The Second State of Natural Resources Report (SoNaRR2020)

SoNaRR2020 Register semi-natural grasslands assessment of SMNR

Natural Resources Wales

Final Report

Mae'r ddogfen hon hefyd ar gael yn Gymraeg

About Natural Resources Wales

Natural Resources Wales's purpose is to pursue sustainable management of natural resources. This means looking after air, land, water, wildlife, plants and soil to improve Wales's well-being, and provide a better future for everyone.

Evidence at Natural Resources Wales

Natural Resources Wales is an evidence-informed organisation. We seek to ensure that our strategy, decisions, operations and advice to Welsh Government and others are underpinned by sound and quality-assured evidence. We recognise that it is critically important to have a good understanding of our changing environment.

We will realise this vision by:

- Maintaining and developing the technical specialist skills of our staff;
- Securing our data and information;
- Having a well resourced proactive programme of evidence work;
- Continuing to review and add to our evidence to ensure it is fit for the challenges facing us; and
- Communicating our evidence in an open and transparent way.

Title: **SoNaRR2020 Register semi-natural grasslands assessment of SMNR**

Peer Reviews: Internal and external peer review

Restrictions: None

The Second State of Natural Resources Report (SoNaRR2020) contents

This document is one of a group of products that make up the second State of Natural Resources Report (SoNaRR2020). The full suite of products are:

Executive Summary. Foreword, Introduction, Summary and Conclusions. Published as a series of webpages in December 2020

The Natural Resource Registers. Drivers, Pressures, Impacts and Opportunities for Action for eight Broad Ecosystems. Published as a series of PDF documents and as an interactive infographic in December 2020

Assessments against the four Aims of SMNR. Published as a series of PDF documents in December 2020:

SoNaRR2020 Aim 1. Stocks of Natural Resources are Safeguarded and Enhanced

SoNaRR2020 Aim 2. Ecosystems are Resilient to Expected and Unforeseen Change

SoNaRR2020 Aim 3. Wales has Healthy Places for People, Protected from Environmental Risks

SoNaRR2020 Aim 4. Contributing to a Regenerative Economy, Achieving Sustainable Levels of Production and Consumption

The SoNaRR2020 Assessment of Biodiversity. Published in March 2021

Assessments by Broad Ecosystem. Published as a series of PDF documents in March 2021:

Assessment of the Achievement of SMNR: Coastal Margins

Assessment of the Achievement of SMNR: Enclosed Farmland

Assessment of the Achievement of SMNR: Freshwater

Assessment of the Achievement of SMNR: Marine

Assessment of the Achievement of SMNR: Mountains, Moorlands and Heaths

Assessment of the Achievement of SMNR: Woodlands

Assessment of the Achievement of SMNR: Urban

Assessment of the Achievement of SMNR: Semi-Natural Grassland

Assessments by Cross-cutting theme. Published as a series of PDF documents in March 2021:

Assessment of the Achievement of SMNR: Air Quality

Assessment of the Achievement of SMNR: Climate Change

Assessment of the Achievement of SMNR: Energy Efficiency

Assessment of the Achievement of SMNR: Invasive Non-native Species

Assessment of the Achievement of SMNR: Land use and Soils

Assessment of the Achievement of SMNR: Waste

Assessment of the Achievement of SMNR: Water Efficiency

Updated SoNaRR evidence needs. Published in March 2021

Acronyms and Glossary of terms. Published in December 2020 and updated in March 2021

Recommended citation for this section of the report:

Natural Resources Wales. 2020. State of Natural Resources Report (SoNaRR): SoNaRR2020 Register semi-natural grasslands assessment of SMNR. Natural Resources Wales.

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Semi-natural grasslands Natural Resource Register Assessment of SMNR

SoNaRR2020

Aim 1: Stocks of Natural Resources are safeguarded and enhanced

Aim 1: Progress towards meeting the aim

1.1 Semi-natural grasslands are generally better connected in the upland fringes (ffridd), and much better connected in the uplands, where patches of habitat are generally much larger.
Confidence Assessment: High
Extent of SNG in the uplands and upland fringes appears broadly stable at present.
Confidence Assessment: Low
However, it may be desirable to convert some areas to other habitats such as heathland.

1.2 Loss of high-quality grassland habitat is continuing in the lowlands outside the protected sites network.
Confidence Assessment: Medium
99% of grassland Priority Habitat is in the lowlands.

1.3 27% of all semi-natural grassland in Wales, and 10% of priority grassland habitat, is on statutory protected sites. Statutory site protection greatly limits loss of semi-natural grassland habitat.
Confidence Assessment: High

1.4 The majority of lowland semi-natural grassland SSSI features are in unfavourable condition.
Confidence Assessment: High

1.5 19% of mapped grassland Priority Habitat has been covered by Glastir Advanced grassland options in recent years (2012 to 2019).
Confidence Assessment: High

1.6 EIA (Agriculture) Regulations cover all semi-natural grassland and have prevented incidents of significant damage to at least 89 high conservation value grassland sites since 2002.
Confidence Assessment: High

Aim 1: Obstacles remaining to meeting the aim

1.7 Semi-natural grassland is the most fragmented ecosystem in the Welsh lowlands.
Confidence Assessment: High

1.8 Only about 10% of grassland Priority Habitat is on protected sites.
Confidence Assessment: High

1.9 A total of 21% of the semi-natural grassland on protected sites is currently covered by specific SSSI management agreements mostly aimed at improving grassland condition.
Confidence Assessment: High

