



EBF feedback on the sustainable finance taxonomy

22 February 2019



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KEY EBF MESSAGES ON THE TAXONOMY

Key EBF messages on the usability (for the two main users) of the Taxonomy

For EU Member States

when setting out requirements for environmentally sustainable financial products or bonds

1. Alignment of the Taxonomy with existing **economic activity classifications** to the maximum extent possible (CPA, PODCOM, CN): *a common language*
2. Alignment of the Taxonomy with existing **environmental classifications** to the maximum possible extent (CEPA, CReMA): *a common language*
3. Alignment of sustainable finance **disclosures** with member states' disclosures in environmental-economic accounts (SEEA): *a common language*
4. The taxonomy needs to be **simple** enough. The principle of proportionality is vital to make sustainable finance work in practice.

For Financial Market Participants

when disclosing compliance with the Taxonomy of environmentally labelled products and origination of those

4. (cont.) Flexible and **voluntary use** of the taxonomy, and sustainability disclosure requirements (that are also possible to meet for SME's)
5. Possibility to implement the taxonomy in **ICT systems** and work processes. We encourage and support a system of **robust classifications** and codes that can be used in automated way
6. No rigid thresholds for sustainability but **relative metrics based on** existing sustainability standards, systems and frameworks. We recommend the EU to leave it to the market what applicable standards are, and only describe the process of how market participants can define, select, use them and disclose results
7. **Do no harm assessment** at the level of the investee companies and the borrowers

Alignment with existing EU taxonomies.

Example: passenger cars

Sustainable Finance Taxonomy

Technical Expert Group "experts workshops" want to set criteria for cars.

- Electric
- Hydrogen
- Other: g/km

+ do no significant harm criteria

When the workshops want to "code" more details than the current PRODCOM definition for cars, then it is important to investigate the consequences for other EU uses (including EGSS and trade)

12.5 Light passenger cars and commercial vehicles

Sector classification and activity	
Macro-Sector	Transport
NACE Level	No specific NACE codes available
Code	No specific NACE codes available
Description	Light passenger cars and commercial vehicles
Mitigation criteria	
Principle	Demonstrate substantial GHG emission reductions contributing to climate mitigation.
Metric	CO ₂ emissions per vehicle kilometre gCO ₂ /km or gCO ₂ /passenger-km or gCO ₂ /tonne-km.
Threshold	Zero direct emissions vehicles (e.g. hydrogen, electric) are eligible. Other vehicles are eligible if the emissions intensity of the vehicle is below the threshold. The level of these thresholds will be discussed and set in the 2 nd Round.
Do no significant harm assessment	
(2) Adaptation	-
(3) Water	-
(4) Circular Economy	Ensure the vehicles, their parts and specifically the batteries are sent for re-use or recycling at the end of their useful life.
(5) Pollution	For non-zero direct emission vehicles, minimise emissions to air of PM, NO _x , PN and other air pollutants from combustion, breaks and tyres Adopt measures to reduce noise pollution
(6) Ecosystems	-
Rationale	
Additional notes on conclusions reached	This activity includes vehicles classified as M1, N1 and L vehicles, as defined by Regulation (EU) 2018/858. Zero direct emission vehicles and vehicles with low and reducing emission intensities contribute substantially to climate mitigation and are aligned with Article 6.1. (c) increasing clean or climate-neutral mobility, and Article 6.1. (f) phasing out anthropogenic emissions of greenhouse gases, including from fossil fuels, including from fossil fuels. Zero direct emissions vehicles (e.g. electric, hydrogen) is eligible because: - the generation of the energy carriers used by zero direct emissions transport is assumed to become low or zero carbon in the near future (for

Existing activity, product and environmental purpose classification

Existing EU classification for passenger cars, **as preferred by 16 countries in 2017 (Reg. (EU) 2017/2119 establishing the 'Prodcom list' of industrial products)**

- Code for car manufacturing: C29 (**NACE**)
- Code for **electric** car: 29.10.24.50; hybrid and plugin have **own** codes (**PRODCOM**)
- Code for electric car: 87.03.80.10 (**Combined Nomenclature, CN, global HS code**)
- Environmental purpose for electric car: protection of ambient air and climate (**CEPA 1**)
- Product class for electric car: "**adapted product**" (in environmental account **EGSS**)
- Asset class "**Produced asset**" (in environmental accounts, **SEEA**)

8. Hybrid and electric vehicles

CN is redrafted to provide separately for hybrid electric vehicles, plug-in hybrid vehicles and for all-electric motor vehicles. Two approaches were proposed for PRODCOM list:

- follow the CN and create five PRODCOM codes, distinguishing petrol and diesel hybrid vehicles
- simplified approach with three PRODCOM codes, covering above listed categories.

The second option was preferred by 16 countries.

Implementation in PRODCOM list 2017:

PRC 2017	Description	CN
29.10.24.10	Motor vehicles, with both spark-ignition or compression-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion, other than those capable of being charged by plugging to external source of electric power	8703 40 10 + 8703 50 00
29.10.24.30	Motor vehicles, with both spark-ignition or compression-ignition internal combustion reciprocating piston engine and electric motor as motors for propulsion, capable of being charged by plugging to external source of electric power	8703 60 10 + 8703 70 00
29.10.24.50	Motor vehicles, with only electric motor for propulsion	8703 80 10
29.10.24.90	Other motor vehicles for the transport of persons (excluding vehicles with only electric motor for propulsion, vehicles for transporting ≥ 10 persons, snowmobiles, golf cars and similar vehicles)	8703 90 90

For the following codes only the description will be slightly modified:

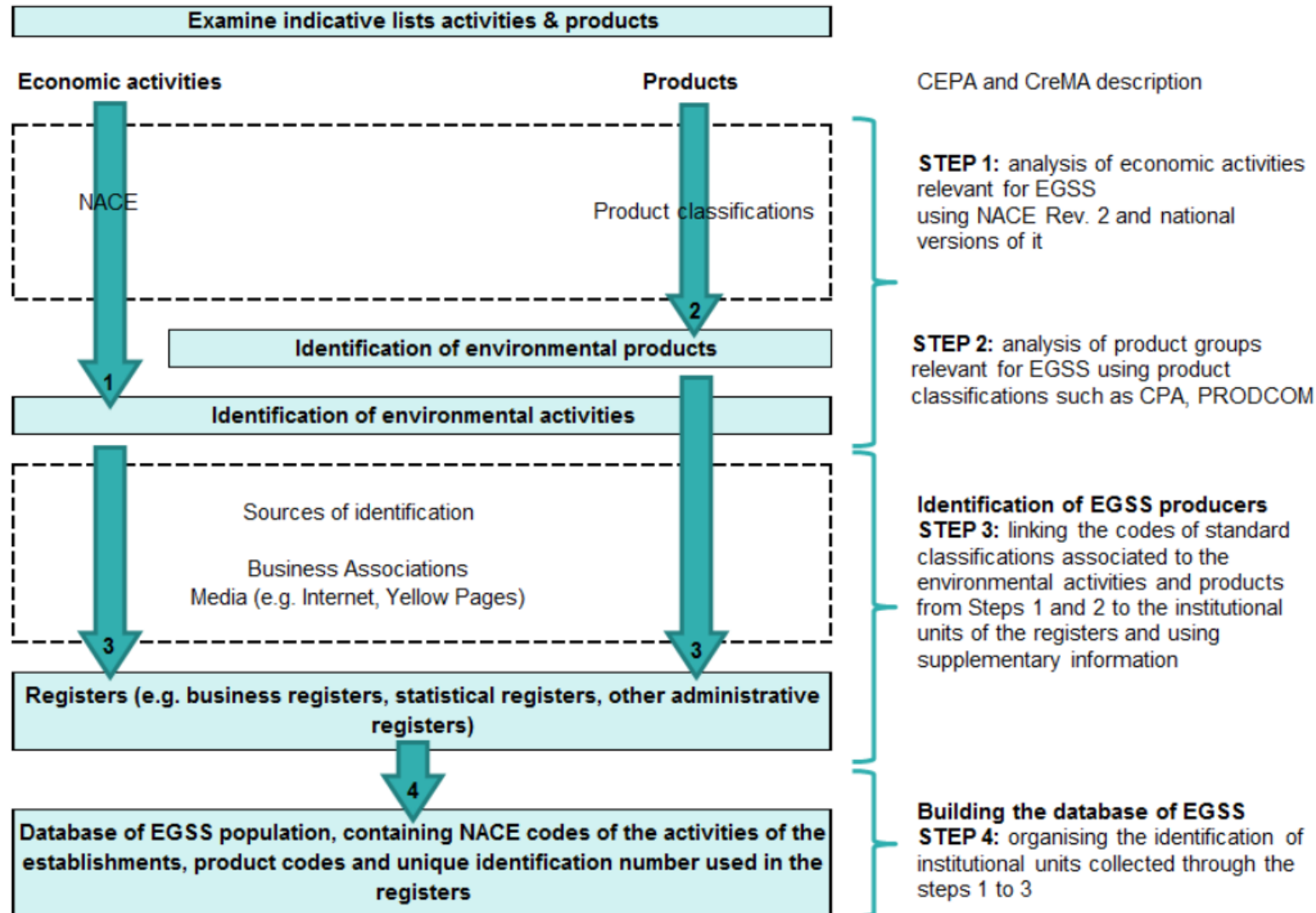
- 29.10.21.00 - Vehicles with **only** spark-ignition engine of a cylinder capacity ≤ 1 500 cm³ **new**
- 29.10.22.30 - Motor vehicles with **only** petrol engine > 1 500 cm³ (including motor caravans of a capacity > 3 000 cm³) (excluding vehicles for transporting ≥ 10 persons, snowmobiles, golf cars and similar vehicles)
- 29.10.22.50 - Motor caravans with **only** spark-ignition internal combustion reciprocating piston engine of a cylinder capacity > 1 500 cm³ but ≤ 3 000 cm³

eurostat RAMON - Reference And Management Of Nomenclatures	
European Commission > Eurostat > RAMON > Metadata	
METADATA PRODCOM list 2017-2018	
Further files and information	
Top of classification	
Show Code	
Detail	
Structure of motor vehicles	
spark-ignition reciprocating internal combustion piston engines for vehicles, of a cylinder capacity ≤ 1 000 cm ³	
spark-ignition reciprocating internal combustion piston engines for vehicles, of a cylinder capacity > 1 000 cm ³	
compression-ignition internal combustion piston engines for vehicles	
vehicles with spark-ignition engine of a cylinder capacity ≤ 1 500 cm ³	
vehicles with spark-ignition engine of a cylinder capacity > 1 500 cm ³	
vehicles with compression-ignition internal combustion piston engine (diesel or semi-diesel)	
other motor vehicles for the transport of persons	
motor vehicles for the transport of 10 or more persons	
goods vehicles, with compression-ignition internal combustion piston engine (diesel or semi-diesel)	
goods vehicles, with spark-ignition internal combustion piston engine; other goods vehicles	
tractors for semi-trailers	
29.10.44 Chassis fitted with engines, for motor vehicles	
29.10.51 Crane lorries	
29.10.52 Vehicles for travelling on snow, golf cars and the like, with engines	
29.10.59 Special purpose motor vehicles n.e.c.	
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COMMISSION REGULATION (EU) 2017/2119 of 22 November 2017 establishing the 'Prodcom list' of industrial products provided for by Council Regulation (EEC) No 3924/91

Alignment with existing EU taxonomies.

Example: EUROSTAT



Source: Eurostat Environmental Goods and Services (EGSS) handbook 2016

Four suggestions for relative criteria for sustainable activities in the Taxonomy (1/2)

No	Criteria for sustainable activities	Will EU define sustainable? If not EU, who?	Roles EU	Roles Financial Market Participant
1	Companies are 100% eligible for green financing when 50% or more (percentage can reflect progress) of their activities/products are on a list of sustainable activities/products	YES (but only an "EGSS" type of list of codes, see for example elsewhere in slides) Various parts of EU already work on updating and deepening these EGSS type of lists	<ul style="list-style-type: none"> The EU will keep and update an "EGSS" list of sustainable activity and product codes (NACE, CPA, PRODCOM and CN in combination with CEPA/CRema). CEPA/CRema may refer to external standards, such as certifications or regulation. EU will not set additional threshold criteria on top of the coded activities unless absolutely necessary EU will define threshold (can be 50%, lower, higher or pro-rata) 	<ul style="list-style-type: none"> Check compliance of investment with the list of codes Ideally automated check using (EU or commercial) market data
2	Companies are 100% eligible for green financing when they have reliable sustainable standards/eco-labels/claims/declarations for products, services or processes (in the case of SMEs, irrespective of % of certified turnover)	NO Standard setting bodies set criteria for their own ECO-label (for example FSC, BREEAM) Providers of ECO-labelling data collect and sell market intel.	<ul style="list-style-type: none"> EU does not need to provide a list of eligible ECO-labels nor minimum levels for those EU does not need to interfere in setting the criteria or thresholds that these ECO-labels are developing (a market driven process) The EU only describes the basic requirements that eligible ECO-labels must meet (<i>such as "criteria must be public/transparent" or "compliance must be externally audited" or "compliant with ISO or ISEAL standards"</i>). EU could provide a webpage for sharing data ("resource center") 	<ul style="list-style-type: none"> Financial Market Check compliance of eco-labeled investment with the basic requirements. Ideally automated check, using providers of ECO-labelling data.

Four suggestions for relative criteria for sustainable activities in the Taxonomy (2/2)

No	Criteria for sustainable activities	Will EU define sustainable? If not EU, who?	Roles EU	Roles Financial Market Participant
3	Companies are x% (pro rata) eligible for green financing when x% (pro rata) of their activities or products belongs to the top 30% of most efficient activities/products in a sector/country.	NO Standard setting bodies, specialized consultants or ESG rating agencies identify top 30%.	<ul style="list-style-type: none"> • EU does not need to define the top 30% of most efficient activities/products in a sector/country • The EU only describes the basic requirements to identify the top 30% (<i>such as "recent report by experienced consultant", "criteria are published/transparent" or "evidence must be statistically significant"</i>). • EU could provide a webpage for sharing data ("resource center") 	<ul style="list-style-type: none"> • Financial Market Participants hire consultants • Ideally automated selection of investments based on portfolio data.
4	Companies are x% (pro rata) eligible for green financing when x% (pro rata) of their activities or products is better than the average of activities/products in a sector/country.	NO Standard setting bodies, specialized consultants or ESG rating agencies identify "better than average" .	<ul style="list-style-type: none"> • EU does not need to define "better than average" activities/products in a sector/country • The EU only describes the basic requirements to identify the average (<i>such as "recent report by experienced consultant", "criteria are published/transparent" or "evidence must be statistically significant"</i>). • EU could provide a webpage for sharing data ("resource center") 	<ul style="list-style-type: none"> • Financial Market Participants hire consultants • Ideally automated selection of investments based on portfolio data.

Rigid criteria/thresholds vs relative criteria?

EBF advises relative criteria

	Rigid criteria in Taxonomy	Relative criteria in Taxonomy
Able to use existing EU taxonomies? (NACE, CPA, PRODCOM, CN, CEPA, CReMA)	<p>YES</p> <p>Rigid taxonomy will only focus on CEPA 1 (=climate) or must find way to integrate existing definitions of environmental purposes in CEPA/CReMA</p>	YES
Flexibility for market participants?	Focus is on a rigid (CO2) threshold. TEG proposal seems to add some flexibility in referring to regional regulation or certain certifications if there is no universal metric. In general there seems not much flexibility for third party standards.	Optimal flexibility. The meaning of “Sustainable” is placed in the local context Key metrics can vary per country, per year and per economic activity. This method allows market participants to use EU and local regulation as well as consultant-experts and third party sustainability standards to define applicable metrics.
Strictness of criteria? Too strict or too loose?	Many Financial Market Participants are afraid that the taxonomy will be too strict or too loose. If criteria are too loose, everything will fit in but it will have no credibility (green washing) which harms the financial industry. If criteria of the taxonomy become too strict, or the scope is too narrow it is not possible to identify investments or it may leave certain sectors unable to attract investors	<p>Relative criteria just mirror the amount of sustainability in the real economy. Financial Market Participants find it important that criteria are set by respected third parties.</p> <p><i>Example: Starbucks’ Sustainability Bond uses 249 external criteria for sustainable certified coffee set by Conservation International (CI). Financial Market Participants can engage with standard setting bodies or consultants when they are not happy with the criteria.</i></p>

Rigid criteria/thresholds vs relative criteria?

EBF advises relative criteria

	Rigid criteria in Taxonomy	Relative criteria in Taxonomy
Natural drifting of sustainable activities in and out?	NO. When the metric is an absolute threshold then it must be adapted all the time to reflect the market	YES, because the "standard" activities/goods/services will become more efficient over time (e.g. for example top 15% most sustainable buildings is a moving target)
Indirect impacts taken into account (do no harm)? Efficient for Market Participants?	<p>Criteria are set by EU so if EU misses out on certain negative impacts it will be seen as an EU failure when something is not sustainable.</p> <p><i>Example: Afforestation. The proposed taxonomy wants to add a long list of do no harm and management criteria to existing certifications such as FSC and PEFC. This is not efficient for Financial Market Participants. They use FSC and PEFC in green finance and must be able to trust these labels. It would also mean that data around investments in PEFC and FSC assets suddenly will not comply with the Taxonomy anymore. The EU should encourage that FSC and PEFC develop the right criteria or levels of certification, but not add criteria (at least not from a finance perspective).</i></p>	<p>Criteria are set by third parties, such as certifying bodies, and the responsibility that these are right and all-encompassing lies with these third parties.</p> <p>If not then this is not an EU failure nor a failure from the financial institutions involved (important principle!)</p> <p>For Financial Market Participants it is of extreme importance that when assets meet certain standards or certifications or regulation there are <u>no</u> additional criteria that must be manually checked for compliance with the Taxonomy. This will also undermine automated project selection and disclosure.</p>

Rigid criteria/thresholds vs relative criteria?

EBF advises relative criteria

	Rigid criteria in Taxonomy	Relative criteria in Taxonomy
Example Aluminium Production	<p><u>Taxonomy:</u></p> <ul style="list-style-type: none"> Sustainable aluminium production in Europe will not emit more than 4 tons of CO2 per ton of aluminum product, properly and consistently calculated, based on the rules of life cycle assessment (ISO 14044) <i>Note: Direct CO2 emissions would only be a comparable metric when the grid factor used for calculation is the same and static everywhere in Europe, which is not realistic. Better use KWh or J in a rigid approach.</i> <p><u>Result:</u></p> <ul style="list-style-type: none"> Only recycled aluminum or production with renewable energy (or nuclear?) is eligible. Focus on only 12 large primary aluminium manufacturers? It will be extremely difficult for EU to find 1 metric for the large variety of aluminum products such as car parts, drink cans or foil Rigid threshold neglects existing initiatives such as ASI with other focus and more criteria. 	<p><u>Taxonomy:</u></p> <ul style="list-style-type: none"> Sustainable aluminium production must meet either one of the following criteria <ul style="list-style-type: none"> ✓ belong to top 30% most efficient in sector/country ✓ be better than average in sector/country in terms of EE ✓ Is evidenced by a relevant environmental Certification, Environmental Claim or Environmental Product Declaration (EPD). Example of such claims: "75% recycled" or "4 ton co2 per ton Al - low carbon" EU does not need to approve individual initiatives, but only sets quality requirements such as <i>transparency</i>. Example: It is possible to finance ASI certified production or individual products. The ASI standard (Aluminum Stewardship Initiative) sets multiple criteria. <p><u>Result:</u></p> <ul style="list-style-type: none"> Aluminum producers in all member states have the possibility to attract green funding for the best part of their business. Metrics are flexible; they can be based on LCA 's or on existing environmental labelling that they have developed to sell products to clients.

