

**Reforming Undergraduate Education for GRen and Sustainable Development
in Armenia and MoLDova**
3rd July 2024, 09:00-11:00

Climate action in the European Union : Issues and challenges

Amélie BARBIER-GAUCHARD, Professor in Macroeconomics

Strasbourg University, Faculty of Economics and Management

e-mail : abarbier@unistra.fr

website : <http://www.barbier-gauchard.com>

A. Barbier-Gauchard

CURRENT POSITION

- Full Professor in Economics (Faculty of Economics and Management / Strasbourg University / France)

FIELDS OF RESEARCH

- Macroeconomics, fiscal policy, government performance, fiscal discipline, European integration.

HONORS, GRANTS, AWARDS

- 2022-2027: Junior Member of the Institut Universitaire de France
- 2021-2024: Recipient of a European Jean Monnet Chair "Disseminating on European Fiscal Integration"

PEDAGOGICAL AND SCIENTIFIC RESPONSIBILITIES

- Vice-Dean of the Faculty of Economics and Management
- Pedagogical Manager of the Master « Macroeconomics and European Policies »

RESEARCH RESPONSIBILITY

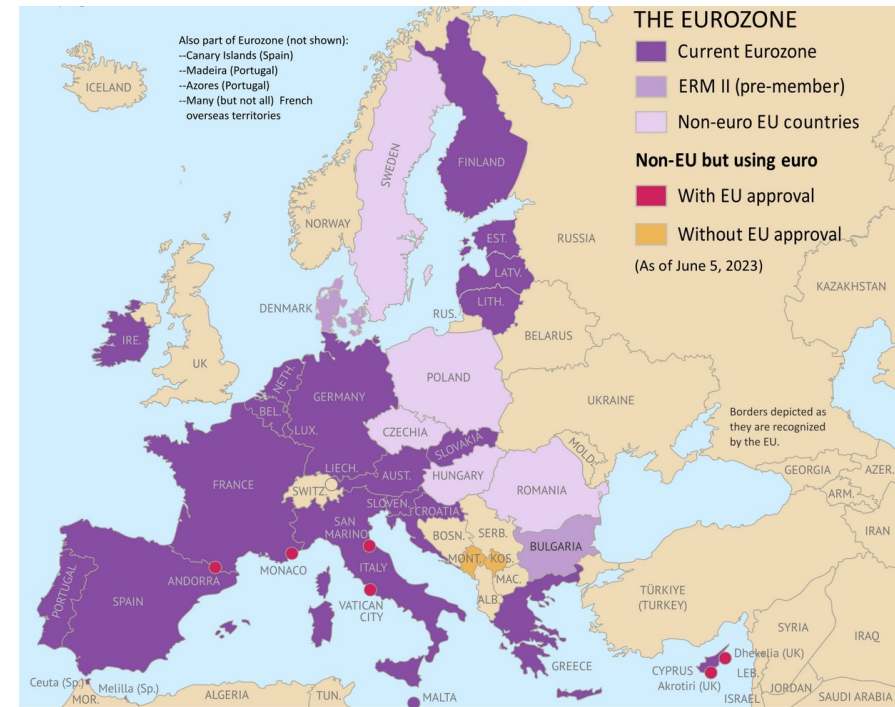
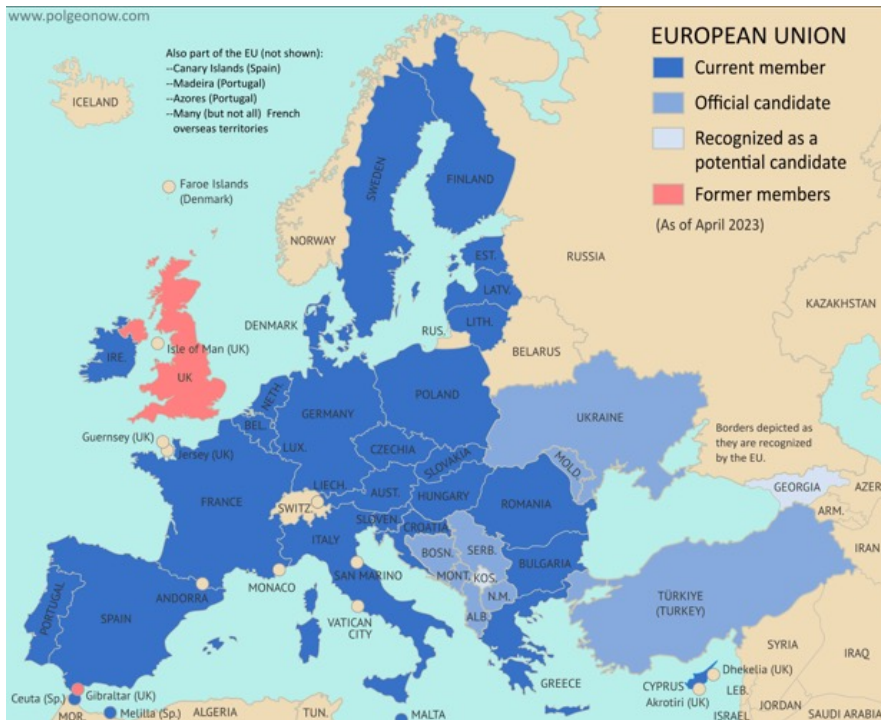
- Co-responsible of interdisciplinary teaching and research program : ITI MAKerS (*Making European Society*)

EXPERT ACTIVITIES

- Scientific advisor for the European Parliament (Brussels), Scientific expert for the Committee of the Regions of the EU (Brussels), Scientific expert for the Commissariat général à la stratégie et à la prospective (Centre d'analyse stratégique before 2013), French Prime Minister Service (Paris)

I - European economic integration in a nutshell

- **The current situation in the EU ?**
- 27 Member States in the EU (since the UK Brexit at the end of 2019)
- 20 Member States in the EMU (Croatia since 1st January 2023)



- **The Economic integration, what does it mean ?**

- ✓ Many forms of integration (economic, political, ...)

- ✓ Various economic fields covered by economic integration (commercial, monetary, budgetary, fiscal, financial ...)

