SUBMISSION BY FRANCE AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES

Paris, 30 April 2022

Subject: views regarding ways to achieve Article 2, paragraph 1(c), of the Paris Agreement, including options for approaches and guidelines for implementation, by 30 April 2022 and requests the Standing Committee on Finance to submit a synthesis for consideration by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its fourth session (November 2022);

1. INTRODUCTION

The European Union and its Member States (EU) welcome the invitation in the decision of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session to submit views regarding ways to achieve Article 2, paragraph 1(c), of the Paris Agreement, including options for approaches and guidelines for implementation, by 30 April 2022.

The EU believes that making finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development is key to the implementation of the Paris Agreement as a whole. Meeting the climate mitigation and adaptation goals requires bringing about a fundamental transformation of all economies and a major shift in the structure of the global economy, financial markets and investments. First and foremost, this means an in-depth transformation of capital markets (capital expenditure, re-orienting business models, new firms) towards a low greenhouse gas emission and climate resilient economy. In this context, the private sector has a pivotal role to play, with the public sector needed to provide appropriate financial and policy incentives and enabling conditions.

Article 2.1(c) is a global goal and will require a global effort. Achieving 2.1(c) will help countries to achieve their nationally determined contributions and other sustainable development goals. The developed country Parties' climate finance responsibilities under the Paris Agreement are one important component of this transformation. Therefore, Article 9 and Article 2.1(c) of the Paris Agreement are neither interchangeable nor mutually exclusive, but

article 9 reinforces article 2.1(c) in achieving mitigation and adaptation goals as demonstrated in EU political and funding priorities through bilateral and multilateral support.

While many initiatives have been put in place and the private sector has started moving in the right direction, much more remains to be done, and Parties will have to find their preferred approach to advancing this goal and pursuing it in all relevant fora. There is of course much room for improvement and it will be essential to ensure that parties set their own pace, and that they work together to gradually increase ambition.

In 2018, the third Biennial Assessment and overview of climate finance flows (BA) information relevant to Article 2, paragraph 1(c) was specifically included for the first time including methods and metrics, and data sets on flows, stocks and considerations for integration. By decision 4/CP.24, the COP requested the Standing Committee on Finance (SFC) to map, every four years, as part of its BA, the available information relevant to Article 2, paragraph 1(c), of the Paris Agreement, including its reference to Article 9 thereof.

The EU and its Member States consider this an important step forward. Having such a first mapping on an actor-specific approach is helpful, but we believe a broad society wide approach is needed. In order to reach this level of implementation, more consideration is needed on what options and measures exist or will need to be put in place to shift finance flows, including identifying finance flows that will need to be redirected in order to accelerate the achievement of all goals of the Paris Agreement.

The BA also highlighted the broad range of available datasets that integrate climate change considerations into insurance, lending and investment decision-making processes and that include information relevant to tracking consistency with the long-term goal outlined in Article 2.1(c). While there is clearly ample interest in implementation, actors are waiting for clearer policy signals from the international climate process, which could help ensure that the efforts made to align to the goals of the Paris Agreement are made in a way that is just, cost-effective and based on the latest available science. The Standing Committee on Finance has the opportunity to assist the Parties to the Paris Agreement to enhance their understanding of the implementation that is already happening, the framework and enabling conditions needed for full implementation and the role that different actors, including the UNFCCC, can play in the implementation of Art. 2.1(c), thereby accelerating the transition to a 1.5°C world, avoiding greenwashing and ensuring transparency of implementation.

2. RECOMMENDATIONS ON GUIDELINES FOR IMPLEMENTATION

With the approval of the Paris Agreement many initiatives have been put in place to align finance with the mitigation and adaptation long term goals and in this context, two main trends should be highlighted: (1) a greater complexity of the climate finance market and (2) a growing number of climate policy initiatives to mobilize financial and private sector.

The international climate finance (including the 100 $ billion goal) was certainly until the Paris Agreement the key policy reference point for the climate finance.

But it now constitutes only a small part of the "all finance flows" that Article 2.1(c) of the Paris Agreement asks to make consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. In recent years, many countries such as the EU and its Member States (as reported in the following sections) have launched policy initiatives relevant to Article 2.1(c) for example by making existing climate markets and projects more investor-friendly, creating investment opportunity with reliable returns and political and financial risk assurance to encourage private actors to invest in climate projects and disinvest from carbon intensive sectors.

In parallel, there is a very dynamic reality of voluntary initiatives by the private sector. This has determined an extremely complex structure of the climate finance market characterized by a numerous set of actors (private and public), products, financial instruments, stakeholders that support the activity of the capital markets for climate objectives.

Even if these initiatives are not yet aligned with each other it shows the willingness of the actors to climate proof their investments (or disinvestment from fossil fuels and carbon intensive sectors). A dynamic, complex and constantly evolving reality with multiple and overlapping international and transnational initiatives concerned with the substance of achieving 2.1(c) (even if they are not labelled as 2.1(c) is, therefore, emerging with a dichotomy.

On the one hand there are (1) a growing number of countries such as the EU and its Member States that have started implementing policies to achieve the Article 2.1(c) by defining a framework to catalyse the interest of the private sector in orienting financial flows towards a pathway consistent with the Paris Agreement goals; (2) an exponential interest of both the public and private financial sector (including final consumers) to invest in a financial market aligned with the objectives of the Paris Agreement; (3) an emerging risk of climate/green washing where there is no regulatory framework in place; (4) a heterogeneity of actors; and different fragmentary initiatives.

On the other hand, there is far too little consideration of this goal within the UNFCCC, which has so far largely limited consideration of progress in reaching the goal to technical processes withing the Standing Committee of Finance reports and within the Global Stocktake.

Even if these spaces are central, they can only provide technical support to the understanding of the implementation of the article 2.1(c). The spaces currently available for consideration of this goal will need to be strengthened and framed within a UNFCCC space that allows governments to exchange views on this topic.

Recommendation on guidelines for implementation of article 2.1(c) within the UNFCCC

Outlined below are recommendations of guidelines based on observed practices, but it should be noted that further deliberations within the UNFCCC are needed in order to have a broader understanding of how such guidelines can be designed and implemented in various socio-economic contexts. But these recommendations cannot replace the role of the national governments in the implementation of the Article 2.1.c.

First, the relationship between article 2.1(c) and Art. 9 of the Paris Agreement must be further clarified and strengthened in the context of the New Collective Quantified Goal (NCQG). In particular, Parties must consider how the NCQG can most effectively help to attract finance for mitigation and adaptation action in line with the long-term goals of the Paris Agreement, taking steps forward towards making all finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. This should include ensuring that: fiscal and economic levers are designed and applied to green global financial flows; climate considerations are mainstreamed into investment decisions, budgets and development cooperation; and additional finance is mobilized from all sources.

Second, the combined effects of governments, climate finance, the private sector and civil society make up the progress towards Art. 2.1(c), which will be reflected in the Global Stocktake, and will allow for the appropriate monitoring of global progress.

Third, as already pointed out, the Standing Committee on Finance has the opportunity to assist the Parties to the Paris Agreement to enhance the understanding of the implementation that is already happening by creating a summary of the submissions and by identifying experience, lessons learned and a technical basis for further consideration of Article 2.1(c) within the UNFCCC.

As core element on which all the points listed above must be embedded there must be **a new UNFCCC space on 2.1(c)** dedicated to giving substance, guidance and more ambitious policy signals to make finance flows consistent with the Paris Agreement goals. This space should not only define a direction for private actors but also **crucial purposes for any public action**.

In this context, all the current work on 2.1(c) under the SCF (including this mapping exercise) and GST can catalyse experiences, lessons learned and good practice emerging from outside the UNFCCC context and feed the discussion of such **a new UNFCCC space on 2.1(c).**

With this in mind the following section shows examples of measures relevant for the implementation of the article 2.1(c) undertaken by the EU and its Member States. Taking into consideration the wide spectrum of possible actions that can be consistent with provisions of article 2.1(c), the list should be regarded as indicative and not exhaustive as examples of options for approaches and guidelines. **The EU believes that this mapping exercise should not be considered as prescriptive but an opportunity to exchange experience and lessons learned in a dedicated space within the UNFCCC. We very much look forward to hearing of steps taken by other parties and learning more of the ways in which it has helped advance the implementation of article 2.**

3. IMPLEMENTING THE ARTICLE 2.1.C : PRACTICES IN THE EU AND ITS MEMBER STATES

A **coherent domestic and international climate policy** is the first step (and pre-condition) to catalyze finance flows towards a low greenhouse gas emissions and climate resilient development as stated by the article 2.1(c) of the Paris Agreement. In the EU, climate finance is embedded in a comprehensive set of regulatory, fiscal, industrial, market-based, and other climate change policies that disincentivizes investment in polluting technologies and incentivizes investment in low or zero-greenhouse gas emissions and climate resilient development. In this context, the **EU European Green Deal**, at the heart of the Commission's strategy is the EU growth model and roadmap to achieve climate neutrality in the EU by 2050. The EU Green Deal sends a clear signal to investors on the direction of the EU policy for the next 30 years, by disincentivizing investments in fossil fuels or carbon intensive technologies and spurring ones leading to sustainable and climate-resilient development.

