The Organic centre

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Comhaontas Saor Ó Dramhaíl na hÉireann

Oíche Shamhna at the Organic Centre

Food and Packaging Waste: The Scary Side of Halloween







Halloween, October 2026
Presentation by Jack O'Sullivan
www.zwai.ie

What will this presentation be about?

- **Samhain** – what are we celebrating ?
- **Oíche Shamhna** in Ireland – **Vėlinės** in Lithuania
- What is **Zero Waste Alliance Ireland**, and what do we do ?
- **Food Waste** – how much, and why ?
- **Packaging of food** – what do we use, is it all necessary, and what happens to it ?
- Ways to **reduce Food Waste**
- Can we **reduce the amount of packaging**, and generate less waste
- Q & A



Samhain

- In Ireland's pagan religion before Christianity, holidays were celebrated during the changes of the season, and **Samhain** marked the beginning of winter and the end of the summer — a new year.
- People believed that the veil separating the human world from the spiritual world was especially thin, allowing spirits to interact with mortals. People would sit in a circle telling stories about the dead, reviving their spirits and feeling close to them.
- As Christians adapted Samhain to ***All Saints Day***, the name was slowly altered to ***All Hallows' Eve***. Slowly **Halloween** evolved to absorb Samhain. Throughout Europe, **All Saints' Day** is celebrated on the first day of November to honour all Christian saints and martyrs, while **All Souls' Day** is observed on the second day of November, to remember and pray for all the faithful departed.
- **Consumerism** slowly transformed *All Hallows Eve* into what we know today.
- Celebrating the dead is celebrating a passed life. Remembering loved ones, their favourite songs, shared memories and their preferred meal is healthy. Death is certain, we need these celebrations to heal our relationship with death.

Samhain

All this might sound very old-fashioned to us here in Ireland in the 21st century, but in many other countries, these days are important public holidays.

In Lithuania, we celebrate **Vėlinės** – from *vėlė*, meaning the spirit or soul of the deceased – and it is a day when families visit cemeteries and light candles on the graves of loved ones who have passed away ……



Photo by Evaldas Činga

Zero Waste Alliance Ireland

- Founded in **1999**
- Registered as a **Not-for-profit company limited by guarantee** and became an **environmental charity in 2004**
- **Funded by the Department of Climate, Energy and the Environment through the Irish Environmental Network**
- ZWAI is a member of the **Irish Environmental Network** (IEN), the **European Environmental Bureau** (EEB) and **Climate Action Network Europe** (CAN-E).



Zero Waste Alliance Ireland

- ZWAI has around **75 members** and is growing steadily, by continually seeking new members.
- Members are located throughout **Ireland**, and we have an office in County Westmeath.
- Our work involves **lobbying government** and **preparing policy submissions** to the Irish government and the European Commission, we also provide educational seminars and we attend conferences, festivals and other events.