- **What are the different steps of European integration :**

- ✓ Commercial integration : free trade area and custom union (1968)

- ✓ The single market : free movement of people and capital (1986)

- ✓ Monetary integration : the birth of the EMU (1999)

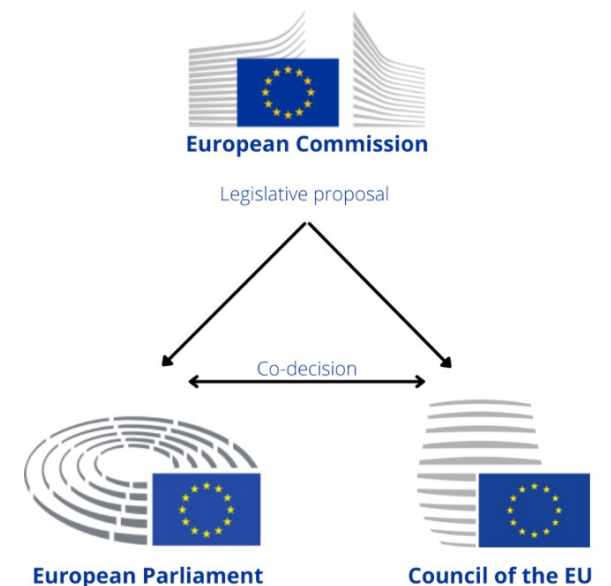
- ✓ => main actor : European Central Bank (ECB)

- ✓ Banking and financial integration : acceleration since the 2008 financial crisis

- ✓ => main actors : European Central Bank (ECB) and regulatory institutions

- ✓ Budgetary and fiscal integration with EU budget since the Rome Treaty (1947)

- ✓ => main actors : the European Institutional Triangle



A. EU budget : the Multiannual Financial Framework (MFF)

- **Main features :**
 - ✓ Decided in a multiannual program (7 years) : the Financial Perspective (Delors Package I (1988-1992), Delors Package II (1993-1999), Agenda 2000 (2000-2006) financial Perspectives 2007-2013 Multiannual Financial Framework (MFF) 2014-2020 and 2021-2028
 - ✓ multiannual financial framework (MFF) = financial perspective
 - ✓ Maximum amounts for each type of Community expenditure
 - ✓ A period of 7 years
 - ✓ Must be in balance
 - ✓ Own resources limited to 1,24 % of GNI

- **Where does the money come from ? Three types of own resources for MFF :**
 - ✓ Traditional own resources (10 %)
 - ✓ Own resources based on Value Added Tax (VAT) (75 %)
 - ✓ Own resources based on Gross National Income (GNI) (10 %)

- **Where does the money go ?**

Multiannual Financial Framework 2021-2027 Allocations per heading (all amounts in € billion)

	MFF	NGEU	TOTAL
1. Single Market, Innovation and Digital	149.5	11.5	161.0
2. Cohesion, Resilience and Values	426.7	776.5	1 203.2
3. Natural Resources and Environment	401.0	18.9	419.9
4. Migration and Border Management	25.7	-	25.7
5. Security and Defence	14.9	-	14.9
6. Neighbourhood and the World	110.6	-	110.6
7. European Public Administration	82.5	-	82.5
TOTAL	1 210.9	806.9	2 017.8



Facts and figures : main MFF programmes

CAP funds : 33 % EU budget

EU Cohesion funds : 30 % EU budget

External actions (development aid, humanitarian aid, support for candidate countries, etc.) : 8%

Research and innovation : 8%

=> 93% of this EU budget is redistributed to the Member States

B – NGEU : Aim and scope, conditions and tools

▪ What does it mean ? Main features

- ✓ Aim : to finance the national recovery plans implemented by the 27 EU Member States to face the pandemic crisis between 2021 and 2027 (90 % of the NGEU for Member States)
- ✓ Amount of the loan : a large European loan amounting to 750 billion euros
- ✓ Features of the loan : 30-year loan (to reimburse between 2028 and 2058)
- ✓ Tools : credits (to reimburse by countries) and grants

▪ Conditions to benefit from it?

To benefit from this European loan, each country must implement a recovery plan that meets 4 conditions:

- (1) devote 37% of the recovery plan's public spending to the fight against global warming,
- (2) earmark 20% for the digitization of the economy ,
- (3) take into account the reform recommendations of the European Commission resulting from the European Semester,
- (4) respect the rule of law (particularly in terms of the fight against fraud or reform of the public procurement code).