The **European Climate Law** sets the EU's new and significantly more ambitious 2030 climate target – of a net domestic reduction of at least 55% in greenhouse gas emissions compared to 1990 levels. The EU Green Deal and the **European Climate Law** are accompanied by a set of interconnected policies and proposals, which not only address targets and standards but also ensure 'greening finance' and 'financing green'.

Below you can find examples of measures undertaken by the EU and its Member States. As already pointed out, ***this list should be regarded as indicative and not exhaustive and a basis to provide examples and exchange experiences and lessons learned.***

3.1 FISCAL POLICIES - PUBLIC EXPENDITURE AND BUDGET

3.1.1 Carbon pricing

The EU Emissions Trading Scheme (EU-ETS) is a cornerstone of EU climate policy and the EU's key carbon pricing instrument for reducing greenhouse gas emissions. Set up in 2005 as a means for the EU to meet its first legally binding emissions reduction target under the Kyoto Protocol, the EU ETS was the world's first major carbon market and remains the largest today.

The EU is also finalizing work on the **Carbon Border Adjustment Mechanism (CBAM)**, which will be key to reinforcing carbon pricing on imports of carbon-intensive products in full compliance with international trade rules. It will then prevent offsetting the EU's greenhouse gas emissions reduction efforts through imports of products manufactured in non-EU countries where climate change policies are less ambitious, by avoiding carbon leakage and encouraging partner countries to establish carbon pricing policies to fight climate change.

In **Germany,** the national emissions trading system has successfully started on 1 January 2021. It comprises all CO2 emissions not covered by the EU emissions trading system (EU ETS) and that are caused by the combustion of fossil fuels such as diesel and natural gas. In particular, this applies a carbon price to road transport and heating. The obligation to surrender emission allowances lies with the "providers", i.e. the companies that put diesel, petrol and other fuels on the market in Germany. The starting price is set at a fixed price of 25 Euros per emissions allowance in 2021 and will increase every year up to 55 Euro per allowance in 2025; for 2026 a price corridor is set at 55 to 65 Euros.

In July 2022, in **Austria** the national emissions trading will start covering energy greenhouse gas emissions caused in the so-called non-ETS sectors (buildings, transport, agriculture, waste management and small industrial plants). This mainly affects the following fossil fuels: petrol, gas oil (diesel), heating oil, natural gas, liquefied petroleum gas, coal and kerosene. The focus is on the placing on the market of the energy sources in free circulation, on the actual use of the said energy sources by the consumer is not important. Therefore, it is not the emitting (the actual cause of the greenhouse gas emissions of the said energy sources by the consumer) but their placing on the market. This significantly reduces the administrative burden. Trading participants are obliged by the NEHG 2022 to purchase emission certificates for the energy sources placed on the market. An emission certificate corresponds to one ton of CO2e. The acquisition of a national emission allowance is a prerequisite for the placing on the market of energy sources.

3.1.2 Taxation

The EU does not have a direct role in collecting taxes or setting tax rates. The amount of tax each citizen pays is decided by their national government, along with how the collected taxes are spent.

The EU does, however, oversee national tax rules in some areas. One of them is the **Energy Taxation Directive (ETD).** The EU is currently devising its revision, to align it with the EU's climate and energy policy frameworks and commitments.

EU Member States Practices

At National level**, France** introduced in 2014 the "*carbon component*", which is not a tax per se but a method of calculating internal consumption taxes proportional to the GHG content of various energy products: fuel (TICPE), gas (TICGN) and coal (TICC). It was initially set at the 7 €/tCO2e level in 2014 with a view to gradually increase to 100 €/tCO2e in 2030 as envisioned by the Energy Transition and Green Growth Framework Law of 2015. Within that framework, the 2018 finance law raised the tax from 39€/tCO2 to 44,6€/tCO2 in 2018 as a further step(now still at 44,6 €/tCO2e from 2019 onwards).

In **Spain,** the *Spanish tax on fluorinated greenhouse gases*, created through article 5 of Law 16/2013[1], is aimed at curbing emissions from fluorinated greenhouse gases by taxing the use of fluorinated gases according to their warming potential climate resilient initiatives.

This tax has been very useful promoting changes through all sectors using fluorinated gases, with high warming potential towards other technologies based on gases with zero or low global warming potential, especially in the refrigeration and air conditioning sector, both representing the majority in the use of these gases. In 2020, emissions of these gases were one third of those recorded in 2014.

In **Poland** the *Thermo-modernization tax relief and exemption*[2] provides support for thermo-modernization projects in single-family residential buildings. It is a thermo-modernization tax relief, available through personal income tax (PIT) return or through a form of PIT exemption for investments carried out under energy efficiency and emission reduction programs.

Also, the depreciation costs of electric passenger cars is a tax-deductible costs. This measure applies both to PIT and the corporate income tax (CIT). *Excise duty exemption for renewable energy* is used for the taxpayers' own needs, and that is produced with the use of generators not exceeding 1MW total capacity, is exempt from excise duty. *Excise duty exemption for electric, hybrid, and hydrogen passenger cars* is dedicated to hybrid passenger cars in which electricity is accumulated through a connection to an external power source (plug-in vehicles) with a combustion engine capacity not exceeding 2000 cm^3, are exempt from excise duty until December 31, 2022. Such exemptions have no time limit for electric and hydrogen cars. *Lowering the excise tax rates for hybrid passenger cars* applies to all hybrid passenger cars is also 50% lower compared to other passenger vehicles.

The Property tax exemption and lower property tax rates are also applied at local level. A municipality can introduce lower tax rates of local property tax and property tax exemptions for the environment or climate-related initiatives. In Poland, there are a few examples of such measures concerning both adaptation (greening residential buildings) and mitigation (green heating), and also friendly tax regulations for wind farms.

The **Belgian federal government** will gradually phase out tax reductions for carbon-emitting company vehicles and gradually increase reductions for zero-emission company vehicles. *By 2026 only zero-emission company vehicles will be 100% tax deductible*. Similarly a tax reduction has been set for those installing charging stations, from 45% for private individuals and 100% for companies, this percentage being reduced yearly to stimulate immediate investments as infrastructure is an urgent necessity.[3]

Following the **Do No Significant Harm** principle set out in the EU Taxonomy Regulation**,** *a DNHS analysis of public expenditure* is in the works. The aim is to gain a clearer view of the current situation and move towards public expenditure that is aligned with the Paris Agreement.

In **Italy**, among the main taxes on energy use and greenhouse gas (GHG) emissions, the excise tax on energy (Ufficio accise sui prodotti energetici e alcolici), classified as a fuel excise tax according to the Taxing Energy Use (TEU) methodology, applies to diesel, gasoline, fuel oil, LPG, natural gas and coal

[1] Art5, Law 16/2013, of October 29, which establishes certain measures on environmental taxation and other tax, and financial measures are adopted.
https://www.boe.es/buscar/act.php?id=BOE-A-2013-11331

[2] https://www.podatki.gov.pl/pit/ulgi-odliczenia-i-zwolnienia/ulga-termomodernizacyjna/

[3] https://vanpeteghem.belgium.be/fr/le-ministre-van-peteghem-fait-des-voitures-de-soci%C3%A9t%C3%A9-et-des-bornes-de-recharge-les-leviers-dun-parc

and coke. On the fiscal side, the Government implemented the so-called "SuperEcobonus", a measure meant to finance building retrofitting on energy efficiency. The Italian Government upgraded a measure on sustainable mobility called "*Ecobonus Auto*", the Car Ecobonus, consisting of a grant for purchasing low emission vehicles.

The Green Taxation Law (Law No. 82-D/2014), approved in 2014, is still a central aspect of **Portugal**'s energy and climate policy. As part of it, Portugal established a carbon tax in 2015 that covers fossil fuel demand in all non-ETS sectors. This tax is charged as an additional amount of the energy products tax (ISP), which covers most energy demand including fossil fuels, electricity and heat. Its rate is based on historic price trends of ETS allowances and conversion factors that assign higher tax rates to fuels with higher emissions and environmental impacts. Both revenues (from the carbon tax and ETS allowance auctions) are allocated to Portugal's Environmental Fund, which supports a wide range of government programmes, namely decarbonisation measures. In 2018, an adjustment was introduced to comply with a progressive elimination of the ISP and carbon tax exemptions for coal used in electricity generation up to 2023. This fiscal measure contributed to fully close the last two coal-fired generation plants in 2021. Since 2020, natural gas used for electricity generation (excluding co-generation) is also subject to a progressive reduction of the ISP and carbon tax exemptions, which favours the deployment of electricity based in renewable sources, according to the national climate and energy targets. Other measures to foster renewable weight in power generation include feed-in tariffs and a new system, established in 2019, for allocating grid connection capacity that includes solar PV auctions

3.1.3 Public Expenditure

The EU has allocated at least 30% of the €2.02 trillion made up of (i) the current EU long-term budget (2021–2027) and (ii) the EU Recovery instrument (also known as **Next Generation EU**; period 2021–2023/2026) for climate-related policies and programmes (up from 20% in the 2014 – 2020 programme period), which is the highest share so far. This means around EUR 606 billion, compared to around EUR 210 billion in the previous period, will be spent on green investments. Furthermore, the **Just Transition Mechanism**, while using some EUR 21 billion in grants and several billion EUR in funded guarantees from the EU budget, is expected to mobilize around EUR 148 billion (2021-2027) in total of private and public investments to alleviate the socio-economic impact of green transition in the most affected regions and sectors in the EU. Moreover, the focus on the green transition in the **EU Recovery and Resilience Facility (RRF**) and the **next generation territorial cohesion programmes** will also provide an opportunity to frontload investments and reforms that can help increase resilience to climate shocks as well as accelerate the decarbonisation of the economy. At least 37% of the spending under the RRF will be dedicated to climate change mitigation and adaptation.