Our website

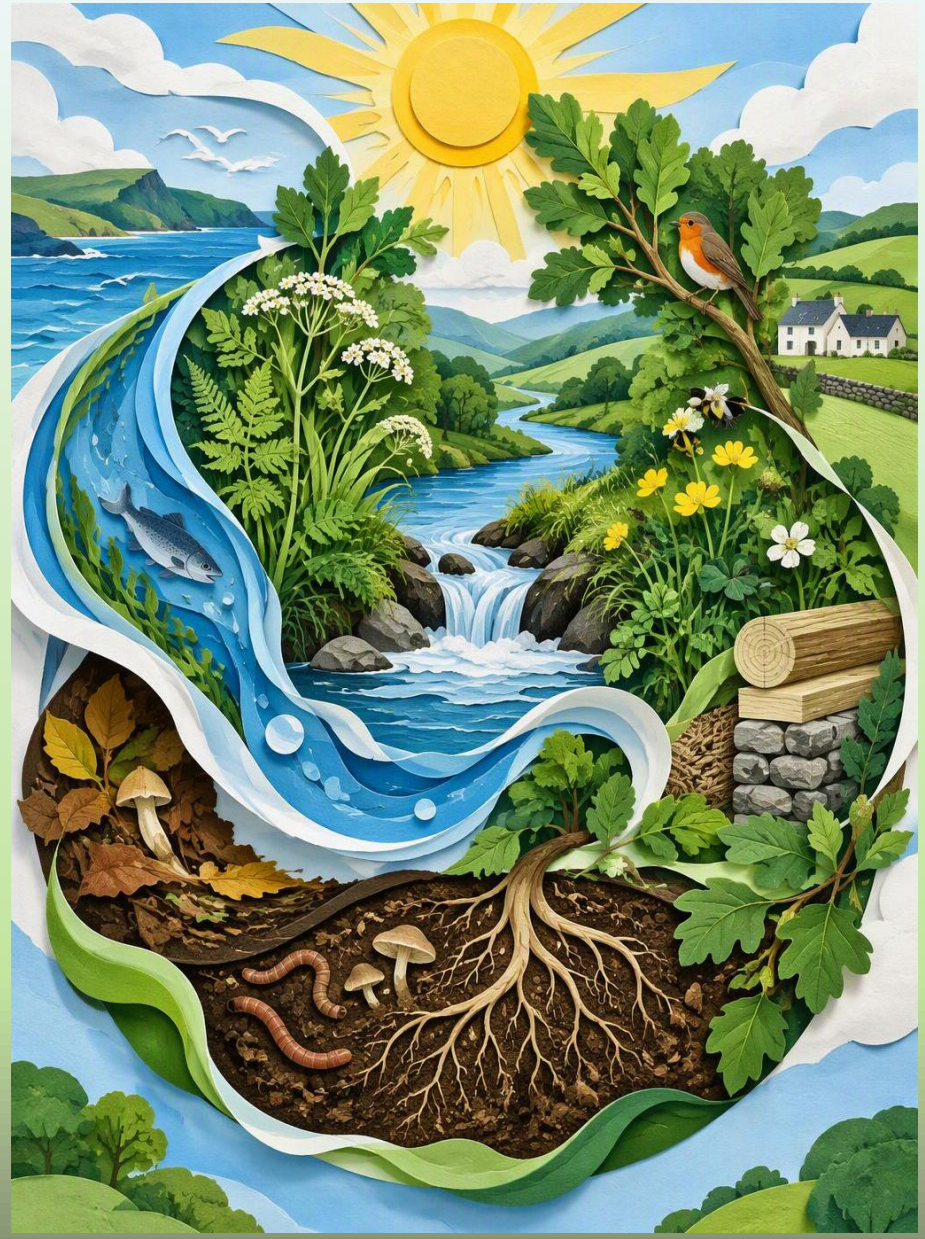
And we are active on Facebook, LinkedIn, and Instagram

And this year we made our first documentary film: on Seagrass –>



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One of our basic guiding principles is that human societies must behave like natural ecosystems, living within the sustainable flow of energy from the sun and plants, producing no materials or objects which cannot be recycled back into the earth's ecosystems, or reused or recycled into our technical systems, and should be guided by economic practices which are in harmony with personal and ecological values.



Food Waste

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Ireland generates approximately 708,000 tonnes of food waste each year, according to the latest data from the **Environmental Protection Agency**. This is equivalent to about **132 kg** of food waste **per person**.

