



European  
Commission

# ENVIRONMENTAL GOODS AGREEMENT

*Promoting EU environmental objectives  
through trade*



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P. 5: Oil skimmers - Courtesy of 'Lamor Corporation'.

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Since July 2014 the EU and 16 other members of the World Trade Organization (WTO) have been negotiating an Environmental Goods Agreement (EGA). Its aim is to remove barriers to trade in products that are crucial for environmental protection and climate change mitigation.

Eliminating the customs duties can boost trade in “green goods”, and this in turn can help the European Union and its partners to protect environment and meet their climate and energy targets.

Each participant of the negotiations has provided a list of products which it considers to belong to this “green” category. The products selected by the EU can contribute directly to environmental protection, climate action, green growth and sustainable development. The EU would like to eliminate duties on products used for:

- ✓ generation of renewable energy,
- ✓ control of air pollution,
- ✓ management of solid and hazardous waste,
- ✓ management of waste water and water treatment,
- ✓ environmental remediation and clean up,
- ✓ noise and vibration abatement,
- ✓ resource and energy efficiency,
- ✓ environmental monitoring and analysis.

The selection of products to be included in the EGA is made on the basis of their end use rather than production methods. This is because there is no common international methodology that would allow assessing the environmental performance of a product throughout its life cycle.

To maximise the positive contribution of trade to environmental protection, the EU selected products that constitute main elements of more complex environmental systems. For instance, in case of waste management they range from waste containers and machinery for sorting waste to shredding or baling machines. In addition to the main products, we also took into account their parts.

Prior to making a selection, the EU consulted a whole range of experts. Relevant international organisations, national environmental agencies, industry and NGOs provided guidance on which environmental products should the agreement focus. Customs officials have also been involved in the process to ensure that the environmental products are clearly defined and differentiated from other products in the customs nomenclature.

This document presents some examples of the EU’s nominated products.



## Components of wind turbines, such as bearings or gearboxes

Large bearings, of diameter of as much as 2-4 meters are key elements in wind turbines. They reduce friction between moving parts, including e.g. spinning blades, and are absolutely critical to the performance of the turbine as a whole.

Gearboxes transform the relatively slow rotation of the blades of wind turbines into the speed required to produce electricity. They account for around 30% of the value of a wind turbine.

Both bearings applications and gearboxes in the wind sector are customised and designed for the wind industry.



## Polysilicon for solar panels

Polysilicon is an essential material used to manufacture the photo-voltaic (PV) cells within a solar panel. These are the cells that convert light into electricity.

While theoretically many semiconducting materials can be used to produce solar cells, for practical and especially economic reasons more than 90% of all PV cells are made from silicon.

Around 90% of all polysilicon produced worldwide ends up in PV cells.



## Small hydraulic turbines and water wheels

Turbines such as these generate electric power from water. They are therefore essential elements for any hydropower plant.

The kinetic energy in the running water causes the turbines to turn, which then powers the generator, producing electricity.



## Biomass boilers

These boilers are an essential element for the production of renewable energy from biomass sources.

They can be run on different kind of biomass fuels, derived from woody and non-woody wastes and residues, like forest residues and yard clippings.



## Waste container

Waste containers are basic but essential elements of waste management systems. The availability of appropriate waste disposal utilities in the direct vicinity is the basic condition for the successful household waste segregation and recycling.



## Equipments for litter collection from water surface

Litter, debris and any other type of macro waste can easily be collected from the surface of water with use of specially conceived trawl nets.

Deployed by only two men using a simple boat they can remove the plastic bottles, cans or paperboards, accumulated in ports or rivers in less than 15 minutes.



## Metal shredders, balers and compactors

These machines take waste metal, shred it and compact it in order to form 'bales' of metal. This can simplify material handling, minimise storage space and reduce transportation and disposal costs.

By forming the metal into these shredded bales it also helps the efficiency of the remelting process and can expose contaminated parts which can be removed to improve the overall quality of the metal.