In November 2020, the **European Investment Bank** (EIB) Group adopted its **Climate Roadmap** committing to supporting €1 trillion of investments in climate action and environmental sustainability in the critical decade from 2021 to 2030; gradually increasing the share of its financing dedicated to climate action and environmental sustainability to reach 50% of its operations in 2025 and; align all its financing activities with the principles and goals of the Paris Agreement by the end of 2020. The EIB, as the "**EU Climate Bank**" is a key partner in making the transition happen.

The EU framework for the coordination of Member States' fiscal policies is based on the principle of sound public finances as a means of strengthening the conditions for price stability and for strong sustainable growth conducive to employment creation. Within this framework, the EU aims also at

reorienting Members States' fiscal policies to support the twin **green and digital transitions**. In the current situation of increased deficits and debts resulting from the COVID-19 crisis and the measures to fight it, this translates, in the recently published **guidance[4] of the European Commission on the conduct of fiscal policy in 2023**, into the promotion and protection of high-quality public investments in the said transitions even in the high-debt Member States with the highest needs of public finance consolidation. Further and more detailed guidelines will be provided in the Commission's European Semester spring package in May 2022, which will include proposals for fiscal policy recommendations to each Member State.

EU Member States Practices

In **Germany**, the Energy and Climate Fund / Climate and Transition Fund Program[5] has planned an expenditure of €157.6 billion by 2025 (currently in parliamentary procedure), flow into a variety of measures to support the energy transition: Low emission buildings, Expenditures for compensating industry and households energy bills/Carbon Leakage, Electric mobility, Decarbonisation and hydrogen use in industry, Production of energy storage, National and international climate change mitigation, Environmental projects and research.

In **Sweden** to further stimulate the reduction of greenhouse gas emissions, the Climate Leap[6] sets a programme for local investments was introduced in 2015, the Climate Leap. In total, SEK 8,9 billion has been granted for investments within the program (as of December 2021). The Swedish EPA administers the grants. Investments in all sectors, except those included in the EU ETS, and all types of organizations are eligible to apply for grants. Some investments in sectors included in the EU ETS are also eligible for grants if these result in an increased utilization of waste heat. Applicants compete based on the estimated greenhouse gas reduction of each investment. Examples of investments that can be granted support are charging infrastructure for electric vehicles, biogas plants, infrastructure for biofuel and transitions from fossil oil to biofuel or district heating.

The fertile drained peatlands in Sweden are a climate problem as they leak large amounts of greenhouse gases annually. By re-wetting these soils, the leakage of greenhouse gases ca be reduced.

The Swedish government has invested SEK 169 million in the rewetting of these peatlands over the time period 2021–2023. The Swedish Forest Agency is responsible for this funding. A large part of the money will go to re-wetting contracts with forest owners who choose to close ditches and thereby reduce emissions. By signing a re-wetting agreement, the land owner receives a one-time compensation for reduced land value.

On 3 June 2021, the Government resolved to give to the National Debt Office a mandate to issue state credit guarantees for new loans raised by companies with credit institutions for financing large industrial investments in Sweden that contribute to reaching the goals of the environmental objectives system and climate policy framework. To be eligible for a guarantee, a loan must amount to at least SEK 500 million. During 2022, the scope of the guarantee scheme is SEK 50 billion. After that, the scope of the guarantee scheme is estimated to be SEK 65 billion for 2023 and SEK 80 billion for 2024.

[4] On 2 March 2022, see Fiscal policy guidance for 2023 | European Commission (europa.eu)
[5] https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Oeffentliche_Finanzen/Bundeshaushalt/Energie-und-Klimafond/10-EKF-Bericht.html
[6] Klimatklivet (naturvardsverket.se)

In **Poland** the *National Fund for Environmental Protection and Water Management (NFEP&WM)*, with over 33 years of experience in the field of financing environmental protection and energy transition, is the leading Polish entity in the implementation of environmental and energy transition policy, as well as financing the largest and most innovative green projects. Acting for more than 20 years as the implementing authority in multiple European funding programs, including pre-accession assistance projects, Operational Programme Infrastructure and Environment, LIFE Programme, along with the European Economic Area Financial Mechanism and the Norwegian Financial Mechanism, the NFEP&WM gained extensive knowledge and skills in all possible fields of environmental engagement. The main priorities of its activity include support of energy efficiency and renewable energy, financed using both refundable and non-refundable instruments. With over 150 000 agreements signed and an overall portfolio of EUR 60 billion (PLN 270 billion), the NFEP&WM has become a regional leader in terms of successful implementation of green solutions in support of Poland's major economic reforms.

The National Recovery and Resilience Plan (NRRP) of **Italy** allocated the 31.17% of the overall budget to the Green revolution and ecological transition (69,8 bn euro). Financing ecological transition through the NRRP will also be supported by the 2021-2050 Ecological Transition Plan, an environmentally comprehensive conceptual framework complementary to the PNRR, an "open plan that will accompany the transition process throughout its duration, with specific targets, monitoring activities and continuous adjustments".

3.1.4 Green Budget

Greening national budgets is key for climate action and the green transition because budgets are one of the main expressions of how a government intends to implement its political ambition. To address this issue the European Commission, jointly with the EU Member States, developed the **EU Green Budgeting Reference Framework** (GBRF) as a toolkit for Member States willing to implement or upgrade green budgeting practices[7]. It includes key elements for implementing green budgeting at the country level: (i) **the coverage of environmental objectives of budgetary items and public sector entities**; (ii) **the methodology used to assess the consistency** of budgetary policies with environmental goals; (iii) **the deliverables** (identifying the green content in both the annual budgetary plans and executed budgets); (iv) **the governance**, setting responsibilities for each player; (v) and **the transparency and accountability of the process**.

In 2021, 5 Member States have already implemented environmental impact assessment of their national budget, 6 Member States had implemented green budget tagging while 6 were currently implementing green budgeting.

EU Member States Practices

In **France**, green budgeting was initiated in 2017 in the « Paris Collaborative on Green Budgeting » and follows, among others, transparency objectives. Green budgeting has been a strong demand from the French Parliament and actors like NGOs. It aims to estimate the environmental impact of budgetary and fiscal expenditures of the French Finance Bill. French Green Budgeting was first published on 2020, and enriched this in 2021 for its second edition (Finance Bill for 2022). Recent trends of the environmental impacts of public expenditures are now available. From the policymaker viewpoint, green budgeting appears as an efficient tool for decision-making on environmental and climate policy,

[7] european_commission_green_budgeting_reference_framework.pdf (europa.eu)

and contributed, in practice, to mainstream environmental objectives in budgetary programs. It also allows a precise management of environment-compatible expenditures and taxes. From the general public viewpoint, it can be used as a tool for more transparency. Transparency is a key aspect for public ownership and social acceptance of public policies, especially on climate. Finally, it has also fostered initiatives at local level.

Denmark is developing a macroeconomic model, *GreenREFORM*[8], to enable the fiscal and economic planning to support the green transition. The model aims to assess the economic and fiscal impacts of climate and environmental policies, and the climate and environmental impacts of economic policies. GreenREFORM describes the energy use and emission of pollutants from all Danish businesses, households, and the public sector and the effect on emissions from environmental taxes, subsidies, and other regulations. The model's projections will allow assessments of the effect of economic developments and budget measures on Denmark's environmental and climate objectives.

In **Spain**, the Spanish Climate Change and Energy Transition Law (art. 30)[9] foresees measures to integrate climate change into the public budget of the Spanish Central Administration The percentage of the General State Budget that must contribute to the objectives established for climate change and energy transition will be the equivalent percentage to that agreed in the European Union's Multiannual Financial Framework. It will be revised upwards in 2025.

Further, revenues from the auctioning of greenhouse gas emission allowances will be used to meet climate change and energy transition targets. In Spain, the Spanish Climate Change and Energy Transition Act (art. 31) foresees measures to integrate the fight against climate change in public procurement procedures, such as the inclusion of emission reduction and carbon footprint criteria specifically aimed at the fight against climate change as specific technical requirements in the contracting specifications. In **Sweden** all proposals for changes in budget appropriations shall have be accompanied by an impact assessment regarding the effect on climate and environment in line with the Ministry of Finance´s instruction for budget basis. The Climate and environmental analysis consists of three steps: Step 1. Decide if the proposal has any climate or environmental relevance. There is a web based tool to help with this decision. Step 2. If the proposal has climate and environmental relevance an impact assessment should be performed based o provided methodological support. Step 3. The line ministry shall write a short description of the result of the impact assessment and submit to the Ministry of Finance. Some good examples are given on the dedicated web site.

Germany introduced a new administrative regulation for procuring climate friendly goods and services, the so called AVV Klima[10], which applies since 1 January 2022 to all federal authorities. The AVV Klima includes two main new elements.

On the one hand, federal procuring entities must make a forecast of the greenhouse gas emissions caused during the entire life cycle of a good or service as far as possible. This external "CO2 shadow price" over the life cycle must be included when determining the most economic and cost-efficient goods or services to procure.

