

Climate governance & commitment

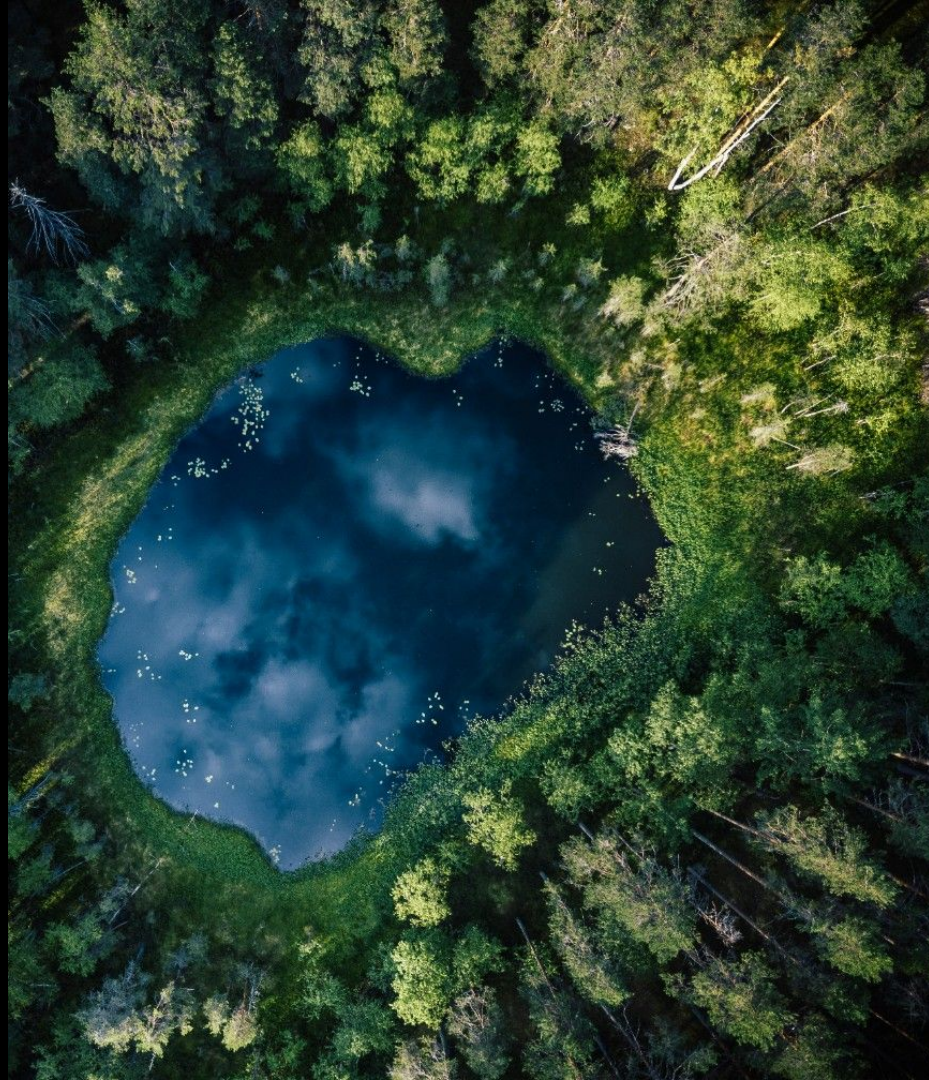
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01.

Understanding climate
regulatory requirements
and targets



Regulatory context: The big picture

2015 Paris Agreement



Limit temperature rise to well below 2° and to pursue efforts to limit warming to 1.5 degrees.

2019 EU Green Deal



Vision for carbon neutrality by 2050

2018 EU NDCs



-40% CO2 emissions by 2030
32% share of RES
32.5% energy efficiency

Large set of legislative measures announced **between 2020 - 2022** to reach the Green Deal target, including:

-55% CO2 emissions by 2030

40% share of RES in the energy mix

36-39% energy efficiency compared to “business as usual” scenario

Ban on petrol cars by 2035

EU member states

are transposing EU measures into national strategies and laws. E.g. Italy's NECP and the Long-Term Strategy.

Regulatory context (1/2)

The **Paris Agreement (PA)** was negotiated during COP21 in Paris in 2015, and entered into force after its signature by ca. 200 countries. The PA sets the goal to **limit global temperature increase to well below 2°C, preferably to 1.5°C**, within a **2050** time horizon (compared to pre-industrial levels). Accordingly, the parties had to:

1. Present a **Nationally Determined Contribution (NDC)**, identifying their contribution to global emissions reduction;
2. Communicate, by 2020, a **long-term low GHG emission development strategy** towards 2050.

