

# **The Second State of Natural Resources Report (SoNaRR2020)**

## **SoNaRR2020 Register woodlands 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 woodlands 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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# Woodlands

## 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. Available evidence suggests that, on balance, the stocks of natural resources associated with woodland ecosystems are generally stable, but it is not possible to say with confidence whether they are being safeguarded due to current and likely future drivers of change (pressures). However, it can be said with confidence that there is scope to do more to enhance these stocks.  
Confidence Assessment: High
- 1.2. Between 2016 and 2019, woodland extent increased from 306,595 ha to 309,312 ha (Forest Research, 2019). This is a positive trend, although some of this reported increase is due to changes to National Forest Inventory (NFI) mapping.
- 1.3. Between 2016 and 2019 there was 1,300 ha of new woodland creation in Wales facilitated through grant funding (Forest Research, 2019). In the same period there has been some permanent woodland loss associated with renewable energy provision, open habitat restoration and approved development but there is incomplete evidence to allow the amount to be quantified.
- 1.4. The overall trend from 2001 to 2019 in the management of woodlands to the UK Forestry Standard (UKFS) is positive: certification<sup>1</sup> of the entire WGWE has been maintained for the last 20 years and the total certified area of privately-owned woodland in Wales has increased from 14% to almost 20% (Forest Research, 2019).
- 1.5. There has been an average of 1,308,600 green tonnes of softwood removals over the last 10 years (Forest Research, 2019). Current forecasts predict a fall in softwood timber availability (Forestry Commission, 2014).
- 1.6. Most woodland stands are in intermediate ecological condition but less than 5% are in favourable condition (NFI Forestry Commission, 2020). Pressures such as pests and diseases, air pollution, INNS and herbivores remain.
- 1.7. Overall, the soil condition trends, except for soil mesofauna (Emmett et al, 2017), in woodlands have been stable with significant positive trends in soil pH [Maskell et

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<sup>1</sup> To UK Woodland Assurance Scheme (UKWAS), a proxy measure of adherence to UKFS

al., 2019].  
From Land Use and Soils Chapter

- 1.8. The largest GHG sink within the LULUCF sector in 2016-2018 was existing woodland due to the action of woodland removing carbon dioxide from the atmosphere (NAEI GHG Inventory 2020).  
From Land Use and Soils Chapter

## **Aim 2: Resilient Ecosystems**

### **Aim 2: Progress towards meeting the aim**

- 2.1. Overall, we have assessed ecosystem resilience as medium. However, this disguises significant differences in the assessment of individual attributes (which vary from Low/Medium to High), and for native and non-native stands.  
Confidence Assessment: High
- 2.2. Most woodland stands are in intermediate ecological condition but less than 5% are in favourable condition (NFI Forestry Commission, 2020).
- 2.3. New data are particularly significant for non-native stands showing that they are not all uniform monocultures and the majority are in intermediate ecological condition (NFI Forestry Commission, 2020).
- 2.4. Article 17 reporting indicates that important woodland habitat condition is stable (but not in good condition) after a long-term trend of reduction in habitat quality, however woodland-associated biodiversity is still declining.
- 2.5. The woodland bird indicator (BTO) has reduced by 25% between 1970 and 2017. Generalist woodland species, (that also breed in gardens or farm woodland) have increased overall by 14%, whilst woodland specialists have shown declines of more than 80%.
- 2.6. Welsh dormouse populations have declined by 79% between 1993 and 2014 (McDonald, 2017).

## **Aim 3: Healthy Places for People**

### **Aim 3: Progress towards meeting the aim**

- 3.1. Evidence demonstrate the importance of woodlands for regulating services, including climate change mitigation (Matthews, 2020), flood risk mitigation (Environment Agency, 2017; Broadmeadow, 2018), and air quality regulation (Engledew et al, 2019).  
Confidence Assessment: High
- 3.2. Evidence demonstrates the importance of woodlands as providers of cultural ecosystem services including supporting mental and physical well-being, education and learning, community cohesion, a connection to nature and the landscape, recreation, tourism and employment (e.g. O'Brien, 2018; Forest Research, 2019);

Woodland Trust, 2017; Welsh Government, 2019).  
Confidence Assessment: High

- 3.3. The Welsh Government have set out the need for increased rates of new woodland creation and the benefits from more tree planting in its Decarbonisation Plan, Natural Resources Policy and Strategy for Woodlands and Trees. SoNaRR2016 identified that planting 'the right tree in the right place' can provide multiple benefits for SMNR and well-being as well as being a critical part of meeting Wales' emissions reduction targets. Confidence Assessment: High
- 3.4. There is an important spatial dimension to the supply of, and demand for, regulating and cultural ecosystem services. For example, the contribution of woodlands to flood risk mitigation is strongly dependent on their location, as is the use of woodlands by people for recreation.
- 3.5. An evidence review of natural capital accounting studies was completed by Saraev et al (2020). The review found that non-market values of many forest ecosystem services (e.g. carbon sequestration, recreation, air pollution absorption) are significantly larger (by a magnitude) than that for marketable goods like timber (Beauchamp et al, 2020).

## **Aim 4: A Regenerative Economy**

### **Aim 4: Progress towards meeting the aim**

- 4.1. Timber is a renewable, sustainable material for a range of products and construction applications. Use of timber locks up carbon (if long lifetime products), displaces carbon emissions associated with other types of materials, has the potential to reduce carbon emissions associated with transport if locally grown sources are used, and can give a boost to local communities in terms of employment and enterprise.
- 4.2. There is incomplete data to accurately quantify the contribution that Welsh-grown timber makes to a regenerative economy and the more efficient use of natural resources in Wales (Forest Research, 2019). However, it is recognised that there is potential for it contribute more (Welsh Government, 2019). Confidence Assessment: Medium
- 4.3. The forestry sector contributes a total GVA of £664M per annum to the Welsh economy (Welsh Government, 2019), up from the £499.3M per annum reported in SoNaRR 2016.
- 4.4. Between 10,300 and 11,000 people worked in the forestry sector in Wales in 2017 (Welsh Government, 2019). These figures exclude the contribution of businesses that are supported wholly or partially by forestry, e.g. woodland-based recreation businesses.
- 4.5. Natural capital accounting studies (Engledew, 2019) valued the timber provisioning service from Welsh forests as £36 million in 2017.