

WE 2C PROGRAMME

A philosophy of action

The long established slogan “think globally, act locally”, was first heard at the creation of the United Nations Environment Programme in 1972. The concept is even more valid today, as we continue to see environmental problems increase in severity and complexity. Without a coherent and strategic approach to preventing and correcting environmental mismanagement and addressing emerging issues this complexity could become overwhelming;

That is why WE 2C will seek, wherever possible, to localise issues of global significance, to enable action on the ground for the benefit of people and local communities. We will focus primarily on promoting the proper management of waste and its minimisation, but we will not be constrained by this if we become aware of other environmental issues that appear to fit our programme vision and resources.

We will develop strategies that support resource efficiency and productivity, especially with a view to contributing to preventing or reducing the negative impact of unsound waste management on climate, to preventing pollution of the oceans, to conserving biodiversity and soil fertility and limiting threats to food security.

WE 2C operates by identifying organisations and individuals relevant to the issue in question, from the private, and public sectors, the professions, labour organisations and civil society. Partnerships are forged between key players to release the resources required to solve the problem, resources which include funds, experts, strategists, practitioners and facilities.

These partnerships will be open-ended.

As the work progresses on each project, WE 2C will invite new partners to bring their own intellectual, technical or financial resources into the project. Additionally, WE 2C will seek to contribute to the relevant efforts of governments and international bodies where they already exist.

The promotion of the environmentally sound management of waste (ESM) underlines and animates WE 2C's programme. It enables WE 2C to address a several themes of global significance:

- The pollution of oceans by waste
- The management of waste generated on board ships
- The proliferation of jellyfish
- The intercontinental transport of used tyres
- Electronic waste

Each of these themes encompasses various aspects of and challenges facing the management of waste and will be treated in their social, economic and ecological context. Despite their variety, all these themes have in common the issue of the warming up of climate, the globalisation of trade, socio-economic development and biodiversity conservation.

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For each of these themes, WE 2C will build up strategic partnerships. Today, the most advanced of such partnership concerns the environmentally sound management of waste generated on board ships.

Themes of WE 2C Programme

Theme 1: POLLUTION OF THE OCEAN BY WASTE

Oceans have become accumulators of human debris and litter, especially of plastic waste. The incredible pollution of the North Pacific Ocean by large quantities of polymers, where degraded plastic seems to outweigh zooplankton, illustrates the problem facing all seas of the planet. The consequences of such widespread synthetic pollution range from endangering marine species, habitat destruction, disruption of the food chain to potential poisoning of human beings. Plastic waste thrown away carelessly from ships, floating platforms or as part of land-based activities has become a major source of ocean pollution

Marine litter poses a growing threat to marine and coastal environment. Plastic wastes degrades very slowly; it may take a few hundred years for plastic to decompose in oceans. More and more plastic waste find their way into oceans resulting in an alarming accumulation of such materials in marine waters.

Additionally, plastic waste go through a process of photodegradation where sunlight breaks down the materials into smaller and smaller pieces until there is only plastic dust. Researchers have shown that floating plastic fragments attract and accumulate toxic chemicals that are not soluble in waters, in particular DDT and PCBs. The plastic resin pellets have the ability to concentrate such toxic persistent chemicals and these pellets will be eaten by jellyfish who will be eaten by fish that will be captured to feed human beings.

Theme 2: SHIP' S WASTE

Ship-generated waste and cargo residues arise from the routine operation of ships, mostly through cleaning of tanks. Some chemical wastes can arise through on board blending processes. This waste has to be discharged or delivered to ports or terminals and managed on land.

Action over the past 30 years to prevent discharge at sea, in particular through the implementation of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), has been successful but has not been matched by the provision and improvement of port based facilities for receiving this waste and the development of adequate infrastructure for their environmentally sound management on land.

Despite the existence of a solid body of international regulations, rules and procedures regarding prevention of pollution by ships, gaps, uncertainties and deficiencies can be identified. Three basic difficulties impede effective implementation of international and national legislations, regulations, rules or procedures. These are:

- Lack of adequate port or terminal reception facilities
- Lack of adequate treatment facilities on land
- Violations of law (malfunctioning equipment, bad maintenance or deliberate attempt to cut operational costs)

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The rules and procedures applying to ship-generated waste, especially slops and hazardous noxious substances are well defined in MARPOL Annexes I and II. The main challenge for slops is to adequate port or terminal reception facilities to the demand for discharge or deliver.

