

## **Session 6**

### **Regional actions against marine litter**

***Marine Litter in the Seas of East Asia:  
Regional Review and Development of a Regional Strategy and Action Plan***

Steve Raaymakers

EcoStrategic Consultants  
PO Box 968, Edge Hill, Qld 4870, Australia  
61-07-4053-5560  
www.eco-strategic.com

The United Nations Environment Programme (UNEP) Regional Seas Programme and the Coordinating Body for the Seas of East Asia (COBSEA) are undertaking a Regional Review and developing a Regional Strategy and Action Plan on Marine Litter in the Seas of East Asia. These tasks are being undertaken as a consultancy by Steve Raaymakers of EcoStrategic Consultants, with support from National Consultants in each COBSEA Coastal State. The draft report on the Regional Review has recently been submitted, and currently concludes, *inter alia*:

- Marine litter, also known as marine debris and marine garbage, from both land and sea-based sources, is one of the major threats to the World's oceans.
- The problem of marine litter is particularly severe in the Seas of East Asia, due in part to the massive industrial and urban development under-way in the coastal zones of the region, combined with an exponential and sustained growth in shipping activity serving their rapidly expanding economies, the current lack of effective marine litter prevention and control measures in many East Asian countries, and major cultural and awareness barriers that impede political will to address the problem.
- As a component of the broader marine litter problem, Derelict Fishing Gear (DFG) is likely to be major concern in East Asia, due to extremely large size of the fishing industry and lack of effective regulation of the industry in the region, including an extremely high level of Illegal, Unregulated and Unreported (IUU) fishing in the region.
- Very little is known about the extent and nature of the problem in East Asia, including source differentiation, zones of accumulation and degree of ecological, environmental and socioeconomic impacts.
- All countries in the region face significant barriers to the effective prevention and control of marine litter, including cultural and capacity barriers.

The following recommendations are made from the Regional Review:

- The COBSEA member countries consider, review, further develop, finalise, adopt and implement the draft Framework for a Regional Strategy and Action Plan on Marine Litter in the Seas of East Asia, which is produced as a separate output of this consultancy, and which includes the following elements, amongst others.
  - A concerted and sustained awareness campaigns targeting political-level decision makers, port, shipping, fisheries and coastal tourism industries and coastal communities.

- More effective implementation of the elements of the GPA NPAs that address land-based sources of marine litter, and more effective implementation of MARPOL Annex V at the national level, to address sea-based sources of marine litter.
  - Adopt a “no special fee” approach to port waste reception facilities in all countries in the region.
  - Stimulate the development of innovative technical and economic solutions to marine litter.
  - Establish national coordinated marine litter surveys and monitoring.
  - Provide for technical training and capacity building of relevant personnel from government, academia, coastal communities, NGOs and relevant industries.
  - Provide for ongoing financing and sustainability of the Regional as well as National plans, including greater use of the “user” and “polluter” pays principles.
- As a sub-set of the Regional Strategy and Action Plan, each country should develop and implement a National Strategy and Action Plan on marine litter, and which include further development of broader national integrated waste management arrangements, with management of marine litter integrated into these arrangements.
  - All countries in the region should join International Coastal Cleanup (ICC), Clean-Up the World (CUTW) and PADI Project AWARE.
  - A central, regional database should be established to which national administrations report annual statistics on the sources, causes, quantities and distribution of marine litter in their respective jurisdictions. The database could present outputs graphically on map-based Geographic Information System (GIS) – providing visual representation of the geographical spread of the problem. This would provide a powerful monitoring tool for assessing the true regional extent of the problem, including regional hot spots, as well as trends over time and the effectiveness or otherwise of management and control responses. Such a regional database could possibly be housed and maintained by the UNEP EAS/RCU, with appropriate support from COBSEA member governments.
  - Marine litter trajectory models should be developed for each sub-regional sea in East Asia.
  - Close coordination and sharing of lessons should be undertaken with neighbouring regions – especially NOWPAP which has highly a developed programme on marine litter. Japan should be invited to join the Regional Strategy and Action Plan in Marine Litter for the Seas of East Asia, as it has a lot to offer the other East Asian countries. Brunei Darusalaam should also be invited to join.
  - Close coordination should be undertaken with PEMSEA / SDS-SEA in developing and implementing the Regional Strategy and Action Plan in Marine Litter, including ensuring that an appropriate share of SDS-SEA resources and funding are allocated to addressing

marine litter, including to support implementation of the Regional Strategy and Action Plan.

