



# **INTERNATIONAL COORDINATION TO ESTABLISH TRANSPARENT AND RELIABLE METRICS TO FOSTER SUSTAINABLE FINANCE IN THE ELECTRICITY SECTOR**

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## Presentation outline

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1. The OECD Centre for Green Finance and Investment and CEFIM Programme
2. Framing sustainability for finance
3. A proliferation of standards
4. Potential benefits of sustainable finance taxonomies
5. The EU Taxonomy initiative
6. Specifics on the electricity sector
7. Other international frameworks
8. International coordination: why, how, how far?



# 1. The OECD Centre on Green Finance and Investment

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## The CGFI Forum

- Annual flagship event
- Senior policy makers, key actors
  - **600** delegates
  - **62** high-level speakers
  - **69** countries:  
25 OECD, 44 non-OECD
- **6<sup>th</sup> Forum, 29-30 October 2019, Paris**

## Our workstreams

- Aligning financial flows, infrastructure with climate objectives and SDGs
  - Policies to mainstream sustainable finance
  - Status and measurement of sustainable finance flows
- Sustainable finance definitions



<http://www.oecd.org/cgfi>



# The OECD Clean Energy Finance and Investment Mobilisation Programme (CEFIM)

**Enabling conditions  
for investment and  
financing**

**Ambitious climate  
and energy targets**

**Innovative  
financing  
instruments**

**Building bankable  
projects**

**Strengthen policy  
frameworks**

India  
Indonesia  
Thailand  
Vietnam  
Columbia

**Implementation  
support activities**

Project  
developers

Banks

Government

DFIs /  
bilateral  
cooperation

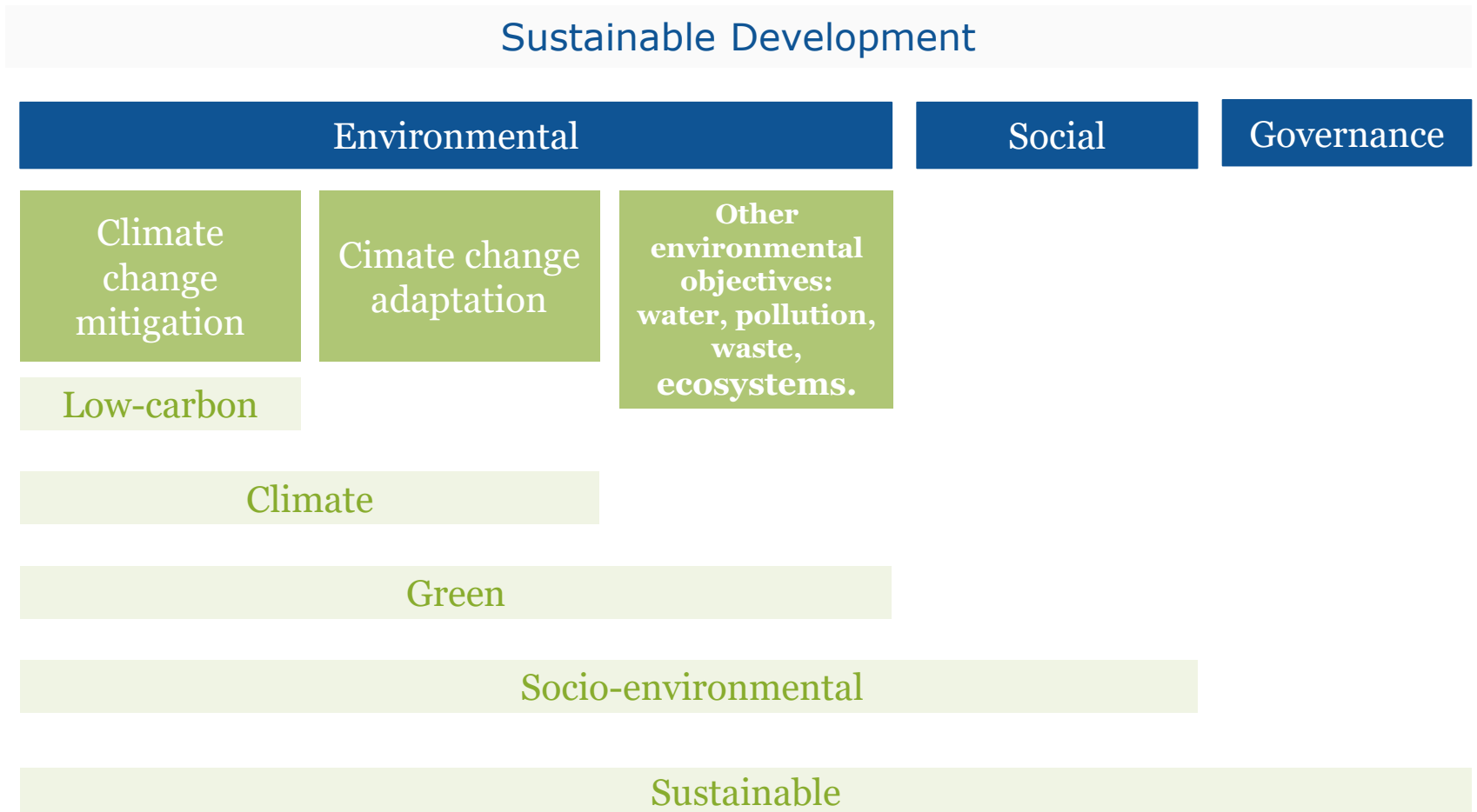
Platform to  
engage the  
clean energy  
finance  
ecosystem