[8] https://dreamgroup.dk/greenreform/

[9] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-8447

[10] https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2021/09/20210915-altmaier-bund-geht-mit-gutem-vorbild-voran-und-kauft-kunftig-klimafreundlich-ein.html

As this may be complicated and practical guidelines will still take some time, the administrative regulation also contains a tool that is easier to handle for procuring entities: The so-called "negative list" includes certain climate relevant products, such as certain freezers or types of packaging material, that generally shall not be procured anymore.

In **Poland**, the *Polish public procurement law*[11] does not oblige contracting authorities to take environmental and climate aspects into account during the procurement procedure. However, it does offer such a possibility. The analysis carried out before the commencement of the procurement procedure may take into account environmental aspects. Requirements for the contractor may relate, in particular, to the application of specific environmental management measures. A contracting authority may also specify in the description the required level of the environmental and climate impact of the construction works materials, products or services.

The *Polish Procurement Policy 2022-2025* is a newly adopted public procurement strategy, which puts a stronger emphasis on sustainability and green solutions. It recommends embedding during procurement procedure requirements concerning specific levels of environmental impact or management measures, obligations to meet needs of environmental management systems or standards, and criteria relating to the energy efficiency. It also established an interinstitutional Green Procurement Team, which will play a coordination role and prepare annually a catalog of products and services for which green public procurement rules will be obligatory. The *Civic Budget* allows local societies to participate in the public fund allocation, by submitting investment initiatives and projects which should be later financed by local government. Several cities in Poland (e.g. Cracow, Gdansk, Katowice, Lublin, Poznan, Szamotuly) has devoted part of their civic budgets only to green investments. The main aim of the so-called Green Civic Budget is to conserve and protect the urban natural environment, by creating new green areas or modernizing already existing ones. This mechanism responds to the need of inhabitants to have more sufficient funding for urban adaptation initiatives.

The **Austrian Ministry of Finance** is establishing Green Budgeting. This means that the ministry collects and analyzes, taking into account all available data, the climate- and environment-specific positive, neutral and negative effects of all budget, regulatory and tax policy measures and processes in the public sector. This analysis includes both financial aspects (input consideration) and assessments of the impact dimension (impact consideration) and provides a decision-making basis for contributing to compliance with national, international and international climate and environmental goals. A resilient, low-carbon and environmentally friendly development in Austria in the face of the consequences of climate change means a development that meets the needs of today's generation without endangering the resources of future generations. In this context, the question of efficient and effective climate and environmental protection is inextricably linked to the goal of sustainably organized budgets. The process consists of four phases: (i) Strategic planning, (ii) intelligence gathering and policy coherence, (iii) accountability and transparency, and (iv) a budgetary governance framework.

The **Portuguese Climate Law** (Law 98/2021), published on 31 December 2021, came into force on 1 February 2022. It establishes targets and requirements for the design of public policies across economic sectors and levels of government. Its framework is compliant with Paris Agreement, the European Green Deal and the European Climate Law, approved in July 2021, and it is linked to the

[11] https://www.gov.pl/web/rozwoj-technologia/3-lutego-weszla-w-zycie-polityka-zakupowa-panstwa-na-lata-2022-2025

European ESG regulations, particularly the European Taxonomy and the obligations foreseen in the already effective legislation on sustainable finance.

The Portuguese Climate Law addresses the economic and financial instruments, namely the budgetary and fiscal policies, and the requirement that by 2030 all public assets comply with the principles of European taxonomy.

The Operational Programme Environment (OPE)[12] (the second largest operational program in the CZ) is one of the subsidy programs that enables the **Czech Republic** to draw European Union funds to protect and improve the quality of the environment. It aims to protect and ensure the quality of the living environment of the Czech population, promoting the efficient use of resources, eliminating the negative impacts of human activities on the environment and climate change mitigation.

The operational program was prepared by the Ministry of the Environment and the State Environmental Fund in cooperation with the European Commission. The funds are intended to support specific projects in five areas (water, air, waste, energy, nature conservation).

Municipalities and cities, state administration and self-government organizations, universities, legal and natural persons as well as non-profit organizations can apply for subsidies from the OPE.

Italy presents its green budgeting reports by activity of environmental protection (CEPA) and of resource management (CReMA). To account for different contributions to an objective, the Italian authorities assign a weight to each action of a programme in order to express the extent to which it contributes to the environment at large and, then, to each specific objective. The eco-budget is produced by the Ministry of Finance alone, since the year 2000. In Italy, two reports are published annually, the eco-budget (Eco-bilancio) report as part of the draft budget and the eco-report (Eco-rendiconto) as part of the budget execution documentation. Information on tax expenditure is produced by the Ministry of Ecological Transition (hence not attached to budgetary documents) in their annual catalogue of environmental subsidies, both favourable and unfavourable to the environment.

In **Portugal**, the recently adopted Climate Law (Law n. 98/2021) dedicates a whole chapter to Economic and financial instruments, whereby it reinforces and aligns the budgeting and financial legal framework with climate objetives and establishes that public institutions and private companies must take into account climate risk and climate impact in their financing decisions. It addresses green budgeting and green fiscal policies; the requirement that by 2030 all public assets comply with the principles of European taxonomy; carbon pricing; sustainable finance and integration of climate impact and climate risk in the construction of financial assets

3.2 FINANCIAL POLICIES AND REGULATION

To ensure the financial sector transitions towards sustainability, and to reorient capital flows towards sustainable investments, the EU created a sustainable finance policy. Its pillars are the **Action Plan: Financing Sustainable Growth** of 2018 and the **Strategy for Financing the Transition to a Sustainable Economy of July 2021**[13]**,** which associated legislative proposals (including taxonomy), announcing a

[12] https://www.opzp.cz/about/

[13] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097

comprehensive shift in how the financial system works. The 2018 package established EU regulatory leadership in the nascent policy field. The 2021 Strategy forgoes regulatory leadership and confirms that the EU will work at an international level to define further steps. The Strategy sets out incremental steps forward for greening the financial sector. While it clearly recognises that insufficient integration of climate risks "hampers reallocation of resources and risks leading to disruptive readjustments in the future, with implications for financial stability", the actions are mostly about further developing the "green niche" rather than integrating sustainability in mainstream financial markets. As such, the overall ambition of the Strategy does not reflect the urgency of action and the ambition of the EGD. At the same time, the incremental steps are useful, and it includes some promising openings, notably on the financial supervision and prudential aspects, including a call for stress testing EU financial markets' readiness for the Fit-for-55 package.

Both the Action Plan of 2008 and the Strategy of 2021 are put in force by interconnected legislation package, containing of:

A. Taxonomy Regulation and its delegated acts

It is a classification system, which establishes criteria for determining whether an economic activity qualifies as environmentally sustainable. It sets up environmental objectives[14] and conditions[15] that economic activity has to meet to be recognised as Taxonomy-aligned. The actual list of environmentally sustainable activities is established by defining technical screening criteria for each environmental objective through delegated acts.

The regulation applies to measures adopted by the Member States or the European Union which set requirements for financial market participants or issuers with respect to financial products or corporate bonds that are made available as environmentally sustainable. Use of the Taxonomy is largely voluntary. However, entities currently covered by the Non-Financial Reporting Directive (NFRD) are required to disclose the taxonomy eligibility and alignment of their business activities, or that of their investments in the case of financial institutions.

B. The Sustainable Finance Disclosure Regulation (SFRD)

The SFDR complements corporate disclosures by creating a comprehensive reporting framework for financial products and financial entities. It introduces obligations on institutional investors and asset managers to disclose how they integrate Environmental, Social and Governance (ESG) factors in their risk processes. Requirements to integrate ESG factors in investment decision-making processes, as part of their duties towards investors and beneficiaries, will be further specified through delegated acts. The SFDR requirements are linked with those under the EU Taxonomy by including 'environmentally sustainable economic activities' as defined by the Taxonomy Regulation in the definition of 'sustainable investments' in the SFDR.

C. The Climate Benchmarks Regulation

[14] Climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems.

[15] Making a substantial contribution to at least one environmental objective, doing no significant harm to any other environmental objective, complying with minimum social safeguards and complying with the technical screening criteria.

The Climate Benchmarks Regulation introduces two new categories of benchmarks, the EU Climate Transition Benchmark (EU CTB) and the EU Paris-Aligned Benchmark (EU PAB), and their minimum requirements. It also lays out ESG disclosure requirements that apply to all investment benchmarks, except of currency and interest rate indices. Specifically, the disclosure requirements apply to all registered benchmark administrators, either based in the EU or offering benchmarks within the EU.

The EU is also in the process of devising other measures, like the **Corporate Sustainability Reporting Directive** and proposal for a Regulation for a **European Green Bond Standard**. As a voluntary label of excellence aligned with the EU Taxonomy, it aims to enhance the effectiveness, transparency, comparability and credibility of the green bond market and encourage market participants to issue and invest in such bonds. Bond proceeds must finance/refinance EU Taxonomy-aligned expenditure.