- Close coordination should also be undertaken with APEC and ASEAN on marine litter issues.
- Close coordination and joint activities should be undertaken with the Asia-Pacific Fishery Commission (APFIC), FAO, IMO and APEC Fisheries Working Group to address DFG in the region.

## A Regional Strategy & Action Plan for Marine Litter in the Seas of East Asia: *Status Report*

UNEP Regional Seas Programme  
Coordinating Body for the Seas of East Asia (COBSEA)  
EcoStrategic Consultants




Steve Raaymakers  
EcoStrategic Consultants  
[www.eco-strategic.com](http://www.eco-strategic.com)

## Introduction & background

Marine litter - a major threat to World's oceans



- 6.4 million tonnes / year globally
- 5.6 million tonnes from shipping
- 46,000 pieces of plastic / square mile
- 3 x more garbage in as fish taken out
- N Pacific - 6 pounds of plastic / pound of plankton near surface
- Significant wildlife impacts
- Derelict Fishing Gear (DFG)
- Transfer, fouling species

## Introduction & background

The Seas of East Asia - COBSEA members



## Introduction & background

The Seas of East Asia

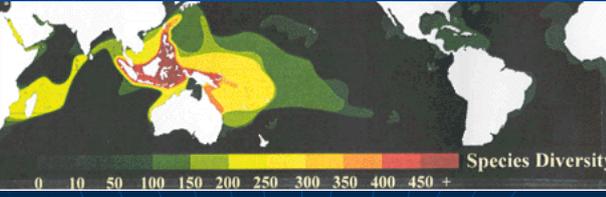
- Most populous region in World (1.8 billion): 60% + coastal
- Massive and sustained (but not sustainable) economic growth
- Increasing urbanization and industrialization
- Continued exponential population growth
- Region embraces 4 sub-regional seas (Large Marine Ecosystems - LMEs)
  - East China Sea
  - South China Sea
  - Sulu-Celebes Sea
  - Indonesian Seas
- Also abuts Yellow Sea / NOWPAP Area

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## Introduction & background

The Seas of East Asia

- The major global centre of coastal and marine biodiversity
- 30% World's coral reefs
- 30% World's mangroves
- 41% World's fish catch



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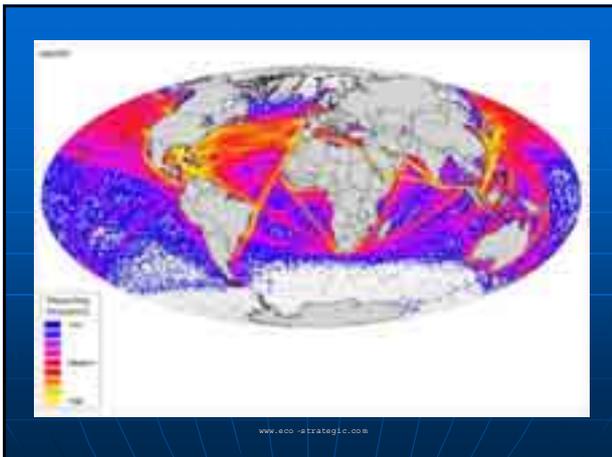
## Introduction & background

The Seas of East Asia



- One of World's densest concentrations of shipping
- Major port development
- Major fishing fleets inc. World's largest component of IUU

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## Objectives of the Review

Establish the current state-of-play, in the Seas of East Asia, at both the regional and national levels, with regard to:

- Existing knowledge and data on the problem
- Existing instruments, programmes and initiatives
- Barriers, gaps and needs

and to make recommendations and proposals for change.

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## Review Methods

- Desk-top study only. No field assessment
- Regional Consultant / National Consultants
- National Surveys
- Literature search and review

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## Existing Knowledge



## Existing Knowledge



## Existing Knowledge

- Very good knowledge of the problem in S Korea (also Japan)
- Some (ad hoc) data for Australia
- Very little information for other COBSEA countries
- Aust, Indonesia, Malaysia, Philippines, RO Korea, Singapore, Thailand and Vietnam part of ICC - China and Cambodia not yet

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### Existing Regional Actions

- APEC - MRC marine debris socioeconomic study
- ASEAN
- PEMSEA / SDS-SEA
- GEF sub-regional LME projects
  - East China Sea (underway)
  - South China Sea (underway)
  - Arafura & Timor Seas (proposed)
  - Sulu and Sulawesi Seas (proposed)
  - Yellow Sea (in NOWPAP area, abuts COBSEA)