Institutional  
investors

Other  
stakeholders



## 2. Framing sustainability in the context of finance



Source: EC Technical Expert Group on sustainable finance.



### 3. A proliferation of standards

<i><b>Actor</b></i>	<i><b>Taxonomy/Standard</b></i>	<i><b>Scope/Purpose</b></i>
<b>Climate Bonds Initiative</b>	Taxonomy	Green bonds
<b>MDBs (EIB, EBRD,...)</b>	Climate finance tracking methodology	Climate alignment of MDBs
<b>ISO</b>	Standard	Process to guide sustainable investment decision making
<b>National regulations</b>	China Green Taxonomy, Japan Green Bond definitions, France Label GreenFin, and many others	Framework for green and/or sustainable labelling of financial products
<b>EC draft regulation</b>	Taxonomy	Framework to identify which economic activities are sustainable and therefore qualify for the future voluntary EC Ecolabel.



## 4. Potential benefits of sustainable finance taxonomies

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- Increase investor confidence: avoid green- and impact- washing
- Enable labelling of investment funds and other products
- Increase visibility of green finance products (eg enable investors to express their preference for sustainable saving products)
- Develop sustainable finance policy instruments
- Improve market integrity



## 5. a. The EU Taxonomy Initiative

### What is the Taxonomy?

### What is set out in the Proposal?

**A list of economic activities** that are considered environmentally sustainable for investment purposes. **The framework to develop the taxonomy.** For an economic activity to be on the list, it has to comply with four conditions:

(a) **Substantially contribute** to at least one of the six environmental objectives as defined in the proposed Regulation\*



(b) **Do no significant harm** to any of the other six environmental objectives as defined in the proposed Regulation\*



(c) Comply with **minimum safeguards**

(d) Comply with quantitative or qualitative **Technical Screening Criteria**

\*The six environmental objectives as defined in the proposed Regulation are: (1) climate change mitigation; (2) climate change adaptation; (3) sustainable use and protection of water and marine resources; (4) transition to a circular economy, waste prevention and recycling; (5) pollution prevention and control; (6) protection of healthy ecosystems.

Source: [European Commission: Proposal on the establishment of a framework to facilitate sustainable investment \(2018\)](#).










## 5. b. Mitigation taxonomy covers 67 economic activities in 7 sectors

(1) High-emitting  
macro sectors

(2) Enabling sectors



	<b>Agriculture and forestry</b>
	<b>Manufacturing</b>
	<b>Electricity, gas, steam and air conditioning supply</b>
	<b>Water, sewerage, waste and remediation</b>
	<b>Transport</b>
	<b>Information and Communication Technologies (ICT)</b>
	<b>Buildings</b>

See the full picture in the 487 pages interim TEG proposal at  
[https://ec.europa.eu/info/files/190618-sustainable-finance-teg-report-taxonomy\\_en](https://ec.europa.eu/info/files/190618-sustainable-finance-teg-report-taxonomy_en)



## 6. Specifics of the Electricity sector ( current draft)

### Production of Electricity

**100 gCO<sub>2</sub>e/kWh, declining to 0 by 2050.**

Technology agnostic

Threshold reduced every 5 years in line with a trajectory to zero net-CO<sub>2</sub>e in 2050.