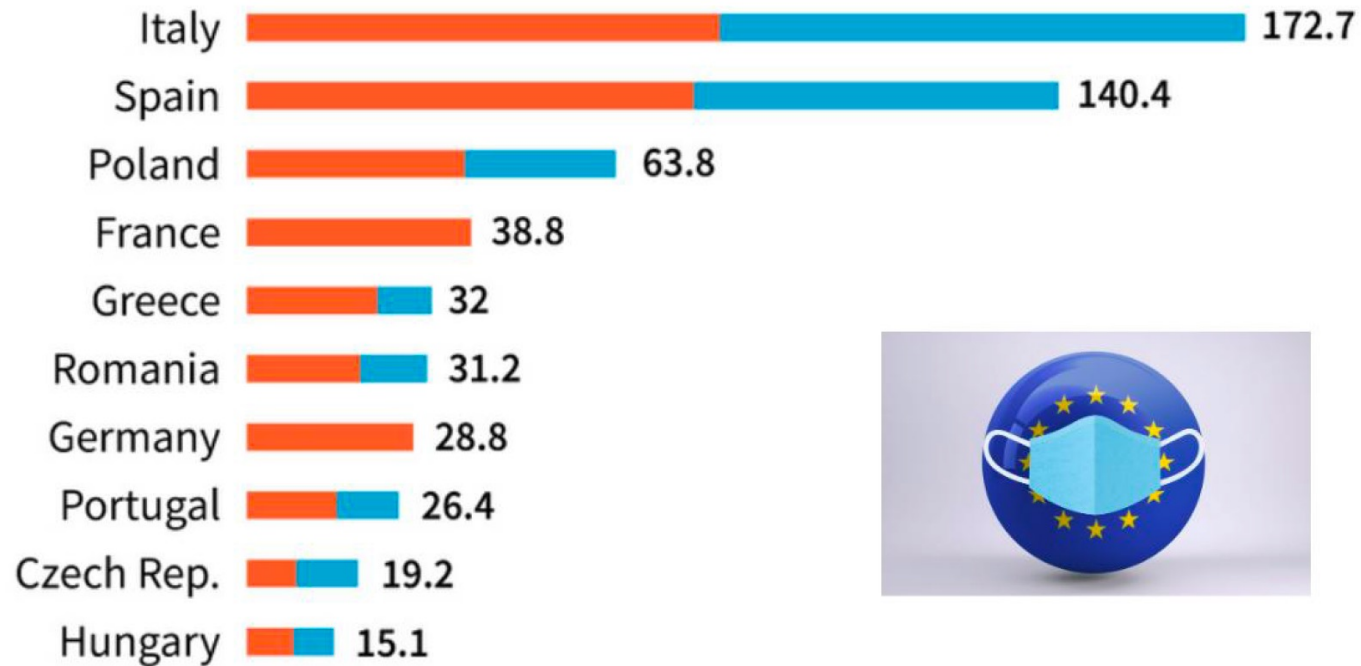
Coronavirus: EU recovery plan

Countries to receive the most from the European Commission proposal

In billions of €

Grants

Loans



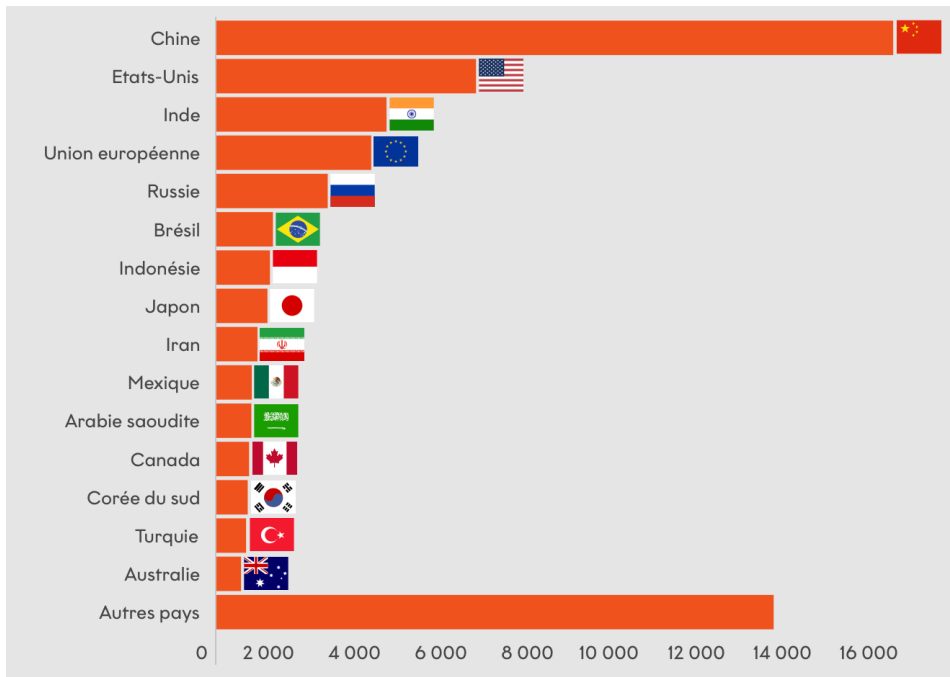
II – Climate action in the European Union: Aim and strategy

A – Challenges, tools and actors

- **What is the problem ?** Not just one problem, but a multitude of problems: climate change, the collapse of biodiversity, the poor health of the oceans, the general depletion of resources, etc.
- **A long story :** 50 years of international commitments for climate and biodiversity since the Stockholm conference in 1972 to the Paris agreements in 2015 !
- **2 complementary objectives to achieve carbon neutrality :**
 - Replace fossil fuels with low-carbon energies
 - Reduce final energy consumption
- **should the public authorities intervene?**
 - climate action: not in the statutes of central banks or the missions of governments
 - and yet affects collective well-being
 - economic researchers forced to rethink public policy objectives

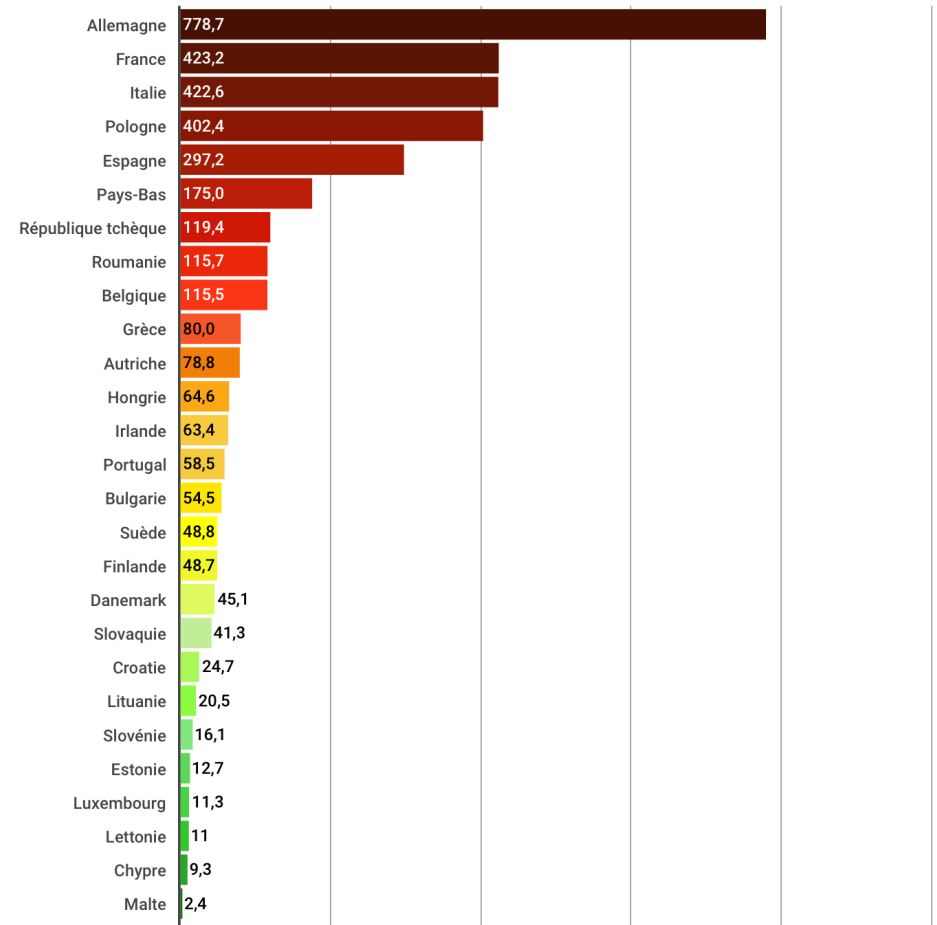
- **Who are the stakeholders ?**

Greenhouse gas emissions **in the World by country in 2022** (in millions of tonnes of CO2 equivalent)