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### Existing National Actions

- Most countries no clear lead agency
- Environment and Maritime Admins
- Only Indonesia has National Task Force
- Other countries have Task Forces on related issues
- No countries have specific marine litter legislation (except for MARPOL)

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### Existing National Actions

- All countries except Indonesia, Thailand and Vietnam parties to MARPOL Annex V
- Implementation is poor in most countries that are party
- All countries report that waste reception facilities are provided in ports
- Based on "user pays" - acts as a barrier
- Need "No Special Fee"

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### Existing National Actions

- All countries report being signatories to GPA and have or are developing NPAs
- NPA implementation is poor
- All countries party to Basel Convention and have implementing National legislation
- All countries except Cambodia and China report having NGO involvement in marine litter

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### Existing National Actions

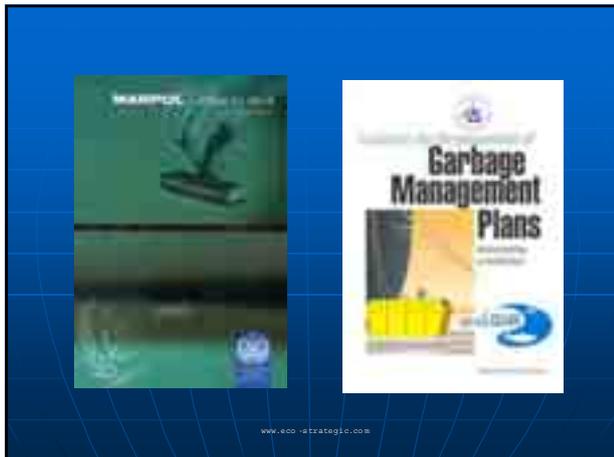
- Most countries report having no economic instruments
- Most countries have problems with national integrated waste management systems

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### Barriers & Gaps

- Cultural and capacity barriers
- Very low awareness / political will
- Major push for economic development / competing national development priorities
- Lack of data on nature and extent of the problem
- No use of marine litter trajectory models
- Lack of regional multi-lateral legal instrument
- Poor implementation of existing instruments, action plans and laws (e.g. MARPOL, GPA-NPAs, FAO Code of Conduct)

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### Barriers & Gaps

- Poor coordination between govt. agencies
- Cost of using port waste reception facilities based on "user pays" - should be "no special fee"
- Lack of other economic instruments / incentive programmes
- Lack of or problems with broader national integrated waste management systems
- Lack of involvement of private sector (fisheries, shipping, ports, coastal tourism, waste management)

### Needs

**A Regional Strategy & Action Plan on Marine Litter in the Seas of East Asia**

To prevent and reduce marine litter, recognizing its transboundary nature and need for intra- and inter regional cooperation

- Legal and administrative arrangements (Regional Task Force?)
- Concerted, sustained and targetted awareness campaigns
- Surveys, monitoring & coastal clean-ups (inc. ICC)
- Trajectory models

### Needs

**A Regional Strategy & Action Plan on Marine Litter in the Seas of East Asia**

- Measures to implement MARPOL Annex V (ship sources)
- Measures to implement FAO Code of Conduct (DFG)
- Measures to support greater implementation of GPA NPAs (land-based sources)
- Technical training and capacity building
- Funding and sustainability - user pays, polluter pays, waste return deposits, product liability
- National plans which reflect above

### Process

- Draft Regional Review has been submitted to COBSEA
- Draft Framework Regional Strategy and Action Plan being developed
- Both will be considered at Regional Workshop in Jakarta 8-9 May 06
- Workshop will further develop Strategy
- Aim to submit to COBSEA IGM Jan 2008 (subject to country agreement)

COBSEA & NOWPAP are linked



Must recognize sources and sinks

Must PREVENT the problem at SOURCE

Transboundary problem requires a transboundary response

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## **Development of Sectoral Guidelines for Management of Marine Litter**

Dr. Jeung Sook Park

Scientific Affairs Officer of NOWPAP Regional Coordinating Unit  
408-1, Shirang-ri, Gijang-eup, Gijang-gun, Busan 619 902, Republic of Korea  
jeungsook.park@nowpap.org

To address the marine litter problem in the Northwest Pacific region, NOWPAP has been implementing the Marine Litter Activity (MALITA) since November 2005. This project is being carried out by four NOWPAP Regional Activity Centres, NOWPAP Regional Coordinating Unit and representatives of NOWPAP member states.