LCE analysis *not* required

- Solar photovoltaic (PV)
- Wind power
- Existing hydropower *in the EU*
  - Investments which improve capacity of a hydro facility, without enlarging reservoir
- Existing geothermal *in the EU*
- Ocean energy
- Concentrated solar power (CSP)

• LCE analysis (ISO 1404) *required*

- New hydro & geothermal
- Fossil fuels
- Bioenergy
- Unabated coal & gas will not meet threshold. Coal with CCS will not; gas with CCS might.
- Mixed molecules – e.g. gas with hydrogen – will need to meet the threshold
- *Measurement* of fugitive emissions is required
- For activities which go beyond 2050, it must be technically feasible to reach zero emissions.



## Status on nuclear power generation in EU TEG work as of 13/9/2019

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- “Evidence on the potential substantial contribution of nuclear energy to **climate mitigation** objectives was extensive and clear. The potential role of nuclear energy in low carbon energy supply is well documented [265,266].” (TEG Technical Report, p 234)
- “Given these limitations, it was not possible for TEG, nor its members, to conclude that the nuclear energy value chain does not cause significant harm to other environmental objectives on the time scales in question. The TEG has not therefore recommended the inclusion of nuclear energy in the Taxonomy **at this stage**. Further, **the TEG recommends that more extensive technical work is undertaken on the DNSH aspects of nuclear energy in future** and by a group with in-depth technical expertise on nuclear life cycle technologies and the existing and potential environmental impacts across all objectives.” (same source as above)
- “Sustainable Nuclear” report by Lucid Catalyst, commissioned by EDF UK, Q3 2019: “Best available evidence showing that under current...regulations, the nuclear energy lifecycle does not and will not cause significant harm to the sustainability objectives”....”The world’s scientific consensus concludes **that maintaining and expanding nuclear energy is necessary to achieve sustainability objectives**, such as climate mitigation”.



# Carbon Capture and Storage

If it enables the respective economic activity to operate under its 100gCO<sub>2</sub>e/kWh threshold.

- Captured CO<sub>2</sub> has to go to a qualifying CO<sub>2</sub> transportation operation & permanent sequestration facility.
- Transport of CO<sub>2</sub>: <0.5% leakage/tonne of CO<sub>2</sub> transported from head of pipeline to delivery.
- Upgrade of existing pipelines to enable transport of CO<sub>2</sub>.
- Operation of a permanent CO<sub>2</sub> storage facility (compliant with DNV Storage Certification Framework, based on ISO 27914:2017 for geological storage of CO<sub>2</sub>).

## Investments in Direct Air Capture operations

Relevant ISO standards:

- ISO/CD 27919-2 - Carbon dioxide capture -- Part 2: Evaluation procedure to assure and maintain stable performance of post-combustion CO<sub>2</sub> capture plant integrated with a power plant
- ISO/CD 27920 - Carbon dioxide capture, transportation and geological storage (CCS) -- Quantification and Verification
- ISO/DTR 27921 - Carbon dioxide capture, transport and storage -- CO<sub>2</sub> stream composition
- ISO/AWI TS 27924 - Lifecycle risk management for integrated CCS projects



# Transmission and Distribution of Electricity

**All investments in T&D infrastructure, EXCEPT those:**

- Dedicated to directly connecting, or increasing connections to, plants that are more CO<sub>2</sub> intensive than 100gCO<sub>2</sub>e/kWh
- Dedicated to connecting additional consumption load without demand-side management capability.

**Upgrades to T&D System Architecture** which incorporate either:

- Third generation smart meters, and operation of smart meters and communication system
- Equipment where objective is increase of RE used (e.g. voltage control measures to allow more RE infeed)
- Sensors for forecasting RE production, automation of substations/feeders, control rooms and software that increase control of the grid
- Software and Equipment enabling Demand Side Management and improved control of grid, or enables exchange RE between users.



