



Llywodraeth Cymru
Welsh Government

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Annex F: Biodiversity impact assessment

Assesses how the Single Use Plastics Bill will integrate biodiversity into decision making.

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A global problem

“Plastic Pollution is one of the great environmental challenges of the 21st century, causing wide-ranging damage to ecosystems and human health”, states the OECD publication **Global Plastics Outlook: Policy Scenarios to 2060**. According to **statistical data**, global plastics production was estimated to be 367 million metric tons in 2020, with production exponentially increasing over the years from 2.3 million tons in 1950 when plastic was first widely manufactured. The OECD report estimates that without policy and regulatory interventions, global plastics use is projected to nearly triple by 2060, driven by economic and population growth.

OECD data demonstrates the significant problem plastic waste presents. Only 9% of globally produced plastic is successfully recycled; most of the plastic waste ends up in landfill, get incinerated or leaks into the terrestrial, freshwater and marine environment.

Single Use plastic items are of a particular environmental concern. The **National Geographic** alleges that “single-use plastics account for 40 percent of the plastic produced every year.” Some of these items have a lifespan of minutes to hours but persist in the environment for extended periods of time. The same study also highlights the impact plastic pollution has on the environment, specifically wildlife:

“ “Millions of animals are killed by plastics every year, from birds to fish to other marine organisms. Nearly 700 species, including endangered ones, are known to have been affected by plastics. Nearly every species of seabird eats plastics.” ”

The findings from a **field study** in 2020 found that terrestrial microplastic has led to the decrease of species that live below the surface such as mites, larvae and

other species that maintain the fertility of the land. The importance of the harm that plastic waste causes to biodiversity is highlighted by the proposed action target of eliminating the discharge of plastic waste by 2030 under the draft **Post-2020 Global Biodiversity Framework**. Whilst the impact of plastic on the marine environment is well documented, some **research** has noted that terrestrial microplastic pollution is much higher than marine microplastic pollution.

UNEP underlines that plastic pollution “can alter habitats and natural processes”, significantly reducing ecosystems’ ability to adapt to climate change. This leads to ecosystem degradation, impacting not only on biodiversity and wildlife, but also people’s livelihoods and food production.

Once plastics enter the environment, they do not disappear but break down into increasingly smaller particles called microplastics. Microplastics can now be found in the most remote parts of the world, including the **Arctic** and **deep sea sediment**. Recently, microplastics were detected for the first time in **Antarctic Snow**, **rainwater** and even **human blood**. All of this evidence demonstrates the ubiquitous and persistent nature of plastic pollution.

Wales policy context

The Welsh Government has an ambitious sustainability agenda and is dedicated to addressing environmental pollution. Although recycling rates in Wales are internationally recognised, plastic waste still represents a problem. Single use plastic items make up a significant proportion of litter on our streets, parks and seas. Eliminating single use plastic items from the waste stream and preventing such products from entering the environment is a key priority in Wales. The objective is enshrined in wider WG goals and ambitions, primary legislation and strategies.

The Programme for Government 2021-2026 sets a commitment to “Embed our response to the climate and nature emergency in everything we do”. Under this encompassing pledge, there is a specific commitment to “Legislate to abolish the use of more commonly littered, single use plastics”. The proposed Bill has been developed in alignment with the ambitions of the PfG, and the wider objectives of the Well-being of Future Generations (Wales) Act 2015 which puts in place the ‘Resilient Wales’ goal - ‘A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic, and ecological resilience and the capacity to adapt to change (for example climate change).’

The Environment (Wales) Act 2016 introduced the section 6 duty, which requires public authorities to ‘maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions’.

The Marine Strategy Regulations 2010 outlines a duty for UK and Devolved Ministers to ‘take the necessary measures to achieve or maintain Good Environmental Status (GES) of marine waters within the marine strategy area’. This duty covers a number of ecosystem components ranging from biodiversity to marine litter, through a broad target to ‘reduce the amount of visible marine litter in the marine environment’.

The proposal to ban the 10 single use plastic items and items made of oxo-degradable plastic seeks to reduce the prevalence of these items often found within the marine environment, collectively known as marine litter. It is broadly assumed that at least 80% of all marine litter found in the marine environment has originated from the terrestrial environment.

Plastic also represents a risk to freshwater ecosystems and the vast proportion of marine plastic pollution is transported via river systems. Plastic cutlery, straws, stirrers, bags and cotton bud sticks are amongst the most commonly found littered items in freshwater, according to [Earthwatch Europe](#).