During the last year, several MALITA components were successfully implemented, such as the collection and analysis of data and information available in this region; establishment of marine litter database ([http://dinrac.nowpap.org/MALITA\\_WhatIs.htm](http://dinrac.nowpap.org/MALITA_WhatIs.htm)); preparation of a regional overview on the legal and institutional arrangements of the member states; and the development of the monitoring guidelines for marine litter found on beaches and shorelines.

The development of marine litter management guidelines for different sectors of industry is an important part of the MALITA.

This presentation will introduce the best management practices for marine litter in different sectors such as shipping, fisheries and tourism. The idea of this presentation is to show existing practices in other regions that are applicable to NOWPAP. Some of these practical approaches to improve the collection, separation, recovery and disposal of marine litter could be used in the Northwest Pacific region.

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## NOWPAP Marine Litter Activity (MALITA) Sectoral Guidelines for Marine Litter Management



Dr. Jeung Sook PARK  
NOWPAP RCU

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Any persistent, manufactured or processed **solid material** discarded, disposed of or abandoned in the marine and coastal environment

Observed and potential dangers

- Entangling divers and swimmers
- Trapping, wounding or killing fish, shellfish, birds and marine mammals
- Degrading marine ecosystem and sensitive habitats
- Damaging propellers and rudders of recreational, commercial and military vessels
- Endangering boat crews and passengers (vessel capsizing)

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### UNEP Strategy to address the marine litter problem



Development and implementation of the **Regional Action Plan for Marine Litter**

- Phase I Assessment of the regional situation
- Phase II Preparation of the Regional Strategy (including a regional meeting of experts and national authorities)
- Phase III Integration of the Regional Strategy into the Programme of work of the respective RSP and implementation of the Regional Strategy at the national and regional level

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**NOWPAP MALITA November 2005**

[http://dirac.nowpap.org/MALITA\\_WhatIs.htm](http://dirac.nowpap.org/MALITA_WhatIs.htm)

- ML Database
- Workshop (June 2006)
- ICC (September 2006)
- Monitoring Guidelines
- Brochures/Leaflets
- Workshop (Toyama, March 2007)
- Development of Sectoral Guidelines
- ICC (Busan, September 2007)
- Draft NOWPAP RAP MALI

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### Development of Sectoral Guidelines

To improve the collection, transportation, separation, recovery and disposal of solid waste



[http://www.nowpap.org/new\\_projects\\_sub06.php](http://www.nowpap.org/new_projects_sub06.php)

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### Best Management Practices for Shipping Sector

About 30-40% of marine litter originated from ships at sea (merchant ships, cruise liners, government and service vessels, recreational/commercial fishing boats and oil/gas platforms)

- bottles
- plastic bags
- aluminum cans
- food/beverage containers
- paper
- cardboard
- cigarette-related
- fishing nets
- others



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**Wise Management Plan to prevent and reduce marine litter from all kinds of ships**

**Best Management Practices for Shipping Sector (California, Connecticut, Ohio, Texas, etc.)**

**No Dumping in principle**

- ◆ Do not put litter or recycling containers on docks
- ◆ Provide adequate and convenient litter receptacles
- ◆ Place covered litter receptacles
- ◆ If practical, lock litter receptacles at night
- ◆ Provide convenient recycling containers
- ◆ Purchase products made with (from) recycled material



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**Best Management Practices for Shipping Sector**

- ◆ Stow goods securely on-board (accidental overboard discharge)
- ◆ Use non-disposable products rather than plastic and polystyrene cups and food containers and other disposable goods
- ◆ Train employees to pick up litter as a daily practice
- ◆ Educate employees about separation requirement and your recycling programme
- ◆ Provide convenient recycling facilities
  - Whatever is collected in your community
  - If you have significant fishing populations, provide recycling for fishing lines and nets

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**Best Management Practices for Marine Protection in Shipping Sector**

**Marine Litter Management**

Cleaning and Maintenance

Sewage Management

Oil and Fuel

Hazardous Waste

Sewage Handling

Fish Waste

Aquatic Nuisance Species



Port Reception Facilities

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**Best Management Practices for Fisheries Sector**