# Energy other

**All energy storage** - BUT, anything which uses hydrocarbons is excluded

- Infrastructure to store **hydrogen** is included.
- Hydrogen production is governed by electricity & manufacturing thresholds

**Cogeneration** - 30g Co2e/kWh for thermal & 100g CO2e/kWh for electricity, reducing every 5 yrs.

**District Heating and Cooling** - Efficient\* pipes and infrastructure

**Electric heat pumps** - If using climate friendly refrigerant (GWP <10)

**Production of Biomass, Biogas and Biofuels** – Only feedstocks listed in Annex 9 EU REDII eligible

**Upgrade of Gas Networks for hydrogen or CCS**

- Investment which enable network to **increase the blend of hydrogen** in the gas system.
- Pipeline repairs *IF pipelines are hydrogen-ready. Repairs to plastic pipelines – Yes; metal pipes - No.*
- Investments whose main purpose is the **transport of CO2 for sequestration.**
- No gas network *expansion* is eligible



## 7. Examples of other international frameworks

**Annexure 5: International Green Finance Landscape at a glance**

	Bangladesh	Vietnam	China	Indonesia	EU	S. Africa**
<b>Definition</b>						
Climate finance	X	X				
Green finance	X	X	X			X
Sustainable finance				X	X	
ESG finance						
<b>Focus of Green Finance definition/ Initiatives*</b>						
Climate Mitigation	X	X	X	X	X	X
Climate Adaptation	X	X	X	X	X	
Pollution prevention and control			X	X	X	X
Natural resource preservation			X		X	X
Biodiversity			X	X	X	X
<b>Sectors</b>						
Alternative energy (incl. renewable and clean energy)	X	X	X	X	X	X
Energy efficiency	X	X	X	X	X	X
Biofuels (biogas, biomass)	X		X	X	X	
Green buildings	X		X	X		X
Clean water supply			X		X	X
Waste treatment/ management	X	X	X	X	X	X
Sustainable/clean transportation	X		X	X	X	X
Sustainable management of natural resources^	X	X	X	X	X	X
Carbon capture and storage					X	
Pollution prevention and control			X		X	X
Sustainable / Green Agriculture		X	X	X	X	
Green Tourism			X	X		
Resilience to climate change			X	X		
Recycling & Recyclable Product	X		X	X	X	X
<b>Market instruments, Incentives</b>						
Fiscal incentives			X	X		X
Climate fund(s)	X	X	X			X
Green credit	X	X	X	X		
Green bonds		X	X	X		
Refinance scheme(s)	X		X	X		
Insurance products (environmental liability)			X			
Carbon pricing mechanisms			X			
Loan Subsidies	X	X	X	X		



## 8. International coordination: why, how, how far?

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### ➤ Why?

- Facilitate cross-border investment (global capital only, not relevant for local currency projects)
- Avoid green washing, reduce due diligence costs, increase market confidence
- Coordinate policy

### ➤ How?

- Emerging international dialogue, under the auspices of, or with the involvement of, the OECD: IOSCO (securities), NGFS (central banks), International Platform on Sustainable Finance(EU), ....
- Common language, mapping the universe, agreeing on good practice and principles

### ➤ How far?

- National NDCs and other frameworks: low carbon power and transport, adaptation,...
- Local sustainable finance markets: green buildings, agriculture and forestry, ...





## Different kind of taxonomies – EU specificities.

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- Different kind of taxonomies:
  - Define sustainable economic activities, or sustainable financial products?
  - Climate mitigation taxonomies, or with several objectives? How are pathways and systems approached, if at all?
  - Define “pure green”, or transition products?
  - Technology neutral, or technology-selective?
  - Market/second opinion certification/verification, or legal? Increase investor confidence: avoid green- and impact-washing
  
- EU specificities
  - Economic activities, based on NACE codes: usability options, ecolabel
  - Attempt to encompass all E and S (G may come in later), with systems and pathways - idem usability issues
  - Thresholds tilted to the stringent side, best in class etc... – signal ambition, uptake may be slower



# THANK YOU

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