Households: 219,000 tonnes (**31% of the total**, costing about €700 per household annually or roughly €1.29 billion nationally)



Food Waste - sources

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- **Restaurants and Food Services:** 181,000 tonnes (26%)
- **Manufacturing and Processing:** 169,000 tonnes (24%)
- **Retail and Distribution:** 85,000 tonnes (12%)
- **Primary Production:** 54,000 tonnes (8%)



Food Waste - sources

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Harvesting (Primary Production)

- **Where it happens:** Fields, orchards, greenhouses, abattoirs and fishing vessels.
- **How it happens:**
    - **Surplus and pricing:** Crops are sometimes left unharvested because market prices fall too low to cover labour and transportation costs.
    - **Cosmetic standards (appearance):** Buyers for supermarkets reject edible fruits and vegetables that do not match specific shapes, colours, or sizes, and supermarket chains have rules which require some fruit and vegetables to comply with these rules.



Food Waste - sources



Harvesting (Primary Production)

- **How it happens:**
  - **Weather and predators:** Unseasonal frosts, heavy rains, floods, heatwaves, droughts, fungi or insect infestations can damage or destroy crops before or during ripening or harvesting.
  - **Mechanical damage**: Inappropriate machine harvesting can cause bruises or cuts to fruit and vegetables, causing them to be attacked by fungi or insects.

Food Waste - sources



Processing and Packaging

- **How it happens:**
  - **Trimming and peeling:** Edible parts of foods (like outer leaves, potato skins, or animal trimmings) are cut away during automated shaping and cleaning.
  - **Equipment malfunctions:** Machinery getting stuck or jammed, temperature control failures, or sealing and filling errors can spoil an entire production run.
  - **Byproduct disposal:** Byproducts which are safe for humans are often diverted to animal feed or to waste because of ignorance, lack of time, or lack of local markets. The killing of livestock for meat in Ireland provides a good example – edible types of meat are discarded or sent to pet food manufacturing plants because they are not “fashionable” to eat.

Food Waste - sources

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Selecting for Sale (Wholesale and Distribution)

- **Where it happens:** Distribution centres, sorting facilities, and transit / transportation.
- **How it happens:**
  - **Delays in Transportation and Logistics :** Broken “cold chains”, delayed ships, aircraft or **trucks**, or inadequate refrigeration can cause perishable food items to spoil *en route*, especially if the distance to be travelled is lengthy. Ireland is particularly vulnerable, because we import most of our fruit and vegetables.
  - **Rejection by buyers:** Wholesalers or retail chains can reject entire shipments if a fraction of the boxes shift, bruise, or fail the wholesaler’s or distributor’s visual inspection.
  - **Over-ordering in the supply chain:** Poor demand forecasting can lead to warehouses and large shops holding stock past its peak viability.
  - **Contamination**: If contamination occurs, or even suspected, an entire consignment may be rejected.

Food Waste - sources

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Marketing and Retail

- **Where it happens:** Supermarkets, grocery shops, and markets.
- **How it happens:**
    - **Overstocked displays:** Full, overflowing produce bins and shelves are maintained to attract shoppers, leading to end-of-day dumping of bruised or aging items, which may (or may not) be past their ”sell by” date.
    - **Date label confusion:** "Best before" and "display-until" dates prompt staff or customers to discard perfectly good food.
    - **Cosmetic cherry-picking:** Shoppers continuously handle and bypass misshapen or slightly bruised items, leaving them to rot until store staff throw them out – and we always wonder why the food on display looks so perfect !



Food Waste - sources

Preparation for the Table (Commercial and Institutional Kitchens)

- **Where it happens:** Restaurants, hotels, hospitals, canteens, and catering services.
- **How it happens:**
  - **Overproduction:** Kitchens prepare too much food in advance to handle an expected rush of customers, and when they don't arrive …. !
  - **Trimming waste:** Peeling, dicing, and bone removal leave behind large piles of usable scraps that are rarely repurposed into stocks or soups.
  - **Improper storage:** Inventory is not rotated properly (failing to apply the "First-In, First-Out" rule), causing fridge items to become out of date and unusable.