Source : EDGAR Community GHG Database /
Commission européenne, JRC et Agence internationale de l'énergie
(IEA), 2023

Greenhouse gas emissions **in the European Union by Member State in 2021** (in millions of tonnes of CO2 equivalent)



- **Who needs financing?**

- ✓ households => changing their energy consumption and transport practices
- ✓ industry => decarbonising industrial production
- ✓ farmers => produce with fewer polluting inputs
- ✓ the services sector => reducing the damaging effects of storing massive amounts of data

- **Who is able to finance ?**

- ✓ National governments, local authorities, European Union => budgetary tools (taxation, public spending, public investment)
- ✓ Central Bank (ECB) => monetary tools (financing the economy)
- ✓ Financial markets => sustainable finance

- **What objectives should the budgetary tools target?**

- ✓ Supporting R&D into alternatives to fossil fuels
- ✓ Support the substitution of fossil fuel capital by low-carbon energy capital
- ✓ Encourage the moderation of energy-intensive uses and consumption (sobriety efforts)

B – What is the EU strategy for climate ?

- **The Lisbon Strategy (2000-2010) and the Europe 2020 Strategy for growth and employment (2010-2020) : the first building blocks?**

=> Not really : green objectives to reach (20% of energy from renewables, 20% increase in energy efficiency, greenhouse gas emissions reduction 20% lower than 1990) but no financing tools

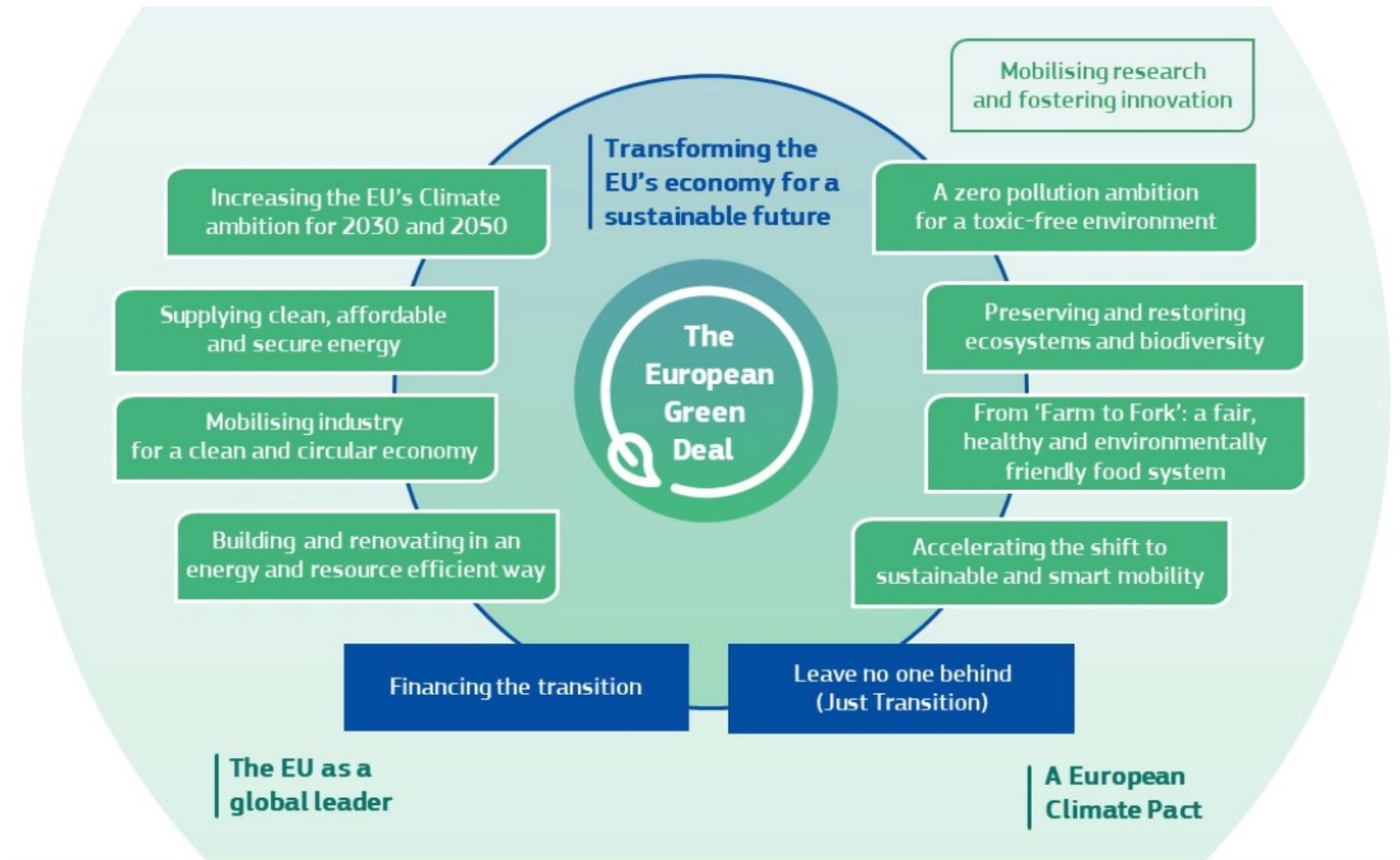
- **The major milestone/turning point : The European Green Deal (2021-2028)**

- ✓ The environmental roadmap of the European Commission, leading role in implementing the EU green strategy
- ✓ A set of policies and measures to implement the EU's commitments on the international scene
- ✓ Various actors involved (European institutional Triangle, Member States, ECB, EIB, private sector)
- ✓ => Tools : regulation + public funds (MFF and NGEU, national budget) + private funds

- **Objective to reach :**

- ✓ Climate neutrality in 2050
- ✓ At least 55% less net greenhouse gas emissions by 2030, compared to 1990 levels