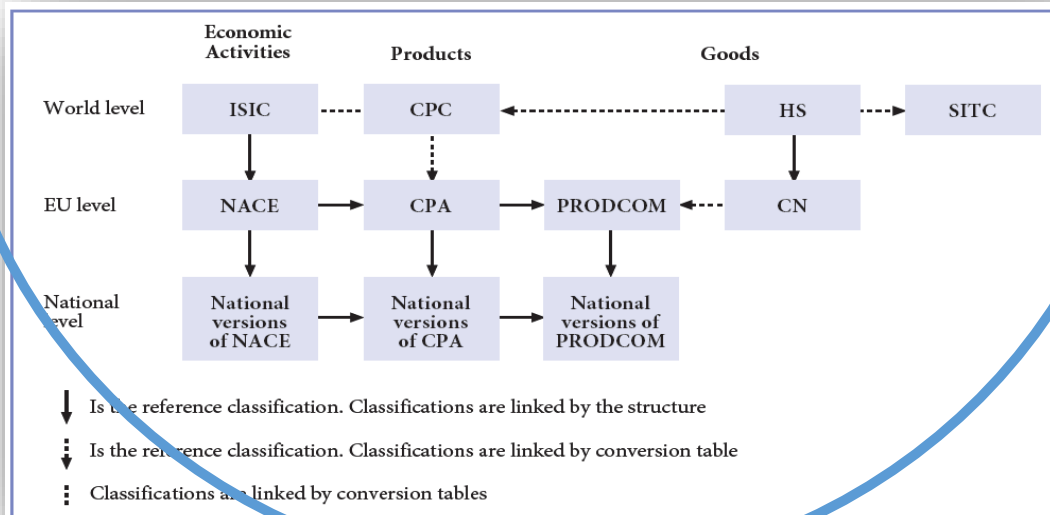
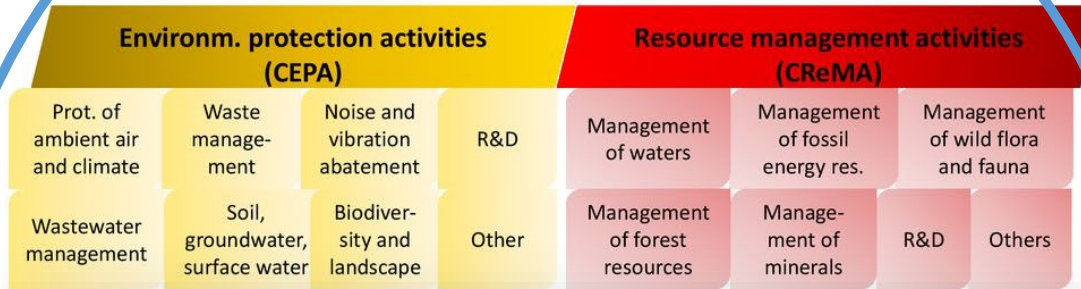
Rigid criteria/thresholds vs relative criteria?

EBF advises relative criteria

	Rigid criteria in Taxonomy	Relative criteria in Taxonomy
Example Green buildings	<p><u>Taxonomy:</u></p> <ul style="list-style-type: none"> • New buildings must meet x kg CO2/m2/year or NZEB standards • Renovated residential buildings must have an energy efficiency improvement of at least 50% or meet NZEB <p><u>Result:</u></p> <ul style="list-style-type: none"> • Using low threshold or only NZEB is far too strict and will effectively stop green bond issuance • Thresholds that do not include at least 10 years of building activity will not lead to meaningful green finance volumes • The eligibility threshold for a mortgage to be considered "green" in the EMF's model doesn't align with the TEG's taxonomy proposal. The EMF's green mortgage product demands 30% energy efficiency improvement of the building. Where energy efficiency is generally already at a high level, finding eligible project in real estate sector might prove to be near impossible with the TEG's 50% threshold. 	<p><u>Taxonomy:</u></p> <ul style="list-style-type: none"> • New buildings: Top 15% most efficient in country/region based on local building codes • Renovated buildings: 30% reduction or two label steps based on local building codes • The absolute energy use automatically become stricter over time when regulation becomes stricter • Other (third partly commercial) certifications used in the green bond market are LEED, BREEAM, DGNB etc. • Issuers would not need to provide information about do no significant harm requirements, since this is not part of the building code (important principle for financial institutions!) <p><u>Result:</u></p> <ul style="list-style-type: none"> • The EPBD proxy works very well: many issuers (especially banks) must identify green buildings with simple criteria (building year, energy label) • <i>Example: green bond issuers LBBW and Volkswagen Immobilien (VW-I) have asked a leading green real estate consulting firm in Germany, Drees & Sommer, to define criteria for the top 15% in Germany. The top 15% were defined as buildings that meet EnEV2007 (office) or EnEV2009 (residential) or later. The cut-off in 2007 and 2009 was (just) sufficient to issue benchmark size green bonds.</i>

A COMMON LANGUAGE: TAXONOMIES IN EUROPE

A common language: taxonomies in Europe



Environmental classification

Further details in next slides

Economic classification

A common language: taxonomies in Europe

<i>Economic and Environmental activities are classified and coded with the help of the following taxonomies</i>	Number of digits in the codes	Regulation (EU)
(A) The taxonomy for environmental purposes. CEPA 2000, the Classification of Environmental Protection Activities and Expenditure (CEPA) and the Classification of Resource Management Activities (CRema).	3 digits	Regulation (EU) No 538/2014
(B) The taxonomy for products, goods and services (including environmental). 5000 product groups are classified in Classification of Products by Activity (CPA), PRODCOM and the CN/HS (=European Combined Nomenclature classification/Global Harmonized System Code). HS is also used in combination with CEPA in specific global trade agreements of environmental goods. Environmental goods and services (EGSS) fall within the categories of: <ul style="list-style-type: none"> i. environmental specific services ii. environmental sole purpose products (connected products) iii. adapted goods iv. environmental technologies 	8 digits	Regulation (EU) No 2658/87 and 538/2014+ EGSS handbook and guide [SEEA 2012]
(C) The taxonomy for Sectors (Industry codes such as NACE , NAICS, SIC). The EU industry classification is NACE (Nomenclature statistique des activités économiques dans la Communauté européenne)	4 digits	Regulation (EU) No 1893/2006.
(D) The taxonomy for environmental and economic assets. The System for Environmental-Economic Accounting distinguishes 7 different environmental assets (natural resources and land) and 3 different economic assets (produced assets, non-produced assets and financial assets)	2 digits	Regulation (EU) No 691/2011

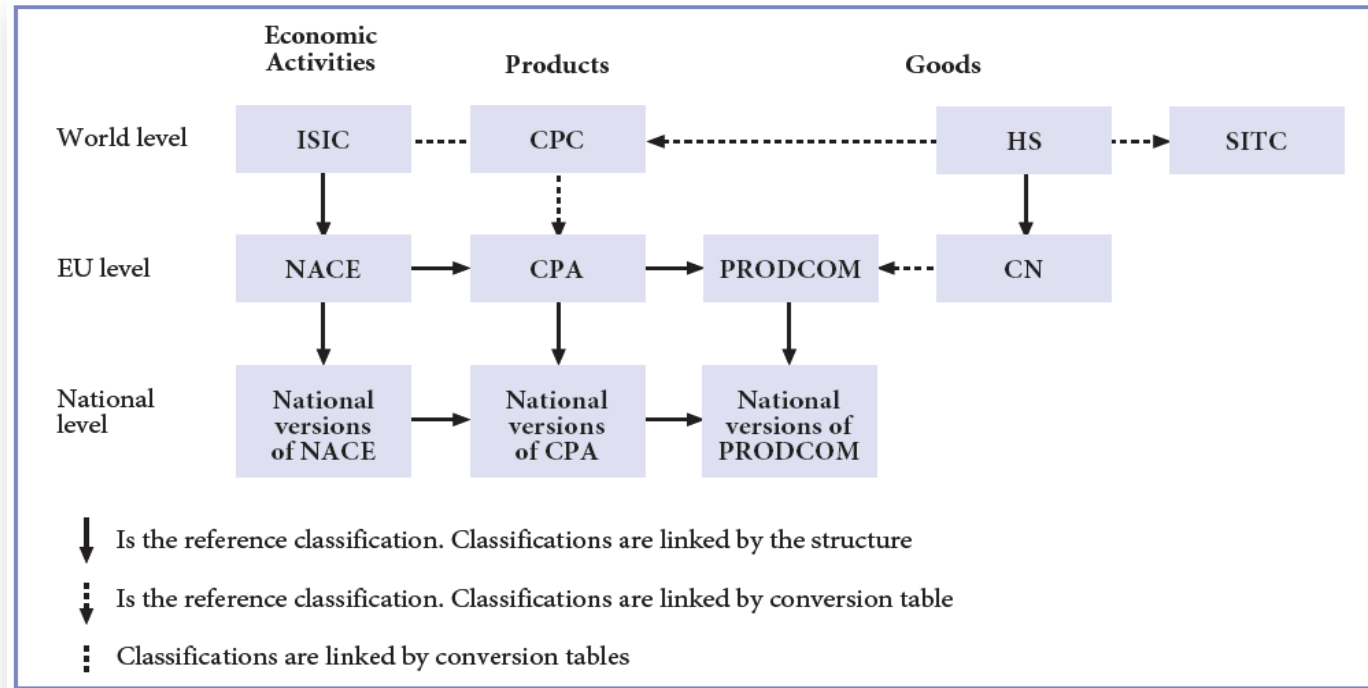
These taxonomies are used in many ways. In the next slides we will show how they are combined in the System for Environmental-Economic Accounting (SEEA 2012), Codified by the EU Commission Implementing Regulation (EU) 2015/2174 and 691/2011

European and World level system of integrated economic activity classifications

Relationships between activities, products and goods/services

- ISIC is the United Nations' International standard industrial classification of all economic activities. **The European version is NACE**
- CPC is the United Nations' Central Product Classification. **The European version is the Classification of Products by Activity (CPA)**
- HS is the Harmonized System code, a commodity description and coding system, managed by the World Customs Organisation. **The European version is CN which stands for the Combined nomenclature**, a European classification of goods used for foreign trade statistics.
- PRODCOM is the **Classification of goods** used for statistics on **industrial production in the EU**.

European and global system of integrated statistical economic activity classifications



([Click](#) here or on picture for link)

Aligning disclosures. Example: the System of Environmental-Economic Accounting (SEEA)

- The System of Environmental-Economic Accounting (SEEA 2012 CF), is a joint system developed by EU, UN, FAO, IMF, OECD, Worldbank, www.seea.un.org.
- The purpose is to support decision making and coherent policy making with the help of environmental accounts and (key) environmental and “green jobs” indicators
- The SEEA uses **multiple economic and environmental classifications** in an integrated way
- The SEEA accommodates a **flexible and modular** approach to implementation – easy to use and build upon
- The SEEA is **global** – internationally accepted standard



EU Strategy for Environmental-Economic Accounting 2019-2023

- The European strategy for environmental accounts describes priorities and actions to develop and use environmental accounts in a harmonized way in Europe.
- Advanced environmental accounting developed in Europe during the last 15 years.
- Environmental accounts are used for a growing number of EU policies including EU monitoring of progress towards SDG's.
- **There is potential for additional applications in Sustainable Finance**, for investments and financing of renewable energies and environmental protection:
 - Environmental protection expenditure accounts (EPEA)
 - Resource management expenditure accounts (ReMEA)
 - Environmental goods and service sector accounts (EGSS)



- EU Commission Implementing Regulation (EU) 2015/2174 and 691/2011
- European Strategy for Environmental Accounts 2019-2023 (published Feb 2019)

EU Environmental accounts (SEEA)

established in Regulation (EU) 691/2011 and amended in Regulation (EU) 538/2014

Obligatory environmental accounts in EU:

1. Air emissions accounts (AEA)
2. Environmental taxes accounts (ETEA)
3. Economy-wide material flow accounts (EW-MFA)
4. Environmental Protection Expenditure Acc. (EPEA)
5. Environmental Goods and Services Sector accounts (**EGSS, Commission Impl. Regul. (EU) 2015/2174**)

6. Physical energy flow accounts (PEFA)

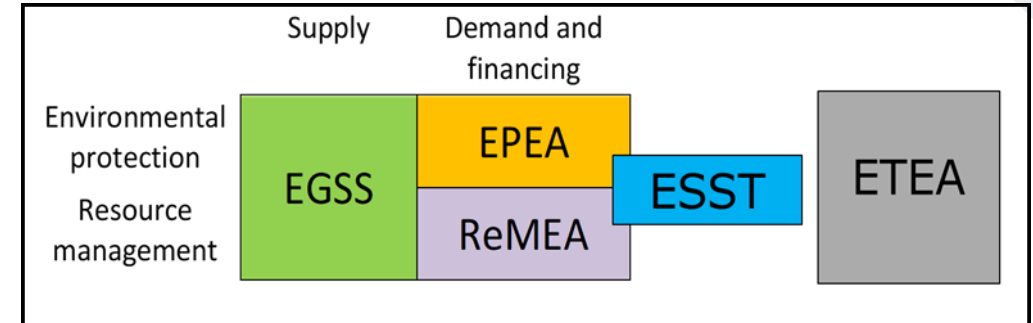
Voluntary environmental accounts in EU:

7. Forests
8. Environm. subsidies and similar transfers (ESST)

In development:

9. Ecosystem (biodiv)/water/Land use&cover accounts
10. Resource Management Account (ReMEA)

Source: https://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_accounts_-_establishing_the_links_between_the_environment_and_the_economy



Various EUROSTAT handbooks



- Eurostat has published an EGSS handbook for EU member countries to collect environmental data for their (obligatory) environmental accounts.

Reporting on output and impact of sustainable finance can and must as much as possible be aligned with the economic output indicators and green jobs reported in the Environmental Accounts of the EU member states

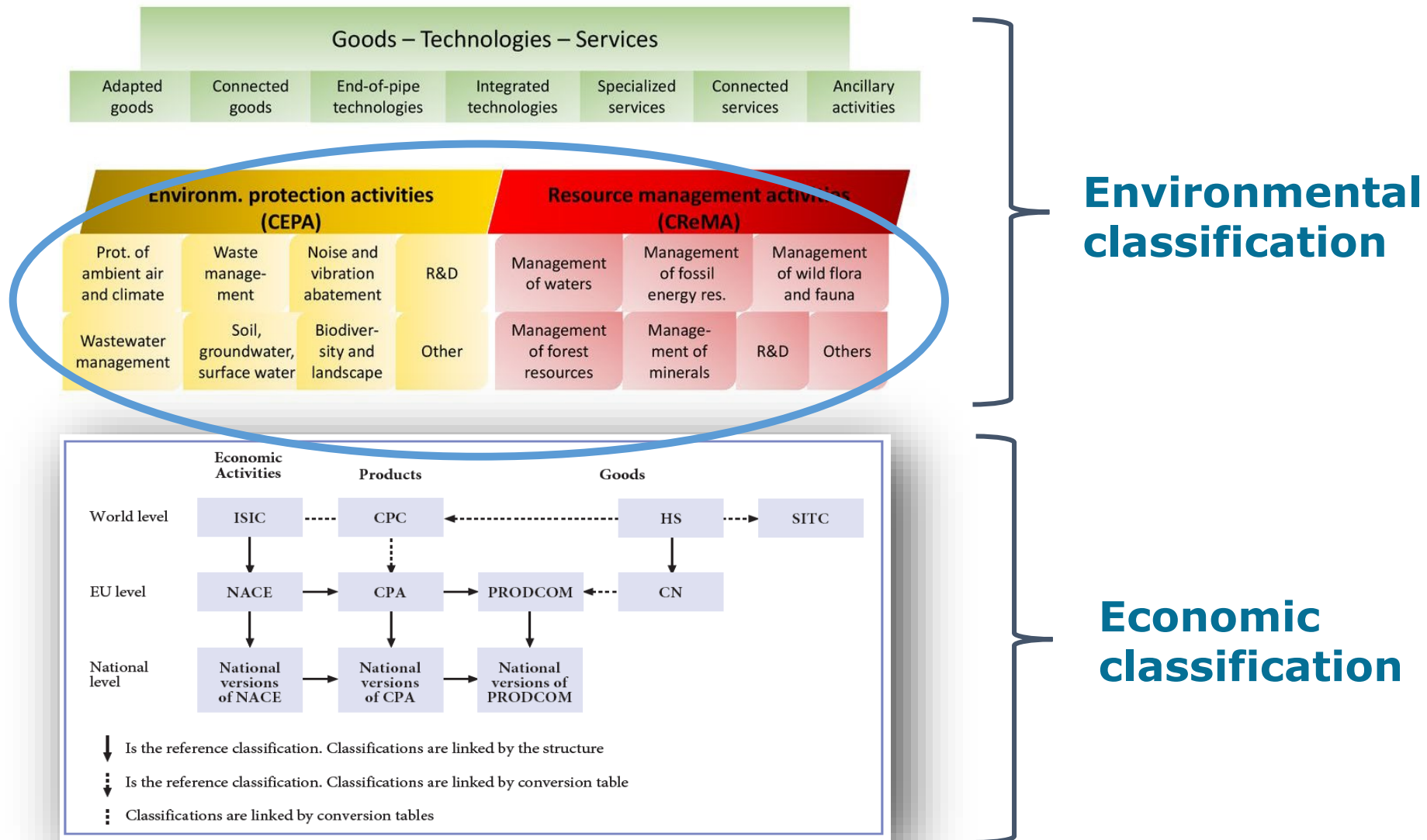
EU Environmental Accounts (SEEA), relationships

Account (classification)			Goods and services (CPC)			Generation of income			Distribution and Use of Income			Capital	ROW	Residuals	TOTAL
			Agr	manu	Serv	HH	Corp	Govt	HH	Corp	Govt				
			<u>1a</u>	<u>1b</u>	<u>1c</u>	<u>3(a-d)</u>	<u>3(ef)</u>	<u>3g</u>	<u>4-6(ab)</u>	<u>4-6(c)</u>	<u>4-6(d)</u>				
Goods and Services (CPC)	Agr	<u>1a</u>	Intermediate consumption (1883)						Final consumption (1399)			FCF (455)	Export (499)	Fr industry	4236
	manu	<u>1b</u>													
	Serv	<u>1c</u>													
Generation of income	HH	<u>3(a-d)</u>	Payment to factors (1721)									FI fr ROW (6)		1727	
	Corp	<u>3(ef)</u>													
	Govt	<u>3g</u>													
Distribution and Use of Income	HH	<u>4-6(ab)</u>			Labor incomes (1300)		Transfers (2120)				Transfers fr ROW (73)	From HH	2010		
	Corp	<u>4-6(c)</u>			OS (321)								983		
	Govt	<u>4-6(d)</u>	Tax on inputs (133)		Tax on labor & profits (104)								1058		
Capital		<u>7-8</u>						Savings (455)			Capital tr (437)		From FCF	892	
ROW		<u>10</u>	Imports (499)			LI to ROW (2)		Transfers to ROW (77)					By ROW	578	
Natural resources		<u>12</u>	To industry					To HH				To ROW			
Ecosystem inputs		<u>13</u>	To industry					To HH				To ROW			
Residuals		<u>14</u>	Re-absorbed by production					To HH			To landfill sites	To ROW			
TOTAL (EXP)		<u>15</u>	4236			1727		2010	983	1058	892	578			

THE EU TAXONOMY FOR ENVIRONMENTAL PURPOSES (CEPA AND CREMA)

**CEPA AND CREMA ACTIVITIES, REGULATION
(EU) NO 538/2014 AND COMMISSION
IMPLEMENTING REGULATION (EU) 2015/2174)**

(A) The EU taxonomy for environmental purposes




(A) The EU taxonomy for environmental purposes

Overview 4-1: International classification of environmental protection activities (CEPA) and activities of resource management (CReMA)

Classification	Description
CEPA 1	Protection of ambient air and climate
CEPA 2	Wastewater management (treatment and prevention of wastewater)
CEPA 3	Waste management (treatment and prevention of waste)
CEPA 4	Protection and remediation of soil, groundwater and surface water
CEPA 5	Noise and vibration abatement
CEPA 6	Protection of biodiversity and landscape
CEPA 7	Protection against radiation
CEPA 8	Research and development of CEPA 1 - 7 and 9
CEPA 9	Other environmental protection activities
CReMA 10	Management of water
CReMA 11	Management of forest resources
CReMA 12	Management of wild flora and fauna
CReMA 13	Management of energy resources: among them (13A) renewable energies, (13B) heat/ energy saving and management, (13C) minimization of the non-energetic usage of fossil fuels
CReMA 14	Management of minerals
CReMA 15	Research and development of activities of resource management
CReMA 16	Other natural resource management activities

Source: Eurostat (2002); European Communities (2009).



