



Co-funded by  
the European Union



Arctic  
Mayors'  
Forum

Canada 

# Policy Brief on Reducing Marine Litter in Iceland



This publication was co-funded by the European Union. Its contents are the sole responsibility of Johanna Franke and do not necessarily reflect the views of the European Union.

It was created during the Arctic Mayors' Forum Mentorship Program, part of the EU-funded Youth Together for Arctic Futures project.



## POLICY BRIEF

# Reducing Marine Litter in Akureyri, Iceland

*A structured, evidence-based approach for marine litter reduction*

Marine litter is a persistent environmental pressure across Arctic marine environments, including the northern coast of Iceland.

Akureyri, situated along Eyjafjörður, experiences marine litter accumulation driven by a combination of local activities and long-range transport via ocean currents and seasonal ice dynamics.

Evidence from monitoring initiatives shows that plastic items make up the majority of marine litter, while fishing-related materials such as ropes and nets form a significant share of larger debris.

Marine litter poses risks to marine ecosystems, recreational values, and the overall environmental quality of coastal areas.

Iceland is committed to preventing marine pollution through international and Arctic governance frameworks that emphasise prevention at the source, monitoring, and coordinated action. Municipalities play a critical role in translating these commitments into practical measures at the local level.

## KEY MESSAGES

- Marine litter is present along the Eyjafjörður coastline and affects Akureyri despite its remote location.
- Plastic dominates observed marine litter, especially fishing gear, packaging and unidentifiable plastic pieces.
- Iceland is bound by international and regional-level commitments to reduce and prevent marine pollution, including marine litter.
- Local, systematic monitoring is limited, making baseline data collection a priority for effective municipal action.
- Targeted, low-cost measures focused on monitoring and prevention can significantly reduce marine litter over time.

## PROBLEM DESCRIPTION

Akureyri's coastal setting along Eyjafjörður includes urban waterfronts, port infrastructure, recreational access points and ecologically sensitive areas. While existing waste-management systems reduce local leakage, they do not fully prevent marine litter accumulation. Limited local monitoring makes it difficult to quantify trends, identify dominant pathways, and assess the effectiveness of current measures.

Without a clearer evidence base and targeted prevention, marine litter risks remaining a recurring environmental issue rather than a manageable pressure.

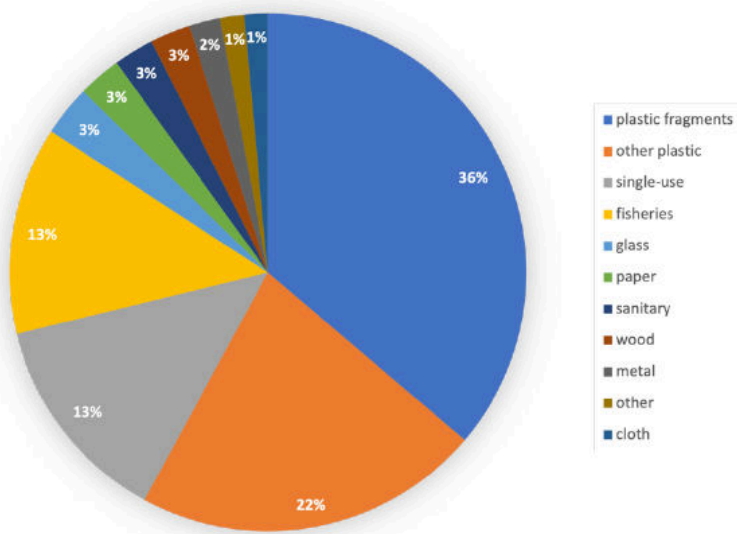
# BACKGROUND

Marine litter numbers in Iceland show that packaging material and fishing gear are some of the most common items found on beaches. Sources of materials in the marine environment can currently only roughly be estimated, by identifying for example that wet wipes and sanitary products are often found near sewage systems, while plastic packaging (besides styrofoam) is often found on recreational beaches.

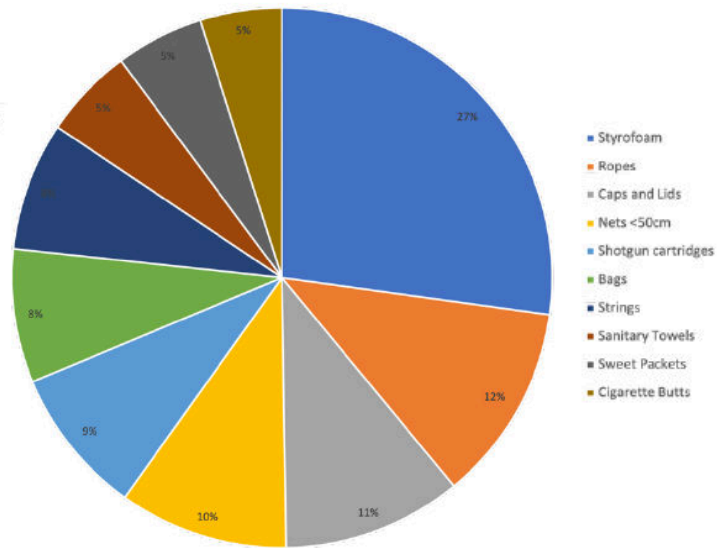
Monitoring of marine litter in Iceland remains fragmented, with limited systematic and long-term data available to identify trends, dominant sources and spatial patterns.

Iceland has implemented international legal obligations into national regulations, however, enforcement mechanisms are lacking to ensure compliance.

