GreenGov

PART I: Understanding the EU sustainable finance regulatory landscape

Project No. 02C0413

GOVERNANCE

Executive summary

To achieve its climate objectives and fulfill its environmental commitments under the European Green Deal[1], the European Union (EU) has established **a comprehensive regulatory framework** to support and oversee the implementation of sustainable finance instruments across the region. Despite being primarily designed for businesses and markets, public authorities can and should also adopt it regarding their **responsibilities**, providing them with a crucial role in the transition, their **ability to issue** on the markets in the same way, allowing them to directly use the same financial instruments, and the possibility of **integrating these sustainable finance instruments** into other financing and management tools for public policies.

Therefore, regional authorities can make use of several existing EU sustainable finance instruments and rules. From a regulatory standpoint, and according to Natixis Green and Sustainable Hub (GSH) public sector expert[2] analysis, they can be organized according to their objective and regions' competencies:

1. **Instruments that have a role in implementing the transition through public policies**: for instance, using the **EU taxonomy** to enhance (or assess) the "greenness" of public policies. This also ties into the concept of green budgeting but extends beyond, and paves the way for future evolution regarding, for example, the publication of a taxonomy alignment rate for public policies.
2. **Issuing green bonds in the markets using the same tools as businesses**: regions can present themselves favorably to investors by issuing bonds. As public authorities investing in some types of infrastructure (e.g., transport infrastructure), these regional bonds could much more likely align with the EU Taxonomy.
3. **Leveraging sustainable finance tools to structure the criteria for other policy instruments**: for example, using the Do No Significant Harm (DNSH) principle when financing a project that may not have a green objective, to ensure Environmental, Social, and Governance (ESG) risks are effectively managed, could constitute a responsible approach. Another example would be to leverage the upcoming Corporate Sustainability Reporting Directive (CSRD) reporting from SMEs to identify the ones that could receive greater public support.

In practice, regions are becoming increasingly familiar with sustainable finance tools, though there still are topics less implemented/used than others. For instance, while green budgeting practices are increasingly seen in Europe at regional or local levels, emerging in varying forms, the implementation of the EU Taxonomy in a comprehensive way is still blurred with a segmented use is made of it. *"While awareness is growing, there is still significant room for improvement in the understanding and implementation of these critical sustainability concepts among public authorities"*, explains Natixis GSH public sector experts.

Sustainable finance tools are used for various reasons. While the DNSH principle is mainly implemented to comply with **regulatory requirements** (Common provisions Regulation for the 2021-2027 period), the issuance of green and/or sustainable bonds, the implementation of a green budget or of the European Commission infrastructure climate proofing analysis, for instance, will more often seek to **help achieve national climate objectives**. However, one of the main challenges in implementing sustainable finance instruments lies in the **availability and quality of the data** required for accurate assessments, which is exacerbated by **limited resources and expertise** needed to navigate these

[1] EC, The European Green Deal, 2019. Available here.
[2] Natixis Green and Sustainable Hub website is available here.

frameworks efficiently. Additionally, the process of gathering and managing information is often complex, **involving multiple stakeholders across different sectors.**

Nevertheless, the implementation of sustainable finance instruments has proved to **enhance the different regional governance contexts.** One of the key benefits is the **promotion of multi-stakeholder** involvement, which encourages collaboration among local communities, businesses, and environmental organizations. In addition, one observation is that authorities (national and regional) have often established **dedicated bodies** to oversee the implementation of these frameworks, ensuring rigorous evaluation and adherence to established standards.

Based on this feedback and a literature analysis, 16 good practices have therefore been identified. They reveal a **strong emphasis on transparency, stakeholder engagement, and structured governance**, designed to inspire and guide other European regions. Practical recommendations regarding the implementation of sustainable finance tools, in particular GreenGov topics, have been formulated, focusing on **enhancing governance, building capacity, engaging stakeholders, and fostering transparency**.

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Introduction

This booklet serves as a comprehensive initial study of the Interreg European GreenGov interregional cooperation project[3]. The aim of the study is for regions and local authorities to understand the European Union's (EU) sustainable finance regulatory framework, and to have first insights on green finance practices among European regions, specifically focusing on topics relevant to the GreenGov project.

The GreenGov project supports European regions and local authorities in gaining a deeper **understanding of the European Union sustainable finance framework, in particular the EU Taxonomy,** and integrating it into their public policies. Thanks to interregional knowledge exchange activities and good practices identification, the project partners aim to establish a robust approach for **aligning regional and local strategies** with this new European framework. To achieve this, the project seeks to develop a guide designed to enhance capacity building and raise awareness about green finance mechanisms and good practices among all stakeholders.