EU Member States Practices

In **Belgium** as per the federal coalition agreement, the Federal Holding and Participation Company (SFPI-FPIM), a limited company of public interest, the capital of which is 100% held by the State, has been tasked with multiple mandates that will come into effect the coming years. Firstly, it will develop a sustainable and ambitious investment strategy with the objective of gradually reducing investments in fossil energy and fuels, following the example of the European Investment bank. By 2030 the federal State and the institutions under its authority will have completely withdrawn from companies that emit GHGs intensively and are not actively engaged in the energy transition.

Another mandate is the development of the Transformation Fund, to be used for both economic recovery as well as for the transition to a sustainable economy. For the latter part, 250 million Euro has been earmarked specifically for investments in a sustainable economy. The fund will contribute to matters that are crucial for Belgium's transition, such as zero-emission vehicles and hydrogen. Only companies that have proven a positive impact on the transition to a future-oriented and sustainable economy will be eligible for support.

SFPI-FPIM will also coordinate the climate renovation of public buildings. A core mandate is the establishment of a Design, Renovate, Finance and Maintain (DRFM) entity to speed up the renovation. The use of such an entity has been chosen due to the emphasis on maintenance, as it stimulates the contractor to implement solutions that are sustainable. This will be supported by both public and private funding.

Work is underway for a Belgian Sustainable Finance Strategy which comprises two pillars: 1) the sustainability of the financial sector and 2) the sustainability of the federal government's investment policy. The strategy aims 1) to provide the main elements and tools to the federal authorities to support the financial sector to align to ESG-related goals with a clear vision and overarching framework; 2) to strengthen the federal government and the institutions under its jurisdiction as an investor and enabler for ESG alignment and 3) to align actors with the ESFS by equipping them with adequate tools and understanding of sustainable finance disclosure and reporting regulations.

The **city of Ghent** has pledged to divest its pension reserve funds of all fossil fuel investments (162 million EUR) by the end of 2023. A framework has been laid out that includes criteria on climate as well as on human rights, weapons, health, labour rights and nuclear energy. In accordance with the city's goal of climate neutrality by 2050, it will also actively invest in environmentally positive companies, such as those specialising in renewable energy. Similarly the city of Leuven has pledged to avoid financing fossil fuels and has joined the International Fossil fuel Divestment Movement.

In **Germany** the Sustainable Finance Strategy[16] comprises a comprehensive package of a total of 26 measures within financial market policies (non-exhaustive list). The steps are designed to mobilise sustainable investments and hence to protect our natural resources, mitigate climate risks and strengthen financial market stability. The 26 measures will i) strengthen sustainable finance at the global and European level, ii) create transparency, iii) strengthen risk management and supervision, iv) advance and implement impact assessment methods, v) improve the financing of the transformation by governmental agencies, vi) further enable sustainable finance actions of the government as a financial market actor, vii) strengthen institutions , generate and share knowledge and viii) create efficient structures for implementing the Sustainable Finance Strategy.

The Sustainable Finance Advisory Council[17] supports the German Government in developing Germany into a leading location for sustainable finance and advises on the further development and implementation of the German Sustainable Finance Strategy. The Advisory Council operates as an independent and effective multi stakeholder dialog platform with members from the real economy, the financial sector, civil society and academia. In order to reflect the broadest possible spectrum of knowledge and to ensure optimal advice, the honorary advisory board members are supported by observers.

In **Poland**, the Polish Capital Market Development Strategy[18] sets several sustainable finance measures, including building dialogue through working groups, educational campaigns, promoting environment-friendly finance as well as developing sustainable products such as green bonds or indices. As part of the implementation of the document, the Ministry of Finance works on launching the Polish Platform on Sustainable Finance and a detailed analysis of development opportunities for the market of green municipal and corporate bonds. To build a regional green finance hub in Poland, the Ministry of Finance will implement a year-long project to create a roadmap for developing sustainable finance in the country. The project aims to identify opportunities and challenges for the Polish financial market in the area of sustainable finance and recommend policies that could lead to increased financing of the just transition towards climate neutrality. The project, funded by the European Commission (the Technical Support Instrument), will run from June 2022. The Polish Financial Supervisory Authority aims to develop supervisory instruments and mechanisms to ensure the implementation of the EU Sustainable Finance Package and prevent greenwashing. The project, also funded by the European Commission, will run from June 2022.

The Ministry of Environment of **Italy** in 2016 launched a collaboration with the UNEP programme "Inquiry on the Design of a Sustainable Financial System" to develop a National Dialogue on Sustainable Finance in Italy, in which important national stakeholders from the finance sector participated. The National Dialogue examined good practices, needs and shortcomings of the Italian sustainable economy and finance landscape. The resulting Italy-UNEP Report "Financing the future" presented in 2017 concludes with 18 recommendations, followed up by the creation of an Italian Observatory on Sustainable finance. Subsequently, the competences on sustainable finance were assigned to the

[16] https://www.bundesfinanzministerium.de/Content/EN/Pressemitteilungen/2021/2021-05-05-sustainable-finance-strategy.html
German Sustainable Finance Strategy:
https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Press_Room/Publications/Brochures/sustainable-finance-strategy.pdf?__blob=publicationFile&v=8
[17] https://sustainable-finance-beirat.de/en/home/
[18] https://www.gov.pl/web/finanse/strategia-rozwoju-rynku-kapitalowego

Bioeconomy and Sustainable Finance Committee within the Ministry of Environment. The Committee has the task, among others, to formulate proposals for sustainable and green taxation, and identifies appropriate tools and processes to ensure an ongoing and transparent dialogue with financial actors engaged in sustainable finance and green funds.

EU Member States Practices (Green Bonds)

In December 2016, **Poland** completed the world's first issue of sovereign green bonds on the international market, for the amount of 750 million EUR. The funds obtained from the issue are used to finance investments that have a positive impact on the environment, including clean transport, support for renewable energy production or afforestation, sustainable agriculture, national parks, and reclamation of heaps. Since 2016, Poland has carried out 4 bond issues for a total amount of 3.75 billion EUR, of which 3.2 billion EUR have been spent so far on various projects. Compliance with international green bond standards is confirmed by Sustainalytics and Moody's Investors Services rating agency. The above activities are described within the Green Bond Framework, as well as regularly published Reports on the Use of Proceeds.

In 2021, **Denmark** adopted a Green Bond Framework[19] aiming to fund green government expenditures and investments in areas including renewable energy and green transportation. Expenditures are evaluated according to, and to the extent possible, aligned with the criteria in the EU Taxonomy regulation and its delegated acts. Furthermore, Denmark has sought to align the Framework with key elements of the proposed regulation on a European Green Bond Standard (EU GBS) including the bond-related, reporting, and external verification requirements. In January 2022, Denmark issued and sold 10-year bonds worth around euro $700 million, attracting strong investor demand.

The **Green German Sovereign Bonds**[20] promote and support sustainable development in the financial markets. It establishes a green yield curve for the euro area, with the same standard maturities as on the conventional curve. It consists of a unique issuance approach: Twin bond approach started in 2020. An outstanding issuance volume of Green German Federal Securities was registered at the end of 2021: €24 bn. In 2022, the issuance volume of Green Federal securities is to be further expanded.

The “Btp Green” are the **Italian** sovereign bonds financing investments and expenditures that contributes to achieving the 6 environmental objectives outlined in the "European Taxonomy of Sustainable Activities”. The use of proceeds raised through the issuance of BTP Green will the 2030 Sustainable Development Goals (SDGs), in particular SDGs 6, 7, 11, 12, 13, 14, 15. The first BTP Green has been issued by the Italian Treasury in March 2021 for an amount of 8.5 billion Euro.

In **Spain**, the Spanish Treasury launched in 2021 a Green Bond Programme[21], with the aim of making it a structural component of the Treasury’s financing strategy. Through this programme, the Treasury aims to: increase the transparency of Spain’s environmental policy and objectives, promote domestic sustainable financing, and green capital markets and continue diversifying the Treasury’s investor base. In September 2021, the Treasury issued the Kingdom of Spain's first sovereign green bonds for an amount of €5 billion with a 20-year maturity. These funds, in addition to financing projects driving the ecological transition and aimed at mitigating and adapting to climate change, are also focused on the

[19] https://www.nationalbanken.dk/en/governmentdebt/green_bonds/Pages/default.aspx
[20] https://www.deutsche-finanzagentur.de/en/institutional-investors/federal-securities/green-federal-securities/
[21] https://www.tesoro.es/en/deuda-publica/el-programa-de-bonos-verdes-soberanos

sustainable use and protection of water and maritime resources, the transition to a circular economy, pollution prevention and control, and the protection and recovery of biodiversity and ecosystems. The issue registered a demand of more than 60 billion euros, 12 times the amount issued. The issue registered a demand of more than 60 billion euros, 12 times the amount issued.