The screenshot shows the Eurostat website with the title "Glossary: Classification of environmental protection activities (CEPA)". It includes a search bar, navigation links, and social media icons. The page content describes the (European standard statistical) classification of environmental protection activities expenditure and other transactions whose primary purpose is environmental protection. It also provides definitions for CEPA and lists environmental protection products and expenditure for environmental protection.

CEPA 1: PROTECTION OF AMBIENT AIR AND CLIMATE

Code	Description
1	Protection of ambient air and climate
1.1	Prevention of pollution through in-process modifications
1.1.1	for the protection of ambient air
1.1.2	for the protection of climate and ozone layer
1.2	Treatment of exhaust gases and ventilation air
1.2.1	for the protection of ambient air
1.2.2	for the protection of climate and ozone layer
1.3	Measurement, control, laboratories and the like
1.4	Other activities

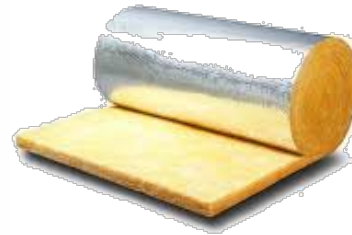
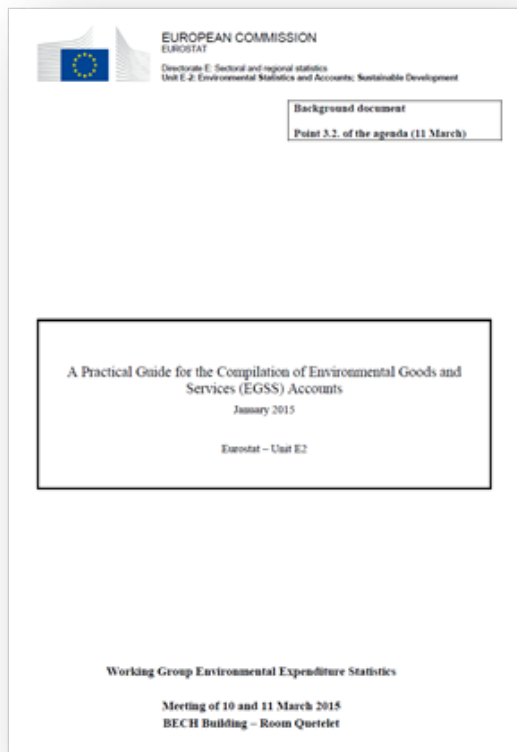
CEPA 3: WASTE MANAGEMENT

Code	Description
3	Waste management
3.1	Prevention of pollution through in-process modifications
3.2	Collection and transport
3.3	Treatment and disposal of hazardous waste
3.3.1	Thermal treatment
3.3.2	Landfill
3.3.3	Other treatment and disposal
3.4	Treatment and disposal of non-hazardous waste
3.4.1	Incineration
3.4.2	Landfill
3.4.3	Other treatment and disposal
3.5	Measurement, control, laboratories and the like
3.6	Other activities

CEPA and CReMA, Regulation (EU) No 538/2014 and Commission Implementing Regulation (EU) 2015/2174)

(A) The EU taxonomy for environmental purposes

EXAMPLE: The taxonomy is very FLEXIBLE and allows both HIGH LEVEL USE but it can also be used in a DETAILED way to classify green assets, see examples



(from: EU EGSS guide and handbook)

- 1. Electric vehicles (plug-in or with hydrogen-fuel cells)** are often seen as a means to reduce air pollution and green-house gas emissions when compared to cars that operate with fossil fuel combustion engines. Electric vehicles can also reduce traffic noise emissions. Whether electric vehicles reduce air pollution depends at a global scale mainly on the mode of electricity production. If the production of electricity is based on firing fossil fuels, electric vehicles may contribute little to reducing air pollution at a global scale. At a local scale (e.g. in cities with high traffic density) electric vehicles can reduce air pollution significantly. Therefore it is presumed that the main environmental purpose of manufacturing such vehicles falls under **CEPA 1**
- 2. Insulation materials for use in buildings** can serve to protect the environment against noise from inside the building (e.g. noise insulation of discotheques, bottling plants etc.) or to save energy by avoiding thermal losses. Therefore the production of these materials may fall under CEPA 5 or CReMA 13B depending on which one is deemed to be the main purpose. Even at the most detailed level it may not be possible to distinguish whether the production of insulation materials belongs to CEPA 5 or CReMA 13B. In this case it is recommended to classify it as **CReMA 13B**.
- 3. A specific case is also the production of energy through incineration of waste.** SEEA CF 2012 (p.259) recommends that the production of energy from the combustion of any kind of waste is included in RM except where the incineration is carried out for the main purpose of waste treatment and disposal and to classify it as **CReMA 13A**.

(A) Example of disclosure of investments per environmental purpose

- Example of how CEPA is used by member states in environmental accounts
- Austria reports investments in environmental goods and services per Environmental Purpose..
- ...and also per sector and per environmental product in later slides
- This is only possible via an integrated approach of all taxonomies mentioned earlier



Environmental Goods and Services Sector 2008 to 2016 by environmental domains

Environmental domains	2008	2009	2010	2011	2012	2013	2014 ¹⁾	2015	2016	Change 2008 - 2016 in %
Environmental output in million Euro (and change in %)										
Protection of ambient air and climate	1.442	1.271	1.217	1.293	1.478	1.491	1.695	1.766	2.102	+45,8
Wastewater management	3.025	3.235	2.868	2.985	3.155	3.287	3.223	3.379	3.370	+11,4
Waste management	3.582	3.367	3.887	4.403	4.581	4.690	3.807	3.676	3.815	+6,5
Protection and remediation of soil, groundwater and surface water	1.747	1.675	1.737	1.834	1.903	2.019	1.606	1.542	1.859	+6,4
Noise and vibration abatement; protection against radiation	556	402	397	440	437	422	677	688	684	+23,1
Protection of biodiversity and landscape	242	242	265	277	276	295	232	239	240	-0,6
Environmental protection R&D	372	376	381	394	443	481	466	492	515	+38,2
Other environmental protection activities	365	352	315	312	345	384	284	304	324	-11,2
Management of waters	305	296	264	316	364	308	356	354	382	+25,3
Management of forest resources	1.497	1.358	1.542	1.619	1.583	1.525	1.292	1.248	1.166	-22,1
of which: Management of natural forest areas	0	0	4	4	5	4	1.274	1.232	1.150	+10.831,7
of which: Minimisation of the intake of forest resources	1.492	1.352	1.538	1.614	1.578	1.521	17	16	17	-98,0
Management of wild flora and fauna	52	51	48	46	56	63	69	83	98	+89,5
Management of energy resources	15.853	16.377	16.434	16.700	18.959	18.960	16.590	16.516	17.296	+9,1
of which: Renewable energy	10.508	11.022	11.770	12.007	14.171	13.108	8.801	8.648	9.341	-11,1
of which: Heat/energy saving	5.240	5.201	4.505	4.405	4.000	5.083	7.355	7.514	7.588	+44,8
of which: Minimisation of the intake of fossil resources for uses other than energy production	105	65	93	138	127	100	374	354	308	+249,8
Management of minerals	1.370	1.228	1.532	1.746	1.672	1.646	942	915	969	-29,3
Resource management R&D	348	336	468	491	479	543	585	679	912	+161,8
Other natural resource management activities	292	278	263	267	284	324	226	238	233	-20,3
Total	31.048	30.844	31.618	33.122	36.015	36.437	32.049	32.118	33.966	+9,4
Environmental gross value added in million Euro (and change in %)										
Protection of ambient air and climate	-	-	-	-	-	-	755	760	851	+12,7
Wastewater management	-	-	-	-	-	-	1.592	1.648	1.662	+4,4
Waste management	-	-	-	-	-	-	1.251	1.267	1.331	+6,4
Protection and remediation of soil, groundwater and surface water	-	-	-	-	-	-	733	705	886	+20,9
Noise and vibration abatement; protection against radiation	-	-	-	-	-	-	245	256	250	+2,2
Protection of biodiversity and landscape	-	-	-	-	-	-	145	139	141	-3,0
Environmental protection R&D	-	-	-	-	-	-	193	227	262	+35,9
Other environmental protection activities	-	-	-	-	-	-	153	166	189	+23,8
Management of waters	-	-	-	-	-	-	130	131	138	+6,8
Management of forest resources	-	-	-	-	-	-	634	600	562	-11,4
of which: Management of natural forest areas	-	-	-	-	-	-	620	505	557	-11,5
of which: Minimisation of the intake of forest resources	-	-	-	-	-	-	5	5	5	+3,3
Management of wild flora and fauna	-	-	-	-	-	-	33	34	58	+76,7
Management of energy resources	-	-	-	-	-	-	5.803	5.815	6.193	+6,7
of which: Renewable energy	-	-	-	-	-	-	3.035	3.013	3.302	+8,8
of which: Heat/energy saving	-	-	-	-	-	-	2.645	2.681	2.702	+4,4
of which: Minimisation of the intake of fossil resources for uses other than energy production	-	-	-	-	-	-	123	120	129	+5,4
Management of minerals	-	-	-	-	-	-	285	286	305	+6,9
Resource management R&D	-	-	-	-	-	-	233	293	396	+70,1
Other natural resource management activities	-	-	-	-	-	-	123	132	136	+11,1
Total	-	-	-	-	-	-	12.306	12.458	13.360	+8,6

CEPA and CreMA activities, Regulation (EU) No 538/2014 and Commission Implementing Regulation (EU) 2015/2174)

(A) Examples of environmental purposes

3. List of CEA classes and related categories

The CEA classes (1-digits) and the related categories (2-digits and 3-digits) are identified by cross-classifying the kinds of activities that can be carried out (Table 2) and the environmental domain or natural resource concerned (Table 3).

Table 2 Kinds of environmental activities considered for identifying CEA categories

Kinds of EP activities		<ul style="list-style-type: none"> - pollution/degradation prevention activities <ul style="list-style-type: none"> ▪ pollution/degradation reduction activities: ▪ reduction of emissions and discharges - reduction of pollution levels and degradation of environmental media - measurement and control activities - research and development activities in the field of environmental protection - teaching and training activities - administrative activities
Kinds of RM activities		<ul style="list-style-type: none"> - activities aimed at reducing withdrawals: recovery, reuse, recycling, savings, substitution of natural resources - replenishment activities: increases/ recharges of natural resource stocks (for renewable resources, i.e. inland waters, forest and wild flora and fauna) - monitoring, control and surveillance (including the control on the observance of licenses, permits, quotas, ...), measurement, inventories, data collection and the like - R&D activities in the field of natural resource management - teaching, training, information and communication activities - natural resource administration and regulation activities carried out by the general government (including e.g. the elaboration of plans, the release of any kind of licenses and permits for exploiting resources, the enforcement of quotas, ...)
Kinds of RU activities	Withdrawals and distribution	<ul style="list-style-type: none"> - withdrawals from existing resources - management and maintenance activities carried out by the public or private authorities in charge of the direct management and exploitation of the reserves of natural resources - distribution of natural resources (only for water resources)
	Exploration	<ul style="list-style-type: none"> - research and exploration for new reserves and resources

Table 3 Environmental domains and natural resources considered for identifying CEA categories

Environmental domains (for EP activities), i.e. type of environmental media or type of pollution-nuisance-degradation	<ul style="list-style-type: none"> - Air pollution (and related climatic risks) - Surface water pollution - Waste - Soil and ground water pollution, erosion and other physical degradation of soil - Noise and vibration - Degradation of biodiversity and landscape - Radiation
Natural resources (for RM and RU activities)	<ul style="list-style-type: none"> - Water resources - Natural forest resources - Wild flora and fauna - Fossil energy - Minerals

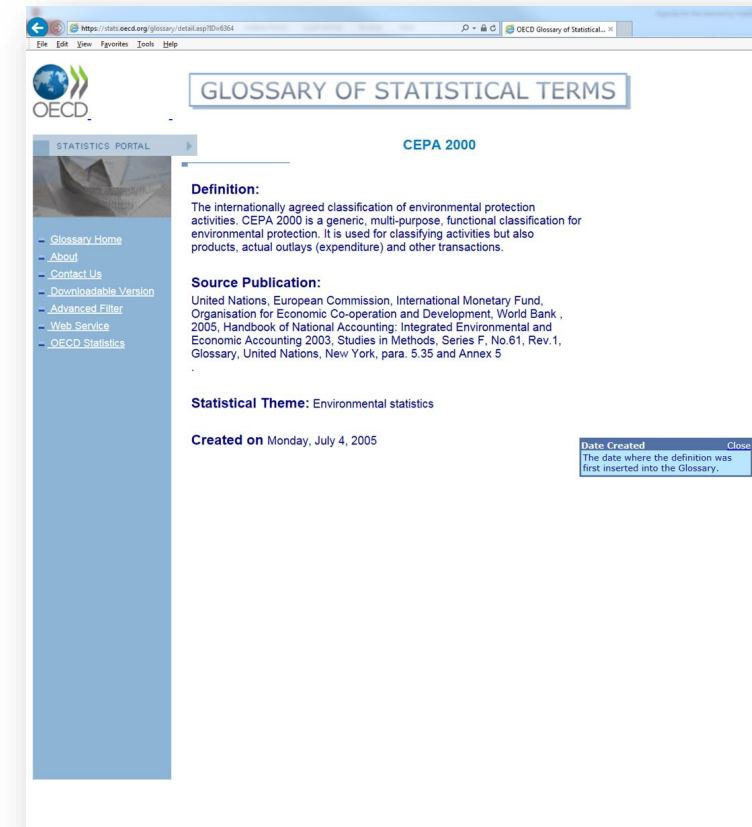
All environmental expenditures can be allocated, according to their environmental goal, to at least one of the environmental purposes that are defined in the European classifications CEPA (Environmental Protection **activities**) and CReMA* (**activities** of resource management)

Environmental Protection activities

Resource Management activities

Environmental media

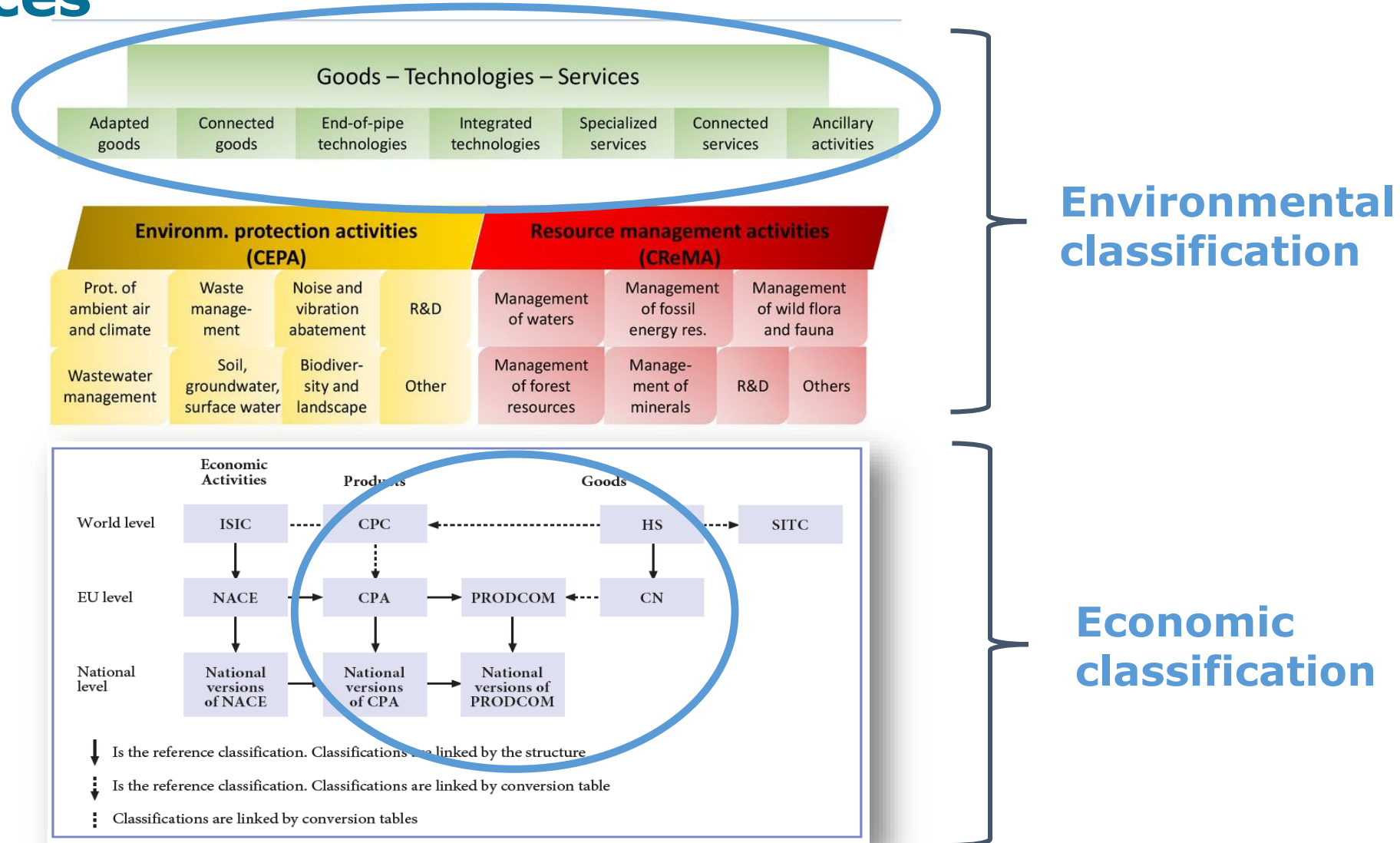
Natural Resources



THE EU TAXONOMY FOR PRODUCTS, GOODS & SERVICES (CPA, PRODCOM, CN)

**CPA, PRODCOM AND COMBINED NOMENCLATURE/HS,
REGULATION (EU) NO 2658/87 AND 538/2014
(ETC.)**

(B) The EU taxonomy for products, goods & services



(B) The taxonomy for products, goods and services – the regulation

PRODUCT CLASSIFICATIONS

Product classifications are not used in EGSS for reporting breakdowns, but play a role in the compilation of EGSS accounts. Therefore they are briefly explained here, too. At European level there are three main classifications of products – CPA, PRODCOM and CN:

- The Statistical Classification of Products by Activity (CPA 2008) is a complete product classification covering goods and services. Each type of product distinguished in the CPA is defined in such a way that it is normally produced by only one activity as defined in the NACE classification. CPA and NACE classification are linked: The first four digits of any CPA code correspond to the four-digit code of the corresponding NACE level. CPA distinguishes ca. 3100 products.
- The lists of products for statistics on the production of manufactured goods (the PRODCOM list) and its codes are used to classify products from mining and quarrying (NACE section B) and manufacturing (NACE section C). To keep it manageable, similar products are grouped into single items. The list is updated every year and currently contains ca. 3900 items. Each heading has an eight-digit code based on the first four digits of NACE sections B and C in which the producing enterprise is normally classified and the first six digits of the CPA supplemented by additional two digits. Going into more detail than CPA, the PRODCOM can allow for the identification of EP and RM output which is not singled out by CPA codes.
- The Nomenclature governed by the Convention on the Harmonized Commodity Description and Coding System, commonly known as HS Nomenclature, is an international multipurpose nomenclature which was elaborated under the auspices of the World Customs Organization. The HS Nomenclature comprises about 5000 commodity groups which are identified by a 6-digit code and arranged according to a legal and logical structure based on fixed rules. The Combined Nomenclature (CN) of the EU integrates the HS Nomenclature and comprises additional (8-digit) subdivisions and legal notes specifically created to address the needs of the EU. The trade classifications are used mainly for recording trade activities. Their items and sub-items are the fundamental terms on which industrial goods are identified in product classifications (e.g. CPA and PRODCOM⁽²¹⁾). The codes can be linked to other classifications (products or economic activities) via correspondence tables.