EU countries presented in 2018 a **joint NDC** to the PA, whose targets are enshrined in the “**2030 Climate and Energy Framework**”. This framework sets the following targets for the EU by 2030:

- ✓ - 40% GHG emissions (1990 baseline);
- ✓ 32% share of RES in the energy mix;
- ✓ +32.5% energy efficiency relative to ‘business as usual’.

Pursuant to the EU Governance Regulation (2018/1999), EU Member States had to submit a **National Energy and Climate Plan (NECP)** to detail their contribution to achieving the EU targets towards 2030. **Italy presented its NECP in 2019**. By 30 June 2023, EU countries were expected to submit their draft updated NECPs to the Commission, in line with Article 14 of the Governance Regulation.



Regulatory context (2/2)

The EU regulatory framework has been further reinforced in **2019**, when the European Commission presented its **European Green Deal (EGD)**. The EGD is a strategic document comprising an ambitious package of reforms, which aim at transforming the EU into a modern, resource-efficient and competitive economy.

To reflect the vision of the EGD, the EU has worked on a number of additional legislations, such as:

- ✓ **European Climate Law** - which enshrines the target of **carbon neutrality by 2050**;
- ✓ **FIT for 55 package** - which should guarantee an increase in the EU **2030** targets, to achieve a **55% reduction in GHG emissions** (1990 baseline).

Italy has updated its **NECP**, to reflect the new targets included in the European Climate Law and, more broadly, in the EGD.

In **January 2021**, **Italy** presented its **2050 long-term strategy** (as required by the PA), which embodies the objective of carbon neutrality.



European Green Deal: main targets

1

No net emissions of GHG by 2050

2

Economic growth decoupled from resource use

3

No person and no place left behind -
“just transition”

Fit for 55

The **FIT for 55 package** is the EU roadmap to achieve a **55%** reduction in GHG emissions by 2030 (1990 baseline). It foresees the introduction or revision of a large set of legislative measures, including:

- ✓ Expansion of the scope of the **EU Emission Trading System** (ETS) to the transport and heating sectors, and increase in the EU ETS targets;
- ✓ Introduction of **Carbon border adjustment mechanism** (CBAM), to shield the EU from the risks related to carbon leakage;
- ✓ Introduction of a **Social Climate Fund**, to mitigate the negative impacts of the transition on communities;
- ✓ Revision of the **Effort Sharing Regulation**;
- ✓ Revision of the **Renewable Energy Directive**;
- ✓ Revision of the **Energy Efficiency Directive** (including strengthening of the EU Renovation Wave);
- ✓ Revision of the **Energy Taxation Directive**;
- ✓ Revision of the Regulation on **CO2 emission performance standards for vehicles**;
- ✓ Introduction of a new **EU forestry initiative**;
- ✓ Introduction of **ReFuelEU Aviation** and **ReFuelEU Maritime**.



Fit for 55: main targets

1

-55% CO2 emissions by 2030

2

40% share of RES in the energy mix

3

36% - 39% energy efficiency compared to “business as usual” scenario

4

Zero-emissions vehicles by 2035

Corporation's climate targets

Corporations have been responding to regulatory change by stepping up own climate ambitions

Carbon neutral

- Defined by internationally recognised standard - PAS 2060
- Boundary only requires Scope 1 and 2, Scope 3 encouraged but not mandatory
- No specification on level of ambition for reduction target
- Possibility to invest in carbon offsets (can be sinks and/or credits) to mitigate impact.

Science-based targets

- Targets to align with 1.5 degree trajectory (min 2 degree alignment), to be approved and validated by independent body ([SBTi](#))
- Reporting in accordance with defined standards. GHG inventory and progress against targets publicly disclosed annually
- SBTi targets must cover a min of 5 years from the target date.
- SBTi requires that if scope 3 emissions account for greater than 40% of emissions, targets must cover scope 1, 2 and 3.
- No offsetting via carbon credits.

Net zero

No officially accepted definition. Common elements of net zero commitments from market practice:

- Setting of a SBT
- Commitment to reducing impact throughout the value chain
- More comprehensive and mandatory annual disclosure
- Advocacy for policy and systemic change
- Use of carbon removals (as defined in the IPCC report) for offsetting

02.

Climate actions
to achieve
ambitious targets



Energy Efficiency

Eliminating energy waste by limiting fossil fuels and switching to renewable energy sources is overall beneficial in reducing emissions and lowering costs. The “energy efficiency first” principle established by the European Commission ensures the development and enforcement of concrete policies that prioritise energy-saving solutions.

This principle is also enshrined in the EU Renovation Wave, which plans for 35 million buildings to be restructured as “energy efficient” across EU Member States by 2030.