Food Waste - sources

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Waste in Restaurants and Food Service

- **Where it happens:** Dining rooms and fast-food counters.
- **How it happens:**
    - **Oversized portions:** Meals served are larger than what customers can comfortably eat, leaving substantial **plate waste**. [we ask for the excess food to be put in a container, so that we can take it home !]
    - **Unpopular menu items:** Rigid menus with low-selling dishes force kitchens to stock fresh ingredients that spoil before they can be ordered.
    - **Buffet leftovers:** Food left sitting out on hot or cold bars cannot be re-served for safety reasons and is discarded at closing time.



Food Waste - sources

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Waste in Homes (Consumer Level)

- **Where it happens:** Home kitchens and refrigerators.
- **How it happens**
  - **Over-purchasing and bulk buying:** Buying multi-buy deals or more fresh food than a household can eat before it goes bad.
  - **Poor home storage:** Storing fruits, vegetables, or dairy products at the wrong humidity or temperature.
  - **Misinterpreting labels:** Throwing food away because it is past its "best-before" date (a matter of quality, not safety).
  - **Cooking too much:** Preparing portions that are left uneaten, forgotten in the back of the fridge, or never frozen.
  - **Less preparation time**: So many people at the present time have less time available for food preparation, or they see food preparation as a task to be done as quickly as possible.

Food Waste

Some General Observations

- Ireland is only now developing a domestic food culture – compare our eating habits with those in France or Spain.
- The way in which our society is organised – most of our food is not produced locally, and instead we have developed a “supermarket shopping habit” – a big shopping spree every week !

But we are changing …

- The number of “**farmers markets**” in Ireland is probably around 150, and the number is not increasing (and far behind other EU Member States), probably because of competition by international supermarket chains, and lack of local government support.
- People from other countries living in Ireland, and Irish people who have returned from other countries, have created a greater awareness of food, and more shops are selling a greater variety of foods.

Clearly, we have a problem with food waste. So what are some possible solutions at national and community levels?



Strategies for Reducing Food Waste

Prevention:

Stronger Policies: stronger government policies can enforce better practices, set standards, and hold companies accountable.

Source Reduction: Implementing better inventory management and demand forecasting within industries.

Consumer Education: Raising awareness about meal planning and proper food storage.

Recovery:

Food Rescue: Donating surplus edible food to charities and food banks.

Animal Feed: Redirecting suitable food waste to livestock, reducing the need for commercial feed.

Recycling:

Industrial Uses: Converting waste into biofuels or energy through anaerobic digestion.

Composting: Transforming organic waste into nutrient-rich soil amendments. Mandatory composting bins for every household should now be implemented.

What can we do as individuals?

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- ✓ Grow your own — or buy from local growers and shops.
- ✓ Buy less, but choose better-quality food in portions you'll use.
- ✓ Read labels and track what's already in the fridge, including purchase dates.
- ✓ Treat "sell by" dates as guidance—and ignore prompts to overbuy.
- ✓ Ignore advertisements urging you to buy more !



Case Studies & Success Stories

- **France:** Legislation mandates supermarkets to donate unsold food, leading to significant waste reduction since 2016.
- **Italy:** Brought in a similar law 6 months after France
- **Ireland:** Local initiatives have successfully implemented community composting programs, and the apps “Too Good to Go”, “Olio”, and “Fridgely” are now available here (mostly in Dublin though).