Belgium has issued a **green bond** for the first time in 2018 for a time period of 15 years (+ 3 billion EUR). The received funds will be exclusively assigned to assets with the goal of transitioning to a sustainable economy. One of the goals is to develop this market to attract more investments for a decarbonization transition, biodiversity and other environmental challenges in the long run. Belgium also aims to improve economic development and jobs in strategic green sectors, as well as to diversify its financing sources and investor base.[22]

In **Hungary**, one of the 8 specific measures of the Climate and Nature Protection Action Plan (announced in February 2020) is the issuance of green bonds. Hungary has issued green bonds in *euro* (in the amount of EUR 1 billion) and in *Japanese yen* (*samurai* bonds, JPY 20 billion) in 2020. As an acknowledgement of the euro green bond issuance, Hungary has received the Sovereign Green Market Pioneer Award from the Climate Bond Initiative in 2021.
In 2020, the Hungarian Debt Management Agency Ltd. has issued a Hungarian Forint nominated new green bond in the amount of 30 billion HUF on Earth Day, 22nd April 2021. Since then, Hungary continued to issue Hungarian Forint nominated green bonds. Altogether nearly 115 billion HUF green bonds has been issued so far. Furthermore, Hungary is the first foreign sovereign actor on the Chinese bond market by issuing so-called *Green Panda* green bonds in December 2021 in the amount of 1 billion Yuan. In 2022 February, Hungary has issued new green bonds on the Japanese market (JPY 75.3 billion).
The revenue from the green bond issuance supports climate action and it is exclusively used for debt management in the field of renewable energies, energy efficiency, land use and living natural resources, waste and water management, clean transportation and adaptation.
Investors are provided with regular and transparent information on the use of Hungary's Green Bonds proceeds. As a first step, the inaugural Allocation Report was published in March 2021. Furthermore, the Green Bond Impact Report that provides additional and relevant information regarding the environmental impact and outcomes of the green budget expenditures was published in November 2021. 87.6 % of eligible green expenditures were distributed to the Clean Transportation category.

3.3 REGULATORY ACTORS AND CENTRAL BANKS

Regulatory actors and central banks have been also engaged in the climate change policy implementation. As one of the results of the monetary policy strategy review conducted in 2020–2021, the **European Central Bank** (ECB) Governing Council stated its commitment to ensuring the Eurosystem[23] alignment with the EU's climate goals and objectives, the implications of climate change and the carbon transition for monetary policy and central banking. It also agreed on a comprehensive Action Plan on Climate Change[24], with a detailed road map consisting of nine

[22] https://www.debtagency.be/en/green-olo
[23] i.e. the ECB and the national central banks of euro area countries. The Eurosystem conducts the monetary policy of the euro area (cf. Art. 282(1) of the Treaty on the functioning of the EU (TFEU)).
[24] ECB presents action plan to include climate change considerations in its monetary policy strategy (europa.eu)

workstreams for the period 2021 – 2024[25]. These include the integration of climate change and related policies into macroeconomic forecasts and modelling; development of statistical indicators to gauge climate-related risks for financial institutions' portfolios and the carbon footprint of those portfolios; review of the market neutrality principle[26]; disclosure requirements, building on EU legislation, to be included in the collateral framework and asset purchases; climate stress-testing of the Eurosystem balance sheet; reflection of climate-related risks in credit ratings; collateral valuation and risk control frameworks and taking climate-related risks into account in the corporate sector purchase programme.

EU Member States Practices

In Germany, the Federal Financial Supervisory Authority (BaFin) and Deutsche Bundesbank BaFin have published a Guidance Notice[27] on Dealing with Sustainability Risks published on 20 December 2019. This guidance notice has remarkably influenced the ECB guide as well as the approach of the European Banking Authority. In addition, BaFin developed a supervisory guidance to enable line supervision assessing ESG transformation in financial institutions. The focus is both on physical and transitional risks, on strategies and risk management practices as well as on the understanding of the new quality of reputational risk.
The Deutsche Bundesbank: 2021 Analytical framework for investigating vulnerabilities in the financial system[28] is a new analytical framework to investigate how transition risks stemming from climate policy could affect portfolios in the German financial system.

Bundesbank is developing a climate risk stress test to investigate to which degree transition scenarios could affect both individual German banks and the banking sector as a whole.

It also starts climate-related disclosures for its non-monetary policy euro portfolio in mid-2022.

The ECB Governing Council agreed on a common stance for sustainable and responsible investment principles for the euro-denominated non-monetary policy portfolios of Eurosystem central banks. Bundesbank is working on incorporating these principles into its investment practices and disclosures. The principles guide the central banks in their ongoing work on measuring carbon emissions and other metrics of these portfolios. They furthermore envisage annual climate-related disclosures for these portfolios by the end of 2022 at the latest[29].

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[25] https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210708_1_annex~f84ab35968.en.pdf
[26] The market neutrality principle guides the implementation of ECB private sector asset purchase programmes and prescribes that, as a rule, it purchases securities in the same proportion to their relative market capitalisation across the markets in which it is active.
[27] https://www.bafin.de/dok/13470418
[28] Deutsche Bundesbank, Climate policy and financial stability, Financial Stability Review 2021, pp. 81-108 (bundesbank.de)
Sensitivity analysis of climate-related transition risks in the German financial sector (bundesbank.de)
The impact of carbon pricing in a multi-region production network model and an application to climate scenarios (bundesbank.de)
[29] https://www.bundesbank.de/en/press/press-releases/bundesbank-to-start-climate-related-disclosures-for-its-non-monetary-policy-euro-portfolio-in-mid-2022-858684

Moreover, the Bundesbank has developed a sustainable investment strategy for its euro-denominated portfolio, consisting of two steps. In the first step, issuers undergo "negative screening" to establish whether they have committed systematic and serious breaches of international sustainability standards. In the second step, issuers are grouped according to their sustainability profile. The best issuers are then weighted higher and the worst weighted lower in the benchmark portfolio. The Bundesbank intends to gradually refine this strategy and regularly monitor its adequacy.

In **Poland**[30] one of the three pillars of the Polish development bank (BGK) Strategy 2021-2025 is sustainable development. Within its framework, it is intended to develop solutions for sustainable financing, as well as to assess potential financing in terms of ESG, adjusting the risk policy**.** The 3W project aims to support the development of new technologies used in industry, energy or medicine and enhance cooperation between society, business, academia and the state administration. Its main focus is to develop new technologies supporting a net-zero transition, especially in the field of green hydrogen or CCS. Within the Stop Smog' program BGK in cooperation with the Ministry of Climate and Environment and the National Fund for Environmental Protection and Water Management provides financial resources to the local municipalities for the elimination or replacement of heat sources with low-emission sources and thermal modernization of single-family residential buildings for those suffering from energy poverty.

The green transition is also visible among commercial banks currently operating in Poland. According to recent studies[31], around 11 of them are introducing elements of sustainable financing in business strategies and product offers, amongst which the biggest are PKO BP, PKO SA, Santander Bank Polska, mBank, PNB Paribas, Millenium Bank. Some of them have adopted comprehensive ESG strategies and received the ESG rating, while others introduced certain sustainable finance approaches, e.g. through their sources of financing (such as green loans, green bonds, and ESG-related loans) or the commercialization process of their products. Around 12 out of 29 commercial banks currently functioning in Poland take into account climate and environmental risks in their lending processes, mainly for selected industries and sectors like energy, mining, and heavy or chemical industries. Only one institution declared that it also takes into account climate and environmental risks in its lending processes for all clients, proportionally to the risk.

In addition to offering green products to individual customers, many of them are also involved in the sector of renewable energy (solar farms, wind farms, and biogas plants). Other actions that are undertaken by the commercial banking sector are, for example, the purchase of leasing receivables due to leasing granted for projects in the field of renewable energy (photovoltaics) and granting loans related to thermal modernization.

In **Hungary** , the National Central Bank (Magyar Nemzeti Bank - MNB) has launched its Green Program in 2019 to mitigate the risks associated with climate change and other environmental problems, to expand green financial services in Hungary, to widen the related knowledge base in Hungary and abroad, and to reduce financial market participants' and its own ecological footprint. The Program consists of three pillars: the various initiatives include elements about (i) the financial sector, (ii) the development of the MNB's social and international relations and (iii) the further greening of its own

[30] https://idea3w.org/, https://www.bgk.pl/

[31] https://www.pwc.pl/pl/publikacje/zielone-finanse-po-polsku-jak-esg-zmieni-sektor-bankowy-i-finansowanie-firm.html

day-to-day operations. The MNB aims to create a framework to reduce the ecological footprint of the banking sector (e.g. paperless banking), and they have established an award as a recognition of the greenest actors of the sector. The MNB also helps to the greening of the sector by providing training and promoting green finance courses at Hungarian universities. To further accelerate the greening of the financial system, based on the decision of the Hungarian Parliament, the mandate of the MNB is extended to environmental sustainability. Fulfilling its mandate, MNB is actively contributing to the greening of the domestic financial system. Last year, the MNB has published the first Green Finance Report with the aim to increase transparency and by that strengthen market awareness with regards to environmental sustainability considerations in the financial system. The Monetary Council has approved the Bank's Green Monetary Policy Toolkit Strategy and in line with the Strategy they launched two new programmes to accelerate green mortgage lending. The MNB - together with the Budapest Stock Exchange and the competent government entities - is currently working on the development of the Hungarian Sustainable Capital Market Strategy based on the recently published recommendations of the EBRD (European Bank for Reconstruction and Development) and Deloitte. Furthermore, the MNB recently published its Climate-related Financial Disclosure. The aim of this report is to identify, measure and publish climate risks related to the MNB's operational activities and financial instruments as widely as possible and in a transparent manner, thereby providing guidance to the participants of the domestic financial sector.

However, the central bank is not the only financial entity that promotes sustainable finance. The Hungarian Banking Association in collaboration with the domestic bank sector launched the so-called Good Deed Bank Green Heart sustainability program. This initiative aims to raise awareness on the natural heritage and to build a sustainable future together with the financial sector. For instance, 120.000 trees were planted so far as part of the Green Heart program.

