A Framework for 30 by 30 on Land in Scotland

Scottish Government
Riaghaltas na h-Alba

NatureScot
NàdarAlba
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Contents

Contents

With thanks to the following organisations, and individuals, who participated in the co-design of the 30x30 Framework and shaped it:

Aberdeen City Council
Aberdeenshire Council
Angus Council
Association of Deer Management Groups
Bat Conservation Trust (SELink)
Biological Recording in Scotland
Bug Life (SELink)
Butterfly Conservation (SELink)
CEMVO
Community Land Outer Hebrides
Community Woods
Corrour Estate
DEFRA
Dumfries and Galloway Council
Environmental Standards
Environmental Standards Scotland
Fife Council
Fauna and Flora International
Forestry and Land
Game and Wildlife Conservation Trust
Glasgow and Clyde Valley Green Network
Glasgow City Council
Green Action Trust
High Life Highland
Highland Council
Inverclyde Council
James Hutton Institute
Landscape institute
Loch Lomond and Trossachs National Park
MacPhail Consulting
National Trust Scotland
Nature Friendly Farming Network
National Farming Union Scotland
NHS
North West Highland Geoparks
NatureScot board
Perth and Kinross Council
Planning Aid Scotland
Plantlife (SELink)
Rewildling Briain
RSPB (SELink)
Scottish Borders Council
Scottish Crofting Federation
Scottish Forestry
Scottish Government
Scottish Land and Estates
Scottish Power
SEPA
Shetland council
SWECO
The Heather Trust
The Way Forward 2045
Trees for Life (SELink)
University of Edinburgh
Welsh Government
West Lothian Council
Woodland Trust Scotland (SELink)
YoungScot

Glossary

30 by 30

Target 3 in the Global Biodiversity Framework “Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories”. For Scotland 30 by 30 sites are made up of Protected Areas and Other Effective Area-based Conservation Measures.

Corridors

A geographically defined area which allows species to move between landscapes, ecosystems and habitats, natural or modified, and ensures the maintenance of biodiversity and ecological and evolutionary processes. (IPBES)

Ecosystem health

Ecosystem health is a metaphor used to describe the condition of an ecosystem, by analogy with human health. Note that there is no universally accepted benchmark for a healthy ecosystem. Rather, the apparent health status of an ecosystem can vary, depending upon which metrics are employed in judging it, and which societal aspirations are driving the assessment. (IPBES) and ecological and evolutionary processes. (IPBES)

Ecosystem services

Processes by which the environment produces benefits useful to people, akin to

economic services. (CBD)

Mainstreaming

In the context of biodiversity, means integrating actions or policies related to biodiversity into broader development processes or policies, such as those aimed at poverty reduction or tackling climate change. (IPBES)

Nature based solution

Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human wellbeing and biodiversity benefits. (IUCN)

OECM

A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values. (CBD)

Private finance

Financial flow from the private sector (not under government control)

Protected area

A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. (IUCN)

Stepping stones

A habitat patch in a landscape that facilitates movement or offer refuge to species.

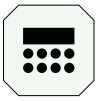
Summary of Key Principles

Key Themes and Principles for Delivery of 30 by 30

Theme 1 – Site Selection, designation, safeguard and governance

- Area-based conservation will provide adequate protection or conservation to the area of importance it covers.
- The approach to 30 by 30 sites will be simple, clear, transparent and flexible in governance and application.
- Approaches to the selection and objectives of 30 by 30 sites will be strategic, forward-looking and dynamic.

Theme 2 – Land Management



- Management must be adaptive, dynamic, and responsive, operating at the necessary scales (spatially and temporally).
- The policy and legislative landscape which shapes management in Scotland will be integrated and coherent and better reflect the value of biodiversity to all of Scotland.
- Those responsible for the management of Scotland's land will be empowered to work collaboratively and equipped with skills needed to champion good management within their own sectors.

Theme 3 – Funding and Finance

- Established and prospective 30 by 30 sites will be considered as priorities for funding and investment.
- Public and private funding and finance will be delivered through properly resourced, clearly directed, long-term, simple and accessible means.
- Funding and finance based on the principles of fairness, trust and transparency through collaborative working.
- Build and maintain coherence in statutory and public funding.

Theme 4 - Participation engagement and communication

- The value of 30 by 30 sites for nature and people is clear.
- Collaboration is key.
- Land owning public bodies will manage their land to contribute towards 30 by 30.

Theme 5 - Monitoring

- Monitoring should prioritise the identification and assessment of the most important factors for maintaining the health and resilience of 30 by 30 sites while also taking into account gaps in knowledge.
- Monitoring will be designed with stakeholders, and for stakeholders, to ensure it iterative and informs ongoing and adaptive land management decisions.
- Monitoring will use a combination of traditional methods and emerging technologies, with a focus on maximising the efficiency and effectiveness of data collection and analysis, while also ensuring that data quality and accuracy are maintained.
- Monitoring must meet national and international reporting obligations.

Theme 6 – Policy and Mainstreaming

Outputs from this theme of work were incorporated into the above themes with policy and mainstreaming requirements embedded into the specific areas of work.

Scene Setting Context

The biodiversity crisis is of urgent concern both globally and within Scotland, which hosts a number of habitats and species aggregations of global importance. Species and habitats have long been in decline meaning, today, we retain just over half of our historic land-based biodiversity. The current situation is still one of loss, with monitoring showing nearly a quarter of terrestrial and freshwater species in Scotland are declining in abundance.

The Scottish Biodiversity Strategy (SBS) and its associated Delivery Plans set's out Scotland's goal of 'bending the curve', moving from the current trend of declining biodiversity, to halting biodiversity loss by 2030 and reversing the trend to increasing biodiversity by 2045. The benefits of which are numerous;

- Biodiversity underpins a large proportion of our economy and is vital to food production and security
- Thriving biodiversity is vital in addressing climate change with around 50% of global human carbon dioxide emissions each year removed by healthy ecosystems. Scotland's trees alone already capture 14% of our gross greenhouse emissions.
- These same healthy, biodiverse, ecosystems also provide numerous ecosystem services such as water purification, cleaning the air, reducing the risk of floods and support sustainable food production
- Being amongst natural and biodiverse spaces have even been shown to directly improve human mental and physical health






The 30 by 30 framework

This framework aims to catalyse the urgent and transformative action needed across Scotland to achieve and exceed the 30 by 30 target and help halt and reverse biodiversity loss. It outlines the basic principles which associated action and delivery, at all levels, should be founded upon.

Developed using co-design, this framework is built from the expertise and time given by over 120 individuals from nearly 100 organisations from a broad spectrum of Scotland's sectors and communities. This highlighted the issues and challenges faced, and then the common guiding principles needed to ensure 30 by 30 address these, are successful, equitable and deliver for a nature-rich future. Full details of the co-design process can be found in Annex 1.

The 'Next steps' highlighted in the subsequent sections will seek to continue this way of working. Engaging with as broad a selection of individuals, organisations and sectors as required when developing the means of implementation.

This framework relates only to the terrestrial element of 30 by 30 which includes terrestrial, in-land water and coastal habitats to mean low water spring. The area commitment has already been achieved in the marine environment, with 37% of Scottish waters lying within Marine Protected Areas. The focus in the marine environment is now primarily on the condition and effectiveness of Marine Protected Areas.

Developed using co-design, this framework is built from the expertise and time given by over 120 individuals from nearly 100 organisations from a broad spectrum of Scotland's sectors and communities.

What is 30 by 30?

Definition

Globally, 30 by 30 seeks to ensure that at least 30% of land and sea is effectively conserved and managed for nature by the year 2030. The full definition is stated as Target 3 in the UN Convention on Biological Diversity's (CBD) Kunming-Montreal Global Biodiversity Framework (GBF), agreed upon by 196 countries including Scotland through the UK, and reads;

"Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories."

> 30 by 30 seeks to ensure that at least 30% of land and sea is effectively conserved and managed for nature by the year 2030

For Scotland to achieve the ambition set out in the target the challenge does not stop at having sites identified and their boundaries drawn on maps. It is vital that the suite of sites that contribute to 30 by 30 are effective in themselves but also act as a catalyst for action for biodiversity, moving us to the trend of increasing biodiversity, throughout Scotland. The means by which these sites are identified, managed, and integrated into the wider landscape is key to their success and are considered within this framework. In Scotland 30 by 30 sites will include Protected Areas and Other Effective Area-based Conservation Measures (OECMs).

What is the current state and challenges faced by protected areas?

In Scotland, terrestrial protected areas cover 18.2% of land and freshwater and have been shown to play a vital contribution towards conservation efforts. They protect Scotland's most rare and vulnerable species and are also an important tool for managing natural capital and ecological processes that are necessary for the functioning of ecosystems and the services they provide. By protecting healthy natural areas, we can ensure that they continue to provide important ecosystem services that support human well-being, including clean water, clean air and carbon sequestration.

That said, our current approach to protected areas, and its implementation, has not universally succeeded, either at the site level (with only 65.1% of notified features on our protected areas in favourable condition with a further 10.5% unfavourable but recovering), or in their role in stopping the overall decline in biodiversity across Scotland.