ENVIRONMENTAL PRODUCT CATEGORIES

Two broad product categories for voluntary reporting are defined in section 2.1: 'specific environmental products' and 'cleaner and resource efficient products'.



The screenshot shows the European Commission website. The main navigation bar includes 'Commission and its priorities' and 'Policies, information and services'. The 'Policies, information and services' dropdown is active, showing 'European Commission > Taxation and Customs Union > Node > Customs: Commission'. The page title is 'Customs: Commission publishes the 2018 version of the Combined Nomenclature'. The article text states: 'The European Commission has published the latest version of the Combined Nomenclature (CN) applicable as from 1 January 2018. The Combined Nomenclature forms the basis for the declaration of goods (a) at importation or exportation or (b) when subject to intra-Union trade statistics. This determines which rate of customs duty applies and how the goods are treated for statistical purposes. The CN is thus a vital working tool for business and the Member States' customs administrations. The Combined Nomenclature was established by Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff. It is updated every year and is published as a Commission Implementing Regulation in the Official Journal of the European Union, L Series. The latest version is now available as Commission Implementing Regulation (EU) 2017/1925 in EU Official Journal L 282 of 31 October 2017. This version applies from 1 January 2018.'

(B) Categories of environmental products, goods and services

eurostat Definition and scope of EGSS and of green jobs (VIII)

STATISTICS AUSTRIA The Information Manager

		Environmental Protection	Resource Management
Technologies	Integrated <ul style="list-style-type: none"> Cleaner Resource-efficient 	X	
			X
	End-of-pipe	X	X
Goods	Adapted <ul style="list-style-type: none"> Cleaner Resource-efficient 	X	
			X
	Connected	X	X
Services	Environmental specific	X	X
	Connected	X	X

Figure 2.2 : Nomenclature of the environmental technologies, goods and services
Source: Handbook on Environmental Goods and Services Sector (Eurostat 2009)

plus goods cleaner when produced; plus cleaner or resource efficient services

www.statistik.at slide 16 | 9 November 2018

The EU EGSS handbook not only identifies “environmental technologies” (environmental products and services) via PRODCOM codes (for example a code for a solar panel or an electric car) but the EU EGSS is **also able to identify** “adapted products” by referring to existing sustainability standards that the market uses (such as energy labels on buildings or organic food) and certifications (such as FSC or the EU ecolabel) to define sustainability.

eurostat Definition and scope of EGSS and of green jobs (VIII)

STATISTICS AUSTRIA The Information Manager

Overview of environmental goods and services

End-of-pipe technology: operates independently or is an identifiable part at the end of a production or consumption cycle. Pressure on the environment already occurred.
Integrated technology: Less polluting and resource intensive than the equivalent average technology in a given country.
Connected products: Are not the output of characteristic EP or RM activities but their use directly serves an EP or RM objective.
Adapted products: Less polluting or more resource efficient than equivalent normal products with a similar utility. Their primary use is not EP or RM.
Environmental specific services: Characteristic environmental protection or resource management activities. Their purpose is EP or RM.

www.statistik.at slide 16 | 3 December 2018

• **Specific services**



• **Connected products**

• **Adapted products**



CPA, PRODCOM and Combined Nomenclature, Regulation (EU) No 2658/87 and 538/2014 (etc.)

Source: https://www.cbs.nl/-/media/_pdf/2017/16/report-egss2016.pdf

(B) Examples of classification: low carbon energy and railways

Example of international HS code for low-carbon energy technologies (similar to CN)

LCETs classification

There are many attempts to define low-carbon energy technologies through the HS or CN classifications, as explained in Annex 2 below. These contributions provide *ad-hoc* aggregations of the HS codes that are needed to analyse trade related to energy technologies. Based on the examination of these previous works and with a closer correspondence to Rudyk et al. (2015), the concordance between LCETs and HS codes is summarised in Table 2.

Table 2: Concordance between HS codes and energy technologies

Technology	HS Code	HS code description
Biofuels	220710	Ethyl Alcohol (Alcoholic Strength 80 degrees or More)
	220720	Ethyl Alcohol, Other Spirits (Denatured)
	840420	Condensers for Steam or Other Vapour Power Units
Clean coal & gas	841181	Other Gas Turbines of a Power Not Exceeding 5,000kw
	841182	Other Gas Turbines of a Power Exceeding 5,000kw
	841199	Parts of Other Gas Turbines
	850710	Lead-acid Accumulators, of a Kind Used for Starting Piston Engines
Energy Storage	850720	Other Lead-acid Accumulators
	850730	Nickel-cadmium Accumulators
	850740	Nickel-iron Accumulators
	841861	Compression Type Units Whose Condensers Are Heat Exchangers
Heating	841950	Heat Exchanger Units
	841011	Hydraulic Turbines, Water Wheels, of a Power Not Exceeding, 1,000kw
Hydropower	841012	Hydraulic Turbines and Water Wheels, Power 1,000-10,000kw
	841013	Hydraulic Turbines, Water Wheels, of a Power Exceeding 10,000kw
	841090	Parts of Hydraulic Turbines and Water Wheels, Including Regulators
	680610	Slag wool, rock wool and similar mineral wools (incl. intermixtures thereof), in bulk, sheets or rolls
Insulation	680690	Other: Articles of Heat-insulating, Sound-insulating Mineral Materials
	700800	Multiple-walled insulating units of glass
	701939	Webs, Mattresses, Boards and Similar Nonwoven Products, of Glass Fibres
	840110	Nuclear reactors
Nuclear energy	840120	Machinery and apparatus; for isotopic separation, and parts thereof
	840140	Nuclear reactors; parts thereof
Smart meters	902830	Electricity meters
Solar PV	854140	Diodes, transistors and similar semiconductor devices; photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes; mounted piezoelectric crystals
		Instantaneous or storage water heaters, non-electric (excl. instantaneous gas water heaters and boilers or water heaters for central heating)
Solar Thermal	841919	Instantaneous or storage water heaters, non-electric (excl. instantaneous gas water heaters and boilers or water heaters for central heating)
		Towers and lattice masts, of Iron or Steel
Wind	730820	Generating Sets, Electric, Wind-powered
	850231	Generating Sets, Electric, Wind-powered

How many related products must be in scope?

Table 3-3: List of main goods required for wind power project

Product name	HS sub-category
Tower	HS 730820
Generator	HS 850231*
Gear box	HS 848340
Ball bearings	HS 848210
AC generators (alternators) of an output exceeding 750 kVA	HS 850164*
Rotor and blade	HS 841290*
Electrical lightening and signalling equipment, parts of engines and motors	HS 851290
33/400 kV step-up transformer	HS 850431
Double circuit high-voltage busbar and associated circuit breaker system	HS 853620

Source: WITS/COMTRADE

Example of CN codes for railways (CN has different codes for electric diesel locomotives!)

Chapter 86

RAILWAY OR TRAMWAY LOCOMOTIVES, ROLLING STOCK AND PARTS THEREOF; RAILWAY OR TRAMWAY ELECTROMECHANICAL) TRAFFIC SIGNALLING EQUIPMENT OF ALL KINDS

Commodity Code	Description
8601	Rail locomotives powered from an external source of electricity or by electric accumulators
8602	Other rail locomotives; locomotive tenders
8603	Self-propelled railway or tramway coaches, vans and trucks, other than those of heading 8604
8604 0000 00	Railway or tramway maintenance or service vehicles, whether or not self-propelled (for example, workshops, cranes, ballast tampers, trackliners, testing coaches and track inspection vehicles)
8605 0000 00	Railway or tramway passenger coaches, not self-propelled; luggage vans, post office coaches and other special purpose railway or tramway coaches, not self-propelled (excluding those of heading 8604)
8606	Railway or tramway goods vans and wagons, not self-propelled
8607	Parts of railway or tramway locomotives or rolling stock
8608 0000 00	Railway or tramway track fixtures and fittings; mechanical (including electromechanical) signalling, safety or traffic control equipment for railways, tramways, roads, inland waterways, parking facilities, port installations or airfields; parts of the foregoing
8609	Containers (including containers for the transport of fluids) specially designed and equipped for carriage by one or more modes of transport

[Go Up To Sections Page](#)

Source:

<https://www.taricsupport.com/nomenclatuur/8600000000.html>

CN code	Description	Conventional rate of duty (%)	Supplementary unit
1	2	3	4
8601	Rail locomotives powered from an external source of electricity or by electric accumulators:		
8601 10 00	– Powered from an external source of electricity	1,7	p/st
8601 20 00	– Powered by electric accumulators	1,7	p/st
8602	Other rail locomotives; locomotive tenders:		
8602 10 00	– Diesel-electric locomotives	1,7	—
8602 90 00	– Other	1,7	—
8603	Self-propelled railway or tramway coaches, vans and trucks, other than those of heading 8604:		
8603 10 00	– Powered from an external source of electricity	1,7	p/st
8603 90 00	– Other	1,7	p/st

(B) Example of disclosure from EU member state of investments per product category

- Example of how CN is used by member states in environmental accounts: Austria reports the same environmental goods and services that were previously shown per CEPA code also per environmental product (and also per NACE sector code, as we see later)
- Commission Implementing Regulation (EU) 2015/2174)
- This is only possible via an integrated approach of all taxonomies mentioned earlier



Environmental Goods and Services Sector 2008 to 2016 by goods, technologies and services

Goods, technologies, services	2008	2009	2010	2011	2012	2013	2014 ¹⁾	2015	2016	Change 2008 - 2016 in %
Environmental output in million Euro (and change in %)										
Environmental services (incl. ancillary activities)	13.316	13.600	14.091	14.606	16.833	17.060	13.020	12.843	12.460	-6,4
Connected goods	1.466	1.335	1.367	1.481	1.577	1.537	2.443	2.469	2.559	+74,5
Adapted goods	10.357	10.081	10.277	10.420	10.624	11.171	9.521	8.964	9.999	-3,5
End-of-pipe technologies	1.496	1.281	1.135	1.463	1.575	1.555	1.156	1.185	1.458	-2,5
Integrated technologies	4.412	4.548	4.749	5.153	5.406	5.115	5.909	6.657	7.489	+69,7
Total	31.048	30.844	31.618	33.122	36.015	36.437	32.049	32.118	33.966	+9,4
Environmental gross value added in million Euro (and change in %)										
Environmental services (incl. ancillary activities)	-	-	-	-	-	-	5.593	5.629	5.743	+2,7
Connected goods	-	-	-	-	-	-	719	729	839	+16,6
Adapted goods	-	-	-	-	-	-	3.571	3.275	3.779	+5,9
End-of-pipe technologies	-	-	-	-	-	-	377	398	475	+25,8
Integrated technologies	-	-	-	-	-	-	2.046	2.426	2.524	+23,3
Total	-	-	-	-	-	-	12.306	12.458	13.360	+8,6
Environmental exports in million Euro (and change in %)										
Environmental services (incl. ancillary activities)	-	-	-	-	-	-	673	695	690	+2,5
Connected goods	-	-	-	-	-	-	941	938	926	-1,5
Adapted goods	-	-	-	-	-	-	1.124	1.130	1.535	+36,5
End-of-pipe technologies	-	-	-	-	-	-	692	705	1.002	+44,9
Integrated technologies	-	-	-	-	-	-	4.469	5.058	5.716	+27,9
Total	-	-	-	-	-	-	7.898	8.525	9.869	+25,0
Environmental employment in persons (and change in %)										
Environmental services (incl. ancillary activities)	77.432	78.721	80.753	80.608	86.564	88.393	69.428	70.334	68.959	-10,9
Connected goods	7.193	7.105	6.744	6.993	7.293	6.796	10.294	10.067	10.360	+44,0
Adapted goods	61.426	60.954	59.357	58.570	57.837	62.139	73.367	71.870	71.749	+16,8
End-of-pipe technologies	6.590	6.230	5.701	6.545	7.358	6.519	4.629	4.632	5.136	-22,1
Integrated technologies	15.023	16.578	17.638	19.103	21.722	20.222	23.359	24.940	25.392	+69,0
Total	167.665	169.589	170.192	171.819	180.775	184.068	181.078	181.845	181.595	+8,3
Environmental employment in full-time equivalents (and change in %)										
Environmental services (incl. ancillary activities)	-	-	-	-	-	-	55.818	56.082	54.559	-2,3
Connected goods	-	-	-	-	-	-	9.519	9.331	9.504	-0,2
Adapted goods	-	-	-	-	-	-	66.078	65.789	65.966	-0,2
End-of-pipe technologies	-	-	-	-	-	-	4.529	4.490	5.016	+10,8
Integrated technologies	-	-	-	-	-	-	21.162	22.725	22.874	+8,1
Total	-	-	-	-	-	-	157.106	158.417	157.920	+0,5

S: STATISTICS AUSTRIA, Environmental Accounts, Environmental Goods and Services Sector (EGSS), 2016, on behalf of BMNT. Compiled on 11 December 2018. - 1) Break in time series. - "x" = Evidence nonexistent or not possible due to objective reasons.

(B) Eco-labels in the taxonomy for goods and services

The EUROSTAT EGSS handbook mentions that the taxonomy uses eco-labels to identifying green assets or activities (such as buildings, food); The EU should do the same in the Sustainable Finance taxonomy: set general rules how to apply “certifications, claims and declarations” in identifying ‘sustainable’

Box 2: Features of goods and services

Characteristics of goods are that they:

- are physical objects,
- can be traded separately from their production.

Characteristics of services are that they:

- are not physical objects,
- cannot be traded separately from their production.

This handbook adopts the delimitation between goods and services of the Balance of Payments. Goods correspond to commodities described at international level by the Standard International Trade Classification (SITC) and the Harmonized Commodity Description and Coding System (HS) and at European level by the Combined Nomenclature, a European classification of goods used for foreign trade statistics (CN). Services correspond to products described at international level by the Extended Balance of Payments Services (EBOPS) classification. Annex 7 presents examples from the classification of services used for EBOPS that are relevant for identifying environmental services and the correspondence with the Statistical Classification of Products by Activity in the European Union (CPA 2008).

Cleaner and resource efficient products may or may not be easily identifiable. Environmental labelling schemes and standards can help identifying environmental products (see Box 3). This handbook proposes that countries select products that have the highest environmental class given by European schemes. Other guidance to identify cleaner and resource efficient products is provided in Chapter 4, e.g. Box 7.

Box 3: Examples of labels and standards useful for identifying environmental products

Energy efficiency

EU Directive 92/75/EC (replaced by Directive 2010/30/EU) established an energy consumption labelling scheme. The directive was implemented by several other directives. Most white goods, light bulb packaging and cars must have an EU Energy Label clearly displayed when offered for sale or rent. The energy efficiency of the appliance is rated in terms of a set of energy efficiency classes from A to G on the label, A being the most energy efficient, G the least efficient. The information should also be given in catalogues and included by internet retailers on their websites.

In an attempt to keep up with advances in energy efficiency, A+, A++ and A+++ grades were later introduced for various products; since 2010, a new type of label exists that makes use of pictograms rather than words, to allow manufacturers to use a single label for products sold in different countries.

Energy efficient products can be found in any NACE category producing electrical or heating equipment. Identification of energy efficient products for inclusion in EGSS can be very time-consuming if it must be done case by case. Some countries use as a proxy the criterion of products with a significantly different technology that does not change on a yearly basis.

Organic farming

Council Regulation (EC) No 834/2007 on organic production and labelling of organic products defines and sets the conditions for organic production. Organic farming differs from other agricultural production methods in the application of regulated standards (production rules), compulsory control schemes and a specific labelling scheme. For farming to be included under organic farming the production methods must be compliant with the rules established by this Regulation.

The products of organic farming (including organic plant, livestock and aquaculture production) are considered in this handbook as cleaner and resource efficient products.

Organic farming is part of NACE 01. The processing of organic farming products (NACE 10-12; manufacture of food products, beverages and tobacco products) is, however, not considered in this handbook to be an environmental activity and the resulting products are not environmental products.

Sustainable forestry

According to the EU Forest Strategy (COM (2013) 659 final, sustainable forest management means ‘using forests and forest land in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems’. The implementation of the EU forest strategy builds on existing legislation and international initiatives, on work carried out under Forest Europe and also on the special situation of small forest owners. Certification issues as market-based private-sector tools are also included there.

According to the indicative compendium forestry products included in EGSS reporting to Eurostat as cleaner and resource efficient products are fuel wood, and other wood when complying with sustainability measures i.e. with e.g. Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) standards. Afforestation, reforestation and the protection of forests against forest fires and pests are included as specific RM products.

Sustainable forestry is part of NACE 02.

Other environmental labels

Another way to identify cleaner and resource efficient products is to rely upon the existing ‘eco-labels’. Goods which comply with the standards set by an eco-label or which fall within the top class of an eco-label may be included in the list. The advantage of such a rule-of-thumb is its user-friendliness. The disadvantage is that, for certain goods, standards set by eco-labels are too broad, allowing for the incorporation of most of the production of a good and thus not allowing for the identification of leading ‘green’ goods. Moreover eco-labels may vary across countries and hamper comparisons.