The GreenGov project is exploring six green and sustainable finance topics especially regarding their implementation at regional level, that are:

1) Alignment with the European green taxonomy, and in particular:
    - the implementation of the transversal Do Not Significant Harm principle (DNHS),
    - taking account of the European green taxonomy in a comprehensive way,

   in European Regional Development Fund (ERDF) programmes and regional strategies, particularly those relating to sustainable transition and finance. A particular attention to the DNSH is paid as it must be mandatorily taken into account by regional programmes since 2021 (see **Part I, chapter 2.2** of the initial study).
2) Implementation of the regulation relating to the Adaptation of the infrastructures to climate change (Climate proofing of infrastructures)[4],
3) Integration of green budgeting principles into budgetary exercises,
4) Sustainable debt management and, in particular, green and sustainable bonds emission,
5) Implementation of innovative financing tools to support the sustainable transition of regional SMEs.

Taking place in the first months of the GreenGov project, the present initial study is introducing an **inventory of the European stainable finance framework (Part I)** and has **identified both practices and good practices at regional level (Part II)** regarding the six previously mentioned topics.

The content of this initial study has been meticulously compiled using a variety of resources. The methodology involved reviewing current **EU regulations** as well as any **non-EU publications** helping to understanding sustainable finance tools' approach and implementation, examining **market practices**, and gathering **insights from regional feedback** mechanisms to create a structured inventory of regulations, as well as of good practices, that is both informative and practical. This collaborative

[3] https://www.interregeurope.eu/greengov

[4] EC, technical guidance on climate-proofing of Infrastructures in the period 2021-2027, 2021. Available here.

approach ensures that the information presented is not only accurate but also reflective of the diverse perspectives within the EU.

Eventually, this initial study has the aim to make it possible to **share different territorial contexts** and knowledge levels of European partners on these subjects, comparing them to the level of advancement and existing good practices in other European territories to:

- Facilitate interregional experience exchanges between partners at local and European levels.
- Improve the strategies (policy instruments) that GreenGov partners aim to impact.
- Strengthen the project's impact on regional governance and the territorial level.

The first part of the study focuses on the EU sustainable finance regulatory landscape. It is divided into 2 chapters. **The second part of this study introduces this framework in a practical way,** referencing to national, regional and local authorities' feedback collected, trying to grasp regions' level of appropriation of sustainable finance tools, and identifying good practices observed regarding the GreenGov topics. It is divided into 2 chapters as well. To collect the information, the work was based on a survey of European national, regional and local authorities. **Finally, recommendations** have been formulated based on the literature review and observations arising from the survey.

PART I: Understanding the EU sustainable finance regulatory landscape

Chapter 1: The EU Sustainable finance regulatory framework at glance

1.1. What is sustainable finance in the EU?

"Green finance involves collecting funds for addressing climate and environmental issues (green financing), on the one hand, and improving the management of financial risk related to climate and the environment (greening finance), on the other. Sustainable finance is an evolution of green finance, as it takes into consideration environmental, social and governance (ESG) issues and risks, with the aim of increasing long-term investments in sustainable economic activities and projects". (European Parliament (EP) Briefing, 2021[5]). Through these words, the European Parliament provides for the several definitions comprised into the notion "sustainable finance". It also shows its role in the double-materially[6] embodied into sustainable finance goals: mitigating economic activities' impact on the environment (investing in green solutions thanks to the EU Taxonomy), and mitigating economic

[5] EP, Green and sustainable finance, Briefing, 2021. Available here.

[6] Defined under the CSRD, the double materiality has two dimensions: impact materiality and financial materiality. A sustainability matter meets the criterion of double materiality if it is material from the impact perspective or the financial perspective or both. Available here.

activities' risk exposure to climate change (risk-based approach). This approach is designed to promote long-term investments in sustainable economic activities, thereby **supporting economic growth while simultaneously reducing environmental pressures.**

In the European Union's policy context, sustainable finance is an evolving concept that plays a pivotal role in the EU's efforts to achieve its climate and environmental objectives. **By channeling private investment** as a complement to public money, it is eventually helping to achieve the EU's international commitments (Paris Agreement), and to reach the climate and environmental objectives of the European Green Deal[7] (i.e., to be climate-neutral by 2050 and reduce greenhouse gas emissions by at least 57% by 2030 compared to 1990 levels[8]), in a context where European climate investments must double to hit 2030 EU targets[9].

1.2. The EU sustainable finance strategies in brief

1.2.1. The 2018 sustainable finance strategy: Action Plan for financing sustainable growth

The EU sustainable finance framework is **primarily designed for businesses and markets** (the private sector), in order to encourage financial flows to support "sustainable" economic activities.

The European Commission has launched its first comprehensive strategy on sustainable finance in 2018, known as the "Action Plan: Financing Sustainable Growth"[10]. This strategy is built around **three main objectives**: reorienting capital flows towards a more sustainable economy, mainstreaming sustainability into risk management, and fostering transparency and long-termism in financial markets.