In **Spain**, the Banco de España[32] published in October 2020 the supervisory expectations, setting out explicitly how it expects credit institutions directly supervised by the Banco de España to consider climate change and environmental degradation in their business models and strategy, their governance and risk management, and in the disclosure of information to third parties. In 2021, the Banco de España published for the first time a stress test exercise to assess the impact of transition risks on the banking sector using analytical models. The Banco de España participates in the main international fora in which climate-related macro and micro-prudential banking regulatory and supervisory matters are addressed (BCBS, ECB and EBA
Regarding its own portfolio management, the Banco de España incorporated in 2019, sustainable and responsible investment principles into its investment framework for the management of its non-monetary policy portfolios, and has agreed a common stance with the other Eurosystem national central banks on the application of such principles to their euro-denominated non-monetary policy portfolios. For this purpose, the Banco de España is building a special portfolio for sustainable and responsible investment (SRI), by directly investing in green bonds denominated in different currencies and participating in the green investment funds (denominated in euro and US dollars) managed by the BIS.

[32] https://www.bde.es/bde/en/secciones/sobreelbanco/sostenibilidad-medioambiental/

The National Bank of **Belgium** (NBB) has regarded climate-related financial risks as a risk priority since 2018 for both macroprudential oversight over financial stability and for microprudential supervision of individual institutions. As for its own investment policy, the NBB is progressively strengthening the sustainable character of its corporate bond portfolio as well as its equity portfolio. The bank will also conduct climate stress tests in the coming year that large Belgian banks will participate in.[33]

Banks operating on **the Czech market**[34] have openly committed themselves to strengthening ecologically and socially responsible business in the Czech Republic. Banks want to be involved in creating a business environment that will lead to the sustainable and socially responsible development of the country. At the same time, the banks have undertaken to take the principles necessary to achieve this goal into account in their activities.
At the same time, CBA member banks have established the Commission for Sustainable Finance, which will in the long-term deal with how banks can make a concrete contribution to creating conditions for the sustainable development of the Czech Republic.

In **Italy**, to further boost its sustainability actions, the Bank of Italy set up a Climate Change and Sustainability Committee, contributing to defining the Bank's sustainable finance strategy. The Bank has also set up a Climate Change and Sustainability Hub, also cooperating with units at the European Central Bank and other national central banks. Under Italy's G20 Presidency, the Bank of Italy promoted, together with the Ministry of Economy and Finance, the creation of the Sustainable Finance Working Group, with the objective of incentivizing best practices in sustainable finance and fostering the transition towards greener, more resilient and inclusive economies and societies.

3.4 INTERNATIONAL CLIMATE FINANCE

The EU is the world's top provider of Official Development Assistance (representing 55.2% of global assistance), with climate action increasingly integrated into this assistance. Financial support is disbursed either bilaterally or through multilateral channels.

The EU is committed to raise the level of ambition at the international level. A key channel for EU-level support targeting climate action in developing countries is the **Neighbourhood, Development and International Cooperation Instrument (NDICI)**. This instrument has an overall budget of €79.5 billion for the 2021-2027 period, of which 30% is to be made available for developing countries to pursue climate action. The EU's commitment has been further strengthened by President Von der Leyen's announcement, during her State of the Union speech on 15 September 2021, of an additional EUR 4 billion for climate finance action over the period 2021-27. It is thus expected that expenditure to support climate action in developing countries under the EU's core international cooperation budget should be around EUR 27.85 billion over for the 2021-2027 period which equates to a 35% spending target.

In 2020, the **European Bank for Reconstruction and Development (EBRD)** launched its new **Green Economy Transition approach**, which aims for the EBRD to raise its share of climate investments to more than 50% by 2025. It notably calls for the EBRD to channel its finance to those sectors that require

[33] https://www.nbb.be/en/articles/national-bank-wants-make-financial-system-greener-climate-focused-risk-management
[34] https://cbaonline.cz/upload/1537-memorandum-cba-pro-udrzitelne-finance-fin-en.pdf

urgent and rapid decarbonisation, enhance policy engagement, and in particular support countries in formulating and implementing ambitious climate strategies, so as to align with the objectives of the Paris Agreement. The EBRD is planning to align all its activities with the objectives of the Paris Agreement by end of 2022. Already in November 2021, the EBRD had reached its target of more than 50% of climate investments.

Also, the **European Investment Bank** is committed to increase its share of finance for climate action and environmental sustainability to 50% by 2025 and beyond, aiming to support, together with the European Investment Fund, green investments worldwide worth over EUR 1 trillion over the decade 2021-2030.

Through the **International Platform on Sustainable Finance**, the EU continues to work with its key partners exchanging and disseminating information to promote best practices, compare different initiatives and identify barriers and opportunities for sustainable finance on how to facilitate cross-border sustainable investments, notably, through a potential **Common Ground Taxonomy** and deepen cooperation on sustainable finance bilaterally and multilaterally.

EU Member States practices

In **Belgium** in 2021 it was announced that the federal level will increase its contribution by 70%, resulting in a sum of 112,5 million EUR a year starting from 2022. Belgium's climate finance prioritizes adaptation and LDCs, an approach which generally does not receive much funding globally.

Several EU Member States[35] are a signatory party of the COP26 Statement on International Public Support for the Clean Energy Transition. As a result, **withdrawal of international public support for the international unabated fossil fuel energy sector is required by the end of 2022**, except in limited and clearly defined circumstances that are consistent with a 1.5° warming and the goals of the Paris Agreement.[36]

The Western Balkans Green Center Nonprofit Llc. (WBGC) was established by the **Hungarian Government** in 2019 under the supervision of the Ministry for Innovation and Technology. The WBGC contributes to the climate protection efforts of the Western Balkan countries in line with the Paris Agreement as well as the green transformation of their economies. The region is significantly affected by climate change, summer heat waves and uneven rainfall distribution. These conditions, together with the outdated utility infrastructure and the frequent usage of polluting technologies, highlight the importance of support for climate change mitigation and adaptation measures.

The WBGC provides Hungary-based companies, higher education institutions, research centres, associations and foundations with non-refundable grants for project preparation and capacity building activities to promote climate protection and energy transition in the 6 target countries (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, Northern Macedonia, Serbia).

In **Italy**, the 2022 Budget Law established the Italian Climate Fund, with an endowment of 840 million euro a year from 2022 to 2026. The Fund is intended to finance actions in favour of private and public entities, aimed at contributing to the achievement of the objectives set out in the international

[35] Belgium, Denmark, Finland, France, Germany, Ireland, Italy, The Netherlands, Portugal, Slovenia, Spain, Sweden.
[36] https://ukcop26.org/statement-on-international-public-support-for-the-clean-energy-transition/

agreements on climate and environmental protection, supporting OECD DAC recipient countries. The Fund may operate through the provision of risk capital, the provision of financing through financial institutions, and the provision of guarantees, including portfolio guarantees, on exposures of financial institutions.

The **Swedish Government** has stated that all Swedish international development aid is to be in line with the Paris Agreement. A point of departure is that international aid is not invested in fossil fuel-based activities and that Sweden acts to promote the phase out of investments in fossil fuel energy investments in relevant international financial institutions. Moreover, the Swedish Government has instructed the Swedish export credit board to make arrangements to be in line with the Paris Agreement and not contribute to lock-in effects in to fossil fuel dependency. This is to be done, inter alia, by ceasing Swedish export guarantees for exploration and extraction of fossil fuels by 2022.

The Netherlands

Dutch development bank FMO 1,5 degree pathway	*As climate change affects developing countries most, FMO strives to align their portfolio with a 1.5°C pathway. FMO commits to **limit GHG emissions and further reduce fossil fuel investments**, by no longer directly investing in upstream or mid-stream stand-alone fossil fuel-related activities.*

Germany

Green finance market regulation and green bonds (FiBraS) (Technical Cooperation via GIZ)	Support Brazil in aligning its financial sector with sustainable development goals through three work streams: • Improve the financial sector policy framework: Strengthen the Ministry of Economy in its coordinating role to develop a comprehensive, strategic approach to aligning the financial sector with sustainability. Coordinate actions with international standards, such as those proposed in the EU. • Enhance regulations and supervision of the financial sector with respect to sustainability risks, impacts and financial stability. Support the central bank and supervisors in the application of sustainability-related instruments. • Scale the use of sustainable finance approaches through training and promotion of successful sustainable financial solutions.
	Main Actors: GIZ, Central Bank of Brazil, LAB (Brazilian network on sustainable finance) Category: Central bank regulation and banking sector, climate financial instruments Website: Green and Sustainable Finance (FiBraS) (giz.de)

NDC Assist II – Financing & Implementing Nationally Determined Contributions: Component „Private Adaptation Finance " (Technical Cooperation via GIZ)	The project seeks to make a business case for adaptation and unlock constrained potential of private actors to finance and facilitate adaptation and resilience to climate change: • Private Equity Fund CRAFT: Tailored advisory services for seven portfolio companies for the strategic market introduction of adaptation-relevant technologies and services. • Knowledge Management: Disseminate innovative practices for private adaptation business and financing models • Private Adaptation Investment Bootcamp (PrivABoo): Individual technical assistance, peer-learning and networking to increase investment attractiveness of private sector business models and enhance private sector capacities to finance and scale business models that enhance resilience of customers.
	Actors: NDC Partnership, The Lightsmith Group, KfW and others Category: Private sector Website: NDC Assist II – Financing and implementing Nationally Determined Contributions (giz.de)