## MARINE LITTER MATERIALS



## TOP 10 MARINE LITTER ITEMS



Data: Research in North Iceland - 2023-2025 - Johanna Franke

# LEGAL FRAMEWORK

## INTERNATIONAL

- United Nations Convention on the Law of the Sea (UNCLOS)
- International Convention for the Prevention of Pollution from Ships (MARPOL)
- London Convention (1972) and London Protocol (1996)
- Convention on Biological Diversity (CBD)
- UN Fish Stocks Agreement
  
- Arctic Council Marine Strategic Plan
- OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic
- UN Sustainable Development Goals (SDGs)

## NATIONAL

**Icelandic Environmental and Waste Legislation** (*Waste Management Act, Waste Management Regulation, Beverage Packaging Act, Packaging Treatment Act, Packaging Regulation, Sanitation Act*)

**Pollution Legislation** (*Anti-Pollution Act (not referring explicitly to marine litter), Pollution-Response Act (not referring to marine litter), Fishing Gear Regulation*)

**Action Plans** (*Circular Economy Policy, Action Plan on Plastics*)

# POLICY OPTIONS

## OPTION 1: MAINTAIN CURRENT PRACTICES

*Continue general waste-management and rely on local beach cleanup organisations without introducing systematic monitoring or targeted prevention.*

### PROS

- + low immediate cost
- + minimal administrative effort

### CONS

- limited understanding of local litter sources and trends
- repeated clean-up without reducing inputs
- weak basis for long-term planning

## OPTION 2: MONITORING-FOCUSED APPROACH

*Increase baseline shoreline and beach-litter monitoring efforts using the OSPAR protocol, to appropriately represent the whole of Iceland and create comparable data.*

### PROS

- + builds a credible local evidence base
- + enables informed prioritisation of actions
- + relatively low cost

### CONS

- does not directly reduce litter in short term
- requires sustained coordination and reporting

## OPTION 3: STRENGTHENED ENFORCEMENT AND COMPLIANCE MECHANISMS

*Enhance enforcement of existing waste sorting and anti-dumping (including lost fishing gear) regulations through: clearer responsibilities, inspections, and follow-up procedures, particularly in coastal, harbour and recreational areas.*

### PROS

- + builds on existing legislation rather than creating new rules
- + can have immediate deterrent effects
- + can build a local evidence base for future source-prevention

### CONS

- requires staff capacity and training
- enforcement alone does not prevent all litter pathways

## OPTION 4: ECONOMIC INSTRUMENTS AND INCENTIVES

*Use economic incentives or disincentives to encourage proper waste handling and reduce litter inputs, particularly from maritime and recreational activities.*

### PROS

- + encourages voluntary compliance
- + potentially more acceptable to stakeholders
- + can be designed as cost-neutral over time

### CONS

- requires careful design to avoid unintended effects
- administrative complexity
- monitoring and verification needed

## OPTION 5: FORMALISED COMMUNITY AND STAKEHOLDER ENGAGEMENT

*Move beyond voluntary clean-ups by formalising cooperation with key actors through agreements or memoranda of understanding.*

### PROS

- + builds shared ownership and legitimacy
- + low-cost and flexible
- + reduces reliance on enforcement alone

### CONS

- non-binding nature may limit effectiveness
- requires sustained engagement
- outcomes depend on partner commitment

# RECOMMENDATIONS

Based on the assessment of policy options, an approach is recommended that focuses first on data gathering and on strengthening existing regulations.

Through those measures, sources can be identified that can be used to propose new policies and regulations that could potentially be used at a national level, to reduce marine litter at its source.

## ROAD MAP

### 1. ESTABLISH A ROBUST LOCAL EVIDENCE BASE THROUGH SYSTEMATIC MONITORING

*short term to long term*

As a first step, Akureyri should strengthen shoreline and beach-litter monitoring, to provide data needed to identify dominant sources, trends and prioritise further action.

Most efficient ways of doing this:

- Collaborate with existing beach cleanup or environmental organisations to conduct the monitoring
- Adopt-a-beach-scheme: create incentives for businesses to pay for or conduct clean-ups, including systematic monitoring
- create a small, flexible job position (one or two individuals on limited hours) dedicated to coordinating and conducting monitoring

### 2. STRENGTHEN COMPLIANCE WITH EXISTING REGULATIONS

*short term to medium term*

Building on the current legal framework, clearer responsibilities, targeted inspections and follow-up procedures should be applied in coastal, harbour and recreational areas. Improved enforcement can provide immediate deterrent effects while supporting longer-term prevention.

Most efficient ways of doing this:

- Introduce or apply fines for non-compliance
- Clarify enforcement responsibilities within the municipality
- Conduct targeted inspections in high-risk areas, such as harbours and coastal access points (especially next to businesses)

## CONCLUSION

Marine litter in Akureyri reflects a broader Arctic challenge shaped by both local activities and long-range transport. While existing waste-management systems and voluntary clean-up efforts contribute positively, they are not sufficient on their own to achieve sustained reductions in marine litter.

This policy brief therefore recommends a focused initial approach centred on systematic monitoring and strengthened compliance with existing regulations. Together, these measures provide the foundation needed to better understand local litter pathways, improve immediate deterrence, and support more effective and targeted action over time.

These actions are intended as initial priority measures; findings from monitoring and enforcement should be used to assess the need for additional prevention, incentive-based or regulatory measures at municipal or national level. By sequencing action in this way, Akureyri can move from reactive responses toward a more strategic, evidence-driven approach to marine litter reduction that makes it become the forefront of marine litter reduction measures in Iceland.