The strategy outlines ten key actions aimed at achieving these objectives. These include **establishing an EU classification system for sustainable activities** (i.e., an EU Taxonomy), creating standards and labels for sustainable financial products (e.g., the Paris Aligned Benchmark, or "PAB"), and incorporating sustainability considerations into financial advice (e.g., the MiFID II Directive). Other actions focus on fostering investment in sustainable projects, developing sustainability benchmarks, and clarifying the duties of institutional investors and asset managers. The strategy also emphasizes the importance of integrating sustainability into prudential requirements and enhancing sustainability disclosure and accounting rulemaking.

1.2.2. The 2021 renewed sustainable finance strategy

As the understanding of what is needed to meet the sustainability goals had evolved and recognizing the need to accelerate and expand its sustainable finance efforts, the European Commission adopted a renewed sustainable finance strategy in 2021[11]. This updated strategy builds on the foundations laid by the 2018 Action Plan but introduces additional measures to support the transition of the economy.

The 2021 strategy focuses on **four main areas complementing the 3 objectives set in 2018:** financing the transition of the real economy towards sustainability, creating a more inclusive sustainable finance

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[7] EC, The European Green Deal, 2019. Available here.
[8] European Parliament, 2022, Fit for 55: Deal on carbon sinks goal will increase EU 2030 climate target. Available here.
[9] I4CE, European climate investments must double to hit 2030 EU targets, 2024. Available here.
[10] EC, Action Plan: Financing Sustainable Growth, 2018. Available here.
[11] EC, Strategy for Financing the Transition to a Sustainable Economy, 2021. Available here.

framework, improving the resilience of the financial system, and fostering global ambition in sustainable finance. Key actions under this strategy include extending the existing sustainable finance toolbox to **facilitate access to transition finance, particularly for small and medium-sized enterprises** (SMEs) and consumers. The strategy also aims to improve the financial sector's resilience to sustainability risks, enhance its contribution to sustainability, and ensure the integrity of the EU financial system during its transition to sustainability. Additionally, the strategy promotes the development of international sustainable finance standards and initiatives, underscoring the EU's leadership role on the global stage.

Overall, the two European strategies have pathed the way for a regulatory framework based on 3 building blocks:

1. **Classification**: The aim of building an EU Taxonomy is to set a common language for the sustainable finance agenda y classifying economic activities according to their "greenness".
2. **Disclosures**: Building a comprehensive disclosure regime for non-financial and financial undertakings providing investors with necessary information to make sustainable investment choices
3. **Tools**: for companies, market participants and financial intermediaries to develop sustainable investment solutions.

In the following chapter 2 making an inventory of the EU sustainable finance regulations, the quoted legislations can therefore fall under these 3 building blocks. Illustration 2 (below) embodies these regulatory interactions meant by the EU sustainable finance framework with existing regulations or directives.

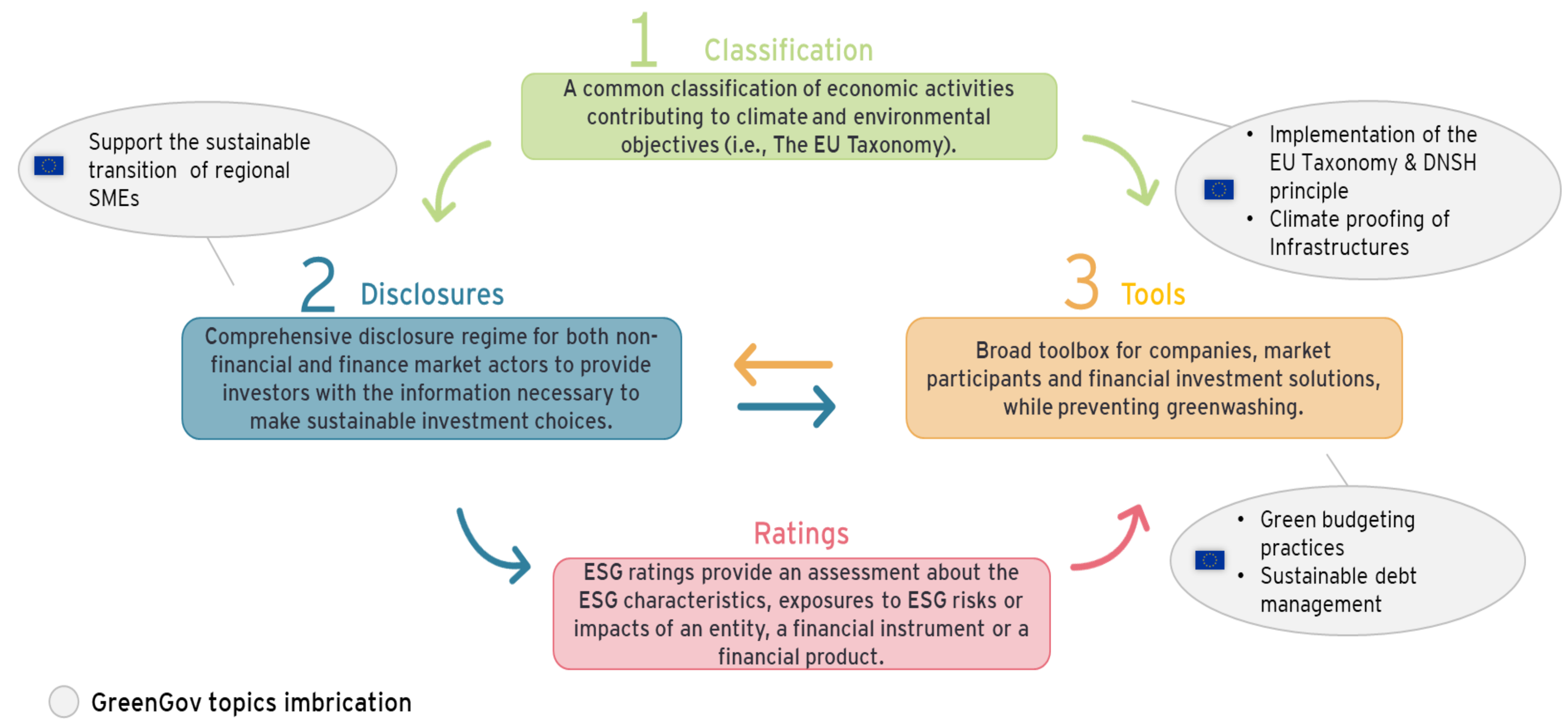
Overall, the EU sustainable finance regulatory landscape has been built around the EU Taxonomy Regulation. As the cornerstone of the EU sustainable finance landscape, the EU Taxonomy is at the heart of other sustainable finance legislative acts, such as:

1. **The Corporate Sustainability Reporting Directive – CSRD** (2022, link): sets, for corporates subject to this Directive[12], disclosure requirements on corporates' sustainability impacts, risks and opportunities, including the % of sustainable activities in the meaning of the EU Taxonomy (% turnover, % Capex, and % Opex aligned to the EU Taxonomy).
2. **The Sustainable Finance Disclosure Regulation – SFDR** (2023, link): sets, for investors, disclosure requirements of Taxonomy eligibility and alignment for sustainable products (i.e., products disclosing under articles 8 or 9 of the SFDR)[13].
3. **The EU Green Bond Standard Regulation - EUGBS** (2023, link): 100% of the proceeds financed through an EUGBS must be aligned to the EU Taxonomy.

The **following schemes (illustration 1 and 2) help to understanding the interaction of sustainable finance regulations**, aiming at supporting sustainable investments.

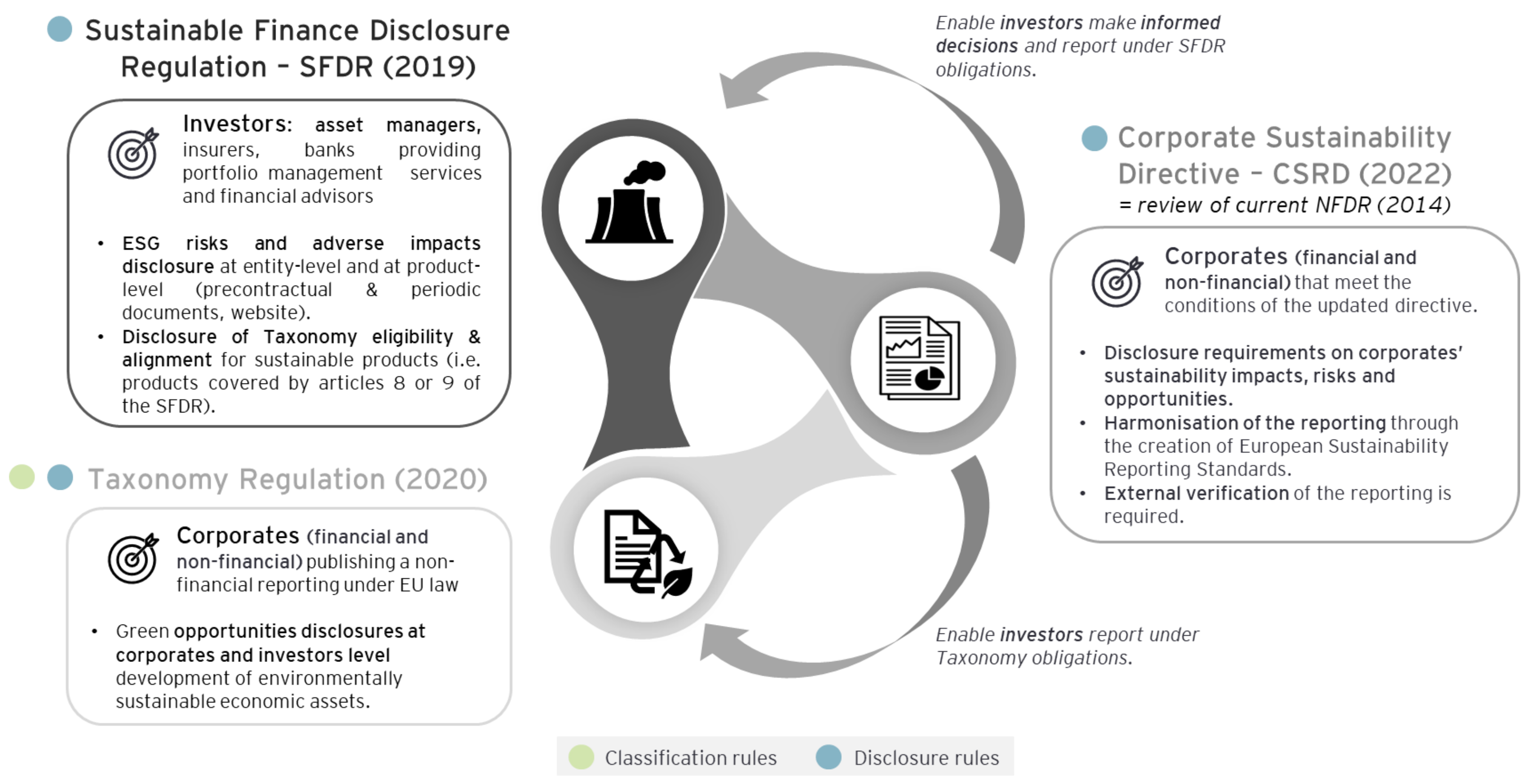
[12] The CSRD is described in Chapter 2, 2.6., of this study.
[13] The SFDR is described in appendix 1.5.

