



- Marine Litter becomes an issue of local, national regional and global concern.
- Attention and concern are high particularly in **East Asia** and the **Pacific**.
- Concern over Abandoned, Lost and Derelict Fishing Gear (ALFG), is escalating in fora such as **APEC** and the **UN system**, providing opportunities for regional cooperation.

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- US Academy of Sciences - estimates the total input of ML into oceans worldwide is **6.4 Million tonnes per year** resulting in 13,000 plastic objects per square km of oceans surface.
- Despite local and sometimes national activities, on many coastlines around the world and reports from mid-oceans show that **levels of Marine Litter are increasing**.

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**This can be understood when the characteristics of ML are noted**

- **Persistency:** long-lived and active for decades; mostly non-degradable variety of plastics, metals and glass (90-95%)
- **Mobility:** travels huge distances around the world with ocean currents and winds

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**What is the issue of Marine Litter in Asia Pacific and around the world?**

- Marine Litter poses a severe threat to marine life, protected species and marine habitats;
- it has significant environmental and economic impact on commercial fisheries resources;
- It has the potential to act as a vector for the introduction of marine invasive species;
- It has serious aesthetic impact on beaches and affects tourism;

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- It poses threat to **human health** and safety;
- it is a serious **navigational hazard** and poses losses to cooling systems of vessels, from small fishing boats and yachts to large military vessels;
- It plugs intakes of sea water such as desalination plants and cooling water for power stations;
- **Damage to fishing vessels and gear** - in the Shetlands a loss of \$12,000-60,000 per year / per vessel;

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- In many parts of the **Asia Pacific**, abandoned fishing nets have caused loss of life through damage to vessels at sea;
- It is a **transboundary** issue causing political conflicts and tension;
- Litter that is likely to have originated from urban sources in **Asia** is also washing ashore in huge quantities in remote and unpopulated coastal areas of northern Australia, Papua New Guinea and the South Pacific islands;

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- In many areas of **Asia Pacific** **derelict fishing gear** represents the greatest proportion of litter and it tends to be the debris type of greatest concern to coastal communities;
- It affects **all the regions of the world** - from Antarctica to Greenland from the long coastline of continents to the smallest and most remote islands of the Pacific;

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### **Hurdles and bottlenecks in the management of ML**

- Despite international, regional and national efforts, there are indications that **ML is increasing**;
- While many of the negative impacts of Marine Litter are experienced at the local level and require **local** action, marine debris is a **global** issue;
- It has a wide variety of sources and can move great distances from where it originally enters the marine environment;

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- Domestic efforts to prevent marine and coastal litter (especially marine-sourced) are therefore ineffective without **regional and international collaboration** to address the **sources** of the problem.

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### **Challenging the Abandoned Fishing Gear problem**

- Though evidence of the manufacturing origin of derelict nets can be recorded, it remains unclear which fishing fleets use the gear types found, and therefore who is responsible for their loss and/or disposal;
- There is insufficient information available on the technical, social, cultural and economic factors influencing the loss or disposal of fishing gear at sea;

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- There is a **diverse range of fishing fleets** operating throughout the **Asia Pacific** region, from large factory trawlers to small subsistence or artisanal fisheries, and fishing debris may occur as a result of deliberate disposal or unintentional loss from all of these fleets;
- Measures required to address the technical and socio-economic influences on **polluting behaviours** within each fisheries sector are potentially very different;

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- Therefore, in order to target effective preventative measures, **good information** on fishing operations, including the gear types used by each sector, and the reasons for gear loss and/or disposal is critical.

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### Behaviour and fate of Lost Fishing Gear

- While Marine Litter is 'part' of the physical marine environment and is therefore directly influenced by the interactions of wind, sand and sea, there is **little information** available on how debris is transported and broken down within this dynamic system;
- Better information on the influence of **ocean circulation** and wind patterns on the movements of marine debris and its persistence in the marine and coastal environment, would enable a better understanding of areas of convergence and accumulation of debris, including regions of potential navigational hazard;

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- This information would also help identify areas for targeting **removal of debris at sea** to minimize its threat to vessels, wildlife or sensitive coastal environments;
- Recent ship reports from the **Asia Pacific** region show an **increase of large derelict fishing nets**, floating at sea and posing **navigational hazard** and a significant threat to marine wildlife;

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- There is a need to introduce **cost effective and efficient procedures for at-sea retrieval** of derelict fishing gear, and for responding to community reports of hazardous floating debris.
- There is a need to understand **socio-economic factors** of abandoning fishing gear at sea and to develop **economic instruments** to address these factors;
- There is a need to **improve data collection** activities and to consolidate existing data on marine debris;

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- Data on Marine Litter that is currently collected tends to be ad hoc, inconsistent, poorly collated, and difficult to access. This, in turn prevents establishing 'status and trend' comparisons across regions and inhibits the assessment of effectiveness of preventative measures over time;
- Long term and harmonized scientific monitoring systems and methodologies must be developed and established.

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- Marine debris originates from a variety of sources and has impacts on many sectors; **However**, in many countries, agency responsibility and capacity to respond to these reports is mostly unclear.

- Currently, in many cases, it falls outside the jurisdictional responsibility of any one government, local management agency or industry.

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- In order to address this complex issue it is therefore important to clearly identify inefficiencies and gaps in current policy and governance arrangements, and to develop an integrated approach to addressing Marine Litter concerns.

THIS IS TRUE FOR BOTH THE NATIONAL and REGIONAL LEVELS.