## Waste elevators and conveyors

These conveyors are an important part of a waste management plant. They ensure that material is transported to and from sorting stations, they feed the mechanism which forms 'bales' of waste, and they help separate bulky material.

There are several different types of conveyors – sidewall-, cleated-, and pinch-type – each of which are designed for specific part of the waste treatment process.



## Pipes and tubes for water

Tubes and pipes are essential for the delivery of safe drinking water and sanitation. They play also a role in wastewater treatment.

Water delivery is a key development goal. In many countries access to water is still difficult and proper sanitation is lacking.

Eliminating customs duties on pipes and tubes we will clearly distinguish between pipes for water and those serving for gas or oil.



## Pumps for handling waste water

In the treatment of waste water it is important to have a well-functioning pump system. 'Positive displacement rotary pumps' are pumps that move fluid using rotating cogs and wheels to move the fluid. It works by creating a vacuum which then drags more liquid through.

Rotary pumps are very efficient because they naturally remove air from the pipes, eliminating the need to bleed the air from the lines manually.



## Microorganisms for water treatment

Waste water treatment plants have become more efficient with the increasing use of microorganisms. Microorganisms eat and digest organic substances for nutrients and energy. Certain microorganisms can digest organic substances such as fuels or solvents into harmless products.

Bioremediation is a general term used to describe the treatment of contaminated water or soil by biological mechanisms, including microorganisms (e.g. yeast, fungi, or bacteria).



## Biodegradable erosion control matting

Erosion can cause major damage to the environment. While erosion is a natural process, human activities have increased the speed at which it happens by 10 to 40%. It increases the risks of flooding leading to damage to property and contamination of rivers.

These mats are used to ensure soil erosion protection in environmentally sensitive areas. They protect the ground long enough for the vegetation to grow and then the materials in the mats biodegrade after a few years.



## Oil spill recovery booms

Oil spills can be disastrous for the environment. Oil spreads out rapidly across the water surface to form a thin layer which can be very harmful to marine ecosystems. They affect both the sea and inland waters and need to be contained fast.

These floating, barriers have two main purposes. The first one is containment. As shown in the picture, a 'containment boom' creates a barrier which stops the spread of oil in the water. This can be deployed very quickly and is essential preparation for other devices (such as skimmers) to come and absorb the oil.



## Oil skimmers

Oil skimmers are devices deployed into the water to remove floating waste oils, greases and fats from water surfaces where there has been a spill.

These technologies are commonly used for oil spill remediation, where they are an essential part of the clean-up process. They are also found in industrial applications such as removing oil from machine tool coolant and removing oil from aqueous parts washers.



## Heat pumps

Like a refrigerator, heat pumps use electricity to move heat from a cool space to a warm space, making the cool space cooler and the warm space warmer. When your property needs heating, the pumps move heat from the outdoors into your house. It also works the other way as a replacement for air-conditioning – if your property is too warm the heat pumps move heat from your house into the outdoors.

Heat pumps are highly energy efficient as they only use a small amount of electricity to transfer heat. The best devices can produce four units of heat for one unit of electricity consumed.



## Thermostats

Room thermostats and electronic radiator thermostats help residents control the temperature in houses or facilities and is an important way of saving energy.

Studies agree on the fact that by managing temperature more effectively there are huge energy savings to be made. Energy savings would be even more significant if traditional manual thermostats were to be replaced with new electronic ones, capable of data storage and wireless communication, in a way that would allow us to manage them remotely.



## Insulating units of glass

Insulating Glass Units are sealed combinations of two or more sheets of glass separated by a dry air space. Insulating glass is used to improve the energy efficiency of buildings, helping to reduce CO2 emissions:

Thermal insulating glass reflects heat back into the room rather than allowing it to escape through the windows.

Solar control glass can be designed to reduce or prevent solar heating of buildings. This minimises the need for air conditioning.