Although, there could be questions about what rules or procedures apply to some cargo residues, for many, the system with regard to Annex II works well. The categorisation of cargoes is based on a global system, the Globally Harmonised System for the classification and labelling of chemicals, and on the scientific knowledge of the day. The major difficulty with Annex II lies in the inability or unwillingness of port or terminal facilities to accept cargo residues.

Cargo residue can also by itself represents a problem. Current scientific knowledge will help in a majority of cases. However, there could be cases where uncertainties would prevail regarding characterisation of the residue. This could result in pollution at shore.

The mixing of different products that takes place during loading or during the voyage of the ship (ie. blending) is recognised as a practice but its legal coverage remains evasive in certain cases. Two things can happen on board certain ships. A mixing of products during loading followed by a blending operation during the voyage.

The changing characteristics of cargoes, especially when chemically-based blending operations are carried out on board ships, represent therefore an additional source of difficulties for implementing international rules and procedures.

Theme 3: EMERGING GLOBAL THREAT: THE ALARMING STORY OF JELLYFISH

A combination of global and local cumulative phenomena are influencing the spectacular growth of jellyfish populations in recent years preparing for a possible global ecological disaster. Many interacting factors explained this alarming situation:

- As a result of **over-fishing**, predators of jellyfish, like swordfish and red tuna, see a drastic reduction of their populations. Some fishing practices have also a negative impact on sardines and whitebait that compete for food with jellyfish. Related to this, there have been observations of millions of jellyfish eating or killing salmons or shrimps raised in sea farms.

- **Global warming** creates conditions that favor the massive proliferation of jellyfish worldwide. Warmer waters and shorter winters in some parts of the globe as well as the acidification of oceans due to carbon dioxide emissions play an alarming role in stimulating this ecological disequilibrium. Acidification will impact calcium and shell-forming marine life, in particular marine turtle, one of the most important predator of jellyfish, that cannot build its shell. Climate change may have effects on ocean currents. Changing marine currents could trigger invasions of jellyfish.
- **Pollution and unsound waste management** have the characteristics of overloading coastal waters with nutrients from agriculture and sewage, and contaminating waters with pesticides and industrial toxic chemicals that destroy marine life to the benefit of jellyfish that accommodate better to a polluted environment than fish.

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Another important factor, and probably a critical one, concerns the inability of current treatment of used waters and sewage to capture traces of pharmaceuticals, in particular hormones, that end up in the sea. Such hormones have the potential to slow down reproduction of fish species and to “feminise” fish with the consequences of reducing reproduction capacity. The extraordinary proliferation of jellyfish may also be linked to its capacity to use traces of hormones to stimulate its own reproduction; this is, however, a hypothesis for the time being.

- Unsound **coastal development and tourism** can lead to the destruction of beaches where turtles lay eggs or generate recurrent disturbances of places where the reproduction of marine turtles takes place which would further aggravates the ecological disturbances.

The current situation that sees a massive proliferation of jellyfish all over the world requires urgent and coherent policy action. This proliferation is impacting on marine species biodiversity and conservation, represents a menace for food security and is affecting tourism. It concerns fishing practices, sources of land-based pollution, coastal management, sewage treatment plants, waste management, and production and consumption patterns.

The proliferation of jellyfish has significant negative environmental effects in California, Japan and Namibia and impacts on the Mediterranean, the Red Sea, the Black Sea, and the Baltic.

Theme 4: USED TYRES: FASCINATING AND TROUBLE MAKER

The way used tyres are managed and recycled is a fascinating subject: into adhesives, insulation, brake linings, conveyor belts, in serving to pad out children's play areas, in asphalt paving and road construction or complement to football artificial turf surface, to

retreading, regrooving and energy resources to supplement fuel in pulp and paper mills, industrial boilers, cement kilns or power plants.

There is however a negative aspect to the positive role played by the recycling and retreading of used tyres. Used tyres are being exported or imported in large quantities and such trade is expanding. Trade in used tyres, stockpiles and discarded tyres have long been recognised as increasing the worldwide dispersal of invasive mosquito species and generating local outbreak of malaria or chikungunya. Used tyres are therefore a potential vector for virus transmission.