Difficulties can arise in the classification of these goods since the eco-labels take into consideration several environmental concerns. The detailed specifications of each eco-label can give information on the main environmental concern that is addressed by the labelling scheme.



(B) The taxonomy for goods and services operationalized

- Example of Combined Nomenclature (CN) codes for Environmental Goods and Services from the Eurostat EGSS handbook.
- Eurostat advises an integrated approach of CEPA codes (for environmental purpose), CPA and CN codes (for products) and an indication of the percentage of sustainable (100% or less).
- This could also work for Sustainable Finance. Especially the use of a percentage solves the problem that many activities are not “pure play” (100%) sustainable but necessary to promote via sustainable finance
- Limitation: the CN system does not distinguish between manufacturing methods!

Annex 2: Operational EGSS list of activities (excerpt)

Environmental activities in indicative compendium	NACE Rev. 2			Class of environmental activity (CEPA/CRReMA)						
	CODE	DESCRIPTION	Share of EGSS (h=100%, v=% to be determined)	1	2	...	13A	13B	...	
Manufacture of instruments, machinery and apparatus for filtering or purifying gases and liquid	28.25; 28.29	Manufacture of non-domestic cooling and ventilation equipment; Manufacture of other general purpose machinery n.e.c.	v	X	X	X				
Manufacture of tubes and pipes for wastewater treatment plants as well as for water management	22.21; 23.81; 24.51	Manufacture of plastic plates, sheets, tubes and profiles; Manufacture of concrete products for construction purposes; Casting of iron	v		X					
Manufacture of biofuels	20.14	Manufacture of other organic basic chemicals	v				X			
Provision of sewerage services: e.g. collecting, transporting and treating wastewater, operation, maintenance and cleaning of sewer systems	37	Sewerage	h		X					
Construction low energy consumption and passive buildings and energetic refurbishment of existing buildings	16.23; 41; 43	Manufacture of other builder's carpentry and joinery, Construction of buildings; Specialised construction activities	v					X		
Installation of photovoltaic panels	43.21	Electrical installation	v				X			
Environmental consulting services	74.9	Other professional, scientific and technical activities n.e.c.	v	X	X	X	X	X	X	

The operational list of EGSS products, which provides relevant CPA and CN codes, has a similar layout.

CEPA/CReMA		Description	CN 2016
CEPA 1	Protection of ambient air and climate	Machinery a. apparatus f. filtering or purifying air (excl. isotope separators and intake air filters for internal combustion engines)	8421.39.20
		Machinery and apparatus for filtering or purifying gases other than air by a catalytic process (excl. isotope separators)	8421.39.60
		Machinery and apparatus for filtering and purifying gases other than air (excl. those which operate using a catalytic process, and isotope separators)	8421.39.80
		Parts of machinery and apparatus for filtering or purifying liquids or gases, n.e.c.	8421.99.00
		Electronic gas or smoke analysis apparatus	9027.10.10
		Non-electronic gas or smoke analysis apparatus	9027.10.90
CEPA 2	Wastewater management	Activated carbon (excl. medicaments or deodorant products for fridges, vehicles etc., put up for retail sale)	3802.10.00
		Submersible pumps, single-stage	8413.70.21
		Machinery and apparatus for filtering or purifying liquids (excl. such machinery and apparatus for water and other beverages, oil or petrol-filters for internal combustion engines)	8421.29.00
CEPA 3	Waste disposal	Panels, boards, tiles, blocks and similar articles of vegetable fibre, of straw or of shavings, chips, particles, sawdust or other waste of wood, agglomerated with cement, plaster or other mineral binders	6808.00.00
		Industrial or laboratory furnaces, incl. incinerators, non-electric (excl. for the roasting, melting or other heat treatment of ores, pyrites or metals, bakery ovens, ovens and furnaces for firing ceramic products, ovens and furnaces for firing cement, glass or chemical products)	8417.80.70
		Parts of industrial or laboratory furnaces, non-electric, incl. incinerators, n.e.c.	8417.90.00
CEPA 7	Protection against radiation	Instruments and apparatus for measuring or detecting ionising radiations	9030.10.00
CReMA 11	Management of forest resources	Pulps of fibres derived from recovered waste and scrap paper or paperboard	4706.20.00
		Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol or higher; ethyl alcohol and other spirits, denatured, of any strength	2207
CReMA 13	Management of energy resources	Biodiesel and mixtures thereof, not containing or containing less than 70 % by weight of petroleum oils or oils obtained from bituminous minerals	3826
		Natural rubber latex, whether or not prevulcanised	4001.10.00
		Reclaimed rubber in primary forms or in plates, sheets or strip	4003.00.00
		Fuel wood, in logs, in billets, in twigs, in faggots or in similar forms; wood in chips or particles; sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms	4401
		Wood charcoal (including shell or nut charcoal), whether or not agglomerated	4402
		Slag-wool, rock-wool and similar mineral wools; exfoliated vermiculite, expanded clays, foamed slag and similar expanded mineral materials; mixtures and articles of heat-insulating, sound-insulating or sound absorbing mineral materials (other than headings 8611 and 6812 and those of Chapter 69)	6806
		Multiple-walled insulating glass consisting of two panels of glass sealed around the edges by an airtight joint and separated by a layer of air, other gases or vacuum	7008.00.81
		Multiple-walled insulating glass: other	7008.00.89
		Panels comprising two walls of profiled (ribbed) sheet with an insulating core	7308.90.51
		Hydraulic turbines, water wheels, and regulators therefor	8410
Heat pumps other than air conditioning machines of heading 8415)	8418.61.00		
Generating sets, wind-powered	8502.31.00		
CReMA 14	Management of minerals	Photosensitive semiconductor devices, including photovoltaic cells whether or not assembled in modules or made up into panels; light-emitting diodes	8541.4
		Macadam of slag, dross or similar industrial waste, whether or not incorporating the materials cited in subheading 2517 10	2517.20.00

(B) The taxonomy for goods and services operationalized

- The EGSS handbook shows an indicative compendium of Environmental Goods and Services (next slide). The table below shows how that list is prepared with a reference to CPA codes, CN (or HS) codes and CEPA/CreMA codes
- Scope is wide and the application is flexible, which is an advantage for the Sustainable Finance Taxonomy. Limitation: inputs needed to manufacture sustainable products are not in scope. Generally excluded from the scope of environmental products are all assets and activities that are not the result of an economic activity such as non-produced assets (e.g. drinking water) and certain ecosystem services (e.g. carbon sequestration in plants).

Environmental goods and services in indicative compendium	CPA 2008			CN 2016			Class of environmental activity (CEPA/CreMA)																											
	CODE	DESCRIPTION	%-age of EGSS (h=100%, v=%, to be determined)	CODE	DESCRIPTION	%-age of EGSS (h=100%, v=%, to be determined)	1	2	3	4	5	6	7	8	9	10	11A	11B	12	13A	13B	13C	14	15	16									
Organic agricultural (plant and livestock) products	01.1, 01.2, 01.4	Non-perennial crops; Perennial crops; Live animals and animal products	v	01.04, 05, 06-14	Live animals; dairy produce, bird's eggs, natural honey, edible products of animal origin, not elsewhere specified or included; Products of animal origin, not elsewhere specified or included; Vegetable products	v					X																							
Supporting services to organic agriculture	01.61, 01.62	Support services for crop production; Support services for animal production	v			v				X						X																		
Other wood when complying with sustainability measures	02.10	Forest trees and nursery services	v			v											X																	
Fuel wood	02.20.14, 16.10.23	Fuel wood; Wood in chips or particles	h	4401	Fuel wood, in logs, in billets, in twigs, in faggots or in similar forms; wood in chips or particles; sawdust and wood waste and scrap, whether or not agglomerated in logs, briquettes, pellets or similar forms	h															X													
Organic aquaculture products	03.00.14, 03.00.15, 03.00.23, 03.00.23, 03.00.32, 03.00.42, 03.00.44, 03.00.64	Live fish, marine, farmed; Live fish, freshwater, farmed; Fresh or chilled fish, marine, farmed; Fresh or chilled fish, freshwater, farmed; Crustaceans, not frozen, farmed; Oysters, live, fresh or chilled, farmed; Other molluscs and aquatic invertebrates, live, fresh or chilled, farmed; Seaweeds and other algae, farmed	v	03	Fish and Crustaceans, molluscs and other aquatic invertebrates	v					X							X																
Supporting services to organic aquaculture	03.00.72	Support services to aquaculture	v								X							X																
Rehabilitation of mining sites services	09.39.00.11	Mining support services; Remediation and clean-up services, soil and groundwater	v							X																								
Waste collection services of waste resulting from the extraction of raw materials	09.39.00.11	Mining support services; Remediation and clean-up services, soil and groundwater	v						X																									
Drainage water capturing services to prevent groundwater contamination	09.39.00.11	Mining support services; Remediation and clean-up services, soil and groundwater	v							X																								
Electric and more resource efficient transport equipment	29.30	Motor vehicles, trailers and semi-trailers; Other transport equipment	v	87.86	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof; Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electromechanical) traffic	v	X														X													
Exhaust pipes and their parts (also particles filters)	29.32.30	Parts and accessories n.e.c., for motor vehicles	v	8708; 8714	Parts and accessories of the motor vehicles of headings 8701 to 8705; Parts and accessories of vehicles of headings 8711 to 8713	v	X				X																							
Instruments, machinery and apparatus	26.51.53	Instruments and apparatus for physical or chemical analysis	v	9027.10.10	Electronic and non-electronic gas or smoke analysis	v	X	X	X																									

Not all "related" products are in scope

Table 3-3: List of main goods required for wind power project

Product name	HS sub-category
Tower	HS 730820
Generator	HS 850231*
Gear box	HS 848340
Ball bearings	HS 848210
AC generators (alternators) of an output exceeding 750 kVA	HS 850164*
Rotor and blade	HS 841290*
Electrical lightening and signalling equipment; parts of engines and motors	HS 851290
33/400 kV step-up transformer	HS 850431
Double circuit high-voltage busbar and associated circuit breaker system	HS 853620

Source: WITS/COMTRADE

(B) The taxonomy for goods and services - examples

The EUROSTAT EGSS handbook includes a long list of coded environmental goods and services as example.

Important note: flexible system, identifies not just environmental technologies but also “adapted products” such as “organic food”, “low carbon buildings” and “circular materials”

Annex 1: Indicative compendium of environmental goods and services and of the economic activities to be covered by Regulation (EU) No 691/2011, Annex V

ENVIRONMENTAL GOODS AND SERVICES

- Organic agricultural (plant and livestock) and aquaculture products and supporting services
- Fuel wood; other wood when complying with sustainability measures
- Rehabilitation of mining sites services
- Drainage water capturing services to prevent groundwater contamination
- Electric and more resource efficient transport equipment; exhaust pipes and their parts (also particles filters)
- Instruments, machinery and apparatus for analysis of pollutants, filtering or purifying gases and liquid
- Septic tanks, perforated buckets and similar articles used to filter water at the entrance to drains; pumps for use in wastewater treatment, vehicles for wastewater collection and sewer cleaning, activated carbon for water-filtering purposes
- Tubes and pipes for wastewater treatment plants as well as for water management
- Sacks and bags for replacing plastic bags; bins, boxes, containers and other receptacles for storing and transporting waste; boards, blocks and similar articles of vegetable fibre, straw or wood waste, agglomerated with mineral binders; incinerators and machinery for waste treatment (e.g. used at landfilling sites)
- Lead containers for radioactive waste
- Maintenance and repair services for reducing water losses
- Specific equipment for the production of energy from renewable sources: e.g. storage systems for biogas, wood fired boilers and other appliances, solar panels and photovoltaic cells, hydraulic turbines and water wheels, wind turbines
- Biofuels
- Charcoal when complying with sustainability measures
- Goods for thermal and noise insulation mainly in buildings: e.g. cork products, windows with three insulating layers, insulation materials for facades, roofs and other elements of buildings such as materials made of glass fibre, rock wool, cellulose, polymers and polyurethane and others
- Reconditioned wooden containers
- Specific equipment produced for environmental protection and resource management products: e.g. thermostats for heating and cooling regulation, thermostatic valves, heat pumps, condensing boilers, solar water heaters
- Discharge lamps as low pressure lamps (e.g. compact fluorescent lamps) and the most efficient domestic appliances
- Reclaimed rubber in primary forms or in plates, sheets or strip, bio-plastic sacks and bags

- Manufacture of septic tanks, perforated buckets and similar articles used to filter water at the entrance to drains; pumps for use in wastewater treatment, vehicles for wastewater collection and sewer cleaning, activated carbon for water filtering purposes
- Manufacture of tubes and pipes for wastewater treatment plants as well as for water management
- Manufacture of sacks and bags for replacing plastic bags; bins, boxes, containers and other receptacles for storing and transporting waste; boards, blocks and similar articles of vegetable fibre, straw or wood waste, agglomerated with mineral binders; incinerators and machinery for waste treatment (e.g. used at land-filling sites)
- Manufacture of lead containers for radioactive waste
- Maintenance and repair services for reducing water losses
- Manufacture of specific equipment for the production of energy from renewable sources: e.g. storage systems for biogas, wood fired boilers and other appliances, solar panels and photovoltaic cells, hydraulic turbines and water wheels, wind turbines
- Manufacture of biofuels
- Manufacture of charcoal complying with sustainability measures
- Manufacture of goods for thermal and noise insulation mainly in buildings: e.g. cork products, windows with three insulating layers, insulation materials for facades, roofs and other elements of buildings such as materials made of glass fibre, rock wool, cellulose, polymers and polyurethane and others
- Reconditioning of wooden containers
- Manufacture of specific equipment produced for environmental protection and resource management: e.g. thermostats for heating and cooling regulation, thermostatic valves, heat pumps, condensing boilers, solar water heaters
- Manufacture of discharge lamps as low pressure lamps (e.g. compact fluorescent lamps) and the most efficient domestic appliances
- Manufacture of reclaimed rubber in primary forms or in plates, sheets or strip, bio-plastic sacks and bags
- Manufacture of machinery for metal recovery
- Maintenance, repair and installation activities for environmental goods
- Production of electricity, gas and heat from renewable sources
- Desalination of water and collection of rainwater; maintenance of water mains for reducing water losses
- Provision of sewerage services: e.g. collecting, transporting and treating wastewater, operation, maintenance and cleaning of sewer systems;
- Provision of collection, treatment and disposal services for non-hazardous and hazardous waste
- Provision of nuclear waste treatment and disposal services
- Provision of materials recovery services; production of secondary raw materials
- Provision of remediation and clean-up services for soil, groundwater and surface water
- Provision of remediation and clean-up services for air
- Provision of other remediation and specialised pollution control services
- Constructing low energy consumption and passive buildings and energetic refurbishment of existing buildings
- Maintenance and repair of water networks

(B) Case study: Environmental Trade Finance

- Environmental goods and services are promoted in trade agreements via lower tariffs and Non-Tariff Measures (NTM).
- Trade in environmental goods is considered to be an important enabler of many of the environmental dimension of the 2030 Agenda for Sustainable Development and associated SDGs.
- Governments and Trade Unions have prepared sophisticated lists of environmental goods, based on harmonized system codes (HS, CN).
- Banks can link these HS codes also to trade finance transactions, and “automate” green trade finance quickly. Quick win! In order to support this, the Sustainable Finance Taxonomy must refer to CN-codes.

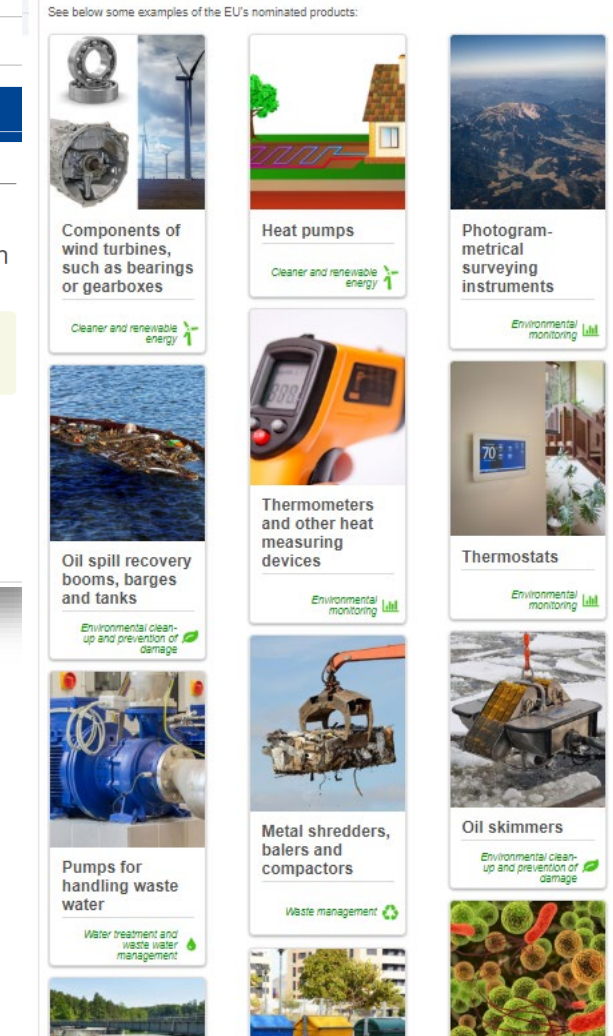


Pictures right: excerpt of EU webpage showing environmental goods in the Environmental Goods Agreement (EGA)

Sources:

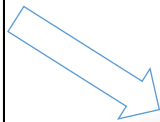
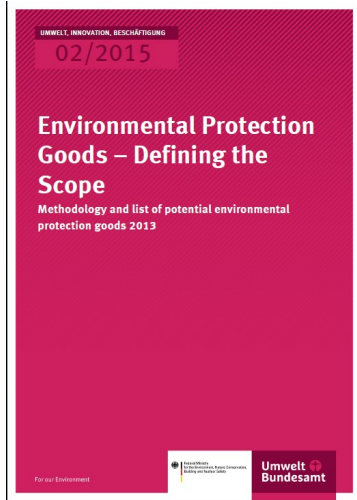
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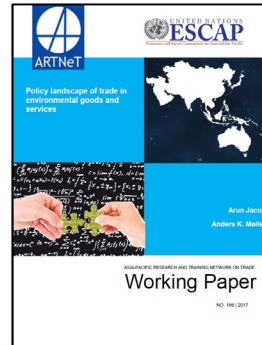
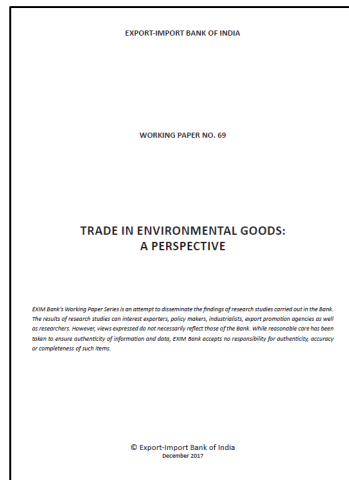


(B) Case study: Environmental Trade Finance

Germany



India



Arun Jacob and Anders K. Møller (2017), "Policy landscape of trade in environmental goods and services", ARTNeT Working Paper Series No. 166, April 2017, Bangkok, ESCAP. Available at: <http://artnet.unescap.org>

Table 3-3: List of main goods required for wind power project

Product name	HS sub-category
Tower	HS 730820
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Ball bearings	HS 848210
AC generators (alternators) of an output exceeding 750 kVA	HS 850164*
Rotor and blade	HS 841290*
Electrical lightening and signalling equipment; parts of engines and motors	HS 851290
33/400 kV step-up transformer	HS 850431
Double circuit high-voltage busbar and associated circuit breaker system	HS 853620

Source: WITS/COMTRADE

5 New list of potential environmental protection goods

No.	GP 2009	Part of	PRODCOM 2008	GP Description	CEPA 2000	Product specification	Relevance for Environment	Main Field	Main Field 2
1	0811 20 503	ex	08.11.20.50	Limestone flux, limestone and other calcareous stone used for the manufacture of lime or cement (excluding crushed limestone aggregate and calcareous dimension stone) - limestone used for the manufacture of lime or cement for manufacturing industry and environmental technologies	Wastewater management Protection of ambient air	chemical recovery chemical recovery equipment flue gas desulfurization	partly environmentally relevant, if wastewater, protection of ambient air	Air	
2	1320 31 300		13.20.31.30	Woven fabrics of man-made filament yarns obtained from high tenacity yarn, strip or the like (including nylon, other polyamides, polyester, viscose rayon)	Waste management Wastewater management Protection of ambient air		partly environmentally relevant, if waste, wastewater, protection of ambient air (filter textiles)	Water/Wastewater	
3	1320 31 709	ex	13.20.31.70	Woven fabrics of artificial filament yarns (excluding those obtained from high tenacity yarn) - for technical and industrial requirements	Wastewater management	filter systems	partly environmentally relevant, if wastewater	Water/Wastewater	
4	1320 46 000		13.20.46.00	Woven fabrics of glass fibre (including narrow fabrics, glass wool)	Climate protection (resource management; renewable energy)	renewable energy (wind power station), glass-fibre reinforced plastics	partly environmentally relevant, if climate protection	Renewable Energy	Wind power

Environmental Protection Goods – Defining the Scope

(B) Case study: DG ENER proposes new PRODCOM

Example of DG ENER proposing a new threshold for specific products via a new PRODCOM categories for a better fit with the Ecodesign directory.