Illustration 1: the 3 building blocks of the EU sustainable finance regulatory framework



Source: Enhancing the usability of the EU Taxonomy and the overall EU sustainable finance framework, European Commission Staff working document, June 2023 (available here) / EY

Illustration 2: 3 disclosure regulations which complement one another



Source: Natixis Green & Sustainable Hub / EY

1.2.3. *Sustainable finance governance and organization in the EU*

In order to draft a regulatory framework, expert groups are assisting the European Commission in its legislative work on sustainable finance. Among the different bodies can be mentioned:

- **The Technical expert group on sustainable finance (TEG):** the European Commission set up a technical expert group on sustainable finance (TEG) from June 2018 to December 2020 to assist it in developing its sustainable finance work, in line with the Commission's legislative proposals. This includes an EU classification system – the so-called EU Taxonomy – to determine whether an economic activity is environmentally sustainable; an EU Green Bond Standard; methodologies for EU climate benchmarks and disclosures for benchmarks; and guidance to improve corporate disclosure of climate-related information.
- **The Platform on sustainable finance:** established in October 2020, this Platform is an advisory body subject to the Commission’s horizontal rules for expert groups that succeeded to the TEG. It plays a key role in enabling cooperation among a wide range of stakeholders from the public and private sector, by bringing together the best expertise on sustainability from the corporate and public sector, from industry as well as academia, civil society and the financial industry. Its creation has been established under Article 20 of the Taxonomy Regulation[14].

1.3. European Regions’ take in financing the transition: what is their role and intervention areas?

1.3.1. *Why regions and local authorities are essential in the ecological transition?*

Though the sustainable finance framework is primarily designed for businesses and markets, public authorities can and should also adopt it regarding:

- their responsibilities, providing them with a crucial role in the transition,
- their ability to issue on the markets in the same way, allowing them to directly use the same financial instruments. In this regard, *“sovereigns, supranational and agencies (SSA) were among the first Green, Social, Sustainability and Sustainability-linked (GSSS) bond issuers and currently represent 44% of the cumulative GSSS issuance volume from 2019 to 2024 year to date”*, says the public sector experts from Natixis Green and Sustainable Hub (GSH)[15].
- the possibility of integrating these sustainable finance instruments into their other financing and management tools for public policies.

In total, there are 242 regions in the 27 Member States of the European Union (according to Eurostat's NUTS 2 statistical classification). *“Accounting for almost 60% of public investment and 40% of public expenditure in OECD countries, regional and local governments […]* ***have jurisdiction over key policy areas*** *relevant to the green transition such as land-use planning, housing development, waste, water, energy, and transport, play a key role in achieving climate and environmental objectives”,* underline the OECD and the European Commission in their Report on “Subnational Government Climate Expenditure and Revenue Tracking”[16] (2022).

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[14] EU Taxonomy Regulation, 2020. Available here.
[15] Natixis GSH website: https://gsh.cib.natixis.com/
[16] OECD, European Commission, Subnational government climate expenditure and revenue tracking in OECD and EU Countries, 2022. Available here.

This stresses **the importance of subnational governments'[17] role in the transition regarding the wide scope of intervention in (green) public policies they have**, as well as the necessity for them to fund this transition at local level. Though, European Regions will display significant levels of autonomy and competences, depending on the powers devolved to them by the State to which they belong.

