

The Second State of Natural Resources Report (SoNaRR2020)

SoNaRR2020 Register mountains, moorlands and heaths assessment of SMNR

Natural Resources Wales

Final Report

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 mountains, moorlands and heaths 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

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Mountains, Moorlands and Heaths 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 S16 management agreements and Agri-environment agreements cover xxxha of upland and xxxha of lowland heathland and peatland.
Confidence Assessment: High
Evidence to be provided.
- 1.2 Direct management and reconstruction of habitat resources under projects such as The Lost Peatlands, New LIFE for Welsh Raised Bogs, Marches Mosses BogLIFE etc.

Aim 1: Obstacles remaining to meeting the aim

- 1.3 Many of our upland landscapes are dominated by extensive patches of often species-poor relatively homogeneous but persistent semi-natural vegetation as a result of decades of over-exploitation and pollution.
Confidence Assessment: High
- 1.4 Reactive Nitrogen Air pollution is projected to remain above critical load for most of these habitats for decades to come.
Confidence Assessment: High
- 1.5 Groundwater Nitrogen contamination exceeds critical thresholds on many lowland peatlands, largely due to agricultural application.
Confidence Assessment: High
- 1.6 Past drainage or peat removal has compromised the hydrological integrity of most peatlands.
Confidence Assessment: High
- 1.7 Limited number of new agreements being signed due to staff resources.

Aim 2: Resilient Ecosystems

Aim 2: Progress towards meeting the aim

- 2.1 The long-term trend between 1990 and 2013-2016 shows no overall change in either habitat condition or plant species richness. However, the short term trend

between 2007 and 2013-16 shows a significant increase in both metrics.
Confidence Assessment: Medium

- 2.2 The National Trust assessment of their designated sites records 2521 ha of MM&H in favourable condition in the uplands and 218ha of peatlands and heathlands in favourable condition in the lowlands (Sherry 2019^{a,b})

Aim 2: Obstacles remaining to meeting the aim

- 2.3 Only 2,997 ha (2%) of the resource of these habitats is in good condition, with 44,783 (30%) in 'not good' condition and the remainder of 102,719 ha (68%) in unknown condition.
Confidence Assessment: High
- 2.4 The most recent SAC monitoring dataset recorded no lowland heathland in favourable condition and the loss of 24 hectares of wet and dry heath on one SAC.
Confidence Assessment: High
- 2.5 Over-grazing in the uplands.
Confidence Assessment: High
- 2.6 Under-grazing in the lowlands.
Confidence Assessment: High

Aim 3: Healthy Places for People

Aim 3: Progress towards meeting the aim

- 3.1 Attenuation of water run-off from the upland
- 3.2 Sequestration of carbon
- 3.3 Mental health value of contact with nature

Aim 3: Obstacles remaining to meeting the aim

- 3.4 Little progress on control of groundwater nutrient loads on peatlands. There is a gulf between the nutrient requirement of current agriculture (and potable water supplies) and the levels acceptable to sensitive ecosystems. WFD Evidence.
Confidence Assessment: High
- 3.5 Slow progress in reducing aerial NO_x levels (Rowe et al 2019) and likely disconnect between critical loads and ecosystem impact (Ref Payne 2019).
Confidence Assessment: High
- 3.6 Ongoing inappropriate grazing - Abandonment of small lowland areas and the ranching of upland grazing.
Confidence Assessment: High

Aim 4: A Regenerative Economy

Aim 4: Progress towards meeting the aim

- 4.1 There has been a reduction in the overall stocking levels since the 1990's. {HIGH}
- 4.2 Nearly 900 hectares of plantation on deep-peat will have been removed to restore carbon sequester peat.
Confidence Assessment: High

Aim 4: Obstacles remaining to meeting the aim

- 4.3 Further reductions in the stocking levels need to be achieved in the uplands.
- 4.4 Small lowland, heathlands and peatlands are often inherently difficult to graze. Difficult terrain, recreational pressure and limited labour are drivers of this.
- 4.5 6,000 hectares of plantations remain to be removed on deep peat.
Confidence Assessment: High
- 4.6 Difficulty of restoring cattle to upland grazing. Partly driven by economic factors and labour required.