How do we achieve energy efficiency in product design?

Combined effect ensures a dynamic improvement of the market:



Ecodesign Directive 2009/125/EC

Energy Labelling Regulation 2017/1369

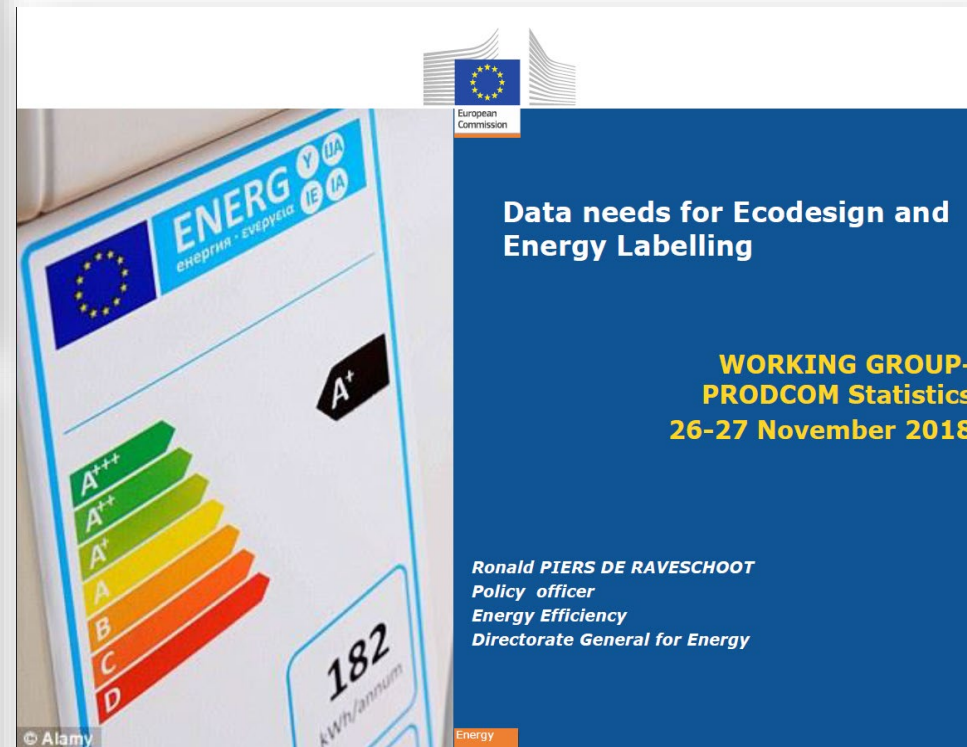
95 Multi-phase AC motors > 750 kW– add 1000kW threshold or replace the actual 750kW

concerned heading: CPA: 27.11.25 - AC motors, multi-phase, of an output > 75 kW

1 PRODCOM we have the actual situation:

CPA: 27.11.25	AC motors, multi-phase, of an output > 75 kW			
27.11.25.30	Multi-phase AC traction motors of an output > 75 kW	8501 53 50	p/st	S
27.11.25.40	Multi-phase AC motors of an output > 75 kW but ≤ 375 kW (excluding traction motors)	8501 53 81	p/st	S
27.11.25.60	Multi-phase AC motors of an output > 375 kW but ≤ 750 kW (excluding traction motors)	8501 53 94	p/st	S
27.11.25.90	Multi-phase AC motors of an output > 750 kW (excluding traction motors)	8501 53 99	p/st	S

or fitting with the Ecodesign Directive DG ENER proposes to create new categories by adding a 1000kW threshold or replacing the existing one 750kW



Data needs for Ecodesign and Energy Labelling

WORKING GROUP-
PRODCOM Statistics
26-27 November 2018

Ronald PIERS DE RAVESCHOOT
Policy officer
Energy Efficiency
Directorate General for Energy

(B) Case study: Labels, Claims and Declarations

- Corporate issuers use various systems to label their products: Environmental Certifications (14024), Claims (14021) and Declarations (ISO 14025) and the Iseal Code of Good Practice
- The EU sustainable finance taxonomy could refer to these standards. Big advantage: sustainability criteria are set and maintained by other parties than the EU



3.1 The ISO typology

Despite their broad scope and diversity, only a few typologies of ELIS have been developed and used. The most widely used typology relies on the series of ISO 14020 standards, which separates environmental labelling schemes into three types (ISO, 1999a, 1999b and 1999c).

- Type I (ISO 14024) is the standard for ecolabels, defined as multi-criteria, whole life-cycle-approach-based, third-party voluntary labelling schemes that distinguish some of the best performing products according to predetermined environmental criteria and apply to diverse product categories. These labels are designed to reward environmental excellence and, as such, are a market-based tool designed to encourage environmental improvement. Most ecolabels have been introduced by or with the contribution of government agencies, setting multi-criteria standards that have then been adopted on specific ranges of products starting in the late 1970s.
- Type II labels (ISO 14021) are self-declared claims, privately made, that describe a product based on one or more characteristics following general guiding principles. In particular they have to be verifiable, and use accurate and non-misleading information. The standard provides guidance as to the proper use of ubiquitous symbols and terms (e.g., “recyclable”).
- Type III (ISO 14025) focuses on environmental declarations, providing quantitative indicators of environmental performance based on life-cycle assessments. These declarations are generally intended for businesses-to-business communication, but can be used by consumers provided they are third-party audited.

The specific characteristics of each type are shown in Table 2.

Table 2. ISO Standards and their main requirements

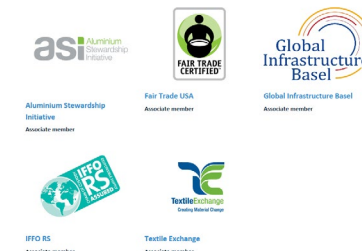
ISO Standard	Type	Requirements	Examples of schemes
14024	Type I – Ecolabels	Multi-issues third-party voluntary labels indicating high environmental performance based on set of life-cycle-based criteria and designed and implemented in a transparent manner.	Blue Angel, Nordic Swan, Canadian Environmental Choice.
14021	Type II – Self-declared Environmental Claims	Private claims, first-party verified, adhering to specific principles (verifiable, accurate information, not misleading).	Recycled content, Biodegradable.
14025	Type III – Environmental Declarations	Quantified environmental information, based on life-cycle analysis, using independent verifiable data, primarily used for business-to-business communication.	Eco-Leaf; Korean Environmental Declaration of Products.

Source: OECD

Sources: ISO (1999a; 1999b and 1999c); Allison and Carter (2000); GEN (2013); JEMAI (2013); KEITI (2013).



“ISEAL Members produce and annually update a public report on their standard-setting, assurance, and monitoring and evaluation systems”



(B) Case study: Starbucks' Sustainability Bond

Example of eco-labels in sustainable bonds: certified coffee

The proceeds of the sustainability bond

are allocated towards refinancing and funding Starbucks projects

- Purchasing of certified coffee, incl. transportation and storage
- Development and operation of farmer support centres and agronomy research and development centres; Loans made to coffee farmers



Project selection criteria




















Criteria are set by Conservation International (CI): C.A.F.E standard, Audited by SCS Global Services. There are **249 indicators** for sustainable coffee (see picture)



Conservation International (CI) is an nonprofit environmental organization. Its goal is to protect nature as a source of food, fresh water, livelihoods and a stable climate, building upon a strong foundation of science, partnership and field demonstration



SCS is an international leader in third-party certification and standards development in environmental, sustainability, and food safety and quality performance claims.

People Social	Planet Environmental	Product Economic
Purpose Ensure fair and non-discriminatory hiring and employment policies. Protect employees from workplace hazards. Conform to national laws as well as to international conventions related to occupational health, safety and living conditions. Strive to improve the quality of life for coffee farmers and workers.		
Criteria Verified		
 Wages	 Benefits	 Soil
 Education	 Medical Care	 Water Use and Conservation
 Living Conditions	 Human Rights	 Energy
	 Wildlife	 Waste
		 Shade Canopy
		 Agro-Chemical Use
		 Equitable Payments
		 Receipts/Invoices
		 Long-Term Viability
		 Green Coffee Preparation
		 Cup Quality
		 Farm Traceability

- Starbucks' Sustainability Bond uses 249 external criteria for sustainable certified coffee set by Conservation International (CI) and audited by SCS.
- Imagine that the Agri section of the EU Taxonomy would add all kinds of **criteria** that must **also** be met in order to be compliant with the Taxonomy.
- This would be a disaster for Financial Market Participants because they cannot fully rely on an existing coffee standard anymore that are used in operational processes.
- It is much better when the EU or Financial Market Participants engage with standard setting bodies (CI) when they are not happy with the criteria.
- It is key to leave it to the market to set criteria.

(B) Case study: OECD on Environmental Labelling

- Environmental labels are often used in green bonds and the market does not know much about it
- An OECD study (2013) researches all characteristics (quality requirements) of environmental labels
- Standards can be Product standards but also Product processes and production methods (PPMs) used to produce the good.
- The EU Sustainable Finance Plan could set some basic quality requirements for eligible labels with the help of characteristics as in table 3 and 5 (without limiting the market; the market share of labels is already small!)

Table 3. Main characteristics of ELIS

Type of criteria	Categorical responses	Examples
Modes of Communication		
Communication channel	Business-to-business (B2B), Business-to-consumer (B2C), Business-to-government (B2G), Government-to-consumer (G2C)	B2B: Abengoa RED; B2C: Krav Organic; G2C: Eco Mark Japan.
Means of communication	Seal, report or declarations. That can be further decomposed into ISO types and exceptions: organic, other single-issue label, resource efficiency label.	Seal: Types I ecolabels Declarations: Type III labels
Communication scope: category of good or service targeted	Agriculture and food, textile products, forest products, buildings and furniture, energy, transportation, biofuels, tourism, household appliances, electronics, cosmetics, cleaning products.	Agriculture and Food: Protected Harvest; Textile: Oeko Tex Standard 100; Forest products: Forest Stewardship Council; biofuels: 2Bsvs; Tourism: Blue Flag; Appliances: Top Runner Program.
Communication content: Environmental attributes	Natural resource, energy, sources of pollution (chemicals), biodiversity, climate, waste, other, multiple	Natural resource: Water Stewardship; Energy: Energy Star; Biodiversity: Shade Grown Coffee; Climate: Carbon Labels.org; Waste: Biodegradable.
Standard Characteristics		
Standard setter	Self-setting External certifier	Type II ELIS: self-claims; ISEAL Alliance members: external certifiers
Leadership or ownership	Private, public, non-profit, hybrid	Private: Casino Carbon Index; Public: Korean Carbon footprint label; Non-profit: Friend of the Sea; hybrid: Roundtable on Sustainable Soy Association
Mode of governance	Voluntary versus mandatory	Voluntary: UL Environment Mandatory: EnerGuide.
Transparency	Availability of information on the standard setting process (yes or no), publication of awardees (yes or no).	Open: EU Ecolabel Not: Bonsucro
Methods for environmental assessment	Life-cycle approach (LCA) based or not	LCA based: Environmental Choice Canada Non-LCA based: USDA National Organic Program.
Monitoring and auditing	First-party, second-party, third-party	First-party: EPA SmartWay Second-party: Green Seal Third-party: Bio-Suisse
Standard focus	Product standard, prPPM, nprPPM, service	Product Standard: Energy efficiency labels prPPM: Imprim'Vert nprPPM: Timberland Green Index
Standard scope	Regional, national, international	Regional: Pure Catskills National: Korean EcoLabel International: Marine Stewardship Council

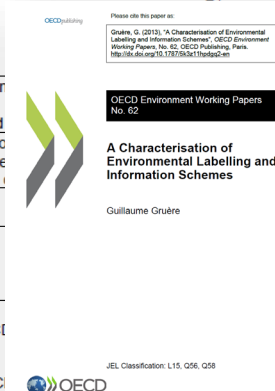
Sources: Author, with examples from Blackman *et al.* (2012); Capozza (2011); Earley and Anderson (2003); EPA (2013); EVEA et Savin Martinet Associés (2012); OECD (1994a; 1997a; 2005; 2007; 2009b, 2009c; 2011a and 2012); Mazur (2012); Moisé and Steenblik (2011); and Ottman (2011).

Table 5. Explanatory variables extracted from the combined ELIS dataset

		Indicator Variable	Sum
Communication modes	Communication channel	B2C communication channel	381
		G2C communication channel	94
		B2B communication channel	62
		G2B communication channel	7
	Communication means	ISO Type I ecolabel	34
		Organic Label	81
		Other single-issue label	222
		ISO Type II claim	44
		ISO Type III declaration	26
		Resource Efficiency	25
		Other communication mean	112
	Communication target	Food and agriculture products	139
		Textile and forest products	83
		Buildings and furniture	88
		Energy, transportation, biofuels	73
		Tourism, financial	30
		Appliances, electronics	42
		Consumer, cosmetics, cleaning products	26
		Multiple products	113
		Other products	25
		Communication content	352
Standards Characteristics	Owner and mode of governance	Natural Resource management	339
		Waste and recycling	228
		Energy efficiency	200
		Climate change mitigation	193
	Transparency*	Biodiversity conservation	189
		Other environmental areas	167
		Public mandatory	21
		Non-profit voluntary	
		Hybrid voluntary	
		Private voluntary	
	Monitoring*	Open standard setting	
		Non-open process	
	Method of assessment	Awardees published	
		First-party (audited)	
	Standard focus	Second-party (audited)	
		Third-party (audited)	
	Region of origin	LCA	
		Non-LCA	
	Scope	Product Standard	
		prPPM	
	Scope	nprPPM	
		Service	
		Europe OECD	
		North America OECD	
	Scope	Oceania OECD	
		Asia OECD	
		South America OECD	
		Non-OECD	
	Scope	Sub-national scope	12
		National scope	353
		Regional scope	76
		International scope	103

Source: Derived from the combined dataset.

*Note: Transparency and monitoring variables are not available for all ELIS. There is no data on the openness of the standard process for 66 schemes, on the publication of awardees for 278 schemes, on auditing for 312 schemes and on verification for 151 schemes.



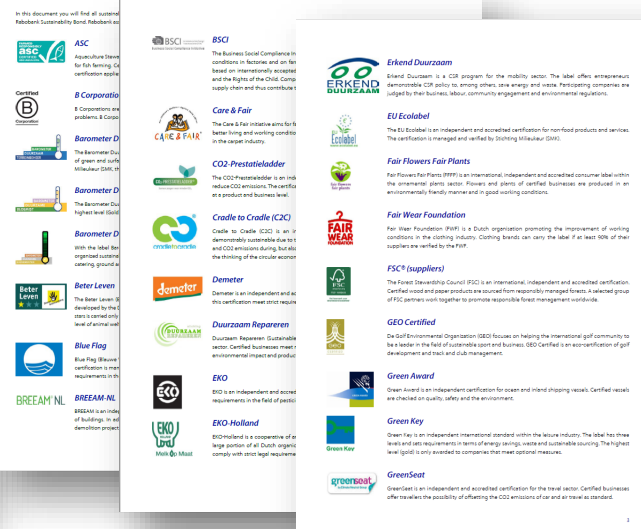
(B) Case study: Rabobank– IB “SME impact loans”



Eco-label based SME lending programme of Rabobank (EUR 10 Bn) supported by EIB tranches

Appendix 3 Sustainability facts & figures

Finance Overview with a societal character or a positive societal impact.					
<i>In millions of euros</i>	2017	2016	2015	2014	2013
Corporate Clients					
Sustainable finance					
Green loans	1,424	1,613	1,509	1,574	1,826
Sustainable project finance (excluding green loans) ¹	3,408	3,301	2,374	2,444	2,621
Loan with agriculture guarantee fund BF/BF+	282	261	255	294	300
DLL Clean tech financing ²	383	303	243		
Financing for sustainable technology and energy companies	315	349	278	192	166
Financing for environmental and recycling	383				574
Financing for companies with a sustainable business model	440				
Subtotal	35				



- SME's with one out of 40 selected eco-labels can get an attractive impact loan from Rabobank
- Automated loan identification (external certification data are used to match with client database)

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Rabobank and EIB expand support for environment-conscious entrepreneurs

Display in: [de](#) **en** [fr](#) [nl](#)

Release date: 27 July 2018

Reference: 2018-206-EN

- ▶ EUR 250m for front-running SMEs with one of the selected quality marks for environmental performance
- ▶ The facility follows three earlier “impact loans”, for a total of EUR 350m, that have supported nearly 300 Dutch SMEs.
- ▶ Selected SMEs will enjoy an interest rate discount from 0.30-0.70% thanks to EIB backing.

Following three earlier successful operations, the Rabobank and the European Investment Bank (EIB) are launching an expanded EUR 250 million “impact loan” for SMEs in the Netherlands. So far, nearly 300 environmentally-conscious businesses in the Netherlands have already benefitted from advantageous lending conditions of the EIB-backed impact loans with the Rabobank.

Wiebe Draijer, Chairman of Rabobank's Managing Board, said: "Impact loans are a success. Our employees are highly motivated to work with customers and explore how they can invest in sustainability. Impact loans contribute to the objectives of the Paris agreements. We are investigating whether impact loans can also be deployed to finance circular economy initiatives. The demand for impact loans is likely to increase since sustainability is a top priority for all businesses, which is why customers are very positive about the impact loans. The interest rate discount is both a reward for frontrunners in sustainability and an incentive for them to keep up the good work."