In 2021, NatureScot's Protected Areas Review considered how to ensure our protected areas deliver maximum value for nature. This built on a 2014 review, and the issues arising from protected areas being increasingly isolated from one another and too heavily focused on rarity and preserving the status quo, rather than allowing for the dynamic nature of ecosystems.

The 2021 review considered how to improve the condition of sites, use them to support ecological connectivity, work better with people to realise their benefits, and ensure that these areas are resilient and adaptable in the face of change, particularly climate change. It concluded that we needed to rearticulate their role and value, to reconsider approaches to site management in order to deliver greater value for nature, to future-proof and to enhance their role in providing ecological connectivity. It also highlighted the importance of positive working relationships between those who manage these areas, communities, and wider society. 30 by 30 offers the opportunity to take this learning forward.

30 by 30 offers the opportunity not just to increase the area of land covered, but to refresh our whole approach to area-based conservation; to build on successes, learn from experience and make improvements to ensure that we have an approach that looks forward and is as effective as it can be in helping tackle the twin challenges of biodiversity loss and climate change.

Vision for 2030

By 2030 at least 30% of Scotland's land (including terrestrial, inland water and coastal habitats) will be protected or conserved for biodiversity, delivering for people and climate. Sites showcase the best in nature restoration, protection and in mitigating and adapting to climate change. They help protect the rare and vulnerable, as well as delivering diverse, complex, and resilient ecosystems that provide important services that benefit everyone far into the future. These 30 by 30 sites are integrated into the wider landscape, acting as the beating, nature-rich hearts of Scotland's Nature Network and beyond.

Protected Areas and Other Effective Area-Based Conservation Measures (OECMs) contribute to 30 by 30. Both protect or conserve the most important areas for biodiversity, ecosystem function and ecosystem services, either through statutory protection or alternate mechanisms that secure long-term assured protection. The approaches are clear, simple, easily understood and recognised as being world leading.

These sites will no longer solely be about preserving the state of an area, but about looking forward, helping biodiversity and people to adapt to the changes ahead and thrive. 30 by 30 sites are representative of all key ecosystems in Scotland and include areas managed strategically to support resilience, connectivity, ecosystem function and services and nature recovery. A bottom-up approach feeds a pipeline of sites or areas where restoration of degraded habitats or ecosystems, urgently needed, is planned or is ongoing. There are clear criteria for a site to contribute to 30 by 30, with candidate sites identified where there is potential. There are effective funding mechanisms, utilising both public and private finance, to support the sites from inception and creation to initial management needs, through to management for maintaining their contribution.

Management is adaptable, embracing the dynamism of natural and semi-natural systems and aims to maximise individual site's effectiveness and contribution to nature recovery, nature-based solutions, climate change and other societal challenges. Understanding that drivers of biodiversity loss often operate, and can only be effectively managed, at landscape scale a holistic view will be taken. Sites will not be looked at in isolation, but as a part of the wider landscape and their connection to it, including neighbouring sites through Nature Networks. This means that our interventions are effective and flexible where they need to be. Future proofing, particularly in the face of climate change, is actively considered – informing when to resist change, when to accept it and when to facilitate it.

Landowners and managers are aware of their responsibilities as custodians of biodiversity, and those responsible for these areas are recognised and celebrated for their work and the benefits they deliver for people and nature. They inspire others, becoming the drivers of change within their sectors and communities. Local communities have a sense of guardianship and care for their local 30 by 30 sites, understanding their value rather than seeing them as restrictive. The role of 30 by 30 sites in halting biodiversity decline, as well as addressing climate change and other societal challenges, is widely recognised across society.

Fair and effective measures are in place to prevent damage to or neglect of 30 by 30 sites, maintaining coverage and effectiveness. Mechanisms to tackle these, including incentives, regulation and where needed, enforcement, are in place and work in harmony across sectors. Where there are jobs and skills gaps are identified in delivering the long-term management, investment in Green Skills will be provided according to the principles of a Just Transition.

There is a robust and transparent monitoring regime in place to ensure effective management of 30 by 30 sites. We collect, manage and use this data openly, efficiently and effectively, and utilising innovative techniques to do so. This enables land-managers to maintain and restore healthy ecosystems by adapting management based on monitoring results to address changing environmental conditions, whilst identifying and prioritising opportunities for improvement and tackle key pressures.

Reaching 30% by 2030 is seen as a milestone for process, rather than an end goal, with Scotland continuing to increase its coverage on our way to have restored and regenerated biodiversity across the country by 2045.

The role of 30 by 30 sites in halting biodiversity decline, as well as addressing climate change and other societal challenges, is widely recognised across society.

Reaching 30% by 2030 is seen as a milestone for process, rather than an end goal, with Scotland continuing to increase its coverage on our way to have restored and regenerated biodiversity across the country by 2045

30 by 30 in Scotland

Important areas for biodiversity

The core purpose of 30 by 30 is to help halt the decline in biodiversity in Scotland, not simply move the needle from our current position of 18.2% to having 30% of land and inland water under some form of area-based conservation. This is an issue of extent and effectiveness. As such, land will only contribute if it is considered as being of ***particular importance for biodiversity, ecosystem function and services*** and if we can be assured, as a protected area or 'other effective area-based conservation measure' (OECM), that it will continue to be so in the long-term.

What does particular importance for biodiversity, ecosystem function and ecosystem services mean?*
– Areas with high ecological integrity or intactness, characterised by occurrence of the full range of native species and supporting ecological processes.
– Rare, threatened or endangered species and habitats, and the ecosystems that support them.
– Areas providing critical ecosystem services, e.g clean water and carbon storage, in addition to in-situ biodiversity conservation.
– Range-restricted species, and ecosystems in natural settings.
– Important species aggregations, including during migration or spawning.
– Areas important for ecological connectivity or to complete conservation networks within landscapes.
– Species and habitats important for traditional human uses, such as native medicinal plants, in addition to in-situ biodiversity conservation.
– Ecosystems especially important for species life stages, feeding, resting, moulting and breeding.
– Ecologically representative natural [*and semi-natural*] ecosystems

*Examples taken from the IUCN guidelines 'Recognising and reporting other effective area-based conservation measures'

As well as being important for biodiversity, these areas can also be important for other services, including being sustainably managed for other resources and for delivering and enhancing our ability to both mitigate and adapt to climate change.

Scotland's approach to achieving the 30 by 30 target also recognises the Lawton Principles that details how, for sites to deliver more for nature and maximise their benefits for people, we should consider opportunities to make them 'bigger, better and more joined up'.

Moving towards 2030 we will recognise and record sites where work is underway to restore areas so they qualify as important for biodiversity. Some of these sites, through their existing value to biodiversity, will contribute towards our 30+% immediately.

This could include sites where the overall objective is for a site with different habitat structure but in its current/transition state it still deliver significantly for biodiversity. Other sites may require a period of time before reaching a level whereby they are considered important for biodiversity, and will contribute toward a tangible pipeline of sites working to enter the 30 by 30 suite, even if they cannot immediately contribute towards the 30+% target figure. Working in such a way will allow for the contribution of sites within the 30+% to be clearly understood, whilst also recognising the hard work others looking to increase the biodiversity value of sites currently outwith the suite.

What makes up 30 by 30?

Protected Areas

The IUCN World Congress on Protected Areas defines a protected area as:

"A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."

There are numerous different designation types, both within Scotland and internationally, that constitute protected areas, largely dependent on their differing management categories, and may therefore contribute towards the 30 by 30 target.

For the purpose of the framework, we consider the following sites as contributing to the current 18.2% land-coverage in Scotland; Sites of Special Scientific Interest (SSSIs, inclusion of those for geological features on a case by case basis), Special Protection Areas and Special Areas of Conservation (SPAs and SACs, collectively known as European sites), Ramsar sites and National Nature Reserves (NNRs).

In Scotland, our National Parks are of national importance for the conservation of their outstanding wildlife and landscapes and the management of a range of ecosystem functions at the landscape scale. While recognised as a category of protected area under the IUCN guidelines on categorisation of protected areas, significant areas within them do not currently meet the criteria laid out in Target 3 of the GBF of 'important for biodiversity' or are not currently "effectively managed or conserved for nature". As such, only the area within Scotland's National Parks under one of the recognised protected area designations listed above, is included in the working baseline of 18.2%. National Parks in their entirety are not.

There is a clear aspiration for National Parks to be exemplars of nature restoration and integrated land management in Scotland and for more of their area to meet the criteria for Scotland's 30 by 30 sites. This work will be taken forward simultaneously via the work to establish a new National Park(s).

Similarly National Scenic Areas do not meet the criteria set out in the 30 by 30 target and therefore do not count towards the 18.2%. Such sites may be assessed on a case-by-case basis.

Other sites that are of local importance for biodiversity (e.g. Local Nature Reserves and Local Nature Conservation Sites) along with areas being restored for nature or connecting and contributing towards Nature Networks, are not automatically included as contributing to the 30+% as many do not fully meet the criteria, primarily with regards to management. Individual sites within these categories may be included in future, and others may, via small changes to their current arrangements, be able to be included either as Protected Areas or, OECMs (see below).