1.3.2. The existing financial programmes and instruments for EU subnational governments to finance the green transition

The OECD and the European Commission have done a compilation work[18] of financial instruments designed for regions and local authorities to bolster and help finance the green transition (see Toolbox 1 below). Subnational authorities' sources of revenues include:

- **Grants and subsidies**.
- **Own-source revenues** such as subnational taxes, user charges and fees, and income from assets.
- **External sources of financing** such as bonds, loans, and loan guarantees, among others. These can be "**green**", "**climate**", or "**sustainable**" focused or have no explicit focus but still be used for climate adaptation or mitigation projects.

Financial programmes and instruments available to subnational governments can be either **funding instruments** or **financing instruments.** **"Funding**" refers to the mobilisation of budgetary resources to capitalise a climate-related investment or expenditure. **"Financing**" refers to capitalising a climate-related investment using external resources, for example public borrowing or private resources (green loans, loan guarantees, green bonds, etc.).

<u>What public sources of funding are available for EU subnational authorities?</u>

The funding instruments inventoried by the OECD and the European Commission are resources provided by central governments (for unitary countries), federal and state governments (for federal countries), government owned banks, and the European Union itself. In this respect, it was observed that there are 2 main types of funding instruments:

- **Earmarked grants and funds,** which are by far the most common type of climate-related funding instruments available for subnational governments in the OECD and EU.
- **Loans and contracts,** which are two less common climate-related instruments available to subnational governments from higher levels of government.

The European Union currently has **at least 22 instruments in place that subnational governments can take advantage of to fund climate mitigation** and adaptation actions. They can be divided into two main categories:

1. Instruments that subnational governments **access indirectly** depending on the national use of European funds. Examples of this first type of indirect instrument Regions can make use of include the Recovery and Resilience Facility and the Cohesion Fund.

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[17] According to the OECD paper, "Subnational government" refers to all public entities that fall under the state government and local government sectors of the System of National Accounts. Regions and municipalities are subnational governments.
[18] OECD, EC, Subnational government climate expenditure and revenue tracking in OECD and EU Countries, 2022. Available <u>here</u>.

2. Instruments that subnational governments can **access directly** without intermediary. This second type of instrument (the most common form) applies for example to the Climate Policy Program or the Invest EU Programme.

The report though underlines that **the degree of decentralisation,** in particular the degree of devolution of environment and climate **competences to subnational governments appear to be key factors contributing to the number and diversity of funding instruments** available to subnational governments.

Which economic sectors are targeted by EU public funding instruments for subnational authorities?

The **energy and buildings sectors** are the two most common sectors receiving funding: 40% target energy sector and projects, more than 30% target the building sector, less than 10% address air quality. Though, Countries in Eastern Europe have a higher share of instruments targeted at air quality compared to other countries (historical reliance on fossil fuel energy sources).

Toolbox 1: OECD and European Commission compilation work on funding instruments for subnational governments				
Name	Author, Date	Nature	Comments	Access
Tracking climate revenue at subnational level	OECD, EC	Tool	This compendium **lists 311 public sources of funding**, herewith referred to as instruments that **subnational governments can mobilise to fund climate-related activities.** Only instruments provided by central governments (unitary countries), federal and state governments (federal countries), or government owned banks are included in the compendium, plus **the European Union.**	Link

1.3.3. Subnational governments account for 63% of total climate-significant public expenditure

The OECD has built a fiscal database on subnational government climate finance which provides **comparative data on subnational climate-related expenditure and investment** collected for a total of 33 countries of which 25 are EU member states.

The results show that, in 2019, subnational governments' climate-significant expenditure (i.e., those that are eligible to the EU Taxonomy climate objectives), accounted for **63% of total climate-significant public expenditure**, on average. Regarding investment in climate-significant sectors, subnational governments accounted for 60% of total climate-significant public investment.

Chapter 2: What regulatory framework for the GreenGov topics? A structured inventory

For the purpose of this initial study, **the GreenGov project has dressed a structured inventory of the EU regulatory framework regarding sustainable finance,** and in particular the existing rules impacting the GreenGov topics.

The inventory was dressed for each of the 6 GreenGov topics[19], and organized according to two categories of texts:

1. **Main EU regulatory texts adopted by the European Commission**. These are mandatory texts which can be regulations, directives, delegated acts, etc.
2. **Main EU regulatory guidance or explanations.** These are documents complementing the regulatory frameworks, officially issued by European Union institutions or European stakeholders. These can be questions & answers, European Commission notices, European Institutions guidelines, etc.

Only the **main EU regulatory texts are mentioned thereafter**. Tables comprising exhaustive lists and explanations of texts related to the topics are available in **appendix 1**.

In addition, **some useful guides and toolkits** have been collected for each of the 6 GreenGov topics to help Regions in the implementation of sustainable finance policy instruments. "Toolboxes" are available for each topic in their respective section. The compilation of the guides and tools suggested are available in **appendix 2**.