These single use, often 'on-the-go' items represent some the most common items found in the marine environment as well. Other sources of plastic found in rivers include tyres, road paints and fibres from clothes, and some originate from waste water treatment works and Combined Storm Overflows (CSO). When CSOs spill, they discharge excess wastewater, which could contain untreated waste water, debris, and toxic substances into nearby waterbodies.

Microplastics are fast becoming a key concern for marine and the freshwater environment. These are present in our waterways and the wider environment due to the volume of plastics used in society today. They get into our water system both from direct and indirect sources – such as particles released from wear of car tyres on roads or microfibres released from synthetic clothes when washed – and from the breakdown of larger plastics such as litter washed into drains.

Microplastics in the marine environment often originate from single use plastic items which break down and degrade over time, through abrasion and interaction in salt water. It is these microplastics which are often more detrimental to marine biodiversity through consumption resulting in digestion blockages.

A 2017 study by **UK Centre for Ecology & Hydrology** identified high numbers of microplastic particles at all examined freshwater sites, even at those which expected to have low pollution levels. More recently, experts from the University of Manchester claimed that “Rivers harbour some of the highest levels of microplastic contamination and supply most of the microplastics found in the oceans,” in a **paper** for Nature Sustainability in 2021.

Another form of microplastics could originate from items where the main constituent part is polystyrene. Polystyrene used to produce drinks and foods containers easily break down in the marine environment through physical contact. The resulting components float in smaller pieces which are often confused as food to fish, seabirds and other freshwater and marine species.

Entanglement is another key issue to marine biodiversity and could occur to fish, birds and some marine mammals. Plastic carrier bags within the water environment could restrict movement of the animal, restrict feeding and growth.

A proposal to ban commonly littered single-use plastic items will help reduce and reverse the amount of litter found in the Welsh freshwater and marine environment, thus reducing the overall risk of future instances occurring. The reduction in manufacturing of unnecessary single-use plastics is an important step towards protecting our waterways and the marine ecosystems from the harmful effects of plastic and microplastic pollution.

1. How will your proposal integrate biodiversity into decision making?

The Marine Strategy Regulations 2010 sets out a duty for UK and Devolved Governments to introduce measures to achieve Good Environmental Status for a number of ecosystem components including marine litter. This duty should be taken into consideration when determining policy options for the benefit of the marine environment.

The UK Marine Strategy, which is the document delivering this duty references marine litter as a key pressure for a number of biodiversity components, such as marine mammals, birds and fish. The 11 items listed are some of the most commonly found litter items in the marine environment and by introducing a ban, this key pressure could be addressed as the number of these items entering the marine environment in Wales would significantly reduce.

2. Has your proposal ensured biodiversity is accounted for in business decisions?

The proposal to ban 10 commonly littered single use plastic items and products made of oxo-degradable plastic, would significantly reduce the amount of this litter entering the freshwater, and subsequently the marine environment, although it is recognised that the effect upon littering would not be as prevalent.

The reduction of visible freshwater and marine litter would benefit areas which are reliant on tourism as an income. This includes coastal areas and sites which are designated as official bathing waters in Wales. Additionally, the prestigious blue flag awards, seen as recognition for having clean waters, litter free beaches and good facilities could become more common.

Banning these items would incentivise manufacturers to explore different materials and products, less harmful to the terrestrial and marine environment which would maintain or create additional employment options.

3. How does your proposal improve understanding and raise awareness of the importance of biodiversity, encouraging others to act?

There is already a well-established governance and stakeholder structure for marine litter in Wales. At a Government level, the Litter Advisory Group, Wales Marine Action and Advisory Group (WMAAG) and Clean Seas Partnership each have a focus on the marine environment and/or littering/marine litter. These groups have a clear focus and in some cases an action plan to support and guide delivery of key aims, such as the Marine Litter Action Plan in Wales.

More locally, key stakeholders such as Keep Wales Tidy, Marine Conservation Society and Surfers Against Sewage all have active schemes and initiatives in place for the benefit of the marine environment and in some cases reducing marine litter. These groups actively engage with Welsh Government and the public utilising volunteers to support projects such as beach cleans e.g. Great British Beach Clean.