- **The European Green Deal strategy in a nutshell :**

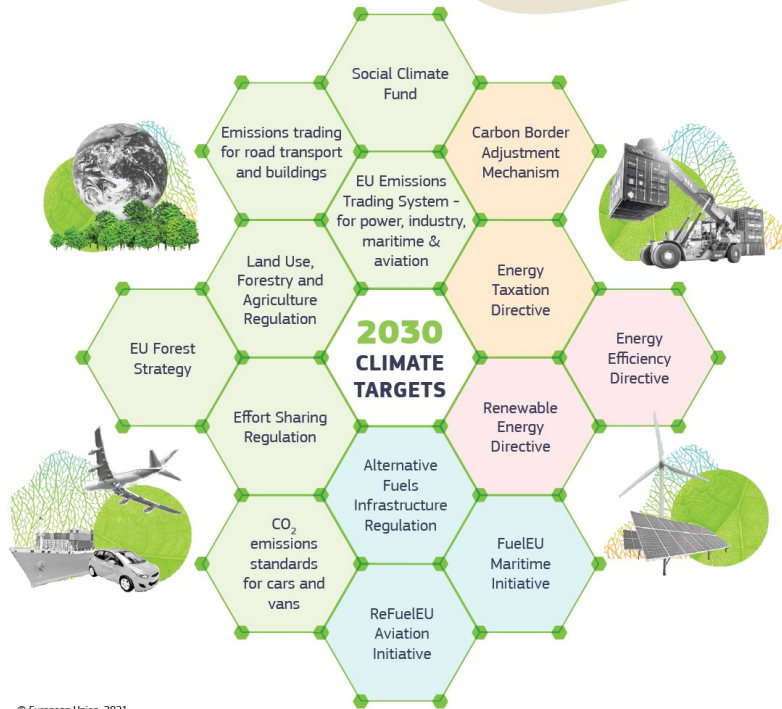


III – Climate action in the EU: A multi-players game

A – Public finance : MFF, NGEU, national budgets

DELIVERING THE EUROPEAN GREEN DEAL THE DECISIVE DECADE

The EU will **reduce its net greenhouse gas emissions by at least 55% by 2030**, compared to 1990 levels, as agreed in the EU Climate Law. On 14 July 2021, the Commission presented proposals to deliver these targets and make the European Green Deal a reality.



© European Union 2021

- **The European Green Deal public tools at EU level :**
 - ✓ **Directives**
 - ✓ Additional funds for EU financed by **NGEU**
 - ✓ Funds for member States financed by **MMF** (greening of the CAP, greening of the Cohesion funds for the poorest countries in the EU, ...)
 - ✓ Funds for member States financed by **NGEU** (through Recovery and Resilience Facility) : 37% of NGEU funding must be directed towards actions to combat climate change.
 - ✓ Member States other own specific programmes
 - ✓ **EU Taxonomy** to identify « green » activities