Today, for instance, the European Centre for Disease Prevention and Control (ECDC) concluded that there was a risk for chikungunya virus transmission in Europe. This virus has been introduced in Europe through different routes but the international trade in used tyres has played a major role in such spread because tyres make optimal breeding sites according to ECDC.

Theme 5: RECYCLING ELECTRONIC WASTE - A WORLD CHALLENGE

The globalisation of trade encompasses the globalisation of trade in electronic waste. The pressure on countries to accept electronic wastes for recycling is mounting leading to situations that are not satisfactory from an health, environmental and social perspective for those countries that do not possess a capacity to recycle or are already overburden with the quantity of domestically generated waste.

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The recycling of electronic waste is faced with a dual constraint. On one hand, there are international obligations that restrict or prohibit export or import of electronic hazardous waste for any purposes, including such waste destined for recycling. On the other hand, many countries do not possess an adequate capacity to recycle electronic waste. Additionally, some of the recycling plants taking electronic waste do not operate in a way to protect human health and the environment.

The current trend leads to a number of undesirable effects. Product take-back schemes and recycling programmes may suffer from the lack of national capacity to recycle electronic waste in a sound way. Large quantities of electronic waste are exported or imported on the fringe of international rules and procedures, sometimes illegally.

To complicate the matter, there are no common understanding, definition and classification, at the international level, of what electronic waste and parts are to be regulated under hazardous waste law, rules and procedures. Individual countries deciding on their own. The European Union has adopted common regulations for all its Member States but implementation of the relevant directives proves to be difficult.

A number of manufacturing companies of electronic goods together with their vendors

have taken measures to recycle their products in a safe and environmentally sound way. However, the limited recycling capacity worldwide prevent optimisation and expansion of such initiatives.

A world recycling market for electronic waste should rely on existing corporate best practices, effective implementation of international rules and regulations and on a solid national base for the environmentally sound management of every waste. It means that such a market would need to operate in the context of the development of a global level-playing field that provides for a high degree of environmental and health protection.

Improving and promoting sound recycling of electronic waste should not be a way to circumvent international rules and procedures that control or prohibit the export or import of hazardous electronic waste. Developing take-back schemes and sound recycling programmes at the country level, that are both socially acceptable and environmentally sound, is a critical first step to come to grasp with the challenge posed by the rapid obsolescence of equipments and products. Programmes for the recycling of electronic waste should not be implemented in isolation. It is important to arrive at a strategy that would include other economic activities such as the refurbishment and repair of used electronic products.

The focus should be to improve the traceability of electronic waste and parts subject to transboundary movements, to ensure that this waste is directed to facilities that can operate in an environmentally sound way and that every custodian of the waste (from generation, storage, transport, recycling, refurbishment to disposal of residues) is certified or authorised to deal with these materials.

Such way forward would need to be supported by an international standard qualifying the management process required for aiming at the environmentally sound recycling (ESM) of electronic waste. An ESM certification scheme for recycling facilities could be conceived using such international standard. A foundation exists for developing an international standard. It consists of the environmentally sound management principles adopted by the Parties to the Basel Convention and the OECD Core Performance Elements for recycling and other waste facilities.

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Such certification scheme would be enhanced and supported by tools for improving transparency, certainty and predictability in the transboundary movements of electronic waste. It would also facilitate the distinction between non-hazardous and hazardous electronic waste.

Improving transparency, certainty, traceability and predictability in the movement of electronic waste destined for recycling would bring the following benefits:

- It could lead to the setting up of a level-playing field at the regional and global level.
- It could provide incentives for economic operators to invest in take-back schemes and recycling programmes that could be supported by national authorities.
- It could improve the global capacity to recycle electronic waste in an

environmentally sound manner.

- It could help in reducing transboundary movements of hazardous electronic waste.
- It could help building capacity of developing countries and countries with economies in transition to recycle electronic waste generated domestically.

It is understood that every country, whether OECD country or not, may not have a capacity to recycle all types of electronic waste. It may also be a fact that regional hubs may be required to achieve economies of scale and efficiency.

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