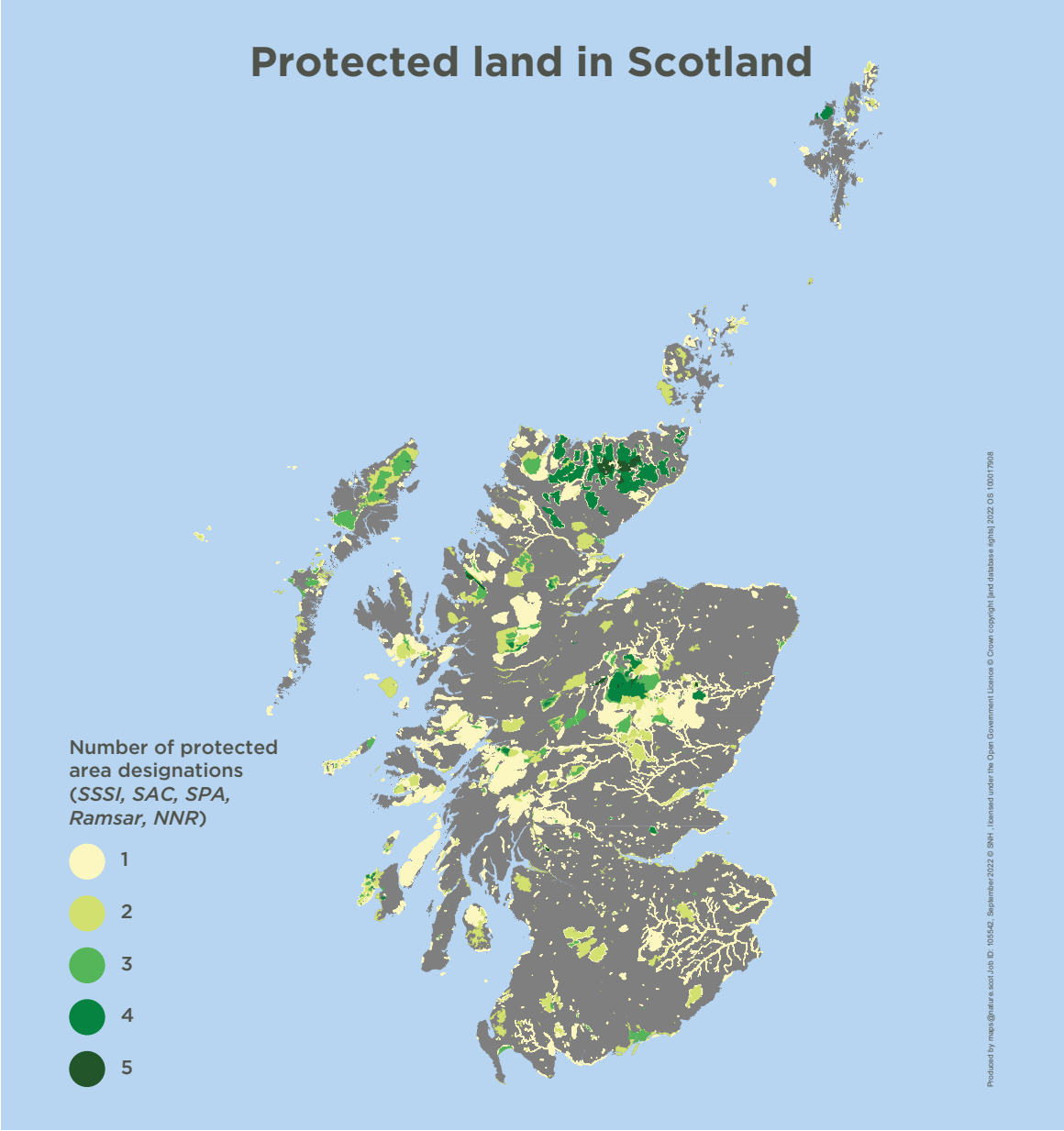


Figure 1: A map of the existing protected area designations in Scotland that are contributing towards 30 by 30 including where there is overlap of a number of different designation types for an area. Note that in the calculation of total area contributing towards 30 by 30 overlaps have not been double counted.

Other Effective Area-Based Conservation Measures (OECMs)

The IUCN CBD defines OECMs as;

"A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values" **(CBD, 2018).**

Their purpose is the same as that of Protected Areas - to provide long-term and effective conservation of biodiversity in the areas they cover – as is the level of importance for biodiversity.

OECMs have a distinctive advantage in expanding long-term conservation efforts through a grassroots approach by distributing the responsibility for protecting biodiversity among a wider group of stakeholders. This approach also increases the visibility of individual stakeholder contributions towards conservation efforts. Unlike traditional protected areas in Scotland, there is not the requirement for OECMs to provide their guarantee to biodiversity through legislation and formal designation. The assurance of long-term conservation for OECMs instead comes through legal or contractual agreements.

The use of OECMs is complementary to traditional protected areas, providing an additional mechanism for biodiversity conservation. They may also provide a route to bring some local designations, where there is not a sufficient level of assurance of delivery for biodiversity, within the scope of 30 by 30. It is expected that OECMs will play an important role in Scotland achieving its 30 by 30 ambitions alongside protected areas.

There are currently no OECMs identified in Scotland although it is highly likely there are a number of areas that would already broadly meet the CBD/IUCN criteria. Our proposed approach for identification of OECMs, which draws on the work of CBD and IUCN, to ensure their meaningful and long-term contribution towards 30 by 30, is outlined in Annex 2.

What do we mean by long-term?

For protected areas, the IUCN gives a clear definition of what is meant by long-term, stating that: "Protected areas should be managed in perpetuity and not as a short-term or temporary management strategy."

With regards to OECMs the definition is less prescriptive. It remains the case that short-term or temporary measures would not provide suitable assurance of governance and any necessary management of an OECM and so would not meet the criteria.

To achieve long-term outcomes will be in part dictated by the types of biodiversity the site is seeking to conserve (with some habitats requiring much longer time periods to deliver their full biodiversity benefits). The preference is for agreements that are as long-term as possible, with a minimum duration to be agreed upon.

OECMs are not limited to large-scale, remote natural areas. Urban and semi-urban sites can play a crucial, and often overlooked role, in achieving 30 by 30 target. Alongside biodiversity conservation and ecosystem service provision they can offer unrivalled opportunity for education and awareness and be areas of particular important for connectivity and wildlife corridors/stepping stones. To realise this potential it is important that 30 by 30 explores new approaches to urban conservation, investing in green infrastructure and integrating conservation into urban planning.

The Remaining 70%

The sites contributing towards 30 by 30 will be areas of 'particular importance for biodiversity' in line with the GBF. The value of land outside these, and the important role it plays supporting the overarching objective of increasing biodiversity, cannot be understated. The way in which land outside protected and conserved areas is managed, and the degree to which biodiversity is prioritised within this, will play an equally important role in the future of biodiversity in Scotland.

Many of the most detrimental pressures acting on our existing protected areas operate at the landscape scale. Therefore, a holistic, landscape scale approach to nature protection, recovery and restoration is required. The areas of land protected and conserved will not sit in isolation in our landscape but will be better connected, integrated and act as core areas for landscape scale change in the way land is managed through collaborative working.

Spatially defined Nature Networks connecting Scotland's nature-rich sites, including those contributing towards 30 by 30, will be one means by which those areas outwith the 30 by 30 suite will contribute towards bending the curve on biodiversity loss. Design and implementation of Nature Networks will be led by Local Authorities, take into consideration local needs, and incorporate a number of policy areas reflecting the broad array of land uses that will be included.

Other actions in the Scottish Biodiversity Strategy Delivery Plan, alongside those concerning 30 by 30, are intended to improve the ecological health of Scotland's land outwith protected and conserved areas, and so ensure that land is contributing to reversing the trend from biodiversity in decline to biodiversity increasing.

Due to the way the ecosystem processes, ownership and management models work in the marine environment, the proposed approach to achieving 30 by 30 on land differs, but will remain aligned with, the marine protected areas approach.

Key policy drivers

Recognising the importance of achieving transformational change, the Scottish Government identified 30 by 30 as a key mechanism to deliver the vision and outcomes of the Scottish Biodiversity Strategy, contribute to the wider Environmental Strategy for Scotland and tackle this biodiversity crisis.

The SBS includes 30 by 30 under Priority Action 2: 'Expand and connect protected areas and improve their condition'. This action includes the commitment to expand protected areas to 30% of land [and 30% of sea] and also to improve ecological connectivity across Scotland through Nature Networks. This aligns with the EU Biodiversity Strategy which looks to legally protect a minimum of 30% of the European Union's land and sea area, and integrate ecological corridors as part of a 'Trans-European Nature Network'.