Recovery and Resilience Facility

€723.8 billion

● €338.0 billion in grants ● €385.8 billion in loans



POWER UP

Clean technologies and renewables



RENOVATE

Energy efficiency of buildings



RECHARGE AND REFUEL

Sustainable transport and charging stations



CONNECT

Roll-out of rapid broadband services



MODERNISE

Digitalisation of public administration



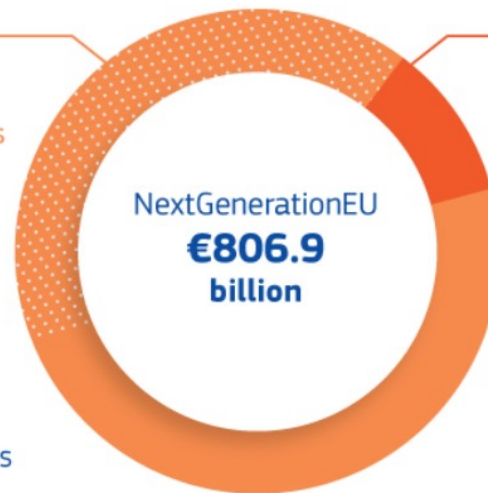
SCALE UP

Data cloud and sustainable processors



RESKILL AND UPSKILL

Education and training to support digital skills



NextGenerationEU contribution to other programmes

€83.1 billion

REACT-EU

€50.6 billion

JUST TRANSITION FUND

€10.9 billion

RURAL DEVELOPMENT

€8.1 billion

INVESTEU

€6.1 billion

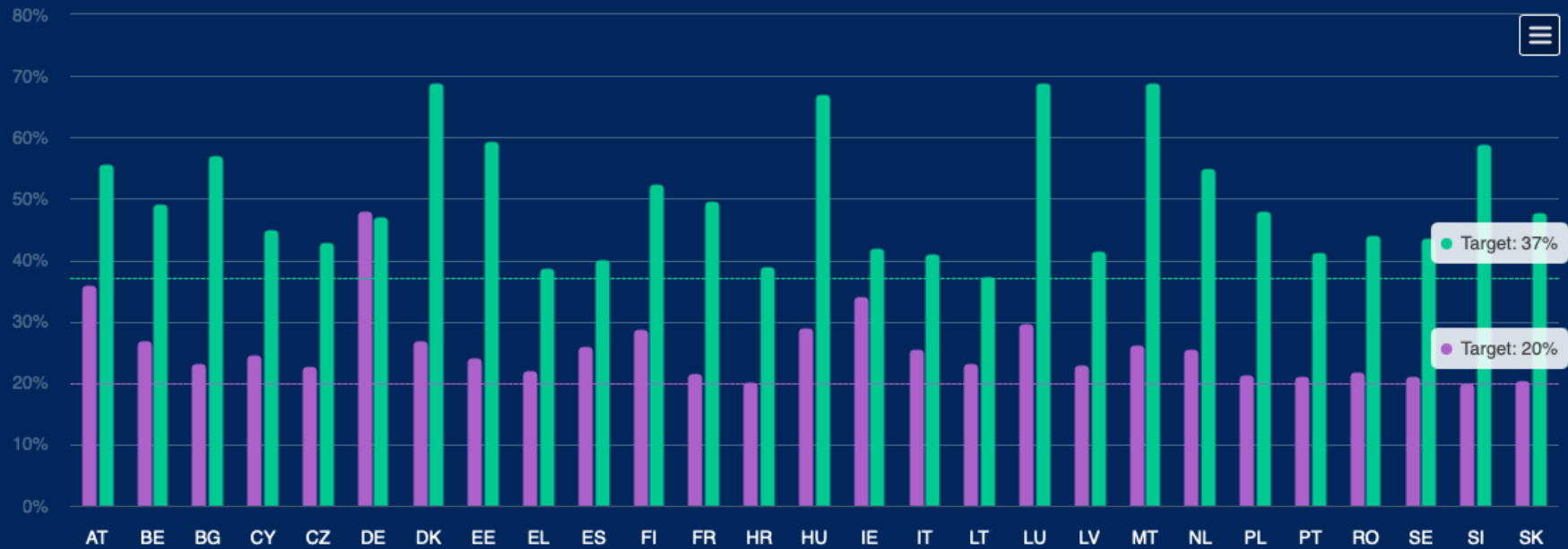
HORIZON EUROPE

€5.4 billion

RESCEU

€2.0 billion

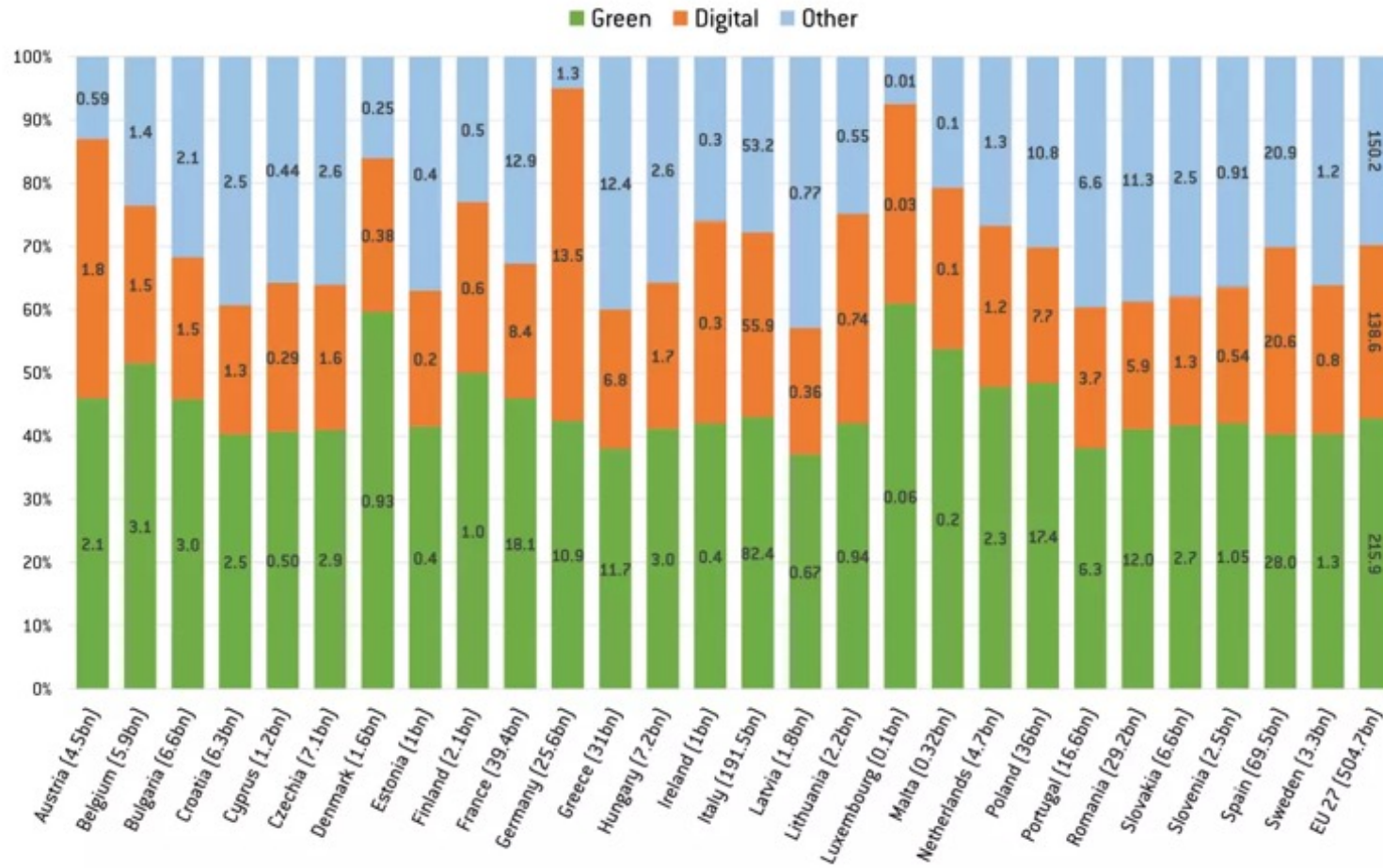
Share of RRP's estimated expenditure towards climate and digital objectives



The RRP's had to specify and justify to what extent each measure contributes fully (100%), partly (40%) or has no impact (0%) on the climate and/or digital objectives. The contributions to climate and digital objectives have been calculated using Annexes VI and VII of the RRF Regulation, respectively. Combining the coefficients with the cost estimates of each measure allows calculating to what degree the plans contribute to the climate and digital targets.

