

What is Marine Debris?

Any persistent solid material that is manufactured or processed and, directly or indirectly, intentionally or unintentionally, disposed of or abandoned in the marine or Great Lakes environments.

Why is it harmful?

- Entanglement or exposure
- Ingestion of smaller, broken-down pieces of plastic

Marine Debris can affect ocean and Great Lakes economies and communities by creating unhealthy coastal ecosystems that may impact:

- Tourism and recreation
- Human health and safety
- Coastal livelihoods

What can you do?

Some ways you can help:

- Be aware of how to properly dispose of garbage
- Participate in beach cleanups
- Reduce reliance on single-use, disposable products
- Support efforts to develop environmentally benign packaging



Visit marinedebris.noaa.gov or scan the QR Code for more info on how you can help



Visit umaine.edu/marine-debris or scan the QR Code to learn about Maine Sea Grant's marine debris program



Visit qr1.be/5IIJ or scan the QR Code to learn about NOAA/Sea Grant's marine debris programs



Visit lovemainewaters.org or scan the QR Code to learn about how you can participate in this community action coalition



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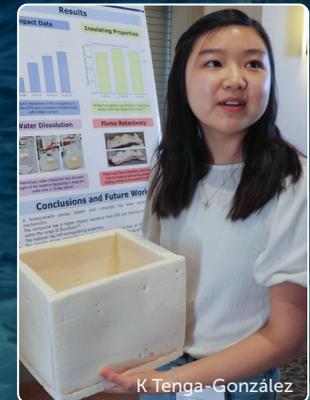
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NOAA Sea Grant

MARINE DEBRIS INITIATIVE



Strategies to prevent and remove marine debris from the environment



Who We Are

1. Marine debris challenge initiative

Awardees: The University of Maine, Maine Sea Grant, and project partners

Objective: Team members from the Department of Chemical and Biomedical Engineering, Process Development Center, Department of Anthropology/Climate Change Institute, and Maine Sea Grant Program are developing and testing alternative packaging systems that can replace single-use plastic products with reusable systems or more sustainable and safe materials from our forests and oceans.

2. Marine debris community action coalition projects

i. Maine Marine Debris Community Action Coalition: A community education and research development initiative to develop new materials and uses from ghost traps.

Awardees: Maine Sea Grant, Haystack Mountain School of Crafts, OceansWide, and project partners

Objective: facilitate the recovery, recycling, and re-fabrication of marine debris material in the Gulf of Maine, such as ghost lobster traps and derelict aquaculture farming gear, into new products with creative, practical, and industry applications.

ii. Reducing derelict fishing gear in the Gulf of Maine: educating and empowering boaters to be a part of the solution

Awardees: Maine Sea Grant, The Maine Marine Trades Association, and project partners

Objective: Form a coalition that will co-develop the first organized outreach campaign to Maine's recreational boaters and commercial fishing vessels on preventing derelict fishing gear accumulation and other marine debris.



Reducing Marine Debris at the Source: Material Replacement and Source Reduction for Single-use Food Packaging

THE 4 PROJECT TRACKS

1 Non-plastic food packaging and film materials from wood and seaweed

CNFs (cellulose nanofibers) are nano-sized cellulose fibrils that are extracted from wood-derived fibers. Seaweed is a common name for many species of marine plants and algae that grow in oceans, rivers, lakes, and other water bodies. Both these materials are different from plastic because they're compostable and can disintegrate into non-toxic, natural elements.

2 Thermally insulating packaging materials from lobster shell

Thermally insulating packing creates a barrier to minimize heat transfer to the environment, thereby keeping the contents hot or cold. Compostability and ocean break-down of the products will be tested before commercialization.

3 Using wood and chitin from lobster shells to develop improved Molded Pulp Products (MPP) for food packaging

MPP is a packaging material that is typically made from recycled paperboard and/or newsprint. Chitin is a tough, semitransparent substance that is the main component of crustacean shells and insect exoskeletons.

4 Reusable packaging systems

Reusable packaging systems not only prevent marine debris and solid waste, but also all of the upstream production inputs associated with disposable packaging (water, labor, energy, emissions). We are working with three coastal Maine communities to pilot reusable takeout food packaging systems and develop a decision support tool.