"This initiative rewards those businesses that have made a real effort to become greener", added the EIB's President **Werner Hoyer**. "Thanks to the excellent collaboration with the Rabobank, frontrunners in different sectors get the chance to further expand their businesses, or finance other innovative plans. The expansion of the impact loans is all the more telling in the light of the Paris agreements: it shows that doing green business makes economic sense."

Impact loans are available to entrepreneurs who are frontrunners in their sector, are demonstrably engaged in corporate social responsibility and possess one of the selected quality marks. Applications for an impact loan have to meet the normal conditions of the EIB and Rabobank. Impact loans are available for businesses with up to 3,000 employees. The total investment may not exceed 25 million euros and the loan principal is capped at 7.5 million euros. The final loan approval decision rests with Rabobank.



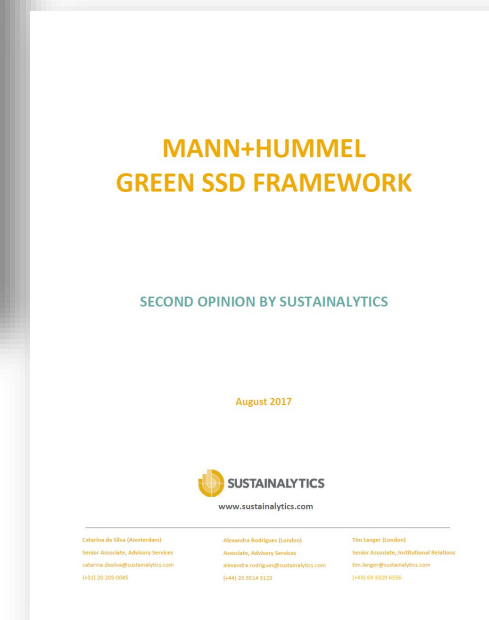
(B) Case study - Mann+Hummel Green bond

Use of proceeds

MANN+HUMMEL will allocate an amount at least equal to the net proceeds from sales of the green SSD to (re)finance a portfolio of eligible investments and expenditures in:

- Products or solutions with an environmental benefit
- Improvement of the environmental performance of production facilities and processes

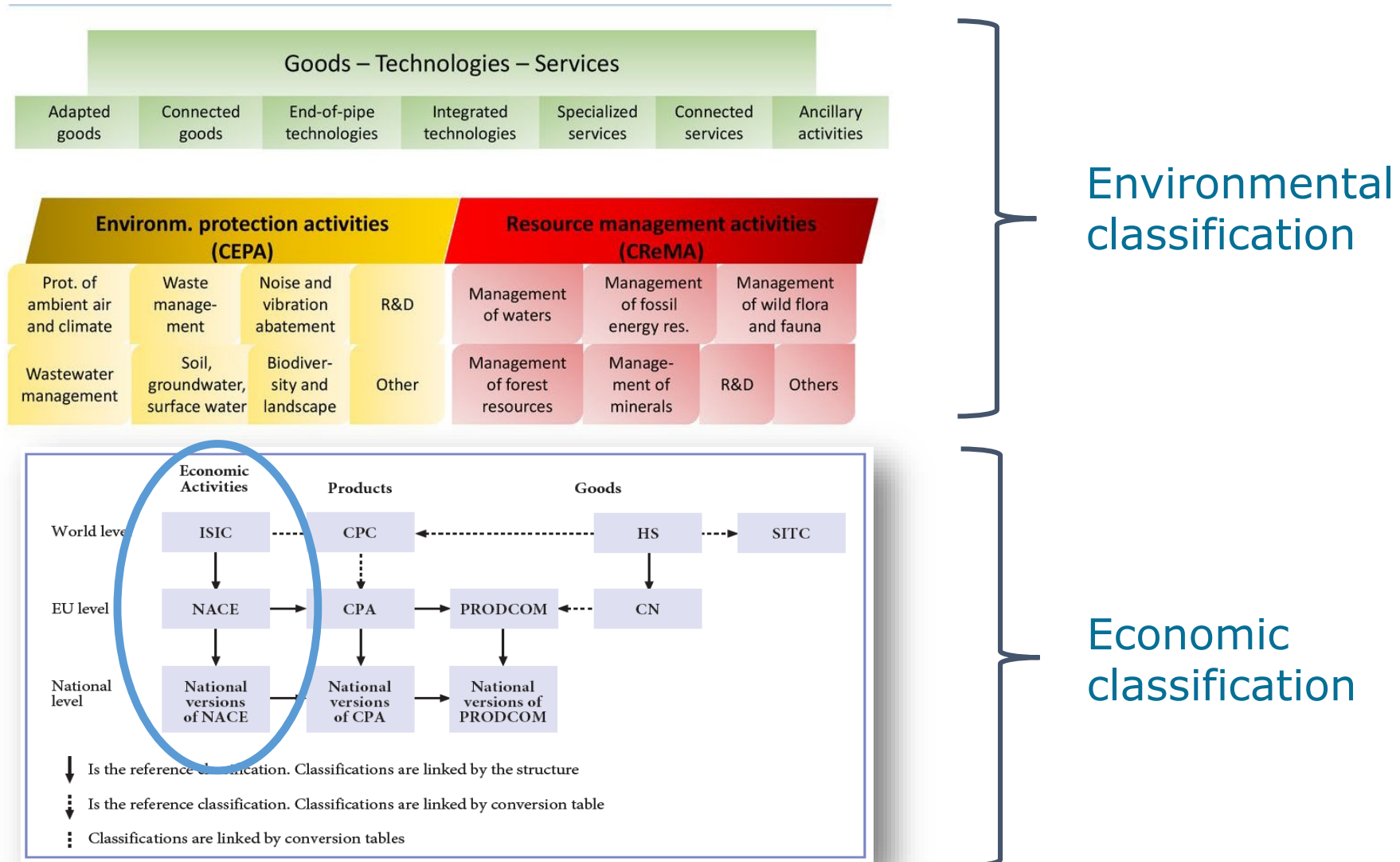
Use of proceeds	Eligible products or solutions	Environmental benefit	KPIs
Products or solutions with an environmental benefit	i) Water filtration products & solutions	Sustainable water & wastewater management	• Number of water filtration products/solutions
	ii) Compression filtration products & solutions	Energy efficiency	• Energy saving % via compression and air filtration compared to market average
	iii) Electrified propulsion products & solutions	Clean transportation	• Number of hybrid/EV vehicles using electrified propulsion products
	i) Air filtration products & solutions	Pollution prevention & control in internal environments	
		Energy efficiency	
Improvement of the environmental performance of production facilities & processes	i) Renewable energy generation		• Energy saved aggregate (eWh)
	ii) Energy efficiency		• Waste diverted from landfills
	iii) Water efficiency		• Water recycled or composted (tons)
	iv) Pollution prevention and control		



THE EU TAXONOMY FOR SECTORS (NACE)

**NACE (NOMENCLATURE STATISTIQUE DES ACTIVITÉS ÉCONOMIQUES
DANS LA COMMUNAUTÉ EUROPÉENNE). REGULATION (EU) NO 1893/2006
AND EGSS COMMISSION IMPLEMENTING REGULATION (EU) 2015/2174)**

(C) The EU taxonomy for sectors (NACE)



(C) The EU taxonomy for Sectors (NACE)

NACE codes (Regulation (EU) No 1893/2006)

NACE Rev. 2 section	NACE Rev. 2 division	Description
A	01-03	Agriculture, forestry and fishing
B	05-09	Mining and quarrying
C	10-33	Manufacturing
D	35	Electricity, gas, steam and air conditioning supply
E	36-39	Water supply, sewerage, waste management and remediation activities
F	41-43	Construction
G	45-47	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	49-53	Transportation and storage
I	55-56	Accommodation and food service activities
J	58-63	Information and communication
K	64-66	Financial and insurance activities
L	68	Real estate activities
M	69-75	Professional, scientific and technical activities
N	77-82	Administrative and support service activities
O	84	Public administration and defence; compulsory social security
P	85	Education
Q	86-88	Human health and social work activities
R	90-93	Arts, entertainment and recreation
S	94-96	Other service activities
T	97-98	Activities of households as employers, undifferentiated goods- and services-producing activities of households for own use
U	99	Activities of extraterritorial organisations and bodies

Sources: Eurostat; RAMON - Reference And Management Of Nomenclatures

Relationship between NACE codes and goods/services (defined by CPA/PRODCOM/CN)

Classification of industries applied to index decomposition analyses

#	Type	Industry
1	Goods	A Agriculture, forestry and fishing
2	Goods	B Mining and quarrying
3	Goods	C10-C12 Manufacture of food products; beverages and tobacco products
4	Goods	C13-C15 Manufacture of textiles, wearing apparel, leather and related products
5	Goods	C16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
6	Goods	C17 Manufacture of paper and paper products
7	Goods	C18 Printing and reproduction of recorded media
8	Goods	C19 Manufacture of coke and refined petroleum products
9	Goods	C20-C21 Chemical and pharmaceutical products
10	Goods	C22 Manufacture of rubber and plastic products
11	Goods	C23 Manufacture of other non-metallic mineral products
12	Goods	C24 Manufacture of basic metals
13	Goods	C25 Manufacture of fabricated metal products, except machinery and equipment
14	Goods	C26 Manufacture of computer, electronic and optical products
15	Goods	C27 Manufacture of electrical equipment
16	Goods	C28 Manufacture of machinery and equipment n.e.c.
17	Goods	C29 Manufacture of motor vehicles, trailers and semi-trailers
18	Goods	C31-C33 Other manufacturing and repair
19	Goods	D Electricity, gas, steam and air conditioning supply
20	Goods	E Water collection, treatment and supply
21	Goods	F Construction
22	Services	G Wholesale and retail trade; repair of motor vehicles and motorcycles
23	Services	H49 Land transport and transport via pipelines
24	Services	H50 Water transport
25	Services	H51 Air transport
26	Services	H52 Warehousing and support activities for transportation
27	Services	H53 Postal and courier activities
28	Services	I Accommodation and food service activities
29	Services	J Information and communication
30	Services	K Financial and insurance activities
31	Services	L Real estate activities
32	Services	M Professional, scientific and technical activities
33	Services	N Administrative and support service activities
34	Services	O Public administration and defence; compulsory social security
35	Services	P Education
36	Services	Q Human health and social work activities
37	Services	R Arts, entertainment and recreation
38	Services	S Other service activities

Source: CBS,
Environmental
activity accounts:
EPEA and EGSS, Jan.
2018,
<https://www.cbs.nl/-/media/pdf/2017/16/report-egss2016.pdf>

Note:

- The following distinction is important for the sustainable finance taxonomy.
- A **"green building"** can be classified as a "product or service" under F (=construction or refurbishing). There are however no PRODCOM or CN codes for entire (residential or office) buildings, because they are not traded (except for Prefab houses).
- For sustainable finance and for the EGSS accounts of the member states a **"green building"** will be classified as "green finance service" under K (finance) or L (real estate). Example: green mortgage. Many green bond issuers in K and L own and finance such assets

(C) Example of disclosure by EU member state of environmental investment per NACE code

- The example shows how NACE is used by member states in environmental accounts
- Austria reports the same investments in environmental goods and services in public and private sectors that were previously shown per CEPA code and per product now also per NACE code
- EGSS Commission Implementing Regulation (EU) 2015/2174)
- This table is only possible via an integrated approach of all taxonomies mentioned earlier



Environmental Goods and Services Sector 2008 to 2016 by economic activities

NACE rev. 2	2008	2009	2010	2011	2012	2013	2014 ¹⁾	2015	2016	Change 2008 - 2016 in %
Environmental output in million Euro (and change in %)										
1 Crop and animal production	1.016,4	959,4	1.057,3	1.127,9	1.112,3	1.148,2	1.178,0	1.126,2	1.458,3	+43,5
2 Forestry and logging	493,7	392,8	482,6	486,9	475,9	490,9	1.637,1	1.572,4	1.460,0	+195,7
8 Other mining and quarrying	-	-	-	-	-	G	-	-	-	-
13 Manufacture of textiles	31,1	27,7	27,8	30,7	29,5	25,3	21,6	12,9	37,7	+21,2
15 Manufacture of leather and related products	-	-	-	-	G	G	G	G	G	-
16 Manufacture of wood and of products of wood and cork	273,9	205,3	253,6	295,1	260,9	831,4	1.399,4	1.423,9	1.739,5	+535,1
17 Manufacture of paper and paper products	1.495,1	1.355,3	1.541,4	1.617,5	1.582,5	1.524,5	G	G	G	-
20 Manufacture of chemicals and chemical products	547,6	412,1	550,5	655,6	582,1	631,1	903,4	851,5	910,3	+66,3
22 Manufacture of rubber and plastic products	255,5	244,0	255,2	504,9	415,2	380,9	786,5	862,2	851,4	+233,2
23 Manufacture of other non-metallic mineral products	741,9	687,1	672,2	731,2	730,0	526,7	325,7	330,5	375,4	-49,4
24 Manufacture of basic metals	1.032,8	903,5	1.196,6	1.382,8	1.322,2	1.348,3	203,6	215,7	225,0	-78,2
25 Manufacture of fabricated metal products	381,6	392,8	329,5	441,7	554,7	549,7	544,5	465,3	423,3	+10,9
26 Manufacture of computer, electronic and optical products	739,2	699,2	717,5	534,5	491,3	329,6	781,3	873,8	1.138,6	+54,0
27 Manufacture of electrical equipment	594,6	623,1	763,3	758,2	586,6	465,8	2.330,3	2.549,7	3.018,0	+407,5
28 Manufacture of machinery and equipment n.e.c.	3.585,3	3.783,7	3.804,9	4.117,5	4.610,0	4.513,7	2.190,9	2.754,9	3.058,0	-14,7
29 Manufacture of motor vehicles, trailers and semi-trailers	821,6	536,3	552,9	741,8	838,0	899,9	972,4	1.105,5	1.223,0	+48,9
30 Other manufacturing of vehicles	-	-	G	G	G	G	G	G	G	-
31 Manufacture of furniture	88,7	98,4	104,5	112,1	127,0	135,8	129,8	140,3	181,1	+104,1
32 Other manufacturing	-	-	-	-	-	-	0,4	0,5	0,5	+22,4
33 Repair and installation of machinery and equipment	108,1	81,9	60,9	107,3	130,4	259,8	314,5	235,1	169,0	+56,4
35 Electricity, gas, steam and air conditioning supply	5.926,6	6.337,0	6.127,3	6.044,1	7.646,5	7.425,8	3.385,9	3.025,5	3.134,9	-47,1
37 Sewerage	1.735,7	1.885,8	1.673,3	1.719,7	1.779,5	1.845,4	2.075,3	2.205,9	2.337,7	+34,7
38 Waste collection, treatment and disposal activities	2.968,9	2.783,1	3.314,0	3.596,6	3.706,1	3.831,1	4.106,8	3.897,4	4.002,6	+34,8
39 Remediation activities, other waste management services	12,9	19,9	16,5	15,2	46,4	79,2	61,2	52,0	40,5	+214,3
41 Construction of buildings	2.763,3	2.816,7	2.627,2	2.343,3	2.262,1	2.408,5	2.645,2	2.246,9	2.101,1	-24,0
42 Civil engineering	571,5	507,5	447,6	490,7	530,4	511,1	569,7	547,0	563,0	-1,5
43 Specialised construction activities	1.448,5	1.470,9	1.754,9	2.118,7	2.504,8	2.267,0	1.550,9	1.370,2	1.143,0	-21,1
45 Wholesale and retail trade and repair of motor vehicles	60,2	61,4	60,9	65,0	64,4	66,1	62,5	63,9	67,4	+12,0
55 Accommodation	85,9	85,7	89,8	94,5	109,4	119,1	118,7	132,1	141,3	+64,6
56 Food and beverage service activities	11,4	11,7	13,8	13,8	15,5	10,2	11,4	11,6	17,1	+50,0
62 Computer programming, consultancy and related activities	G	G	G	G	G	G	G	G	G	-
63 Information service activities	G	G	G	G	G	G	G	G	G	-
64 Financial service activities, except insurance and pension funding	-	-	-	-	-	G	G	G	G	-
66 Activities auxiliary to financial services and insurance activities	-	-	-	-	-	G	G	G	G	-
69 Legal and accounting activities	75,2	78,1	80,5	86,2	88,4	91,1	94,3	100,1	104,8	+39,4
70 Activities of head offices; management consultancy activities	116,1	105,9	99,9	116,5	122,9	116,1	124,3	127,6	138,6	+19,4
71 Architectural and engineering activities; testing	2.032,5	2.120,1	1.736,3	1.522,7	1.923,4	2.031,2	2.047,5	2.208,7	2.262,0	+11,3
72 Scientific research and development	156,5	153,4	151,4	170,1	185,1	232,7	251,3	272,7	293,5	+87,5
74 Other professional, scientific and technical activities	19,9	18,2	16,9	18,7	22,2	21,2	21,1	21,1	22,5	+12,8
81 Services to buildings and landscape activities	99,3	250,5	253,2	263,5	278,1	293,3	298,6	308,9	317,0	+219,1
85 Education	G	G	G	G	G	G	550,8	570,3	592,3	+7,5
91 Libraries, archives, museums and other cultural activities	13,3	13,9	13,8	13,9	13,9	13,1	12,7	21,8	30,3	+128,0
94 Activities of membership organisations	55,1	57,6	49,2	58,7	52,8	62,1	88,1	102,0	72,4	+31,2
General Government sector	685,7	660,8	705,2	705,8	776,6	871,6	183,0	223,9	208,2	-69,6
Total	31.048	30.844	31.618	33.122	36.015	36.437	32.049	32.118	33.966	+9,4

S: STATISTICS AUSTRIA, Environmental Accounts, Environmental Goods and Services Sector (EGSS), 2016, on behalf of BMNT. Compiled on 11 December 2018. - 1) Break in time series. - "G" = numerical value is zero. - G = confidential.