olio

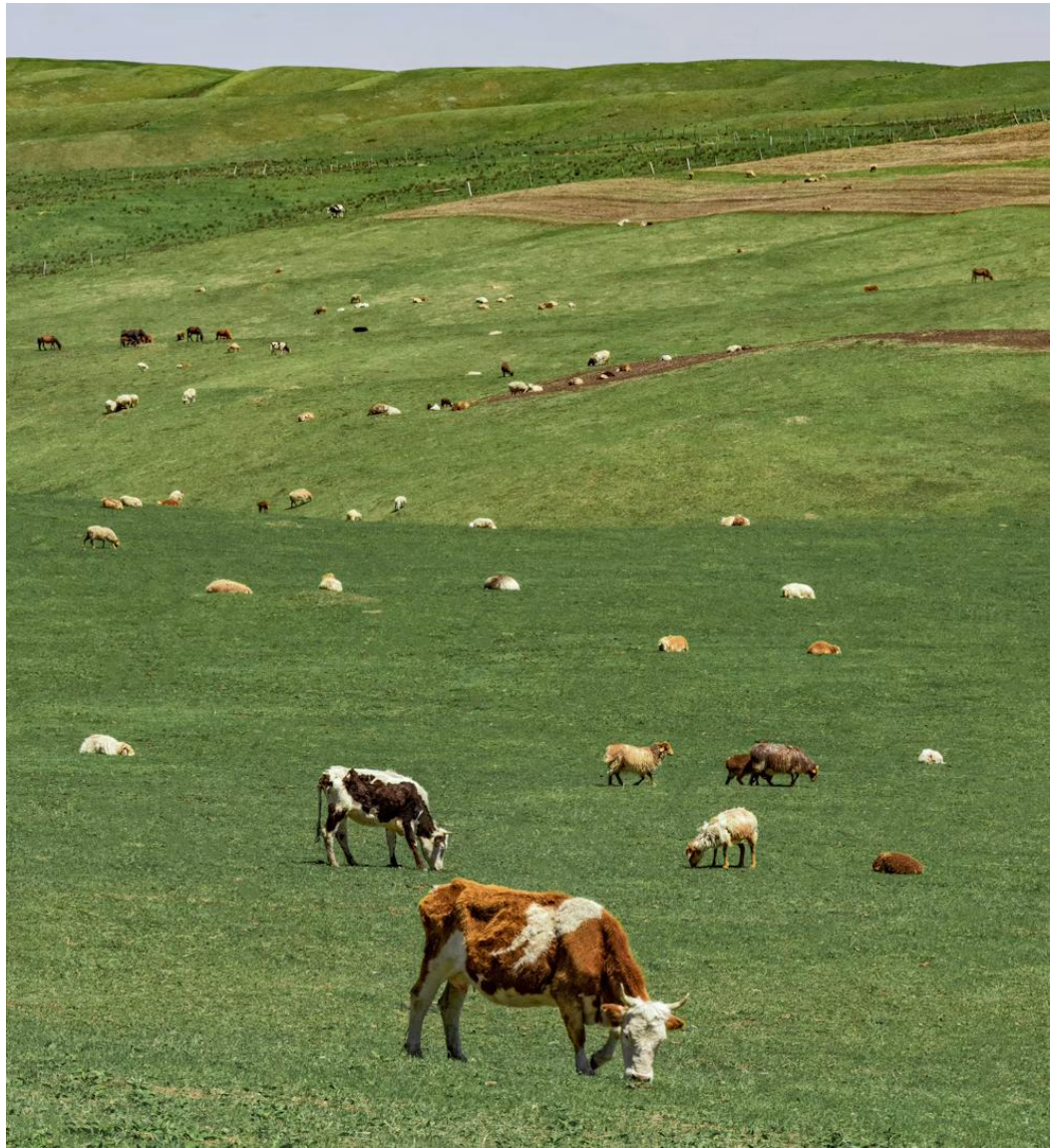
TOO GOOD TO GO

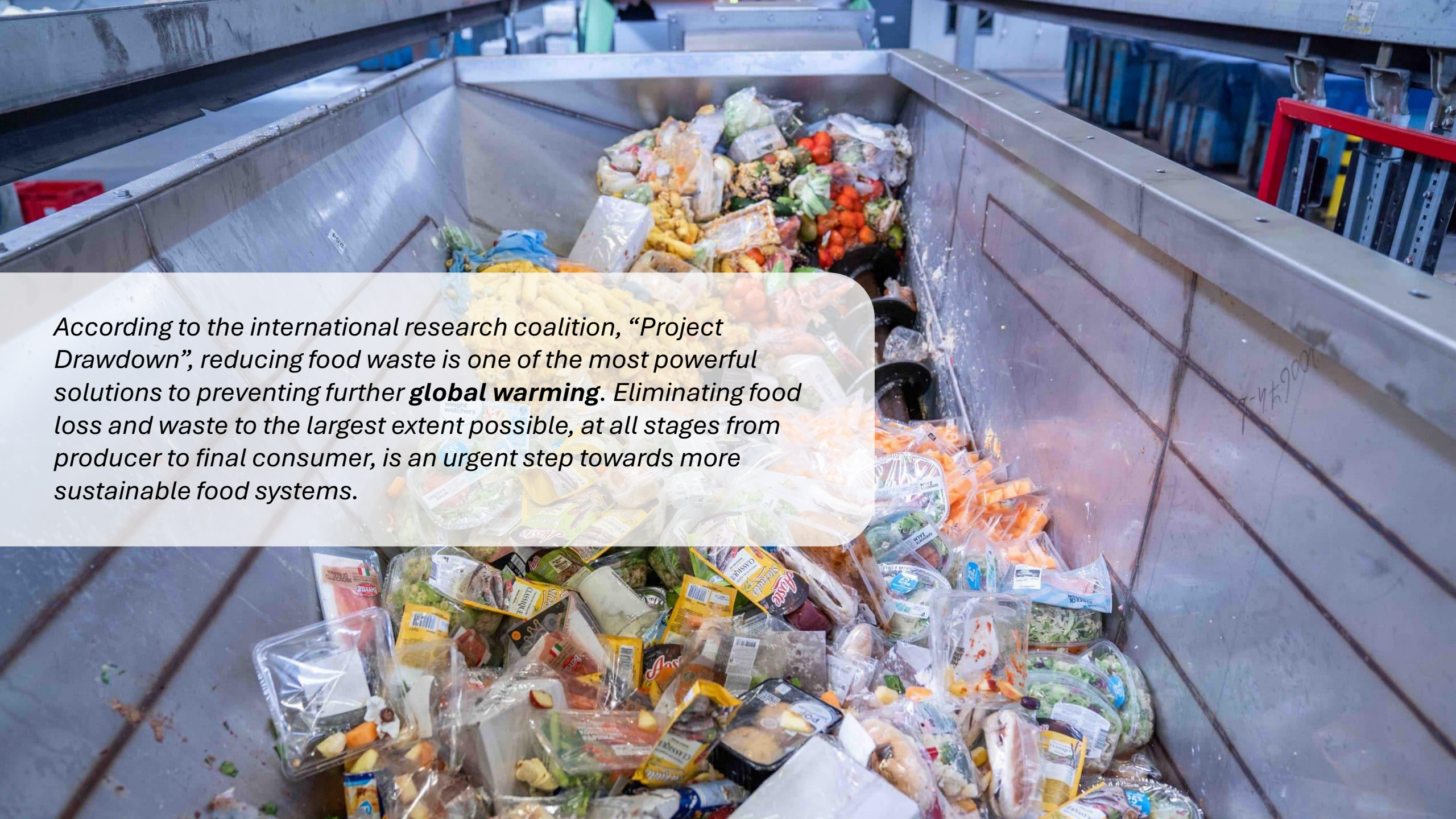
FRIDGELY
Food Expiration Date Tracker



Environmental Impacts of Food Waste

1. **Greenhouse Gas Emissions:** Food waste contributes to 3.3 billion tonnes of CO_2-equivalent emissions annually
2. **Resource Wastage:**
    1. **Water:** Significant volumes used in food production are wasted.
    2. **Land:** Deforestation, habitat loss and soil damage resulting from food production, especially meat from grazing animals, used to produce food which is ultimately discarded.
3. **Biodiversity Loss:** Unsustainable agricultural practices, such as intensive or monoculture farming, driven by demand for cheap food contribute to species extinction.