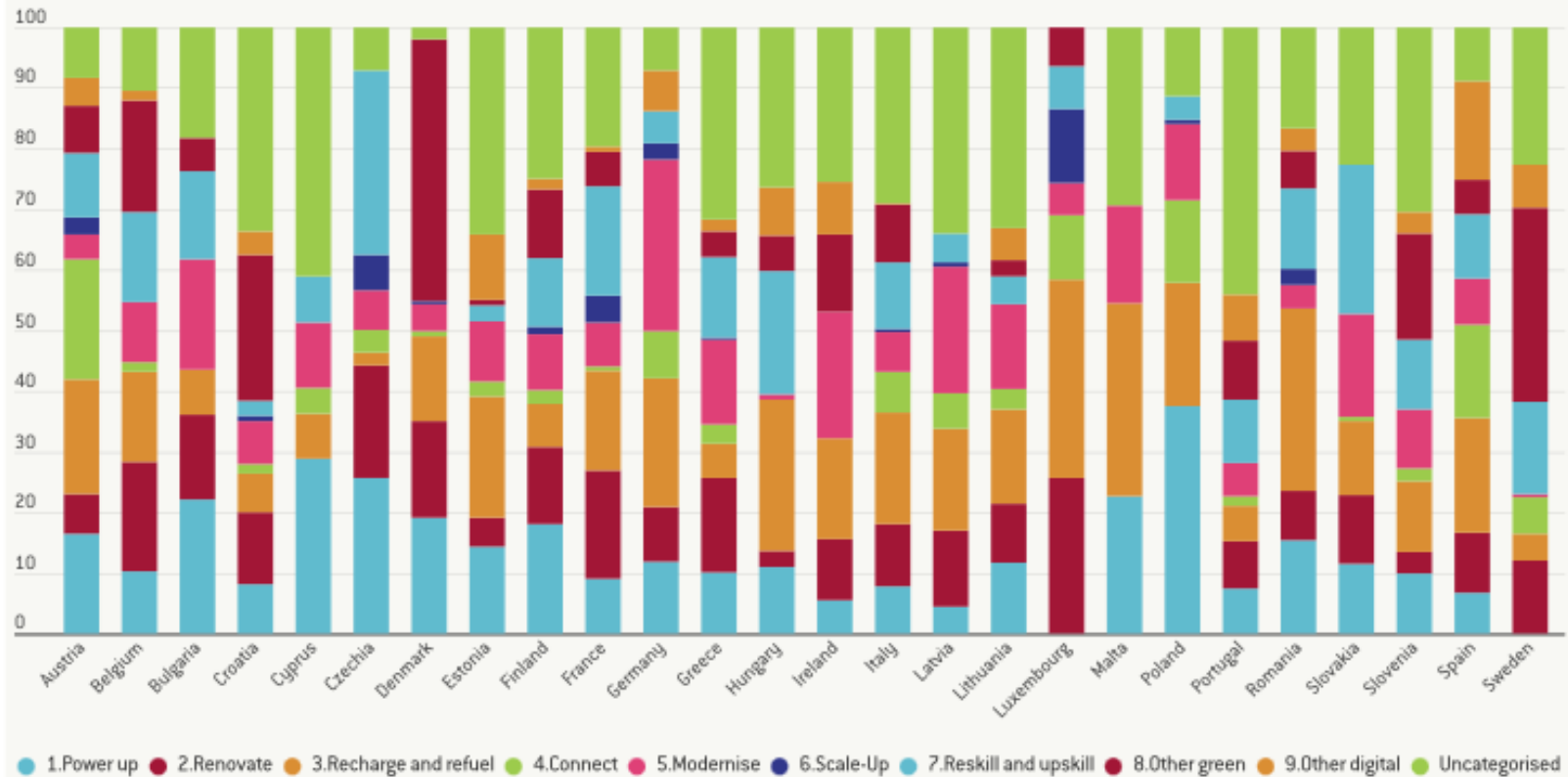
Source : European Commission

Figure 1: Overall resource allocation in national recovery and resilience plans (% of total and € billions)



Source : Bruegel

Figure 4: Composition of recovery plans according to the flagship areas defined by the Commission (% of total)

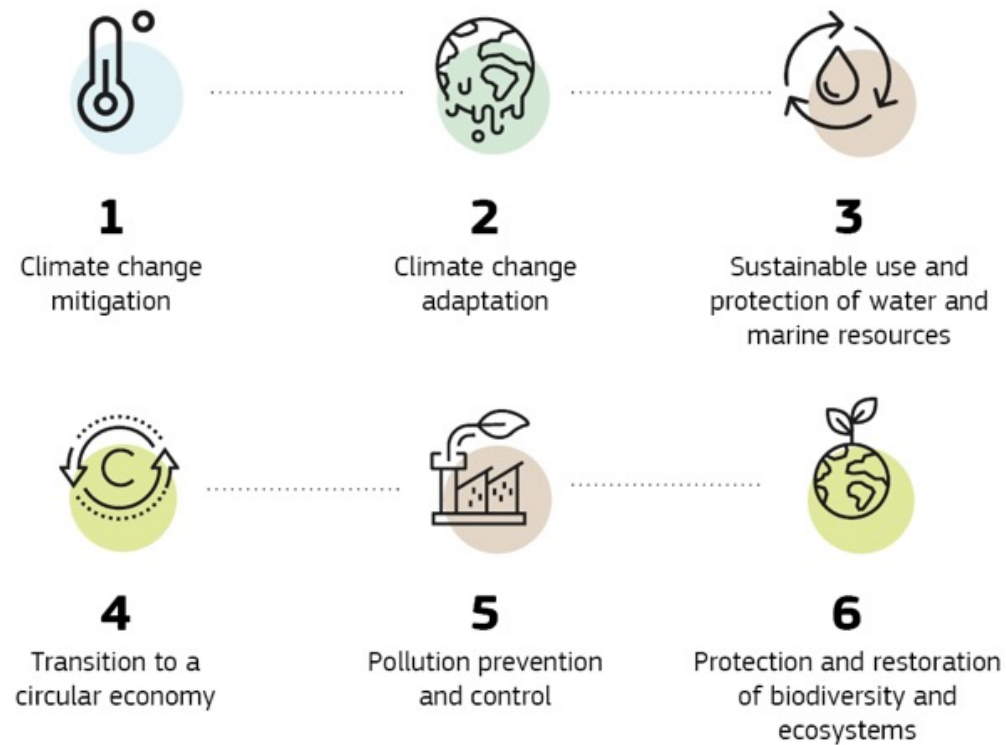


Source: Bruegel.