Preparation of the EU Sustainable Finance Action Plan to finance a green corona recovery in the ASEAN region (Study and Expert Funds) (Technical Cooperation via GIZ)	Assess the EU Sustainable Finance Action Plan to finance a green recovery in the ASEAN region. Pilot actions in Vietnam and Indonesia. • Supporting development of ASEAN wide sustainable finance taxonomy, chaired by the ASEAN Capital Markets Forum. GIZ provided financial support and expertise to the ASEAN Taxonomy Board. • In Vietnam: GIZ carried out trainings and pilot activities with banks on implementing recommendations of the Task Force on Climate Related Financial Disclosure (TCFD). Supporting issuance of green bonds. • In Indonesia: GIZ supported the development and consultation of the sustainable finance taxonomy.
	Partners: GIZ, ASEAN Secretariat, Central Bank of Vietnam, Financial Services Authority of Indonesia (OJK) Categories: Climate financial instrument (green bonds), information instrument (taxonomy)

InsuResilience Solutions Fund (Financial Cooperation via KfW)	The InsuResilience Solutions Fund aims to improve the range of climate risk insurance in developing and emerging countries and thus increase the financial capacities of these countries with regard to climate change. Climate risk insurance helps to reduce

	the consequential costs of extreme weather events and the associated financial and sometimes existential risks for poor and vulnerable people (such as low-income households, microfinance customers and agricultural businesses). The funded projects directly and indirectly protect the poor and vulnerable population in developing and emerging countries against extreme weather risks.
	Category: Climate financial instrument Website: Home – Insuresilience Solutions Fund (insuresilience-solutions-fund.org)

Portugal

Roadmap for Carbon Sustainability of Principe Island in São Tomé and Principe (Portuguese Environmental Fund)	The Autonomous Region of Principe (ARP) is an outermost region, part of São Tomé e Príncipe, a LDC and SIDS highly vulnerable to climate change. Due to its large forest the region Principe Island is a carbon sink, classified by UNESCO as a world Biosphere Reserve, providing a global service. With an innovative perspective, the Roadmap emerged from an international cooperation between Portugal and ARP. The objectives are aligned with the NDC of São Tomé and Principe under the Paris Agreement, providing a decision tool, promoting economic growth, decreasing GHG emissions, enhancing the carbon sink, and affording the region with specific regional GHG emissions data.
	Category: Climate financial instrument Website: https://roteiroco2principe.com/en/

3.5. PRIVATE SECTOR

Below some examples on private sector: disinvesting from carbon intensive activity; investing in climate neutral activity and climate resilient initiatives.

In **Belgium** the **University of Ghent** has a fossil divestment policy in response to the call of students in the Fossil Fuel Divestment Movement. Companies based on upstream, midstream and downstream fossil fuels as well as companies with a high carbon emissions are no longer allowed in its investment portfolio. The University keeps its policy broad in order to support future-oriented technologies, renewable energy sources and the circular economy.

Proximus, a major Belgian telecommunications company, announced its first Green Bond for an amount of 750 million EUR in 2021, under its Sustainable Finance Framework. The firm aims to play a leading role in Belgium's green transition by becoming circular by 2030 and net zero by 2040.

The Ghent site of **ArcelorMittal Belgium**, a big player in the steel sector, has pledged to reduce its CO2 emissions by 35% in 2030 and reach net zero in 2050 despite steel being a hard-to-abate sector. The production of 'green steel' will be aided by an investment of 1.1 billion EUR, with support from the Federal and Flemish governments.

In **Poland,** the **PKN Orlen** is the first fuel and energy company in Central Europe that wants to achieve climate neutrality by 2050. Orlen's strategy is based on four pillars: energy production efficiency, zero-emission energy, fuels of the future, and green financing. Orlen has carried on two issues of ESG-based bonds for a total amount of 2 bln PLN. It is also the first Polish company to issue green Eurobonds worth 500 mln EUR. The money will be allocated to investments related to the sustainable development of the group, in particular in renewable energy sources, recycling, and charging infrastructure for electric and hydrogen cars.

KGHM Polska Miedź will achieve the climate neutrality of the parent company by 2050 in terms of direct and indirect emissions and a reduction of these emissions by 2030 by 30% compared to the 2020 level. It will also limit energy purchases from coal by increasing its output powers, by about 50 percent by 2030. The **Greencoin** consortium, consisting of various polish and foreign universities and the City Initiative Association, is currently working on creating an alternative currency, which will promote pro-ecological activities. The currency will be introduced in 2024 to the residents of Gdańsk. The inhabitants will be given Greencoins for their pro-environmental activities and behaviors, which they can after spend on further pro-ecological solutions (products, services, technologies). The process is aimed at increasing the awareness and changing residents' habits. After the testing phase, the currency could be also implemented in other cities.

Under the Green Finance Alliance (GF-Alliance), financial companies based in **Austria** pledge to voluntarily align their portfolios with the 1.5°C climate target set by the Paris Agreement.

The members of the GF-Alliance show that climate protection and environmentally sustainable business practices are compatible.

In particular, this means supporting national and EU-wide climate targets through 2030 and the EU's long-term objective of becoming climate neutral by 2050 by reducing greenhouse gas emissions (GHG emissions) associated with the companies' core business (investment and lending portfolio and underwriting portfolio). The financial companies undertake to comply with relevant, pre-defined measures and criteria. Compliance with these criteria will be reviewed once a year in the course of the monitoring activities.

In **Portugal**, the Think Tank for Sustainable Finance was set up, made up of the main players in the financial sector in Portugal and coordinated by the Ministry of the Environment and Energy Transition, in partnership with the Ministry of Finance and the Ministry of Economy. This Think Tank identified key areas and a number of recommendations over different time frames, in order that the financial sector in Portugal can make a contribution towards accelerating this process, in particular via the setup of a structure to promote Sustainable Financing in Portugal. (https://www.fundoambiental.pt/ficheiros/commitment-letter-v2-pdf.aspx)

3.6. INFORMATION INSTRUMENTS

Information instruments raise awareness, promote learning, shift behaviour and stimulate product and business development, including by making climate risks and opportunities clearer.

In the **Netherlands** in July 2019 the Dutch government presented its national climate and energy plan (NCEP), which aims to reduce GHG emissions by 2030 to 49 percent of the level recorded in 1990. The plan includes a commitment by the financial sector, signed by over 50 institutions with combined assets of over €3 trillion. The institutions agreed to mandatory measurement and reporting of

emissions from 2021 onwards. As of 2022, institutions will publish action plans that outline how they will contribute to a decrease in CO2 emissions, such as setting reduction targets. As part of the commitment, financial institutions will exchange knowledge and best practices on methodologies and actions that financial institutions can undertake to align their portfolios. As part of this effort, the financial sector aims to make climate methodologies more comparable to each other and to work towards further harmonization.

The joint initiative launched in New York by the **Netherlands** and Switzerland seeks to accelerate the alignment of financial flows with the Paris Agreement (article 2.1(c)), including by building on concrete methodologies already developed by PCAF and PACTA. The initiative forms a group of parties, representing different actors in society, including governments and financial institutions that take actions to enhance transparency on climate impact of the financial sector with a view to the alignment of private financial flows. The initiative focuses on sharing best practices and helping each other with overcoming obstacles aligning private finance with Paris.

The New Green Savings Programme[37], administered by the State Environmental Fund of the **Czech Republic**, is one of the most effective programmes in the CZ focused on energy savings in family houses and apartment buildings. The programme focuses on reducing the energy consumption of residential buildings (through insulation), construction or purchase of houses with very low energy consumption, environmentally friendly heating methods, renewable energy sources, and currently also adaptation and mitigation measures in response to ongoing climate change.

In **Italy**, following up in 2016 to the "Non-financial reporting Directive" 2014/95/EU, large companies that are public interest entities are requested to compile a non-financial statement that includes information on the environmental impacts of their economic activities. All other companies may also provide to the regulatory body (Consob) a non-financial declaration on a voluntary basis, with simplified procedures for SMEs.

The **Portuguese** Climate Law (Law n. 98/2021) foresees that within one year after the entry into force of this law, the Government regulates the matter of sharing information on the integration of climate impact and risk in the construction of financial assets.

A Think Tank for Sustainable Finance was set up, made up of the main players in the financial sector in Portugal and coordinated by the Ministry of the Environment and Energy Transition, in partnership with the Ministry of Finance and the Ministry of Economy.

The Think Tank identified key areas and a number of recommendations over different time frames, in order that the financial sector in Portugal can make a contribution towards accelerating this process, in particular via the setup of a structure to promote Sustainable Financing in Portugal. There are already Portuguese financial institutions organizing the launch of green bonds on the market, certified by external entities. The main objective of the programme is to improve the state of the environment by reducing the production of pollutant and GHG emissions, to achieve energy savings in final consumption and to stimulate the Czech economy with other social benefits, such as improving the quality of housing of citizens, improving the image of towns and villages, starting up long-term progressive trends.

[37] https://www.sfzp.cz/en/administered-programmes/new-green-savings-programme/ (EN)