**Ghost fishing**

- Fishing nets (entire or pieces of nets)
- Crab and shrimp traps and pots
- Strings, cords and plastic ropes and lines
- Foam and plastic buoys
- Crates and cardboard boxes
- Salt bags
- Rubber gloves
- Dirty rags
- Plastic floats and lures
- Plastic motor oil and lubricant bottles
- Light bulbs
- Other recreational or commercial harvest equipments

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**Best Management Practices for Fisheries Sector**

- ◆ Properly dispose of beverage cans, food wrappers and bags and discarded fishing tackle including fishing lines and lead weights
- ◆ Stress that nothing other than ice is ever thrown into the water
- ◆ Retrieve litter that accidentally falls overboard
- ◆ Leave unnecessary packages and wrapping on shore
- ◆ Use biodegradable products when possible
- ◆ Use fish cleaning stations and properly dispose of fish offal

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**Best Management Practices for Fisheries Sector**

**Other helpful practices**

- ◆ Secure items that may be blown overboard
- ◆ Use permanent cups instead of foam or plastic cups and be sure to use permanent cup holders on your vessel
- ◆ Use recyclable/reusable materials instead of disposable ones
- ◆ Retrieve litter encountered in the water
- ◆ Remove tangled and snagged fishing line from water
- ◆ Stow away fishing weights, boxes, bags and plastic sacks so they do not accidentally end up overboard
- ◆ Keep the engine maintained properly to prevent fuel or oil leaks

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**Derelict Fishing Gear Removal Project**  
by Washington Department of Fish and Wildlife

- 1. Locating and Reporting:** divers, fishermen, boaters, beach-goers and anyone involved with the marine environment can report sightings of derelict fishing gear in the water or on shore
- 2. Verifying and Prioritizing:** a dataset of reported gear will help sets priorities for removal efforts based on threats to public safety and marine resources, hazards to navigation and other criteria
- 3. Removing**
- 4. Reusing, Recycling and Disposing**

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**Derelict Fishing Gear Removal Project**  
by Washington Department of Fish and Wildlife

**Establishment of Database**

Location  
Types of Gear  
Details (Date)  
Contact Name



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**Best Management Practices for Tourism Sector**  
Minimizing the physical impact of tourist activity including environmental degradation caused by marine litter

**For Beach-Going**

- ◆ Keep the beach clean (bring a litter bag along with you)
- ◆ Follow marked paths to the beach, rather than walking across sensitive sand dunes and other natural shoreline areas
- ◆ Refrain from using pesticides and fertilizers (follow regulations when you dispose of pollutants e.g. automotive oil and antifreeze)
- ◆ Educate yourself, your friends and family on how human actions can affect the shoreline environment
- ◆ If you live on or near the coast, get involved in local development and land use issues

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**Best Management Practices for Tourism Sector**  
Minimizing the physical impact of tourist activity including environmental degradation caused by marine litter

**For Diving and Snorkeling**

- ◆ Use companies that abide by and promote eco-friendly diving practices when booking dive and travel plans
- ◆ Don't pluck living organisms like corals or sponges - Instead, capture sea life with a camera
- ◆ Never feed, touch or otherwise disturb marine animals/plants (may disrupt their feeding, scare them, interrupt mating or provoke them)
- ◆ Volunteer to help record a fish census or to get involved in underwater cleanups and other public education efforts

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**Best Management Practices for Tourism Sector**  
Minimizing the physical impact of tourist activity including environmental degradation caused by marine litter

**For Nature-Watching**

- ◆ Use eco-friendly tour companies for your travel
- ◆ Respect local culture and tradition and learn from native people about the way they live in harmony with nature
- ◆ Respect and protect wildlife and habitats - Keep your distance from animals and don't feed them
- ◆ Don't take shells, corals, sponges or any other living things for souvenirs from your excursion
- ◆ Leave an area as clean when you came - Bring along a litter bag

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**Best Management Practices for Different Sectors**

- Analyzing conditions, problems and opportunities
- Identifying objectives and making choices
- Suggesting policies and action programmes

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- ▶ Guiding **policies** and **actions** of the ministry and its agencies such as national organizations
- ▶ Stimulating the potential investors and general public
- ▶ Providing a framework for policies and actions

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**NOWPAP Sectoral Guidelines: Simple Things We Can Do**  
"Changing our behaviours and attitudes"

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should be implemented in the NOWPAP region  
and  
help to enforce the existing international conventions/agreements

**Don't Litter!**  
**Pick Up Litter!** → 

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**Thank you very much for your attention!**