1.10 81% of mapped grassland Priority Habitat has not been covered by Glastir Advanced grassland options in recent years (2012 to 2019).
Confidence Assessment: High

1.11 EIA (Agriculture) Regulations are unlikely to guard against gradual changes, such as incremental increase in fertiliser application, and are not designed to prevent management neglect or abandonment.
Confidence Assessment: HIGH

Aim 2: Resilient Ecosystems

Aim 2: Progress towards meeting the aim

2.1 More than 90% of SNG in lowland Wales was lost in the 19th century. Remaining habitat patches are invariably small, ranging from an average of 6.2 ha (acid grassland) to just 1.8 ha (neutral grassland).
Confidence Assessment: High

2.2 Semi-natural grassland is the most fragmented ecosystem in the Welsh lowlands; patches are widely scattered within landscapes dominated by improved grassland.
Confidence Assessment: High
Some better-connected landscapes remain locally.

2.3 Upland semi-natural grassland scores high on both extent and connectivity and diversity and condition is medium.
Confidence Assessment: Medium
Overall resilience of upland ecosystems may be improved by conversion of some upland acid grassland to other habitats such as heathland.

2.4 There has been very little recorded recent loss of grassland extent on SSSIs in Wales, but condition is mostly poor.
Confidence Assessment: Medium

2.5 Condition is mostly poor for lowland SNG outside statutory sites.
Confidence Assessment: Medium
Undermanagement is one of the principal causes of this.
Confidence Assessment: High

Aim 2: Obstacles remaining to meeting the aim

2.6 Lowland SNG outside statutory protected sites is still being lost to agricultural improvement.
Confidence Assessment: High

2.7 High Levels of atmospheric nitrogen deposition (nitrogen oxides and ammonia) is still occurring, although atmospheric N is declining slowly. These cause increased soil nutrient levels and acidification in SNG.
Confidence Assessment: High

2.8 Climate change will have a direct negative impact on semi-natural grassland ecosystems, for example through increased droughting and hydrological changes, as well as indirect effects such as changes to land management.
Confidence Assessment: High

2.9 Insufficient resources devoted to management of grassland SSSIs or targets aimed at improving site condition.
Confidence Assessment: High

2.10 Insufficient uptake and targeting of agri-environment schemes on SNG sites.
Confidence Assessment: High

2.11 90% of grassland Priority Habitat is not on protected sites.
Confidence Assessment: High

Aim 3: Healthy Places for People

Aim 3: Progress towards meeting the aim

3.1 Despite a decline in the historic rate of loss of SNG, conversion to improved grassland is continuing. This decreases regulating and cultural ecosystem service provision, including pollination supply, water and soil quality, sense of place and cultural provision.
Confidence Assessment: High

3.2 Undermanagement or abandonment of SNG is still widespread within and outside statutory protected sites, meaning decreased provision of, for example, pollination supply and increased hazard (fire) loading.
Confidence Assessment: High

3.3 The intensification of SNG on floodplains has led to increased flood risk and water pollution.
Confidence Assessment: High
However, floodplain opportunity mapping project just completed in SE Wales

Aim 3: Obstacles remaining to meeting the aim

3.4 Focus in farming is predominantly on maximising food production rather than multiple ecosystem service benefits.
Confidence Assessment: High

3.5 Insufficient resources to tackle undermanagement on and outside statutory sites.
Confidence Assessment: High

3.6 Insufficient spatial targeting of SNG restoration/creation to maximise ecosystem service benefits.
Confidence Assessment: High

3.7 Atmospheric nitrogen pollution.
Confidence Assessment: High

3.8 Climate change is causing changes detrimental to SNG and the ES they provide and leading to land use changes harmful to SNG. This is likely to increase into the future.
Confidence Assessment: Medium

Aim 4: A Regenerative Economy

Aim 4: Progress towards meeting the aim

4.1 SNG undermanagement and abandonment are still widespread within and outside statutory protected sites.
Confidence Assessment: High

4.2 Meat produced from semi-natural grasslands typically has a higher nutrient content and lower fat levels than that produced from agriculturally improved grasslands.
Confidence Assessment: HIGH. Meat quality is being increasingly promoted but is often regarded as less important than price.
Confidence Assessment: Low

4.3 The capital costs of farming semi-natural grassland are markedly lower than for intensive grassland management, largely due to much lower expenditure on fertilisers and farm chemicals, and also less use of farm machinery.
Confidence Assessment: High
This is now being considered more in farm economics.
Confidence Assessment: Medium

4.4 From Enclosed Farmland Chapter
Sustainable land management, with lower use of farm chemicals and artificial fertilisers, is gradually improving.
Confidence Assessment: Low

Aim 4: Obstacles remaining to meeting the aim

4.5 Semi-natural grasslands provide comparatively low financial returns due to low productivity, often leading to neglect and undermanagement.
Confidence Assessment: High

4.6 Focus in farming is predominantly on maximising food production rather than multiple ecosystem service benefits.
Confidence Assessment: High

4.7 Appreciation of the greater nutritional value of meat from semi-natural habitats is likely increasing but is still largely a niche market and cost is still generally regarded as more important.
Confidence Assessment: High

4.8 The full capital costs of intensive farming are not always accounted for in farm food production, when compared with the lower costs of food production on SNG.
Confidence Assessment: High