Scotland's National Strategy for Economic Transformation sets out a vision that by 2032 Scotland will be a wellbeing economy – an economic system which serves the collective wellbeing of current and future generations within safe ecological limits, placing people and the planet at its core. Underpinning this is a commitment to work across society to deliver lasting action that secures a just transition ensuring that economic change is managed in a way that is fair for all. The delivery of 30 by 30 will contribute towards this vision.

How will 30 by 30 be delivered?

In order to increase the coverage and improve the state and effectiveness of areas protected for nature, significant changes are necessary. Particularly, this requires cooperation from both decision-makers and managers of these areas, as well as the individuals and industries who impact our wider landscapes. Collaboration is crucial to ensure that the benefits of biodiversity are recognised and integrated across all relevant sectors and society at large.

By mainstreaming an understanding of biodiversity and its value, the role of 30 by 30 sites, as well as individual and sectoral responsibility, we can achieve these goals. This transformation will be supported through actions taken forward in the SBS Delivery Plan or Environmental Strategy alongside those driven directly by 30 by 30.

30 by 30 and scale

30 by 30 will be delivered at the local scale by supported land owners/managers. These local sites will be core areas within a connected, wider network that spans Scotland, supporting national and regional conservation objectives and priorities.

Locally: 30 by 30 sites will address pressures on site and in the wider landscape, restoring and protecting and conserving sites important for biodiversity. Local Nature Networks, will connect sites to nearby people and communities, delivering local priorities. Equitable governance will maximise contribution via bottom-up delivery, with regionally and nationally coordinated support.

Regionally: 30 by 30 sites will be integrated into the wider landscape and connected to neighbouring sites through Nature Networks, allowing for opportunities to deliver on landscape level priorities and pressures in a strategic way and support national objectives and priorities. This will be done through collaborative, cross boundary partnership working to ensure strong connectivity between landscapes, larger-scale features and areas of importance, such as National Parks, or river catchments.

Nationally: The approach to 30 by 30 will look at Scotland as a whole, and will be spatially and ecologically representative of Scotland's nature. As part of Scotland's Nature Networks, they should be able to facilitate large-scale expansion and shifts in species ranges at a national level, particularly in response to climate change. Strategic approaches will be taken that identify and ensure 30 by 30 sites support delivering wider ecosystem resilience, diversity, and ecosystem services will be taken.

By mainstreaming an understanding of biodiversity and its value, the role of 30 by 30 sites, as well as individual and sectoral responsibility, we can achieve these goals.

Delivery principles

The following sections are based on the key themes arising from the co-design workshops. They outline the key challenges raised and the agreed principles and approaches tackle those challenges and deliver what is needed to ensure we reach our vision for 30 by 30 in Scotland.

Theme 1: Site selection, designation and safeguarding, and governance

Challenges and barriers

- Variety of designation types and legislation on protected and conserved areas creates a complex and confusing landscape, with overlapping designation types, and differing objectives and requirements, often across the same areas.
- The protection and regulatory instruments designated sites currently receive often doesn't reflect or address the pressures.
- Current approach is highly inflexible, difficult and slow for making changes to sites, to allow them to adapt or perform better for biodiversity.
- Designation and governance of sites have historically been very top-down in approach with limited ability for local representation both in the identification of sites and the continued decision making over how they are managed.

Taking on the challenge

To ensure protected areas are able to deliver, we must first be sure the level of protection legally afforded to them is appropriate. As part of the 30 by 30 implementation process, the key pressures driving decline in protected areas' health, and the legislative remedies that could be applied to strengthen the existing measures, will be considered. Measures need to be able to address issues such as how we can drive positive management, accountability, restoration and how to prevent a lack of appropriate management, or direct mismanagement. Identified obstacles from current protected areas can help inform whether new policies or legislative changes are required to enhance the effectiveness of our approach. This will be done in conjunction with looking at recommendations from existing reviews undertaken at the Scotland, UK and EU levels.

To help tackle the current complicated and layered protected areas system, simplification is proposed to improve accessibility and understanding, while ensuring no reduction to the level of protection that any site is currently afforded. Environmental Standards Scotland have a role to play in ensuring any proposed changes do not diminish levels of protection on sites. This review will also look at how the legislative landscape can better deal with, and where warranted, penalise or remove any incentives to poor or damaging management.

For OECMs, in developing the means of assured long-term delivery of conservation, it will be necessary to build in similar safeguards to that of protected areas. As self-nominated areas that meet eligibility criteria are brought into area-based conservation, there will need to be a clear route for the removal of status from any site where effective management is not being continued in the agreed manner.

This regulation will work together with incentives, such as recognition of good practice and financial support, further explored below.

Community participation in identifying 30 by 30 sites is vital. Given the significance of stakeholder involvement in such a bottom-up approach, adequate resources must be allocated to the site identification and governance process to enable active, transparent, and meaningful engagement from the outset. This will facilitate bottom-up action, resulting in sustainable, resilient, and effective management with long-lasting impacts.

Encouraging and facilitating a bottom-up approach to site selection will be paired with oversight and input from NatureScot to ensure designation is strategic and works at a national and landscape scale. These sites must be ecologically diverse and representative of key habitat types and supporting multiple species. They will encourage natural processes and ecological complexity and function rather than focussing on creating a static environment. This will include traditional nature-friendly land management methods that are responsible for many of Scotland's semi-natural ecosystems that are important for biodiversity (e.g. species-rich grasslands). Both for new sites and existing, we will have due regard to the bigger, better and more connected principles where appropriate, to reduce fragmentation and help facilitate landscape scale working. There will be a proactive pipeline process of prospective sites, with clear and understandable criteria for consideration, and oversight of progress on what is currently, and what will be in the future, included. This pipeline will be a driver of restoration for land across Scotland.

Having a centralised overview over what the suite of 30 by 30 sites are delivering will guarantee that rare and vulnerable habitats and species are not overlooked.

Having a centralised overview over what the suite of 30 by 30 sites are delivering will guarantee that rare and vulnerable habitats and species are not overlooked. Such an approach will allow for a clearer more strategic approach to land use and management at the site and landscape level.

To ensure longevity, it is essential to make 30 by 30 sites and our strategies towards them adaptable for the future. This means moving from a default position of preserving each site in its designated state, to exploring ways to optimise their individual and collective contributions for nature and people, amidst change. Ensuring that all sites are contributing to biodiversity is vital, and thus, the ability to assess their importance is vital. The procedure for modifying these sites must be trustworthy, mutually accepted, transparent, strategic and take into consideration

the unique needs and objectives of individual sites. This may entail exploring options for legislative modifications that can facilitate this, along with changes in the management of these areas (as discussed below).

Key principles - Site selection, designation and safeguarding, and governance

- Area-based conservation will provide adequate protection or conservation to the area of importance it covers
- The approach to 30 by 30 sites will be simple, clear, transparent and flexible in governance and application.
- Approaches to the selection and objectives of 30 by 30 sites will be strategic, forward-looking and dynamic.

Next steps

- The governance and pipeline system will be set up in the year following the framework publication.
- The criteria, means of long-term assurance and route for identification and recognition of OECMs in Scotland will be developed collaboratively and published
- Through the proposed Natural Environment Bill, opportunities will be sought to overcome current weaknesses and improve on existing protected area designations or new area-based conservation measures.

Theme 2: Land management

Challenges and barriers

- Potential tensions over conflicting land uses depending on land owners/managers' economic, environmental and social priorities that will need to be considered and balanced.
- Pressures on sites do not respect designation boundaries making isolated site management difficult and less effective.
- Management that contributes to the landscape scale is often difficult and resource heavy to organise as it crosses land boundaries and owners.

Taking on the challenge

Effective management of 30 by 30 sites is crucial for achieving their objective and providing the maximum contribution towards nature recovery and is highlighted as a critical component in delivering the 30 by 30 target in the GBF text.

To achieve greater biodiversity benefits, we must adopt forward-looking and holistic approaches to management of sites that promote the delivery of ecological health and complexity. By considering the changing nature of our environment, including the effects of climate change, we can determine when to resist change, accept it or facilitate it. With the right management in place, sites both individually and collectively, can better adapt and continue to effectively deliver for biodiversity in the long term, while also benefiting rare and vulnerable species.

Similarly, for management to be effective it must not be viewed in isolation, but as part of an adaptive and participatory management cycle, clearly linked to desired outcomes and monitoring for an area. Broadly such management will fall within one of three categories; enhance, restore or maintain depending on the current state of the area.

The outcomes for an area must also be clearly defined in collaboration with, and clearly understood by, those individuals, communities, or businesses identified as having the primary role in managing the land to deliver these outcomes. This collaboration may be at the regional scale covering a suite of sites facing similar pressures. Communication must be tailored to those groups responsible for enacting them.

Effective management requires operating at the appropriate scales, informed by the pressures being felt. Key pressures, such as grazing and invasive non-native species (INNS), often demand landscape-scale management. To tackle these challenges, management strategies should involve cross-boundary collaboration and long-term management approaches, with funding streams that align with the necessary timescales and access to the adequate expert advice and information.

