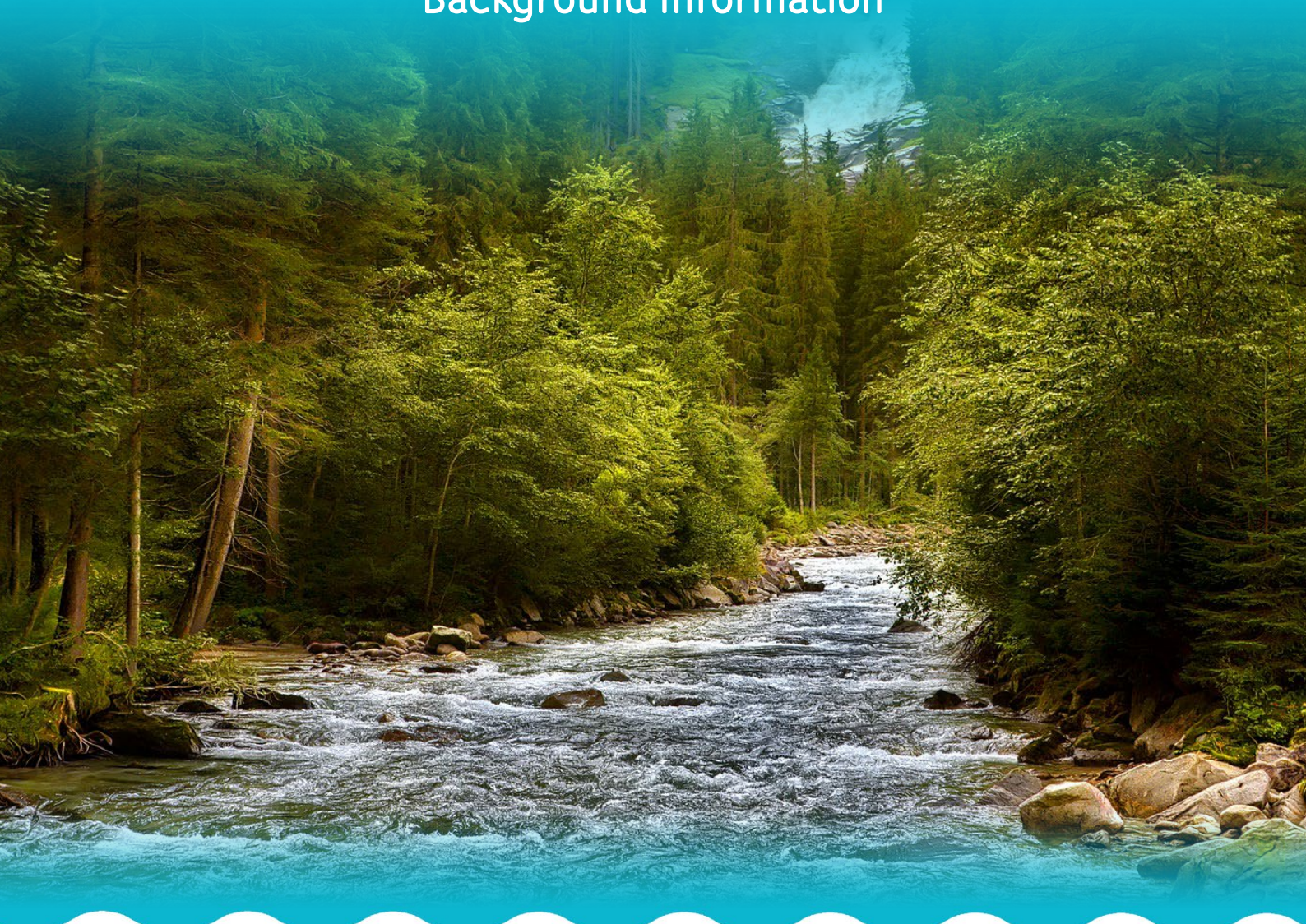


BE THE WAVE AR FRIG YDON

Source To Sea

Background Information



cadwch keep
gymru'n wales
daclus tidy

**MARINE
CONSERVATION
SOCIETY**



UNDEB EWROPEAIDD
EUROPEAN UNION



Llywodraeth Cymru
Welsh Government

**Cronfeydd Strwythurol a
Buddosoddi Ewropeaidd
European Structural
and Investment Funds**



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government



How does Litter enter our oceans?

The ocean connects us, it is immense. It can be a surprise to realise that a single drop of ocean water could make its way all around the world! Our ocean is connected to the freshwater ecosystem of lakes and rivers around the planet and 97% of the Earth's water is in the ocean and the ocean is an integral part of the global water cycle.

Knowing the interconnectivity of the oceans to human activity it is extremely important to remember that any waste material improperly disposed of, as well as any material improperly transported or stored, has the potential to become marine litter. Waste from land mainly enters the ocean through our rivers however there is a vast amount of fishing industry waste lost through ocean-based activities. Waste pollution has serious impacts on the ocean and the wildlife it supports, interfering with its functions and performance and impacting on biodiversity.

Marine litter or debris is a local, national, regional and globally important topic and will be for decades to come. To tackle the issues of litter entering the ocean we must target the sources of the problem. Policy decisions, effective messaging and encouraging positive behaviour changes will all need to play a part to succeed.

It has been estimated that around **80% of marine litter is from land-based sources** and the remaining **20% is from ocean-based sources**.