Keep Wales Tidy are also the delivery partners for the Welsh Government Eco-Schools project. Primary and Secondary schools are invited to sign up to the scheme if they meet the eligibility. The scheme offers guidance, presentations and practical education focusing on sustainability, the environment and littering/recycling.

Treasure Your River is a Keep Wales Tidy initiative focused on addressing littering in and around freshwater sites. Keep Wales Tidy works collaboratively with Hubbub, the Rivers Trust, and other partners around the UK to help keep Wales' rivers in a neat state and to stop litter reaching the seas.

4. Have you used the best available evidence of biodiversity to inform your proposal and this assessment?

The Great British Beach Clean survey [results](#) for 2021 found that over 80% of items found on Welsh beaches were either macro or micro plastics (MCS, 2021).

Further, the UK Marine Strategy assessment for Good Environmental Status (GES) in 2019, which focuses on a number of ecosystem components including marine litter, found it was not meeting GES across the UK. The UK Marine

Strategy uses 3 forms of monitoring for marine litter, sea floor, floating and beach litter. Sea floor litter gives a good indication of litter quantities and types, however, it is sporadic and ad-hoc therefore difficult to make conclusive year on year judgements. Floating litter uses Fulmar seabird cadavers, recognising this species of bird is a surface water feeder and thus likely to ingest floating litter. Unfortunately, this isn't available in Wales, but good data is presented from Eastern England and Scotland. Beach litter surveys for the purposes of GES assessments are more methodical and conducted at set locations across Wales and the UK. They are assessed on a quarterly basis and provide a very good indication for marine litter surveys.

The State of Natural Resources Report ([SoNaRR](#)) (NRW, 2020) highlights marine litter as a key pressure upon biodiversity within the marine environment.

5. Have you used up to date knowledge of the key impacts on biodiversity to make evidence-based decisions?

It is clear plastic based litter is prevalent in both the freshwater and marine environment and that a ban on the sale of these items would significantly reduce the further input of these items. Similar interventions targeting a change in behaviour such as the carrier bag charge in Wales, saw an almost immediate decline in these items within the water environment.

6. Can your proposal contribute to our body of knowledge for biodiversity?

This proposal will not only reduce these items from entering the marine

environment but will provide knowledge on the efficacy of future measures based on marine litter surveys through beach cleans.

The proposal could also be measured within the assessments for GES and within SoNaRR recognising litter is a key pressure to biodiversity achieving its conservation aims.

7. Can your proposal support biodiversity action in any way?

Welsh Government could engage local stakeholder groups regarding this proposal, for example improving methodologies for beach cleaning to ensure the efficacy of this measure can be appropriately tested, and how it directly benefits biodiversity, with less input into the marine environment

8. Can your proposal help to build capacity for biodiversity action?

The [Nature Recovery Action Plan for Wales](#) identifies six objectives that will contribute to reversing the decline of biodiversity in Wales, one of which is about tackling key pressures on species and habitats. The production and disposal of plastic contributes to these pressures. The extraction of fossil fuels causes damage through the destruction of habitat, the production process for plastic emits greenhouse gasses and its disposal takes up landfill and often leaches into the terrestrial and marine environment. Therefore, through banning certain single use plastic items this will benefit biodiversity through reducing the damaging inputs into the natural environment that results from their production,

use and disposal.

One of the key priorities of the **State of Natural Resources Report** is encouraging the use of renewable resources. The Bill should lead to the development of more sustainable production methods, through substituting renewable for non-renewable resources. It would be important that the materials used to replace single use plastic are sustainably sourced and that its manufacturing process does not have a detrimental impact on biodiversity.

Although the Bill would only ban certain types of SUP this would raise awareness of the issues that plastic in general does cause to the natural environment. Therefore, it could encourage decisions to be taken that will reduce the use of plastic more widely and not just items banned under the legislation.

9. Have you recorded decisions and actions to maintain and enhance biodiversity?

The Bill is proposing a ban or restriction on 10 products and products made of oxo-degradable plastic. However, it is only the first step towards achieving the Welsh Government's wider agenda on tackling single-use products in Wales, as the Bill provides the Welsh Ministers with the powers to ban other SUP products in the future by statutory instrument.

The Bill places a duty on the Welsh Ministers to report under section 79(2) of the Government of Wales Act 2006 on the consideration they have given to whether to exercise the regulation making power to add further products to the list of prohibited single-use plastic products. The Bill signals items for consideration, such as trays, platters and wet wipes, although this is not an exhaustive list.

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