In our rapidly changing environment, some management interventions will have uncertain outcomes. Therefore, it is crucial to have robust and transparent monitoring systems in place that can provide valuable feedback for making informed management decisions. This approach ensures a better understanding of cause and effect, improving the effectiveness of management strategies.

Ecosystem Health: What is a healthy ecosystem?

A healthy ecosystem is one that is not subject to IPBES drivers of biodiversity decline. In such a state well connected protected and conserved areas, surrounded by more nature-friendly farming and forestry methods, have habitats that flourish with species diversity, structural diversity and functions increasing.

The approach to better defining ecosystem health, improving management effectiveness and reforming protected area monitoring to inform both is ongoing.

Effective management also requires that the biodiversity crisis, and the role protected and conserved areas play in combatting it, is recognised across policy areas and sectors. This will be achieved through policy alignment where government funded policies with the potential to fund damaging management, as well as 'loopholes' in policies, are eliminated. Achieving this will require adequate understanding/training of government staff. Replacement of the Common Agricultural Policy with a bespoke model for Scotland and reform of the Forestry Grant Schemes in Scotland being aligned with the goals of 30 by 30 are key given their significant impacts on landscapes and biodiversity.

Where protected area legislation, policy, or other mechanisms such as conservation burdens, do not address the negative impacts on biodiversity from a lack of management or fails to satisfactorily address poor or damaging management then this must be addressed to put adequate provisions are in place.

The transformational change required in land management, requires adequate engagement, training, awareness raising and clear guidance for practitioners, government regulatory and advisory bodies plus financial resources to support. This should be twinned with a recognition/ accreditation system to encourage a 'pull through' approach to changes in management whereby individuals or organisations leading the way on good management are recognised, rewarded and are able to act as champions within their own sectors to drive positive change. Wherever possible, delivery of 30 by 30 should actively support efforts to fulfil this principle.

Key principles – Management

- Management must be adaptive, dynamic, and responsive, operating at the necessary scales (spatially and temporally).
- The policy and legislative landscape which shapes management in Scotland will be integrated and coherent and better reflect the value of biodiversity to all of Scotland.
- Those responsible for the management of Scotland's land will be empowered to work collaboratively and equipped with skills needed to champion good management within their own sectors

Next steps

- NatureScot to identify and work with land owners/managers interested in managing their land, to the benefit of biodiversity, in innovative ways.
- Continue work on improving management effectiveness taking into consideration an Ecosystem Health approach to site monitoring and possibilities to better utilise management agreements.
- Where required, seek to use the Natural Environment Bill to close gaps or improve on management of important areas for biodiversity in Scotland.

Theme 3: Funding and finance

Challenges and barriers

- Existing funding streams are short lived and often inaccessible
- Funding is too short-term and targeted to implementation and does not support the lifetime of projects (from inception to ongoing management and monitoring)
- There is a significant finance gap that needs filling

Taking on the challenge

Although new technologies and improved work methods can enhance efficiency, managing a minimum of 30% of Scotland for nature effectively will require considerable resources. These can be broken down into three broad elements, with individual sites requiring two or more aspect to be resourced; restoration work, ongoing management and monitoring. To meet these resource needs will involve a combination of public and private funding, integrating with other Policy drivers, and capitalising on the link to nature-based solutions and natural capital revenue streams.

To achieve 30 by 30, it is crucial to establish a funding mechanism that effectively delivers the necessary resources. A harmonious integration of public and private financing can facilitate the injection of additional funds while preventing duplicate payments for the same activities and outcomes, thus ensuring cost-effectiveness. As the most important areas for biodiversity, current and potential 30 by 30 sites will be recognised as a priority and attract a premium with regards to investment and support. It is hoped that increased commitment of financial support, will encourage landowners and managers to propose their sites for 30 by 30 consideration.

As part of the developing Biodiversity Investment Plan as outlined in the SBS Delivery Plan, we will work with the emerging markets to facilitate the adoption of this. The development of further private finance for 30 by 30 sites, as core elements of Scotland's Nature Networks, will be based on the principles for responsible investment in natural capital.

We must not look to simply increase funds available, but also ensure that money is spent efficiently and effectively. Funding models must be designed to ensure better accessibility and spread, including fairness and equitability, and so supporting a just transition within the approach, notably:

- **Regional fairness** – throughout the process of identifying sites right through to funding any management needed for these sites, it is important to acknowledge that to reverse the decline in biodiversity across Scotland relies on effort and funds being put in to each geographic area of

We must not look to simply increase funds available, but also ensure that money is spent efficiently and effectively.

Scotland, islands and mainland, rural and urban in a manner proportionate to the ecological need within the respective area. Links to restoration work, such as landscape restoration areas through the SBS Delivery Plan being utilised.
- **Habitat/species fairness** – it is important that funding is not disproportionately directed towards particular habitats, such as those with more obvious carbon offsetting benefits, but benefits all biodiversity and drives the greatest level of biodiversity recovery.
- **A fair application process** – care must be taken to not exclude from funds those people who are best placed to action change (e.g. tenant farmers) or produce a higher burden on those operating in protected areas.

This will be achieved through participation of stakeholders in the design of future fund processes, including those who are end users and have historically experienced difficulty in accessing funding, and the recognition that decisions on funding need to be made at the appropriate level. Funding will also need to facilitate, and actively reward, working collaboratively and across boundaries fashion to achieve the landscape scale interventions and connectivity needed.

Existing or new funds (e.g. Agri-Environment Climate Scheme, Infrastructure Fund, Forestry Grant) with clear potential to impact on 30 by 30 sites or the landscape they sit within, must be developed and adapted to complement and work with, and not operate in isolation of, or in conflict to, 30 by 30. Creating better coherence across departments and sectors will ensure the most value for money spent and prevent unintended perverse consequences.

Key principles – Funding and Finance

- Established and prospective 30 by 30 sites will be considered as priorities for funding and investment.
- Public and private funding and finance will be delivered through properly resourced, clearly directed, long-term, simple and accessible means.
- Funding and finance will based on the principles of fairness, trust and transparency through collaborative working.
- Build and maintain coherence in statutory and public funding.

Next steps

- The Scottish Government promote such coherence as the head of such bodies and the administrator of funds to them, so ensuring NatureScot can work with other funders to create complementary approaches.
- NatureScot will look to those funds we administer, as well as funds that we provide via management agreements, to ensure they are compatible with the principles in this framework.
- NatureScot will seek to influence new funding streams linked to areas of work where we have a remit, such as the new rural support mechanisms, to encourage them to have the flexibility to support 30 by 30 management.

Theme 4: Participation, engagement and communication

Challenges and barriers

- Current protected area system too complex with inaccessible language and tier systems making it difficult to engage with unless you work in the sector
- Perceptions are currently centred on restrictions and what you can't do on protected sites, rather than what their purpose and benefits are.

Taking on the challenge

To ensure that the public, landowners and managers understand the purpose and value of 30 by 30 sites, a simple and unified message is needed that makes clear the benefits they deliver. Through a wider national campaign on Nature Networks, a positive narrative will be built around 30 by 30 sites, with accessible and inclusive language and terminology, raising awareness of the benefits these areas provide, and building a sense of guardianship between people and their local areas.

30 by 30 sites will make up the core areas of Scotland's wider Nature Network. Partners involved in the management and ownership of 30 by 30 sites will be supported through the Nature Network Toolbox to develop clear, common messaging. This will allow those visiting or using the sites to understand the purpose, value and role of such sites in Scotland's wider Nature Network and for Scotland's biodiversity, climate and people.

A unified message, with shared framing and language, across sites will help address partisans between organisations' brands and image, and help link the local to the national to the international. Sites will utilise opportunities to build in cultural participation and ownership, defining peoples' role in that, and explore how sites can be valuable educational resources to build nature connection with people.
Across the board, collaboration is vital to the success of 30 by 30. This includes between landowners and managers to ensure landscape scale partnership and change, but also in community engagement and support. Therefore, proactive, meaningful and inclusive communication and engagement will be built into all 30 by 30 site management. Although management outcomes may be predefined, the method or approach to achieving the desired outcome should be flexible and adaptable in response to engagement, balancing top-down targets and definitions with genuine participation fostering a sense of responsibility and ownership over a space.

We will work with local communities, sectors, and landowners and managers to ensure that those people able to make the most impact understand the importance of their contribution and their responsibilities

As part of their Biodiversity Duty and recognising the benefits of biodiversity from protected and conserved areas are considered a public good, it is expected that all public bodies will assess their land ownership and current management practices to identify potential areas that can aid in achieving the 30 by 30 target.

Key Principles – Participation, engagement and communication

- The value of 30 by 30 sites for nature and people is clear.
- Collaboration is key.
- Land owning public bodies will manage their land to contribute towards 30 by 30.

Next steps

- NatureScot to develop a positive, simple and engaging narrative for 30 by 30 through the wider national campaign on Nature Networks.
- NatureScot to work with other public bodies to review their land holdings, in line with their Biodiversity Duty, to review their landholdings and contribution towards both 30 by 30 and Nature Networks as well as measures necessary to ensure public body participation.