Different options for companies to improve their energy efficiency:

1	Improve the energy efficiency of buildings
2	Revamping of old plants
3	Upgrading and modernizing IT equipments at the end of their life-cycle
4	Installation of IOT and machine learning technologies

Barriers

Economic: liquidating and transitioning assets to implement energy efficiency solutions requires relatively high capital cost.

Institutional: lack of adequate technologies or capital investments to facilitate the transition to energy efficient solutions creates incentive issues for companies. This needs to be addressed through adequate regulatory frameworks.

Greening: Renewable electricity

Decarbonization is a process which aims at reducing carbon emissions per unit of energy generated. Currently, decarbonizing electricity is considered easier than decarbonizing other sectors, as electricity can be generated by non-emitting renewable sources (e.g. solar, wind). In other sector, such as industry, there is still a lack of identifiable zero-carbon alternatives to fossil fuels.

Different options for companies to decarbonize their electricity consumption:

1	Enter in Power Purchase Agreements - PPAs
2	Purchase of Guarantees of Origin (GOs) for RES
3	Construction of on-site solar PV generation in own infrastructures

Barriers

Technical: electricity storage can be a significant barrier for variable RES such as solar and wind (intermittency issue).

Permitting and authorizations: new buildouts tends to face bottlenecks in admin processes

Integration of high RES shares: to effectively manage high shares of RES in power grids will require sizeable investments in system's flexibility and grids' capacity.

Carbon offset

Carbon offset is an action or activity that compensates for the emission of CO₂ or other GHG to the atmosphere, by funding an equivalent CO₂ saving elsewhere. Under a carbon neutrality paradigm, offsetting should only be employed to compensate for unavoidable emissions (approach: avoid - reduce - offset).

Offsetting can be done through nature-based solutions (e.g. reforestation, afforestation) or through technical solutions (e.g. Carbon Capture, Utilisation, and Storage - CCUS).

Different options for companies to use offsets:

1

Purchase offsets on voluntary markets (following best practices as set by Gold Standard, Verra, the American Carbon Registry, etc.)

If the negotiations on **Article 6** of the Paris Agreement were to be successful



Companies could purchase offsets on a new international carbon market (to be established under art. 6.4)

Barriers

Science Based Targets initiative (SBTi) does not recognize offsets towards its targets.

Additionality: the requirement that emissions reductions achieved through offsets go beyond what would have happened without such offsets is hard to prove (need to set reliable baselines).

Permanence of CO₂ sequestration: natural methods like reforestation run the risk of not being permanent, as the captured CO₂ could be released back in the atmosphere (e.g. if the vegetation starts to decay); a solid track-record on the permanence of CO₂ sequestration via technical solutions (e.g. CCS) is still missing.

Lack of a global market: a global market for carbon offsets, with globally accepted standards, is still to be developed.

What are carbon offsets?

A carbon offset is a reduction in emissions of carbon dioxide made in order to compensate for emissions made elsewhere.

- Carbon offsets are measurable, verifiable emission reductions from certified climate action projects.
- These projects reduce, remove or avoid greenhouse gas (GHG) emissions and can also bring a host of positive co-benefits, e.g. empowering communities, protecting ecosystems, restoring forests or reducing reliance on fossil fuels
- They can be used to compensate for an organisation's emissions by canceling out emissions somewhere else
- Projects must adhere to a rigorous set of criteria to pass verification by third-party agencies and a review by a panel of experts at leading carbon offset standards
- After an organization or an individual buys a carbon offset, it is permanently retired so it can't be reused

Avoided emissions

These types of projects are awarded credits for avoidance of emissions that would have otherwise been emitted, had it not been for the carbon offset project.

E.g. renewables energy plants, or a project to protect rainforest that would otherwise be vulnerable to deforestation.

Removals / drawdowns

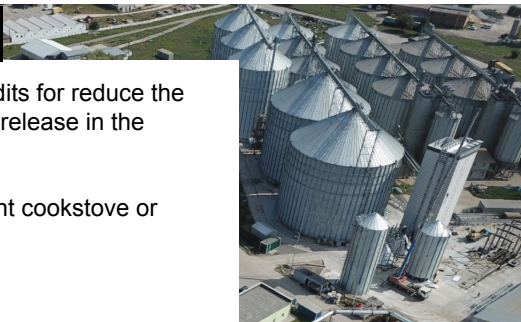
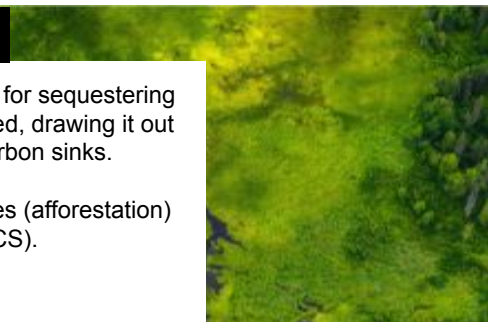
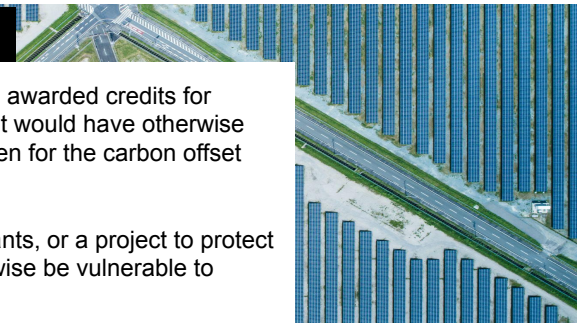
These projects are awarded credits for sequestering carbon that has already been emitted, drawing it out of the atmosphere and acting as carbon sinks.

