

THE ENVIRONMENTAL GOODS AND SERVICES INDUSTRY – CATEGORIZATION OF GREEN SECTOR

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1. Goal of the study
 2. The importance of green sector
 3. The problem of definition: review of main contributions from 1999 to 2013
 4. A tentative classification of economical activities starting from the Italian classification
 5. Future steps of research

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- analyze the definition of green/environmental industries to achieve a standard classification
 - create a code system for the environmental sector
 - support the analysis of trade and FDI, in the environmental sector

GREEN SECTOR



WHY ?



WHAT
IS IT ?



WHY ?

The current system of production and consumption of energy showed to be unsustainable over time; the renewable energy sector has created 2,3 milion of jobs in the world, and according to the estmates, it could reach 20 milion by 2030 (*UNEP, ILO, IOE, ITUC, 2008*)



**WHAT
IS IT ?**

The green sector is characterized by several areas as renewable energies, reduction in CO₂, green building, clean energies, treatment of waste and wastewater management, a more sustainable use of agriculture, fisheries and forests...

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 - THE GREEN TECH MARKET IN CHINA “report” (EU SME Centre, 2011)
 - APEC LIST OF ENVIRONMENTAL GOODS “Annex C” (Asian – Pacific Economic Cooperation, 2012)
 - LOW CARBON ENVIRONMENTAL GOODS AND SERVICES (LCEGS) “report 2011/2012” (Department for Business, Innovation and Skills – LONDON, 2013)
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The environmental goods and services industry consist of activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimise pollution and resource use (OECD 1999)

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SPECIFIC SERVICES

ADAPTED GOODS

**CONNECTED
PRODUCTS**

**ENVIRONMENTAL
ACTIVITIES**



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Table 1. The green tech sectors

Energy & power supply			Energy efficiency			Water & waste		Others [‡]
Cleaner conventional energy	Renewable energy	Electric power infrastructure	Green building	Cleaner transportation [‡]	Others	Clean water	Waste management	Sustainable forestry and agriculture
Cleaner coal	Wind	Transmission	Green building design	Road	Efficient processing*	Water extraction	Waste collection	Sustainable management
Cleaner oil	Solar	Distribution	Sustainable materials	Rail	Optimised Design*	Water treatment	Waste recycling	Optimised crops
Cleaner Gas	Bioenergy	Energy storage	Power efficiency	Air	Sustainable materials*	Water distribution	Energy from waste recovery	
Nuclear power	Hydropower	Demand management	Water efficiency	Waterway	Monitoring systems	Water use	Waste treatment	
		Supply flexibility	Energy efficient appliances			Wastewater treatment	Sustainable waste disposal	

*Not covered in this report.

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- APEC list pursues goals that are focused on commerce. The aim of APEC list is to obtain more favorable tariff treatment for environmental goods. It was born by negotiation in the context of trade liberalization initiative.
- US Department of Commerce and Statistic Administration:

**CONSERVE ENERGY
AND NATURAL
REOSURCES**

REDUCE POLLUTION

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ENVIRONMENTAL	RENEWABLE ENERGY	LOW CARBON
<p>Air Pollution Contaminated Land Environmental Consultancy Environmental Monitoring Marine Pollution Control Noise & Vibration Control Recovery and Recycling Waste Management Water Supply and Waste Water Treatment</p>	<p>Biomass Geothermal Hydro Photovoltaic Wave & Tidal Wind Renewable Consulting</p>	<p>Additional Energy Sources Alternative Fuel/ Vehicle Alternative Fuels Building Technologies Energy Management Carbon Capture & Storage Carbon Finance Nuclear Power</p>

In conclusion when collecting data it is recommended to consider the following issues:

- identification of the key environmental sector
- identification of the most significant codes in relation to the related activity
- categorization of the codes of standard classification where the activities are identified and identification of those activities which are considered borderline
- analysis of borderline activities that include the environmental ones in the list

- **Classification of economic activities from the ATECO list**

**Bottom-up
data model**

**High level
of detail:
six digit
code**

**FROM detailed
analysis TO
synthetic analysis**



WE FOUND ABOUT 100 INDICATORS

TRADITIONAL



INNOVATIVE





GREEN BUILDING



NUCLEAR ENERGY



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- Compare Chinese classification with European classification;
 - Select relevant subsectors to analyze Chinese FDI in the green sector;
 - Analyze FDI flows;
 - Survey European and Chinese firms.