Theme 5: Monitoring

Challenges and barriers

- Current monitoring approach is under-resourced and suffers from inefficiencies, often lacking the necessary focus and frequency with existing information and data sources, for multiple reasons, underutilised.
- Monitoring data is not well designed for providing sufficient information for effective land management decisions with the relationship between monitoring, management, and outcomes often not clear enough.
- Focus on features does not provide a comprehensive picture of an area's overall health and benefits.
- Landscape-scale pressures are poorly captured through the inward-looking approach to monitoring.

Taking on the challenge

A clear monitoring strategy will be developed that identifies Scotland's data needs ensuring data sources, existing or new, are well integrated, incorporated and fully utilised allowing for gaps to be identified. Monitoring will shift from purely feature focussed monitoring of sites, to one that considers ecosystem health alongside data on species and habitats.

In response to the increased area to be monitored, and in the interest of using resources efficiently, new and existing technologies for monitoring will be fully exploited. A blended approach using active (e.g. ecological surveys carried out by people) and passive (e.g. the use of technological solutions) monitoring sources will increase the efficacy of protected and conserved area monitoring.

The purpose and use of data collected from monitoring will be clear, and ensure that it informs actions necessary to improve ecological health and complexity, such as dealing with pressures and drivers of change, thereby closing the loop between monitoring, management and outcomes.

To ensure effectiveness and efficiency, where new monitoring methodology is required, this will be designed with the target groups who will be responsible for data collection and/or carrying out action on the ground informed by the data collected. Recognising the importance of monitoring data being used to inform management decisions, it is important data collected is communicated back out to all relevant groups in a manner that is accessible for the end user.

Any reporting requirements needed will add value and contribute towards the objectives of 30 by 30 sites.

Key Principles – Monitoring

- Monitoring should prioritise the identification and assessment of the most important factors for maintaining the health and resilience of 30 by 30 sites, while also taking into account gaps in knowledge.
- Monitoring will be designed with stakeholders, and for stakeholders, to ensure it iterative and informs ongoing and adaptive land management decisions.
- Monitoring will use a combination of traditional methods and emerging technologies, with a focus on maximising the efficiency and effectiveness of data collection and analysis, while also ensuring that data quality and accuracy are maintained.
- Monitoring must meet national and international reporting obligations.

Next steps

- NatureScot will collaboratively develop an Ecosystem Health approach (Delivering Healthy Ecosystems) to area-conservation monitoring with an aim for such an approach to be in place by 2025/26
- The 30 by 30 project to take advantage of, and support, the Better Biodiversity Data project

Theme 6: Policy and mainstreaming

Challenges and barriers

- Protected areas are currently not well integrated across other sectors and their policies, this results in them being overlooked or unable to have their needs taken into consideration.
- Existing policy and legislation does not always promote fairness nor is it implemented consistently.
- Existing policy and legislation can both lack the strength/power required but also be inflexible and act as a barrier to taking action to achieve biodiversity objectives

Taking on the challenge and next steps

As discussed at various points throughout this framework the success of 30 by 30 relies on the 30 by 30 sites being able to deliver on their goals. How easy or difficult this will be is, in large, dictated by how well integrated these areas are into the landscapes within which they sit and the way this land is used and managed.

Outputs from this theme have been incorporated into the preceding themes with policy and mainstreaming requirements embedded into the specific areas of work where they logically fit. When considering policy, legislation, and mainstreaming development the outputs of the workshops on this theme will be a valuable resource to inform further discussions with stakeholders.

A detailed list of the policy landscape 30 by 30 sits within, and requires integration to, can be found in Annex 2. With 30 by 30 sites making up the core areas of Nature Networks, as Nature Networks are mainstreamed within policy so too shall 30 by 30 (see the Nature Networks Framework for more on policy).

> ...the success of 30 by 30 relies on the 30 by 30 sites being able to deliver on their goals.

How we will measure success

Success goes beyond simply having 30% of land classified as “30 by 30 sites” by 2030. Coverage will mean nothing unless those areas are effective at delivering our Vision and contributing to the international 30 by 30 target as described in the GBF.
The following measures of success will be considered;

Progress towards 30% terrestrial cover

As we move from the current situation of 18.2% to 30+% it is important to be transparent on the progress being made by total area of Scotland currently under protection, classified as an OECM, or being proposed as a candidate 30 by 30 site.

It can be expected that in these first years of the journey, whilst the principles within this framework are being further developed and implemented, progress on coverage will start slowly. As the policies, resources and traction within communities increase, so should the rate at which new areas are identified and either designated or assured by some other means.

We propose to report on the following measures of progress on coverage on an annual basis;

- The current total area of Scotland contributing to 30 by 30 (as protected areas and OECMs)
- The total new area brought under area-based conservation in the previous 12 months
- The total area currently under formal proposal for area-based conservation (e.g. sites under restoration and so in the pipeline to count as 30 by 30 sites)

Measuring effectiveness at the site level

As well as monitoring the land area that constitutes a 30 by 30 site, it's essential to understand the health status to therefore determine the effectiveness of management of each individual site. To do this we propose to adopt an approach to monitoring that is based on the concept of ecosystem health (see monitoring section for more details). This means that we will be able to report annually on the health of all 30 by 30 sites utilising the results of our monitoring programme.

Measuring effectiveness of our approach

The areas of measurement above, reported annually, will provide the reference point against which progress towards meeting the 30 by 30 target will be measured.

However, we also need to ensure that our overall approach to area-based conservation is effective. To do this we propose to conduct system-level assessments of management effectiveness of our 30 by 30 sites.

These evaluations of management effectiveness consider more holistic aspects of area-based conservation and are based around three key themes; the design of the system, the adequacy of management and processes, and delivery against objectives.

This level of assessment will help consider key elements of our approach against the GBF, including how ecologically representative the system is, whether it is equitably governed, well connected, etc. Crucially the benefit of these assessments is in supporting adaptive approaches, ensuring effective resource allocation, establishing clear accountability and building support.

There are a number of recognised approaches to assessing management effectiveness in this way. Such system-level assessments do not need to be carried out annually (but do rely on a robust monitoring regime at the site level - as above). We would intend to carry out system-level assessments at 5-10 year intervals.

As well as monitoring the land area that constitutes a 30 by 30 site, it's essential to understand the health status to therefore determine the effectiveness of management of each individual site.

Annex 1 – Co-designing the Frameworks for 30 by 30 and Nature Networks

The 30 by 30 and Nature Networks frameworks sought to follow a co-design approach in their design and development. This highly collaborative process saw stakeholders from across Scotland work together to design the frameworks that will lead to us reaching 30% of land protected for nature by 2030 and the roll out of Nature Networks. Due to their interlinked nature, the two frameworks were co-designed in tandem. Overall, the co-design process engaged 316 people from 130 organisations and groups.

What is a co-design approach?

Co-design is a design-led process that uses creative and participatory methods. In this context, it is when an organisation and stakeholders work together to design or rethink a service, policy or project.

Co-design is often mistakenly used as an umbrella term for all forms of user involvement. However, while consultation and feedback mechanisms seek advice and opinions from users, co-design allows us to design services in close collaboration. By using a co-design approach, NatureScot looks to identify and address challenges collaboratively, by working with one or more stakeholders in the private, public and voluntary sector, and citizens. The core objective of co-design is to move away from consulting with stakeholders to co-creating services and policies with them.

Co-design principles and methods can be applied throughout the whole project or programme cycle. This can include collaboration in terms of the design, production, planning, implementation, delivery, and evaluation of services and policies. The process is iterative, meaning the output, whether a service, project or policy remains representative of those involved in the co-design process.

Co-design principles

There are many ways in which co-design can be delivered and it is not one size fits all. There are, however, a number of key principles that need to be followed to ensure co-design is enacted.