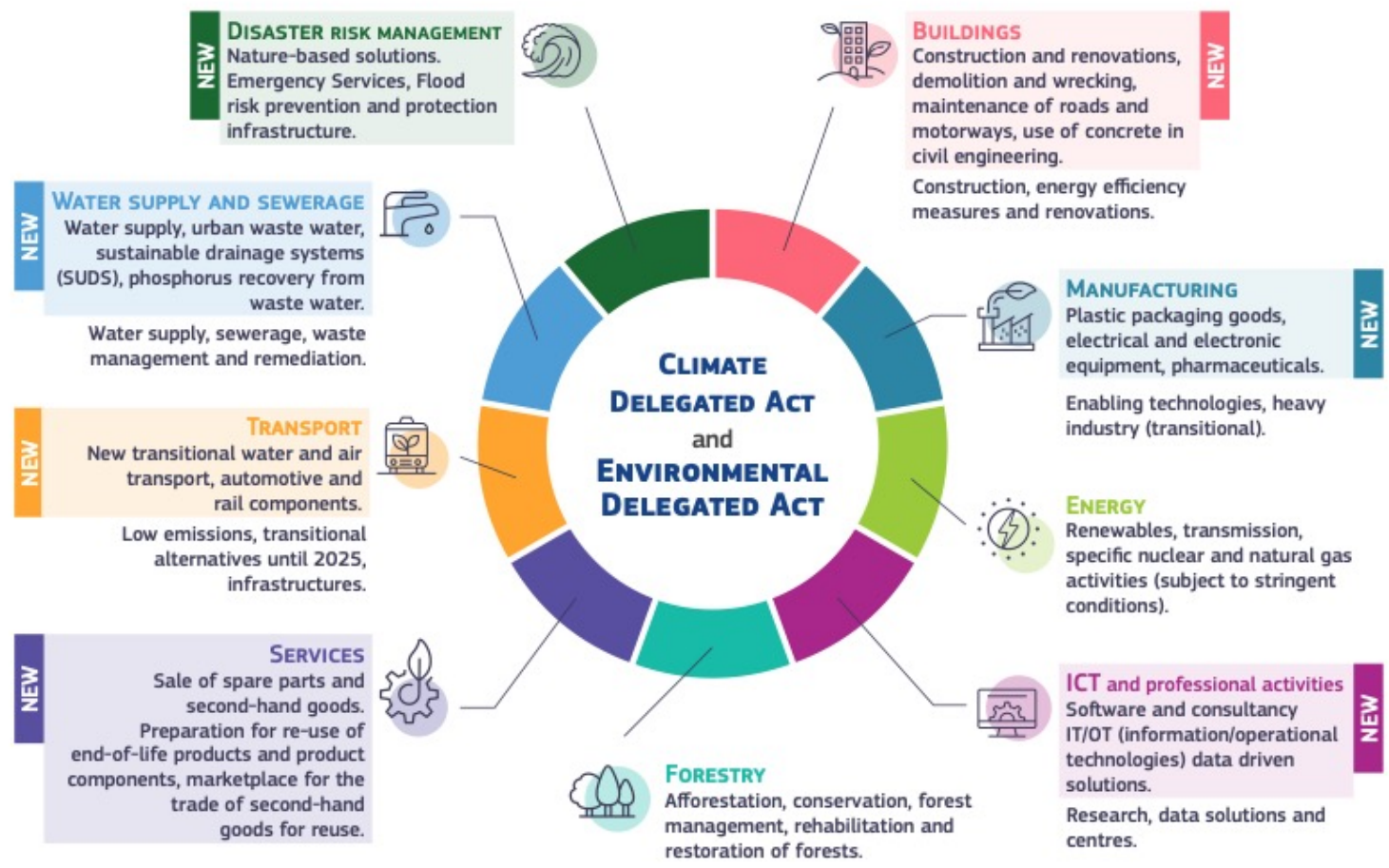
• EU Taxonomy

The [Taxonomy Regulation](#) was published in the Official Journal of the European Union on 22 June 2020 and entered into force on 12 July 2020. Article 9 of the Taxonomy Regulation sets out six climate and environmental objectives.



Source : European Commission (april 2024)

EU TAXONOMY ECONOMIC SECTORS AND ACTIVITIES COVERED



Source : European Commission (june 2023)

B – Private finance :

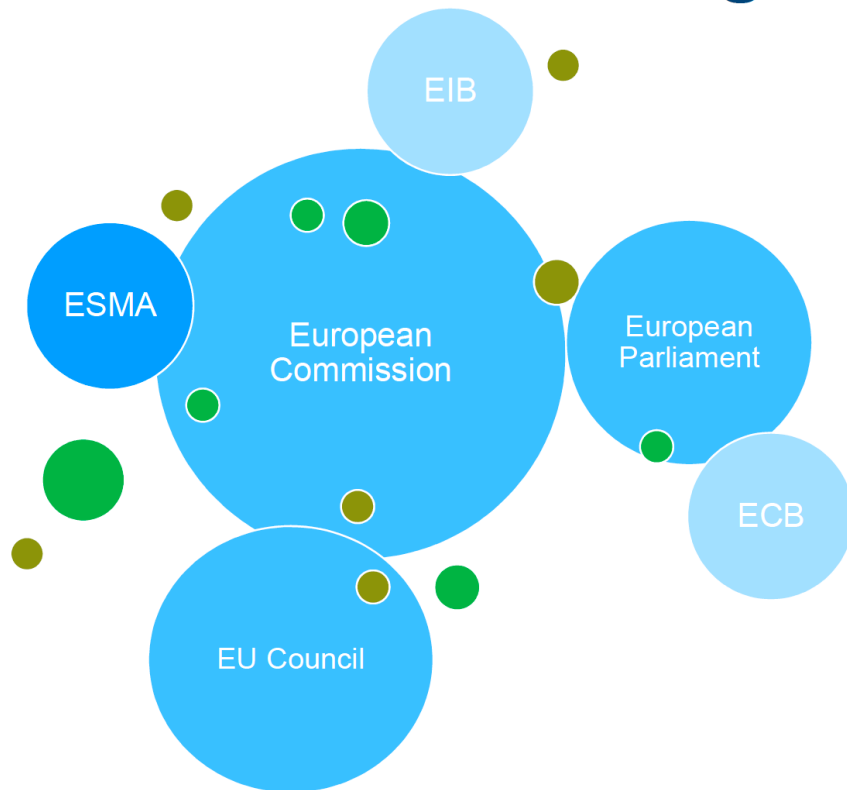
What about ECB and financial markets action for the climate ?

- **Sustainable finance** ‘Sustainable finance is about including environmental, social and governance considerations in investment decisions. It leads, in the long-term, to more investment in sustainable projects and activities. It plays a key role in delivering on the objectives of the European Green Deal, which aims to boost the green transition. This means moving towards a green economy through sustainable technology, industry and transport’

Source : website of the European Commission, 27 January 2024

- **Tool** : « Green bonds » are just one of the type of bonds to finance sustainable activities/investments
 - ✓ An exhaustive definition (the EU Taxonomy)
 - ✓ A trustworthy green bonds label (a green bonds standard regulation adopted in November 2023)

The EU actors of this game



- The European Central Bank's actions :
 - ✓ Integrating climate risk considerations into its:
 - ✓ Monetary Policy Frameworks (i.e. collateral and asset purchase programmes)
 - ✓ Financial Stability assessments
 - ✓ Micro-Prudential Policies and Instruments
- European Securities and Markets Authority (ESMA)
- European Investment Bank (EIB)

Conclusion : 3 major challenges

1. Implementation of the programs in the various countries (delays in the implementation, bureaucratic slowness, lack of qualified technicians, lack of infrastructure, cumbersome procedures for tendering for construction sites, fraudin some country)
1. Assessment of the socio-eco-environmental impact of climate action of each Member State ? For EU as a whole ? Overall consistency wit Green Deal ?
1. Major challenge : overcome the contradictory injunctions (green agriculture but growing demand for productivity given the geopolitical context, decarbonisation of industry but strong international competition, risk of climate-damaging effects of a high intensive digitalisation)