Rivers and Streams

Our oceans are connected to lakes, rivers and streams because all major watersheds on Earth drain to the oceans. Rivers and streams transport organisms, nutrients, salts, sediments and pollutants from watersheds to estuaries and to the ocean. Rivers provide transportation routes, water for drinking and for irrigating farmland, and power for homes and industries. They create tourist destinations and facilitate recreational activities such as boating and angling.

Human activity can harm river habitats and the species found within. Pollution from discharges, runoff from agricultural land, sewage overflows and plastic pollution have a negative impact on our rivers. Keeping rivers healthy and clear will benefit the growth of fish stock, native species and increase biodiversity. Reducing blockages in rivers can aid wildlife migration and reduce potential flooding.

Plastic pollution isn't just an ocean problem. It's having a negative impact on lakes, rivers and other bodies of inland water. In addition, our rivers and lakes are feeding plastic waste directly into the sea. [How does plastic reach the ocean from inland areas?](#)

Large rivers are particularly efficient conveyors of plastic waste to the oceans, especially in countries lacking a well-developed waste management infrastructure. Scientists at the Helmholtz Centre for Environmental Research in [Leipzig reported up to 95% of river-borne plastic comes from just 10 world rivers.](#)

The video "[The World's Dirtiest River](#)" shows the shocking pollution of the Citarum river in West Java, illustrating the huge problem for the health of our oceans.

In the UK, research from a new study led by the [Canal & River Trust](#) finds that 24 million items of plastic and other litter are dropped or blown into English and Welsh canals every year. Used plastic,



including bags, bottles and food wrappers now accounts for 59% of the litter found in the waterways. The report also reveals that over half a million plastic items reach the ocean every year carried along rivers and canals.

Recently there have been headline reports in Wales looking at the issues of litter in our rivers.

[Plastic Pollution, Litter in Cardiff Rivers Shocking](#)

[Flooding after Storm Dennis: Trail of river litter left behind](#)

Beach Litter

The following events in Wales can illustrate events where litter has been discarded on land or lost at sea:

- [Barry Island: Litterbugs' complete disregard for beach.](#)
- [Storm Emma: Anglesey polystyrene clean-up intensifies.](#)
- [Plastic Cargo loss causing long term fear for coastlines.](#)
- [Ghost Gear: The Abandoned Fishing Nets Haunting Our Ocean – Greenpeace](#)

Down the Storm Drain

Remember “Only Rain Down the Drain” is the key message to what should end up going down our street drains. These drains are often mistakenly thought to be linked to the treatment network but in most cases their contents go directly to a watercourse or the sea where it can negatively impact on our drinking water supplies, wildlife, and recreational use of an area.

Due to lack of awareness people also have been known to unintentionally cause harm by pouring waste such cleaning fluids, fats or oils, paints and car washing water directly down a drain. This can lead to negative impacts on water quality in the nearby river, lake or beach.

Campaigns such as [Only Rain Down the Drain](#) and [The Yellow Fish Campaign](#) are highlighting these issues. The school resource [stormwater360](#) has produced lesson activities.

Floating in the Air.

Wind and rain can assist the journey of our litter out to sea, but we also need to think about the items we deliberately let go! Balloons, sky lanterns and fireworks may look great, but they can cause big problems. Once these items are in the air we have no control over them anymore and they can travel for miles. These products can cause a lot of damage, especially when many are released at the same time.

Balloons can be mistaken by wildlife for food, and once eaten they can block digestive systems, causing animals to starve. The string on balloons can also entangle and trap animals. There are even more dangers with sky lanterns as they can cause fires and are often mistaken for distress flares. In February 2018 all local authorities in Wales introduced voluntary bans on the release of sky lanterns.



In this section we mustn't forget fireworks. They end up causing fires and accidents every year, the loud and sudden noises they create can scare animals that can result in creatures being injured. Fireworks can be toxic, which means that they also pose a danger to the environment and pollute the air we breathe. [Litter-from-the-Air-min.pdf \(keepwalestidy.cymru\)](#)

The Marine Conservation Society tells us that balloons sold as "degradable" are known to last several months, even years and ask s you to pledge support to the ["Don't Let Go"](#) campaign.

For further interest read the article from [The Conversation about biodegradable balloons.](#)

Waste Down the Drains

Pollution in our oceans can come from our own homes. Sewage related debris can include items that have been flushed down the toilet such as wet wipes, tooth floss and cotton buds. These items can cause costly blockages in our homes, businesses, and wastewater systems and can ultimately leading to sewer overflows in our communities and plastic pollution in rivers, on beaches and in the ocean.

Microplastics found in personal care products can enter the drain when we shower and microfibers from our clothing are released from our washing machines. Both activities resulting in plastic entering and contaminating the waterways.

What can we do to reduce the amount of litter entering the ocean?

There are some great initiatives for removing litter from our waters, however the scale of the problem is such that extraction can only be a part of the solution and land-based waste needs to be addressed from manufacture to distribution and disposal to stop it becoming marine litter in the first place.

In the UK and most of Europe there is a formalised system of waste collection, transport, treatment and disposal. This is not found everywhere around the world and some countries have informal facilities or even none. This factor must be addressed, and investment made to infrastructure and waste management practices.

Most environmentalists focus on litter prevention and with increasing awareness of the impacts of marine litter there have been more laws passed by governments and international organisations against disposing of rubbish into the ocean.

The more we consume the more waste we produce. Failure to enforce legislation is also a significant factor but the impact of human consumption and disposal choice plays a huge role that needs to be addressed globally.



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