Some key principles include;

- Openness through inclusion, transparency, and use of shared language
- Equal value is given to expertise by lived experience and expertise by profession or education
- Respect and trust between all participants with shared decision-making power

Co-design model

The 30 by 30 and Nature Network projects used the Double Diamond design model to inform the co-design approach. The Double Diamond is a visual representation of the design and innovation process, dividing the process into four phases;

Discover: explore the problem or challenge, building understanding amongst participants
Define: clearly define the challenge
Develop: explore and develop multiple potential solutions
Deliver: select a single solution(s) and prepare for implementation

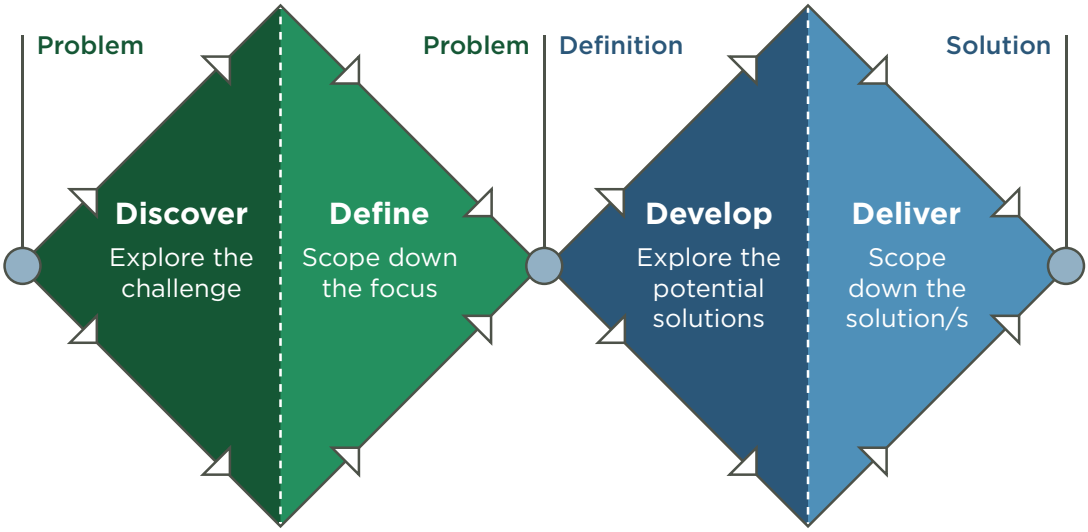


Figure: Diagram illustrating the Double Diamond design model

Launch event

The Discover phase was launched in June 2022 with a 30 by 30 and Nature Networks webinar. This first phase helps people understand, rather than simply assume, what the problem is that we are looking to address. This event set the scene by introducing the challenge, context, and parameters we were working within. The event asked interested parties who attended to start thinking creatively and ambitiously about what 30 by 30 and Nature Networks could look like. The launch event was attended by 131 stakeholders from 45 organisations with speakers from across the nature-based sector.

When asked in the initial opening event, the majority of stakeholders expressed interest in contributing to the project through workshops, therefore the primary method for this co-design process was through a series of workshops, hosted online to ensure the best level of accessibility.

Discovery workshop

It was important to apply a participatory approach not only to problem-solving or idea-generating but also when defining the challenge to ensure we are uncovering and solving the "right" problem and true needs. The closing of the Discover phase and beginning of the Define phase was achieved through the Discovery Workshop. This workshop brought together 98 participants from 78 organisations, this time delving deeper into the two projects separately to identify present challenges. After

an introduction, participants, or co-creators, worked in either a 30 by 30 or Nature Networks breakout group of eight to 10 members and two NatureScot facilitators. Co-creators explored the issues and challenges they face in relation to 30 by 30 and Nature Networks and defined them down into key challenge themes. These themes formed the based for the next iteration of solution-based workshops.

Themed solution-based workshops

Moving into the second stage of the Double Diamond, the solution-based workshops looked to again explore the potential 'solutions' possible, and together, defined and decided the solutions to feature in the frameworks. These solutions were in the form of high-level principles that would need to feature in the frameworks in order to combat the current challenges and ensure we reach our 30 by 30 and Nature Networks ambitions. A total of 87 participants, from 59 organisations, formed 14 workshops.

30 by 30 = 50 participants, 41 organisations	**Nature Networks = 52 participants, 39 organisations**
– What's included in 30 by 30 – Monitoring – Management – People – Funding and resources – Policy and legislation	– What are Nature Networks? – Land management and ownership – Data, mapping and monitoring – People – Knowledge and skills – Governance – Finance and resources – Policy

NatureScot also facilitated bespoke discussions with organisations or communities who reached out. This included a youth-focused event run in partnership with YoungScot, and events with Planning Aid Scotland and The Heather Trust.

In the interest of transparency and openness, all workshop details and outputs feature on the NatureScot website along with a method for those who weren't able to attend to input. As the Develop phase moved to Deliver, the core 30 by 30 and Nature Network team within NatureScot drafted the framework based on the workshop outputs. An iterative process took place, reviewing and refining the framework before it went out to public consultation. Both frameworks also benefited from a 'sense-check group' of key stakeholders. The role of the group was to have those who have an overview of the policy and practice landscape, flag if there were any issues resulting from the workshops.

30 by 30 sense check group	**Nature Networks sense check group**
– Scottish Government – NatureScot – SEPA – Forestry and Land Scotland – Forestry Commission – Cairngorms National Park	– Scottish Government – NatureScot – Loch Lomond and Trossachs National Park – COSLA – Edinburgh City Council

Annex 2 - A Route to Other Effective Area-Based Conservation Measures (OECMs) in Scotland

Disclaimer: Please note that this section was written prior to the formation of OECM working group. Most recent progress and updates on the development of OECMs can be found on NatureScot's website***.***

The purpose of OECMs is the same as that of protected areas; to provide long-term and effective conservation of biodiversity in the areas they cover. OECMs look to conserve areas of equal importance for biodiversity, but in a different way. The use of OECMs is complementary to traditional protected areas, providing another tool in the conservation tool box.

OECMs are an effective mechanism to diversify management and governance of conservation areas, providing an opportunity to bring in new models of underrepresented governance structures. They look to bring more areas under long term conservation, in a bottom-up approach, by distributing and sharing the responsibility for protecting biodiversity amongst a broader coalition of stakeholders.

Rather than long term protection and conservation brought about through legislation and formal designation, like traditional protected areas (PA) in Scotland (such as SSSIs and SPAs), for OECMs, this long term assurance instead comes through legal or contractual agreements. This can be thought of as Protected Areas achieving biodiversity conservation through intent, while OECMs achieve it through outcome, but ultimate resulting in the same goal.

An OECM cannot be recognised and reported on by Scottish Government or NatureScot without the free, prior, and informed consent of the governing body/ies of the area it would cover.

Defining an OECM

The definition of an OECM, to be used in Scotland, will follow that from the IUCN WCPA guidance as summarised below;

> **Definition;**
> A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the ***in situ*** conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values.

- The area must be clearly geographically defined with a mapped (GIS) boundary that will be made available to be hosted on the national protected and conserved areas public database. For Scotland this is SiteLink.
- Like Protected Areas, at least 75% of the area covered by the OECM will, at the time of recognition, be important for biodiversity* and therefore contribute to Scotland achieving the 30 by 30 target.
- The area must not already be recognised and reported as a protected area. In

Scotland this is taken to mean; a SSSI, European site, Ramsar site or NNR.
- There must be a clear governance entity in place for the proposed OECM, this could fall within one of three main categories (in practice there may often be mixed governance);

    a. Government at various levels (e.g. public bodies such as Scottish Water, SEPA, Forest and Land Scotland, Scottish Government Rural Payments and Inspections Directorate, Ministry of Defence or Local Authorities)
    b. Private individuals, organisations, or companies
    c. Local communities

- The area to be included must be managed in such a way that achieves positive and sustained long-term biodiversity conservation outcomes. The purpose of the management does not have to be specifically for the biodiversity, for who the benefit may be ancillary or secondary, but must result in positive, sustained outcomes for biodiversity.
- There must be a long-term guarantee provided by the OECM. For Scotland, we look for this to be no less than 30 years. Agreements of significantly longer periods, or in perpetuity, are encouraged and favoured.
- The area to be included should be of a sufficient size to achieve long-term conservation of ecosystems, habitats, and species' communities on site.
- Whilst there is no explicit requirement for monitoring of OECMs in the IUCN guidance, the requirement for them to be effective (achieving conservation outcomes) and adaptive (in management) will necessitate an appropriate and proportionate level of monitoring.

*Important for biodiversity means areas that are identified as Key Biodiversity Areas (KBAs) or some combination of Important Plant Area (IPA), Important Bird Area (IBA), Important Insect Area (IIA), Gene Conservation Units (GCUs). (See 30 by 30 framework or IUCN guidance box 4 for further break down).

What an OECM is unlikely to be

The most frequent confusion over what could qualify as an OECM is in regards to areas that are being sustainably used (e.g. areas under agriculture, aquaculture, fisheries, and forestry) and practicing biodiversity friendly practices.

Whilst contributing towards Target 10 of the Global Biodiversity Framework, these areas will often not qualify as OECMs as the balance of land use will remain too heavily skewed towards human activities – for example intensively farmed areas with low levels of pesticide use and small set aside areas or, forestry which retains a large proportion of non-native species and a large scale felling schedule. As such they are unlikely to meet the criteria of being important for biodiversity. Conversely, as suggested by the IUCN, an area of native grassland, dominated by native plants, and having healthy populations of a large variety of native birds and mammals, may constitute becoming an OECM if a lower-intensity management and governance regime ensures these outcomes over the long-term.

A simplified potential process for recognising OECMs

Identifying and recognising OECMs in Scotland

Step 1) Ensuring transparency and integrity of OECMs

Establish an OECM working group, with representation of relevant stakeholder groups likely to be involved in the governance of such sites (government bodies, land owners and managers, NGOs, academia), to explore and agree the details of the process.

Step 2) Identifying potential OECMs

NatureScot will carry out an initial exercise in identifying potential OECM approaches (see box 1) in Scotland. This will be;

d. an assessment of existing land management and ownership styles where there is a clear legal, managerial, or contractual route in place that could lead to assured governance,
e. an assessment of proposed areas which currently do not have a governance system in place, where a bespoke governance structure would be allowed and is needed.