Finally, **examples of regional frameworks and initiatives** have been identified to illustrate each GreenGov topic's implementation (in box 2 to box 6). The full inventory of frameworks and initiatives mentioned is available in **appendix 3**.

2.1. Taking into account the European green taxonomy in a comprehensive way

2.1.1. Defining the EU Taxonomy

The EU Taxonomy is a cornerstone of the EU's sustainable finance framework. The EU Taxonomy is a classification system established by the Taxonomy Regulation[20] (2020) to determine whether an economic activity is environmentally sustainable, and **share a common definition of it, based on six environmental objectives**: 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.

A taxonomy is designed **to help investors and companies make informed sustainable investment decisions.** It must provide clarity on what is sustainable**.** Reporting the *eligibility* and *alignment* of a

[19] The GreenGov topics are: Alignment with the European green taxonomy; Implementation of the Do Not Significant Harm Principle (DNSH); Implementation of the regulation relating to the Adaptation of the infrastructures to climate change; Integration of green budgeting principles into budgetary exercises; Sustainable debt management and in particular the green and sustainable bonds emission; Implementation of innovative financing tools to support the sustainable transition of regional SMEs.

[20] EC, Taxonomy Regulation, 2020. Available here.

company’s activities to the EU taxonomy (mandatory since 2022 for the climate objectives) thus allows investors to have **more information on their portfolio, themselves subject to sustainability transparency obligations (the Sustainable Finance Disclosure Regulation (2019)[21]).**

The European Taxonomy lists eligible economic activities, in dedicated Delegated Acts, accompanied by **performance criteria in terms of contribution** to the six environmental objectives. The Taxonomy is dynamic and adaptable, designed to evolve as scientific knowledge, technological advancements, and environmental challenges progress.

Box 1: What is the EU Taxonomy? (and what is it not?)

✓	✗
✓ A **list of relevant activities and criteria**	x **A rating** of “good” or “bad” companies / activities
✓ **Flexible** to adapt to different types and investment strategies	x **A list of mandatory investments** for companies, banks or investors
✓ Based on the **latest scientific and industrial** data available	x A judgment of the financial performance of an investment – only environmental performance
✓ **Dynamic**, responsive to technological, scientific, new activities and data developments	x Inflexible or static

2.1.2. The EU Taxonomy’s legislative framework

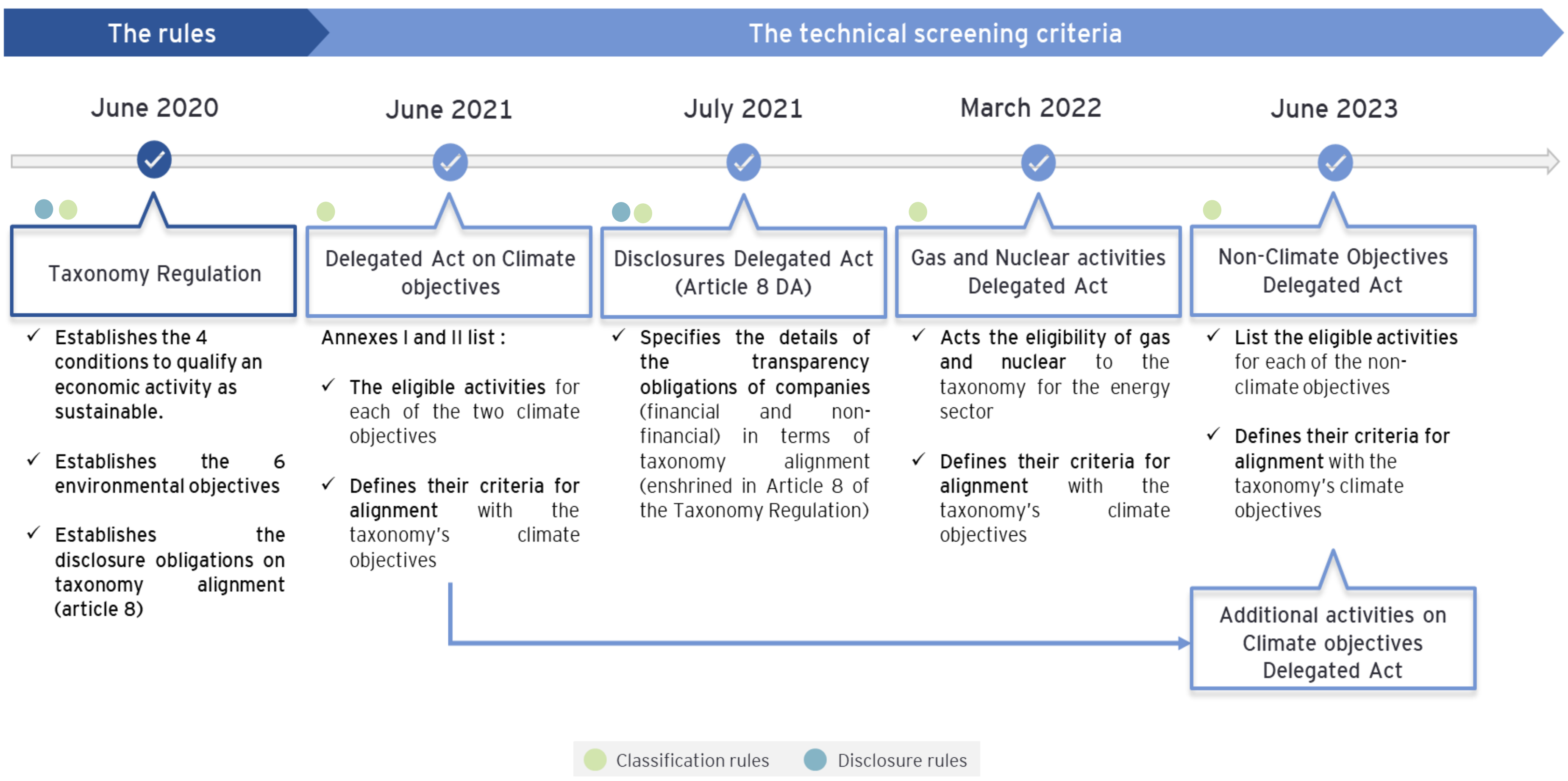
The Taxonomy Regulation was adopted by the European Commission **in 2020**. The text provides for a series of Delegated Acts complementing the EU Taxonomy. Delegated acts, which are supplementary legal acts, provide the specific technical screening criteria for assessing the environmental performance of different economic activities, and therefore qualifying the alignment (or not) of an economic activity.