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### And finally, hurdles on the global level

- The lack of international legal instruments (except for IMO/MARPOL Annex V which deals only with garbage from ships) or Global Programmes – makes it difficult to tackle.
- Deficiencies in the implementation and enforcement of existing international, regional and national regulations/standards are increasing.
- Lack of awareness among main stakeholders is a major reason why ML appears to increase worldwide.

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### Possible strategies and Policies –

- Despite a range of measures partially in place in Asia Pacific, marine litter continues to accumulate in many areas - indicating the need for enhanced responses on a local, national, regional and international scale.
- Countries more concerned are the countries down-wind or downstream which receive marine litter, mainly ALFG.
- There is a need for domestic, bilateral and multilateral measures and multi-sectoral activities to prevent the problem at its source.

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**National and Domestic activities (1)**

- Address **gaps in the responsibilities of Government agencies** which, currently result in no agency having responsibility for recovering of large and threatening floating nets;
- Develop **economic instruments** to address the financial value of abandoning fishing gear;
- Promote and spread of **codes of responsible conduct in fisheries**, and consider the development of codes for other sectors;
- Increase the implementation and enforcement of MARPOL **Annex V** through the development of **reception facilities**;
- Promote and develop better **waste management**;

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**National and Domestic activities (2)**

- Allocate **legal responsibilities and financial resources** to local authorities for **regular and mandatory beach clean up operations**;
- Encourage and facilitate adequate funding for control of litter in **rivers** inputs to the oceans;
- Establish consistent and sustained **litter education**;
- Support **community and NGO** coastal clean up activity;
- Provide funds and infrastructure for national and regional consistent and **sustained monitoring**;
- Improve funding for **targeted research** on the sources, impacts and of marine litter;

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**Bilateral and Regional Activities**

- **Improve the information** jointly available on the sources of ALFG (e.g. document net and gear types used by fleets);
- Identify the **socio-economic** and technical factors influencing the loss and disposal of waste (especially fishing gear and nets) within fisheries through direct engagement with fishing industry participants and coastal communities;
- Investigate possible links between **IUU fishing** in the region and ghost nets;
- Determine the capacity of ports throughout the region to handle vessel sourced waste, (particularly derelict fishing gear), **and** investigate the barriers and incentives relevant to the **effective use of existing port waste reception facilities**.

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- Study **ocean circulation, wind and drift patterns** in the and focus on identifying accumulation areas for marine debris.
- **Transfer of information and technologies** already developed for prevention and cleanup of AFLG **at sea or on the bottom**;
- Improve our information on the impacts of marine debris on wildlife and people (for example document numbers of turtles and other wildlife found entangled in nets);
- **Document economic costs** of debris on shipping and fishing industries.
- Encourage and assist countries to sign, **ratify and enforce Annex V** of the MARPOL73/78.

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**Required Multilateral, International and Global Activities**

1. Initiation of the **Regional Activities** as a basis for a Global Approach;
2. Building **ownerships and partnerships** (e.g - the coming **GPA IGR 2**);
3. Develop **information and outreach** to change **human behaviour** and attitude;
4. Develop **sectoral activities**;
5. Fundraising for global and multilateral initiatives;
6. **DO NOT** develop an new Global Convention (for the time being...)

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**Multilateral, International and Global Activities – more specific**

- Address and act according to the **decisions of the 60<sup>th</sup> United Nations General Assembly** (of Nov. 2005; Resolution on Oceans and the Law of the Sea);
- Review existing structures and tools relevant to the control of marine litter with special emphasis **on the effectiveness of MARPOL Annex V with respect to fishing industries** and the management of waste on board fishing vessels (e.g - UNEP-FAO study);

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**Multilateral and Global Activities – more specific (2)**

- Introduce, through FAO and RFMOs, IMO, Regional Seas and other relevant bodies, guidelines, regulations or incentive measures to prevent the disposal of fishing gear, including compulsory reporting of lost fishing gear;
- Increase **engagement of countries** with the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) in order to better address land based sourced of litter;

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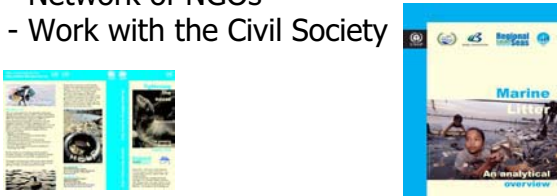
**Partners**

- **UNEP (Regional Seas, GPA, DTIE, Basel Convention)**
- **IMO and London Convention**
- **UNESCO/IOC**
- **FAO (and RFBs)**
- **Regional organisations (EU)**
- **Countries / Governments**
- **Civil Society – Industry and the Private sector, NGOs)**

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**Regional Seas Activities developed by UNEP**

- Publications
- U.N GA decisions
- DEVELOPMENT of 11 REGIONAL ACTIVITIES
- Development of a GEF MS Project
- Network of NGOs
- Work with the Civil Society



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**Regional Activities developed and sponsored under Regional Seas**

- NOWPAP (North West Pacific)
- East Asian Seas (COBSEA)
- East Africa (Nairobi Convention)
- SACEP (South Asian Seas)
- Mediterranean
- Caspian
- Black Sea
- Caribbean
- PERSGA (Red Sea and the Gulf of Aden)
- CPPS
- HELCOM and OSPAR as partner programmes
- In 2006 – (S)PREP

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**There is so much to do -  
we have do it together!**



**Thank you**