Step 3) Identifying potential sites

NatureScot, with help from the OECM working group, will identify potential sites for OECMs by mapping areas important for biodiversity over land identified as having potential governance as an OECM from Step 2.

Step 4) Consent

Work with the land owners and/or managers to obtain consent to further look at the viability of their land. Particularly in the early stages, an effort will be made to gain consent for a selection of sites under different ownership, management, and uses.

Step 5) Assessment

Assess the selection of sites against a Site-Level Assessment Tool. This may be the IUCN OECMs Site-Level Assessment Tool or a version adapted for Scotland's needs. It is unlikely most areas in Scotland will initially meet all the criteria and qualify as OECMs without additional action. This step will involve NatureScot working closely with the governing parties of the potential sites to establish, at each stage within the assessment tool process, any necessary changes, measures, or support that would be needed to meet the criteria.

Working with a variety of stakeholders across multiple sectors will allow NatureScot to understand the common measures and support that are required as well as the specificities that will be needed within individual sectors. By doing so, the basic standards can be identified and clearly defined, allowing more efficient and effective uptake of future OECMs.

Step 6) Verification

For those sites that have passed through the Site-Level Assessment Tool, with agreement they meet the criteria, and the owner and/or manager wishes it to be recognised as such, there will be a verification process of the appropriateness of the site via an 'external source'. This is most likely to be a sub-panel of the OECM working group.

Initial sites will help to define the Scotland specific standards for individual requirements, with early work informing formalised guidance via the working group. External verification is considered an important step for OECMs to address perception of them being an 'easy route' for increasing a countries coverage towards the 30 by 30 target, without contributing to true biodiversity benefits. In cases where, for whatever reason, the land owner/manager does not wish to work extensively with the Government, or its associated bodies, this allows for a large part of the process to be free from their input.

Step 7) Recognition and Reporting

For sites that have been verified as meeting the OCEM criteria, NatureScot will, where asked, formally recognise sites as such. At this stage they will begin to contribute towards Scotland's obligations under Target 3 of the GBF (30 by 30). They will be entered onto our internal database and the sites' boundary and summary information be made publically available via SiteLink. This will in turn result in the site being included, for the duration of the agreed period of the OECM, in Scotland's reporting to international databases such as the World Database of OECMs or World Database on Protected Areas.

Promoting and retaining OECMs in Scotland

Step 8) Promotion

Whilst it will not be a pre-requisite for inclusion in the OECM assessment and recognition process, participants will be actively encouraged to promote the contribution they are making towards nature in Scotland, particularly within their own sectors. If there is an appetite, the use of some form of official accreditation badge can be explored.

Step 9) Monitoring and reporting

Authorities responsible for OECMs should ensure that adequate monitoring is undertaken of the effectiveness of management to ensure long-term conservation outcomes. The working group will explore monitoring and reporting actions to ensure OECMs are successfully achieving their aim. If it is found that the OECM is no longer adhering to the criteria, the recognition will be removed.

Annex 3 – Policy landscape

National Policy/ legislation	Relevance to nature restoration and connectivity
Environment Strategy	Supported via the Scottish Biodiversity Strategy (SBS) and associated Delivery Plan (DP)
Scottish Biodiversity Strategy to 2045 & associated Delivery Plan	Nature Networks and '30 by 30' are key implementation aspects of the SBS & DP to achieve the aims of halting biodiversity loss by 2030 and reversing loss by 2045.
Biodiversity Duty	Implementation of Nature Networks will help public bodies meet their statutory obligations.
Climate Change Plan Climate Change Adaptation Programme	Nature Networks and 30 by 30 will help to integrate Nature-based Solutions across communities, in order to meet carbon reduction and climate adaptation targets, through woodland creation, peatland restoration, creation of new protected areas, ecological connectivity; and supporting biodiversity within and across community areas.
Peatland Action Plan	Restoration across peatland areas provides multiple benefits including to climate change, flooding, water quality, and biodiversity.
National planning framework 4	Integration of Nature Networks within NPF4-Policy 3 seeks to ensure positive effects for biodiversity within the planning system, and to ensure connectivity across and between rural, peri-urban and urban areas. Additional provisions are provided to conserve protected areas through the planning system.
Developing with Nature Guidance | NatureScot	Associated guidance produced by NatureScot sets out how a nature-rich approach should be implemented and appropriate measures for biodiversity enhancement. Guidance setting out the Scottish Ministers' expectations for implementing the system of local development plans - so that they deliver new-style, place-based, people-centred and delivery-focussed plans, including provisions for their role in facilitating Nature Networks.
National Marine Plan and regional marine plans	Supporting the wider SBS & DP through marine planning approaches to manage human impact upon the marine environment.

National Policy/ legislation	Relevance to nature restoration and connectivity
Marine Protected Areas	Underpinning the SBS & DP, through the restoration of marine ecosystems, and halting and reversing declines in marine species. 37% of Scotland's seas are already protected. Nature Networks will provide connectivity of restored areas at coastal boundaries.
Coastal erosion and flood risk management | Scotland's Marine Assessment 2020	Nature Networks and 30 by 30 will support the restoration of coastal areas, bringing benefits to coastal erosion and flood prevention.
River Basin Management Plan for Scotland 2021-27	Taking a Nature Networks approach through enabling partnership working to improve the condition and quality of Scotland's waterways, support habitat restoration and ensure community access to green & blue spaces.
Scottish Wild Salmon Strategy and associated implementation plan 2023-28	Restoring high quality, functioning ecosystems through river catchment approaches, which connect across marine, coastal and river habitats, including the restoration and creation of riparian woodlands, is a great example Nature Network approach.
Scotland's Forestry Strategy 2019-29 and associated Implementation Plan 2022-25	Underpinning the SBS & DP through habitat restoration and creation, providing connectivity and improving species diversity.
UK Forestry Standard	The UK Forestry Standard (UKFS) is the reference standard for sustainable forest management across the UK, and applies to all woodland, regardless of who owns or manages it. The document covers key different elements of sustainable forest management, i.e. biodiversity; climate change; historic environment; landscape; people; soil; water.
Land Reform Bill - new legislative proposals for land reform	Nature Networks will encourage the development of land management approaches for nature restoration, which align to local priorities, opportunities and public policy.
Land-use Strategy 2021-26 including the development of regional land-use partnerships (RLUPs)	Aligned to the SBS, taking a landscape view of sustainable land use, through regional partnerships to meet across landscape scale partnerships which support nature restoration and halt species declines.

National Policy/ legislation	Relevance to nature restoration and connectivity
Delivering our vision for Scottish Agriculture	Consultation on how Scottish Government proposes to transform support for farming and food production, to become a world leader in regenerative agriculture.
Agricultural Reform Route Map	Outlines the processes and steps to be taken to transition from the current support framework to a new regime to deliver the vision for agriculture.
Just Transition - Land Use and Agriculture (www.gov.scot)	A discussion paper that sets out the need to deliver a Just Transition to a net zero, nature positive Scotland, across key land use areas - including forestry, peatland restoration and agriculture. Nature Networks are a key delivery area to help create opportunities and benefits for people across Scotland; provide the skills that people need to tackle the nature crisis; empower a green recovery; prioritise wellbeing.
Invasive non-native species - Wildlife management (www.gov.scot)	Invasive non-native species are one of the largest causes of biodiversity loss in Scotland and the second largest negative pressure on our protected areas. Delivering strong and resilient Nature Networks and 30 by 30 network will require action to control or eradicate invasive non-native species to prevent them using the networks to spread further.
Non-native species: code of practice (www.gov.scot)	The Code sets out guidance on how you should act responsibly within the law to ensure that non-native species under your ownership, care and management do not cause harm to our environment. GB Strategy outlining how collaborative working will detect and prevent new and existing invasive non-native species from establishing and spreading.
Rural Land Use Partnerships	Regional Land Use Partnerships (RLUPs) are partnerships facilitating collaboration between local and national government, communities, land-owners, land managers, and wider stakeholders. They will enable natural capital-led consideration (for instance in developing Nature Networks or the 30 by 30 suite) of how to maximise the contribution that our land can make to address the twin climate and biodiversity crises.
UN Sustainable Development Goals	Scotland signed up in 2015 to work towards the multiple goals within, delivery of 30 by 30 will contribute towards the delivery of multiple associated targets.

Note: This annex is illustrative and is not an exhaustive list of cross-policy areas which relate to nature restoration.

Acknowledgements

Photo credits

© NatureScot 2023/Lorne Gill: cover, pages 3, 4, 7, 8, 9, 10, 13, 19, 22, 26, 37, 30, 32, 34 © James Carter: page 33

Scottish Government
Riaghaltas na h-Alba

November 2024

NatureScot
Great Glen House
Leachkin Road
Inverness, IV3 8N

01463 725000
naturenetworks@nature.scot

ISBN: 978-1-78391-992-5

www.nature.scot

NatureScot
NàdarAlba
Scotland's Nature Agency
Buidheann Nàdair na h-Alba