(C) case study NACE: BPCE Samurai Social Bond

Selection criteria

Education



- Pre-primary, primary and secondary education
- Post-secondary non-tertiary and tertiary education
- Adult learning
- Other educational projects and activities supporting education and culture

Healthcare



- Hospitals and private clinics
- Health facilities and residential nursing care activities
- Public and private medical activities
- Social security services
- Other health services

Social Projects



- Social housing for individuals and families requiring specific support
- Public and private organizations providing support and assistance to the elderly, children and disabled people
- Structures implementing social programs

A pool of Eligible Loans selected according to the French NAF Code (Similar to NACE)

Code NAF	Eligible NAF	English translation
SECTION 0	ADMINISTRATION PUBLIQUE	PUBLIC ADMINISTRATION
84 12Z	Administration publique (telle) de la santé, de la formation, de la culture et des services sociaux, autre que sécurité sociale	Healthcare and social-related public administration
84 30A	Activités générales de sécurité sociale	Social security general activities
SECTION P	ENSEIGNEMENT	EDUCATION
85	Enseignement	Education
85 10	Enseignement pré-primaire	Pre-primary education
85 20	Enseignement primaire	Primary education
85 31	Enseignement secondaire général	General secondary education
85 32	Enseignement secondaire technique ou professionnel	Technical and vocational secondary education
85 41	Enseignement post-secondaire non supérieur	Post-secondary non-tertiary education
85 42	Enseignement supérieur	Tertiary education
85 51	Enseignement de disciplines sportives et d'activités de loisirs	Sports and recreation education
85 52Z	Enseignement culturel	Cultural education
85 53	Enseignement de la conduite	Driving school services
85 59A	Formation continue d'adultes	Continuing education for adults
85 59B	Autres enseignements	Sundry education
85 60	Activités de soutien à l'enseignement	Activities supporting education
SECTION Q	SANTÉ HUMAINE ET ACTION SOCIALE	HUMAN HEALTH AND SOCIAL WORK ACTIVITIES
86	Activités pour la santé humaine	Human health activities
86 10	Activités hospitalières	Hospital activities
86 21	Activités des médecins généralistes	General medical practice activities
86 22C	Autres activités des médecins spécialistes	Other specialist medical practice activities
86 22A	Activités de radiodiagnostic et de radiothérapie	X-ray diagnosis and radiotherapy activities
86 22B	Activités chirurgicales	Surgery activities
86 23	Pratique dentaire	Dental practice activities
86 90A	Ambulances	Ambulances
86 90B	Laboratoires d'analyses médicales	Medical analysis laboratories
86 90D	Activités des infirmiers et des sages-femmes	Activities of nurses and midwives
86 90E	Activités des professionnels de la rééducation, de l'appareillage et des pédicures-podologues	Activities of professionals in re-education, prosthesis or health devices and chiropodists
86 90F	Activités de santé humaine non classées ailleurs	Human health activities n.e.c.
87	Hébergement médico-social et social	Medico-social housing
87 10A	Hébergement médicalisé pour personnes âgées	Residential nursing care activities for the elderly
87 10B	Hébergement médicalisé pour enfants handicapés	Residential nursing care activities for disabled children
87 10C	Hébergement médicalisé pour adultes handicapés et autre hébergement médicalisé	Residential nursing care activities for disabled adults and other residential nursing care
87 20A	Hébergement social pour handicapés mentaux et malades mentaux	Residential care activities for mental retardation and mental health
87 20B	Hébergement social pour toxicomanes	Residential care activities for substance abuse
87 30A	Hébergement social pour personnes âgées	Residential care activities for the elderly
87 30B	Hébergement social pour handicapés physiques	Residential care activities for the disabled
87 90A	Hébergement social pour enfants en difficultés	Residential care activities for children with difficulties
87 90B	Hébergement social pour adultes et familles en difficultés et autre hébergement social	Residential care activities for adults and families with difficulties and other residential care activities
88	Action sociale sans hébergement	Social action excluding social housing
88 10A	Aide à domicile	Home help services
88 10B	Accueil ou accompagnement sans hébergement d'adultes handicapés ou de personnes âgées	Other welcome or guidance services without accommodation for disabled adults or the elderly
88 10C	Aide par le travail	Assistance by work
88 91A	Accueil de jeunes enfants	Welcome facilities for young children
88 91B	Accueil ou accompagnement sans hébergement d'enfants handicapés	Welcome or guidance services without accommodation for disabled children
88 99A	Autre accueil ou accompagnement sans hébergement d'enfants et d'adolescents	Other welcome or guidance services without accommodation for children and teenagers
88 99B	Action sociale sans hébergement n.e.c.	Social work activities without accommodation n.e.c.
SECTION C	INDUSTRIE MANUFACTURIÈRE	MANUFACTURING
21	Industrie pharmaceutique	Manufacture of basic pharmaceutical products and pharmaceutical preparations
21 10	Fabrication de produits pharmaceutiques de base	Manufacture of basic pharmaceutical products
21 20	Fabrication de préparations pharmaceutiques	Manufacture of pharmaceutical preparations
26	Fabrication de produits informatiques, électroniques et optiques	Manufacture of computer, electronic and optical products
26 60	Fabrication d'équipements d'irradiation médicale, d'équipements électromédicaux et électrothérapeutiques	Manufacture of irradiation, electromedical and electrotherapeutic equipment
32	Autres industries manufacturières	Other manufacturing
32 50A	Fabrication de matériel médico-chirurgical et dentaire	Manufacture of medical, surgical and dental equipment
SECTION G	COMMERCE, RÉPARATION D'AUTOMOBILES ET DE MOTOCYCLES	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
47	Commerce de détail, à l'exception des automobiles et des motocycles	Retail trade, except of motor vehicles and motorcycles
47 73	Commerce de détail de produits pharmaceutiques en magasin spécialisé	Dispensing chemist in specialised stores
47 74	Commerce de détail d'articles médicaux et orthopédiques en magasin spécialisé	Retail sale of medical and orthopaedic goods in specialised stores
47 78A	Commerces de détail d'optique	Retail sale of optics



"Eligible Social Loans" are exclusively granted to customers whose activities are dedicated to one of the following Social categories according to **eligible official sectors of economic activity code (Nomenclature d'Activités Française Code)**

(C) case study NACE: Rabobank loan portfolio reporting



Appendix 3 Sustainability facts & figures

Finance Overview with a societal character or a positive societal impact.

in millions of euros	2017	2016	2015	2014	2013
Corporate Clients					
Sustainable finance					
Green loans	1,424	1,613	1,509	1,574	1,826
Sustainable project finance (excluding green loans) ¹	3,408	3,301	3,374	2,444	2,621
Loan with agriculture guarantee fund BF/BF+	282	261	255	294	300
DLL Clean tech financing ²	383	303	243		
Financing for sustainable technology and energy companies	315	349	278	192	166
Financing for environmental and recycling companies	583	623	517	533	574
Financing for companies with a sustainability label ³	7,640	7,589	8,867	9,831	9,454
Subtotal	14,035	14,039	15,044	14,868	14,941
Access to finance					
Rabo Stimulus Capital	136	176	222	280	328
Loans with a State guarantee (under BMKB)	1,240	1,176	1,069	1,075	1,126
Loans with Go facility	230	269	251	268	330
Growth Facility Scheme (Rabo Capital Injection Loan)	11	21	31	36	35
Subtotal	1,617	1,642	1,573	1,659	1,820
Community services					
Financing for businesses in the education sector and research and development	554	577	658	617	644
Financing for social and ethical organisations	492	573	516	663	593
Financing for cultural organisations	84	130	114	117	179
Financing for organisations caring for vulnerable groups and sheltered employment	1,828	1,830	1,335	1,575	738
Subtotal	2,958	3,110	2,623	2,973	2,155
Total sustainable finance	18,610	18,791	19,240	19,510	18,926
In % of total credit and loan portfolio private clients	4.53%	4.43%	4.52%	5.09%	4.90%

- 1 Sustainable project finance relates to renewable energy projects of EUR 25 million and more.
- 2 This figure is part of the total DLL portfolio and reflects the minimal allocation to the clean tech portfolio.
- 3 An overview of the labels can be found on the corporate website.

⇒ NACE code based
⇒ Eco label based

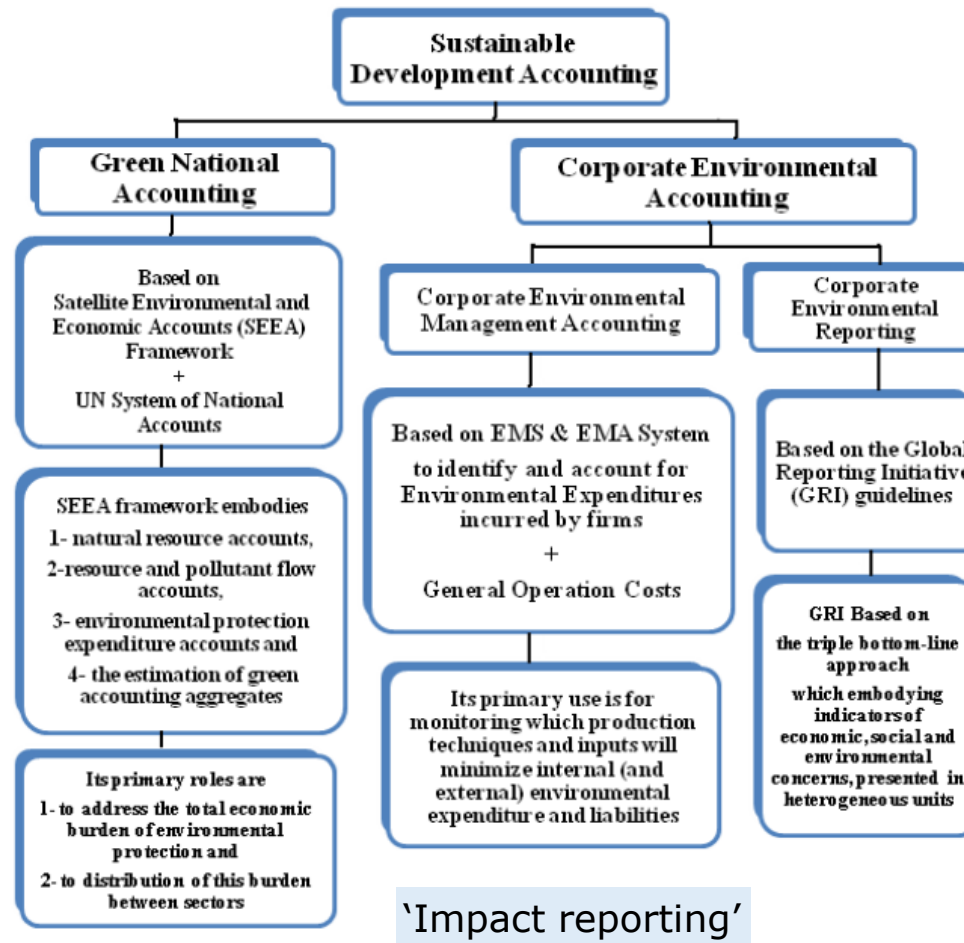
⇒ NACE code based

THE EU TAXONOMY FOR ASSETS

NATIONAL AND CORPORATE ENVIRONMENTAL ACCOUNTING: IMPACT REPORTING

(D) National and Corporate Environmental Accounting

- The EU member states are already used to environmental accounting (green national accounting based on the international SEEA framework). Especially the so called “asset accounts” show impacts on stocks of water resources, land resources, forest resources, etc.
- There are various ways for corporates to also do environmental accounting, for example based on Environmental Management Systems (EMS) and LCA’s (Life Cycle Assessments).
- A well implemented Sustainable Finance Taxonomy that is aligned with the SEEA accounts of the EU member states will also contribute to the development of corporate environmental accounting.
- In sustainable finance we call this “**impact reporting**”, with one difference: SEEA environmental accounts **monetize** the impact.

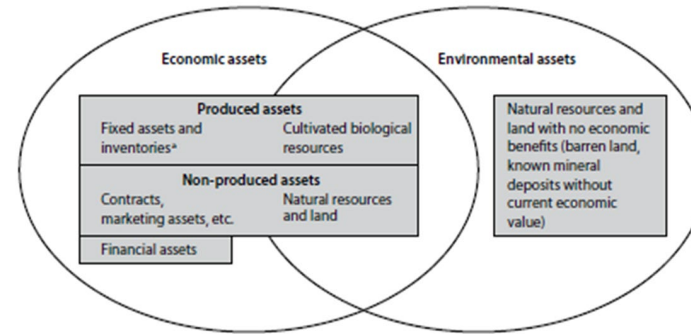


Source: Fifty Years of Sustainability Accounting: Does accounting for income in business sustainability really exist? Macrothink Institute;
www.macrothink.org/journal/index.php/ijaf/article/.../6996

(D) Two types of assets

- Assets are considered items of **value to society**. In economics, assets have long been defined as stores of value that, in many situations, also provide inputs to production processes. More recently, there has been consideration of the value inherent in the components of the environment and the inputs the environment provides to society in general and the economy in particular.
- One motivation for considering environmental assets is the concern that **current patterns of economic activity are depleting and degrading the available environmental assets** more quickly than those assets can be regenerated.
- There is a general aim to improve the management of environmental assets, taking into account the sustainable use of resources and the capacity of environmental assets to continue to provide inputs to the economy and society. This general aim is a key driver for the development of the SEEA.
- The system of environmental-economic accounting (SEEA) distinguishes a number of environmental assets and economic assets
- The term “environmental asset” is used to denote the source of these inputs which may be measured in both **physical** and **monetary** terms, which is why the impact reporting can be monetized.

Figure 5.1
Relationship between environmental and economic assets



* Other than cultivated biological resources.

Table 5.1
Classification of environmental assets in the SEEA Central Framework

1	Mineral and energy resources
1.1	Oil resources
1.2	Natural gas resources
1.3	Coal and peat resources
1.4	Non-metallic mineral resources (excluding coal and peat resources)
1.5	Metallic mineral resources
2	Land
3	Soil resources
4	Timber resources
4.1	Cultivated timber resources
4.2	Natural timber resources
5	Aquatic resources
5.1	Cultivated aquatic resources
5.2	Natural aquatic resources
6	Other biological resources (excluding timber resources and aquatic resources)
7	Water resources
7.1	Surface water
7.2	Groundwater
7.3	Soil water

Source: The System of Environmental-Economic Accounting 2012—Central Framework

(D) Asset accounting: additions and reductions of environmental assets

- Asset accounts record both the opening and the closing stock of assets and the changes over the accounting period. The entries concerning the changes between opening and closing stocks of each asset are divided into: (a) additions to the stock and (b) reductions in the stock
- Renewable sources cannot be exhausted in a manner akin to fossil energy resources and, unlike biological resources, they are not regenerated. Thus, in an accounting sense, there is no physical stock of renewable sources of energy that can be used up or sold. The investments in the assets (land) and technology (e.g. turbines, PV panels) are included however.
- Valuation of assets is a key component of asset accounting, so that the impact (changes in environmental assets) can be monetized.

Table 5.3
Conceptual form of the monetary asset account (*currency units*)

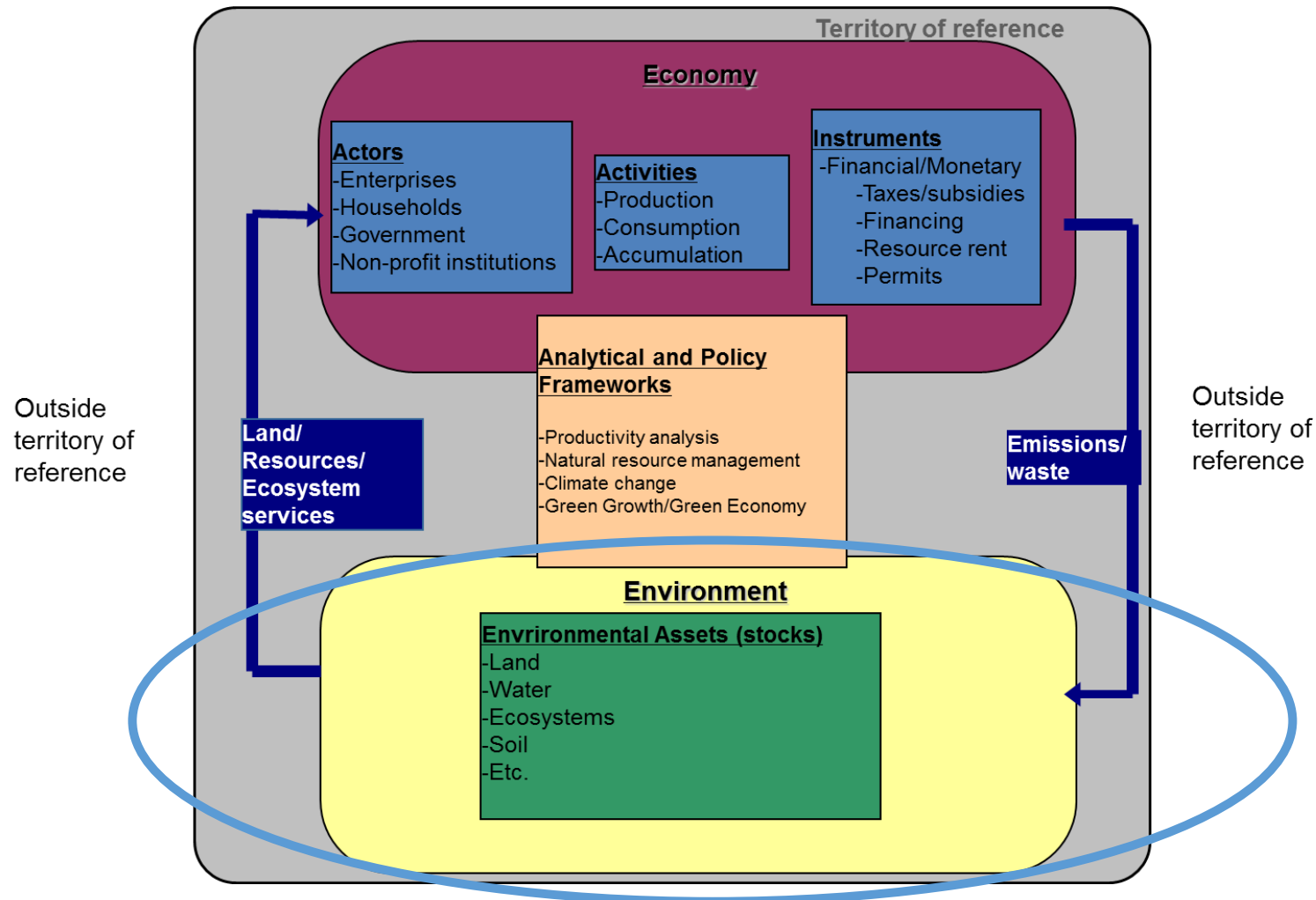
Opening stock of resources
Additions to stock of resources
Growth in stock
Discoveries of new stock
Upward reappraisals
Reclassifications
<i>Total additions to stock</i>
Reductions in stock of resources
Extractions
Normal loss of stock
Catastrophic losses
Downward reappraisals
Reclassifications
<i>Total reductions in stock</i>
Revaluation of the stock of resources
Closing stock of resources

Table 5.2
General structure of the physical asset account for environmental assets (*physical units*)

	Mineral and energy resources	Land (including forest land)	Soil resources	Timber resources		Aquatic resources		Water resources
				Cultivated	Natural	Cultivated	Natural	
Opening stock of resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Additions to stock of resources								
Growth in stock	na	Yes*	Soil formation Soil deposition	Growth	Natural growth	Growth	Natural growth	Precipitation Return flows
Discoveries of new stock	Yes	na	na	na	na	na	Yes*	Yes*
Upward reappraisals	Yes	Yes	Yes*	Yes*	Yes*	Yes*	Yes	Yes*
Reclassifications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	na
<i>Total additions to stock</i>								
Reductions in stock of resources								
Extractions	Extractions	na	Soil extraction	Removals	Removals	Harvest	Gross catch	Abstraction
Normal reductions in stock	na	na	Erosion	Natural losses	Natural losses	Normal losses	Normal losses	Evaporation Evapotranspiration
Catastrophic losses	Yes*	Yes*	Yes*	Yes	Yes	Yes	Yes	Yes*
Downward reappraisals	Yes	Yes	Yes*	Yes*	Yes*	Yes*	Yes	Yes*
Reclassifications	Yes	Yes	Yes	Yes	Yes	Yes	Yes	na
<i>Total reductions in stock</i>								
Closing stock of resources	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: The System of Environmental-Economic Accounting 2012—Central Framework

(D) Territory of reference of the system of Environmental-Economic Accounting (SEEA)



Source: Daniel Clarke; United Nations, ESCAP, 2012



Questions?

Contact EBF

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