According to the international research coalition, “Project Drawdown”, reducing food waste is one of the most powerful solutions to preventing further ***global warming****. Eliminating food loss and waste to the largest extent possible, at all stages from producer to final consumer, is an urgent step towards more sustainable food systems.*

Packaging

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Ireland generates approximately **233.8 kg of total packaging waste per inhabitant** (placing it among the highest in the European Union).

Total Packaging Waste: Ireland generated about **1.19 million to 1.24 million tonnes** of total packaging waste in recent years (approximately 247 kg per capita or **~233.8 kg** per inhabitant depending on the baseline year).

Plastic Packaging Waste: Ireland produces annually some **65 to 73 kg of plastic packaging waste per person**, which is **nearly double the EU average** of around 36 kg per capita.

Plastic Recycling: Plastic packaging accounts for about **29.8%** of Ireland's total packaging waste (one of the highest in the EU), and plastic recycling rates remain very low at around the official figure of **28%**, with a large portion sent for incineration.

Packaging Waste (2024 data, from EPA)

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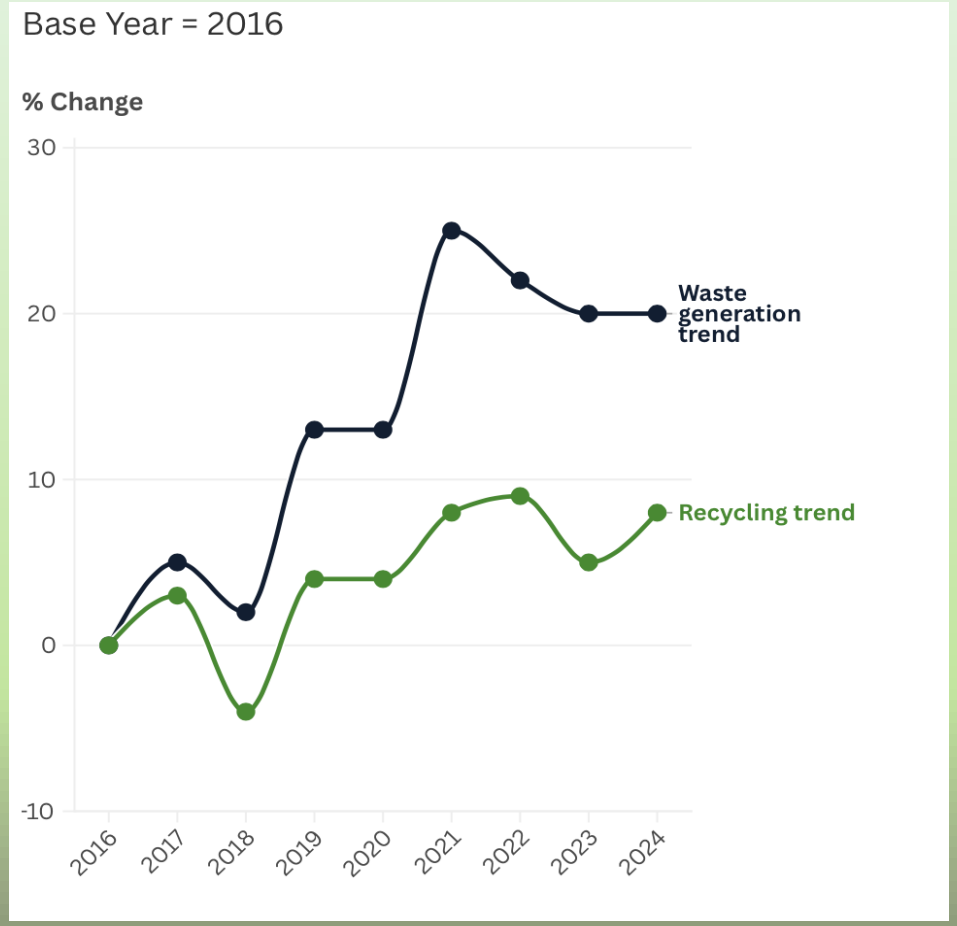
Material Type	Amounts Generated (Tonnes)	Share of Total	**Recycled**	**Burned**
Paper and Cardboard	501,783	~42.2%	379,580	128,407
Plastic	349,990	~29.4%	106,797	237,820
Glass	166,743	~14.0%	141,831	—
Wood	102,420	~8.6%	51,783	49,665
Metal	63,180	~5.3%	36,130	1,109
Other	7,748	~0.6%	—	—
Total	1,191,864			