## Insulating wool

Mineral wool is one of the best insulating materials. The porous and elastic structure of the wool not only absorbs noise, it also traps heat. Mineral wool is widely used in the building industry because it helps maintain the desired temperature in buildings, both in winter and in summer.

By greatly reducing the amount of energy used to heat or cool buildings, mineral wool brings environmental benefits in the form of lower CO2 emissions.



## Cork

Cork is an excellent insulator, both against noise and the cold. It is good for improving the energy performance of buildings because it minimises the transfer of energy between the inside and the outside. Cork is used for inner walls, façades, floors and roofs thanks to its stability and flexibility.

Cork production is highly sustainable. It is cut from cork oaks every 10 years, without any damage to the tree because the bark grows back. It is also easy to recycle.

## Insulating panel boards



This category of materials is used for soundproofing and thermal insulation. They are made of organic and often recycled materials.

The material can be produced in different shapes, such as panels, tiles and blocks. It has a relatively low density, making it an excellent insulator. It is used in the building industry for both noise and heat insulation.

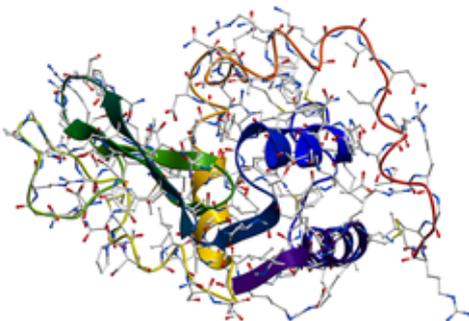
These materials are made of natural cellulose fibres, from renewable, reused and recyclable materials. They include a high proportion of recycled content such as saw mill trim, sawdust, wood chips and construction waste (demolition wood). Non-wood fibre sources such as wheat straw, rice straw, palm or coconut fibres are also used.



## Mechanical seals and other sealing technologies

Sealing technologies are not only essential to avoid polluting leaks into the environment but also ensure efficient use of resources, thus contributing significantly to reducing greenhouse gases.

Mechanical seals in particular are used to seal rotating shafts as they enter a pump or compressor, mixers and reactors, and other equipment where a rotating shaft enters through a housing.



## Enzymes

Enzymes increase bio-chemical reaction rates and accelerate production processes across different industries. In this way, they can help save energy, water and raw materials.

They can for instance make your laundry powder more efficient or reduce environmental impact of paper making or leather tanning.

Being applied in many industries and sectors, enzymes are already contributing to huge CO<sub>2</sub> emissions savings, estimated in 110 million tons of CO<sub>2</sub> for 2013, and, they hold potential for greater environmental benefits in the future.



## Smart meters

Smart meters allow a better regulation of electricity use, making it possible to detect how much electricity is being used at a given point in time.

In addition to this, new generation smart meters provide a wide range of additional information on when and how electricity is being consumed in the system, also allowing for the storage of such data. These smart meters are becoming more and more common in ordinary people's homes.

They therefore represent a key element of smart grids, which create benefits for both producers and consumers, mainly by maximising the efficiency of the electricity distribution and helping the integration of renewable energy sources.



## Thermometers and other heat measuring devices

Thermometers are needed for measuring impacts on the environment across different sectors, including water, air quality etc. They are very important in meteorology and climatology.

Thermometers can be made in many different ways. The products mentioned here, however, are not liquid-filled thermometers (like traditional mercury thermometers) but rather more advanced applications, like infrared (laser) thermometers and high accuracy devices (like quartz thermometers). Pyrometers are a kind of remote sensing, non-contacting, thermometers used to measure temperature by intercepting thermal radiation.



## Photogrammetrical surveying instruments

Photogrammetry analyses photographs taken from the air or on the ground to obtain reliable information about landscapes.

It forms the basis of many Geographic Information Systems and Land Information Systems, which are important for monitoring and managing natural risks such as floods or earthquakes. This is done by feeding the measurements from remote sensing and imagery analysis into computational models in an attempt to estimate earth movements. Its main environmental applications are in geology, meteorology and mapping.