e.g. a project that will plant new trees (afforestation) or Carbon Capture and Storage (CCS).

Reduction emissions

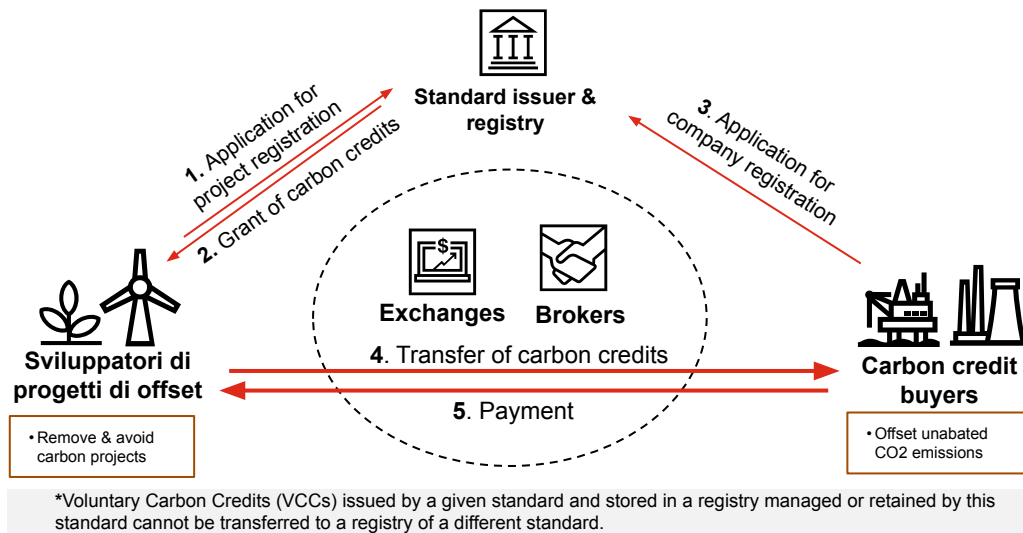
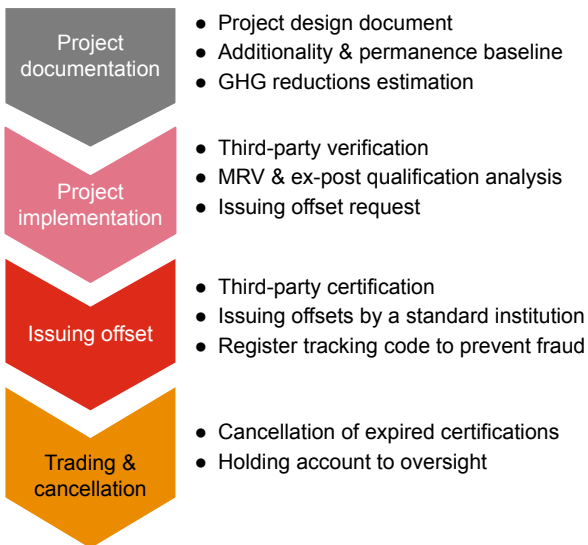
These projects are awarded credits for reduce the quota of carbon emission that is release in the atmosphere.

e.g. A project that provide efficient cookstove or develop low-carbon fuels.

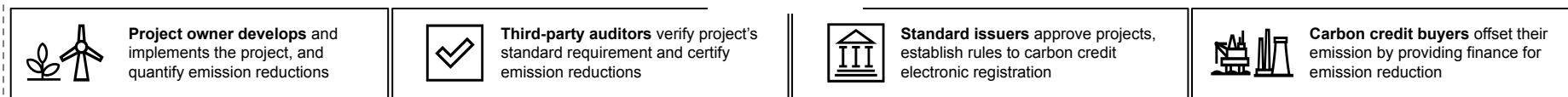


How do voluntary carbon markets function?

Process flow for issuing + retiring offsets



KEY ACTORS



Thanks!



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