The Second State of Natural Resources Report (SoNaRR2020)

SoNaRR2020 Register urban key pressures and opportunities

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 urban key pressures and opportunities**

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:

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Urban
Natural Resource Register
SoNaRR2020

The Natural Resource Registers are an important output of SoNaRR2020.Their purpose is to distil the key pressures and opportunities identified within the chapters and to provide an accessible assessment of SMNR.

The urban natural resource register is made up of two additional documents:

1. SoNaRR2020 Register urban assessment of SMNR

2. SoNaRR2020 Register urban evidence

Table 1 Key Drivers, Pressures and Impacts on the Urban Ecosystem

Driver	Pressure	Impact
Climate Change	1. Changing Weather Patterns	1.1. Leading to people being put at risk Confidence Assessment: HIGH SMNR Aim 3 1.2. Increase the risk of flooding in Wales Confidence Assessment: HIGH SMNR Aim 3
	2. Sea Level Rise	2.1. Increase the risk of flooding in Wales Confidence Assessment: HIGH SMNR Aim 3
Pollution	3. Air Pollution	3.1. Harm to human health. Confidence Assessment: HIGH SMNR Aim 3

Pollution	4. Land Pollution	4.1. Decrease water quality. Increase risk of ill health. Confidence Assessment: HIGH SMNR Aim 2 and 3
		4.2. Land contamination leading to harming animals and plant life. Confidence Assessment: HIGH SMNR Aim 2
		4.3. Lowers the value of land and tourism decline Confidence Assessment: HIGH SMNR Aim 3 and 4
		4.4. Community well-being decline Confidence Assessment: HIGH SMNR Aim 3
Pollution	5. Noise Pollution	5.1. Increases the risk of ill health and poor quality of life Confidence Assessment: HIGH SMNR Aim 3
Pollution	6. Water Pollution	6.1. Point Source pollution leading to harm to aquatic ecosystems and risk to human health. Confidence Assessment: To be provided SMNR Aim 2 and 3
		6.2. Diffuse pollution leading to harm to aquatic ecosystems and risk to human health. Confidence Assessment: To be provided SMNR Aim 2 and 3
		6.3. Increased costs and carbon footprint due to increase in water treatment needs. Confidence Assessment: HIGH SMNR Aim 4

Land Use Change	7. Built Development and Infrastructure	7.1. Increases carbon footprint Confidence Assessment: HIGH SMNR Aim 4
		7.2. Consumes more natural resources Confidence Assessment: HIGH SMNR Aim 1 and 4
		7.3. Leads to the loss of high-grade agricultural land and soil sealing Confidence Assessment: HIGH SMNR Aim 1, 3 and 4
		7.4. Contributes to landfill and waste. Confidence Assessment: HIGH SMNR Aim 4
INNS, Pests and Disease	8. INNS	8.1. Impacts on built structures, human health and environmental systems Confidence Assessment: HIGH SMNR Aim 2 and 3
Over-exploitation		Note: demands for ecosystem goods and services by people living in urban areas are a significant driver of over-exploitation of other ecosystems.

Opportunities for Action

Aim 1: Stocks of Natural Resources are Safeguarded and Enhanced

Sustainable transport
[Synergy] with reduced greenhouse gas emissions, reduced environmental noise, and reduced air pollution

Low carbon, energy efficient housing
[Synergy] with reducing fuel poverty

From Water Efficiency Chapter
Reduce water use to reduce energy used for heating, pumping and treating water. –

Protect large trees in urban areas and promote the planting of street trees.
[Synergy] with: reduced energy demand through summer cooling, reduced risk of local flooding, increased air quality, increased mental well-being).

Increase the rate of new woodland creation and plant more trees.

Monitor the change in selected mammal and invertebrate species in urban areas.

Aim 2: Resilient Ecosystems

SUDS in existing developments
[Synergy] with biodiversity and provision of accessible green space

Water efficiency measures, **Green space management**
[Synergy] with human well-being and reduction in anti-social behaviour

Protect existing large urban trees and plant more street trees
[Synergy] with biodiversity, local property values and human well-being

Innovative deployment of renewables (such as, solar roof tiles, wind integration with agriculture and forestry can reduce land use pressures, as well as avoid landscape disturbances caused by fossil fuels and nuclear energy)

Implement water efficiency measures such as off-line storage, rainwater harvesting and grey water recycling. Initiate behavioural change to a more conservative use of water.

Aim 3: Healthy Places for People

Provide adequate garden space for homes likely to house children
[Synergy] with SUDS provision

Increase biodiverse, accessible green space
[Synergy] with reducing flood risk, air pollution and extreme summer temperatures

Manage road verges for biodiversity
[Synergy] with good financial management)

Convert lawns around public buildings to biodiverse meadows
[Synergy] with good financial management

Aim 4: A Regenerative Economy

Increase energy efficiency of housing stock
[Synergy] with reducing fuel poverty

Use more timber in construction to help reduce emissions and support the timber industry
[Synergy] with a resilient economy

From Water Efficiency Chapter
Increase the amount of highly water-efficient domestic appliances installed in new and existing homes.

Promote 'Covid-proof' travel to make it safer and easier to get around towns, as well as to promote public transport following the lockdown. The aim is to capitalise on the change to sustainable travel behaviours and reallocate road space in town centres to active travel. (Welsh Government 2020)

[Synergy] with reduced air pollution and environmental noise. Synergy with improved human health and well-being.

Water labelling for water appliances

Reduce non-supply leakage and waste through awareness- raising initiatives

Encourage off-line storage, Rain Water Harvesting and Grey Water Recycling. For example, on-farm storage of water for irrigation.