Packaging Waste (2024 data, from EPA)

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Packaging waste generation has increased almost 4 times faster than recycling since 2016.

<u>Ireland is not on track to meet the mandatory EU recycling targets.</u>



Packaging waste generation and recycling – changes from 2016 to 2024 (EPA figure)

Packaging Waste (2024 data, from EPA)

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Let's look at some of the figures:

Are 379,580 tonnes of **paper and cardboard** actually recycled ?

Incorrect, as **nearly 100% of all collected paper and cardboard waste is exported** to other countries for actual recycling. Do we have a Paper Mill in Ireland ? No !

What about **plastic** ? Are 106,797 tonnes of plastic actually recycled ?
No, only about 30% of plastics are actually recycled – mostly downcycled to items such as fence posts, the remainder is exported for re-processing, or is burned by incineration or as a fuel in cement plants.

Packaging Waste (2024 data, from EPA)

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More figures:

Clean, well-sorted plastics (such as PET from the Deposit Return Scheme or rigid HDPE plastics) are typically exported to specialized plants in **Britain, Germany, the Netherlands, and Belgium.**

Approximately **37% to 41% of Ireland's total municipal waste** (which contains lots of plastic and paper packaging) is shipped out of the country for disposal!



Watch this video by Duncan Stewart, EcoEye: it’s a wake up call !
https://www.youtube.com/watch?v=tnu7MzrYC88&t=44s

Grigeo Paper Mill (formerly Grigiškės) near Vilnius, **Lithuania** (population 3 million).
Yearly turnover is approximately €163 million. 800 employees.
The plant produces tissue paper, container-board, corrugated cardboard packaging, and fibreboard; used paper and packaging is the principal raw material for the production process.



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Photo by Taisytojas1 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=127306580

Packaging Waste (2024 data, from EPA)

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What about glass:

- **No bottle-to-bottle recycling plant in the Republic:** Since Irish Glass Bottle closed in Ringsend in 2002, the Republic of Ireland has had no plant which recycles waste glass into new products.
- **Derrylin remanufactures most Irish waste glass:** Encirc's plant in County Fermanagh melts about **875 tonnes of glass cullet daily** and makes new bottles and jars for Irish food and beverage markets; some products are exported.
- **Heavy reliance on road transport:** With no rail connection, all raw materials and finished products are moved by road, involving more than 100 heavy articulated vehicles each day.
- **Alternative use:** Gannon-Eco in County Westmeath crushes waste glass into a fine powder for commercial applications.



What can we do about packaging as individuals?

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- ✓ Try to buy unpackaged vegetables and fruit.
- ✓ Use a “refill store” if there is one near you, where you can bring your own container and have it refilled, you pay only for the contents (there was one in Mullingar, but it closed due to lack of customers).
- ✓ Try depositing unwanted packaging in the supermarket before you leave (that’s a difficult action – best done as a member of an organised environmental action group!).



It's our turn to act.

We can begin by educating ourselves and others!

Zero Waste Alliance Ireland thanks the Organic Centre for the invitation to give this special Halloween presentation on waste

Thanks for listening. Find out more at www.zwai.ie.
Follow us on social media or visit our website and join us as a member!

Jack O'Sullivan