopian vision is unlikely to make local land use decisions less contentious.
- 3 Accessibility to data and information was considered important to allow a wider range of stakeholders to participate and contribute to land use decision making. Stakeholders were positive about the usability and functionality of the online platform used.









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The Biosphere-wide visioning activities were insightful and have strategic value, but the real challenge now is to develop processes to negotiate and support on-the-ground landscape transitions following the aspirations outlined in the vision. Based on our research, we suggest valuable next steps include:













- Continued facilitation of dialogues among stakeholders by the Biosphere
- Developing and testing deliberation processes to discuss and understand tensions and negotiating trade-offs through action research
- Democratising access to spatial data and information to understand consequences of land use change by Scottish Government and its agencies
- Establishing governance processes that support collaborative land use decisions (e.g. through Regional Land Use Partnerships)
- Developing policy support to reward change towards the vision and disincentivise activities that do not align with the vision



ACCESSING The platform & further Information

Instructions to access the Forland platform can be found on the Biosphere website: www.gsabiosphere.org.uk

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Design by Countryscape

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Cover:	Loch Doon and the Galloway Hills.
Pages 2/3:	Monreith, near Newton Stewart.
Pages 6/7:	Loch Doon in winter.
Pages 8/9:	Clatteringshaws Loch, Galloway Forest Park.
Pages 10/11:	
Header:	Stone Circles, near Creetown.
Insets:	Glenluce Abbey, Newton Stewart.
	Dark skies, Galloway Forest Park.
	Loch Doon Castle, Carrick.
	Red Kite, Castle Douglas
	Seals – a view from Girvan towards Ailsa Craig.
	The Byre Striding Arch by Andy Goldsworthy, Moniaive
	Red Squirrel, Gatehouse of Fleet.
	View over the artist and fishing town of Kircudbright.
Back:	Isle of Whithorn, Wigtownshire.