The screening criteria are defined both for qualifying the substantial contribution to one of the six environmental objectives, and the DNSH regarding all 5 remaining objectives. Below are listed the delegated acts already adopted by the European Commission, and presented in Illustration 3:

- Climate Delegated Act (2021, link): it introduces the criteria under which an economic activity can be considered sustainable, as regards to its contribution to climate mitigation and climate adaptation objectives.
- Nuclear & Gas Climate Delegated Act (2022, link): this delegated act introduces “**transitional activities**” based on the use of gas and nuclear, in order to make sure these activities remain on a credible pathway consistent with a climate-neutral economy by 2050.
- Non-Climate Objectives Delegated Act (2023, link): it is a new set of EU Taxonomy criteria for economic activities making a substantial contribution to one or more of the four non-climate environmental objectives.
- Complementary Climate Delegated Act (2023, link): to complement the EU Taxonomy Climate Delegated Act, the Commission has adopted targeted amendments, which expand on economic activities contributing to climate change mitigation and adaptation not included so far – in particular in the manufacturing and transport sectors.

[21] EC, Sustainable Finance Disclosure Regulation, 2019. Available here.

Illustration 3: The Taxonomy Regulation and its delegated acts



Source: Natixis Green & Sustainable Hub / EY

In the end, the Taxonomy Regulation alongside its delegated acts builds classification rules, by comprehensively defining what is green and what is not. **These criteria are regularly updated** to ensure that the EU Taxonomy remains relevant and effective in driving sustainable finance.

The Taxonomy Regulation additionally **introduces disclosure rules specified in the "Disclosure Act"** (supplementing Article 8 of the Taxonomy Regulation) adopted in July 2021 and applicable since January 2022: the Disclosures Delegated Act (2021, link).

The delegated act **specifies the content and presentation of information** to be disclosed by financial and non-financial undertakings subject sustainability information disclosure requirements concerning environmentally sustainable economic activities and specifying the methodology to comply with that disclosure obligation. Information to be disclosed mainly consists in the proportion of companies' turnover, CapEx KPI and OpEx KPI eligible and aligned to the EU Taxonomy.

For financial companies, the Green Asset Ratio (GAR) must be disclosed and is defined as the proportion of the credit institutions' assets invested in taxonomy-aligned economic activities as a share of total covered assets. As this delegated act **excludes sovereign exposures of financial institutions** from both the denominator and the numerator of their green ratios, the EU Taxonomy though **does not constitute an incentive for public authorities to disclose their sustainability information regarding the EU Taxonomy.**

What does a "sustainable economic activity" mean under the Taxonomy Regulation?

To qualify as sustainable under the EU Taxonomy, article 3 of the Taxonomy Regulation defines what an environmentally sustainable investment is. An economic activity shall qualify as environmentally sustainable where that economic activity:

1. **Contributes substantially to one or more of the environmental objectives** […], by complying with technical screening criteria established by the Commission in dedicated Delegated Acts,
2. **Does not significantly harm (DNSH)** any of the environmental objectives [a dedicated section to the DNSH is be found at point 2.2 of this study], and
3. Is carried out in **compliance with the minimum safeguards,** defined regarding international texts on human rights[22].

Once the 3 cumulative screening criteria are validated, the economic activity is considered **"aligned to the EU Taxonomy".**

To better understand the EU Taxonomy regulatory framework, a series of questions and answers or Commission notices have been issued. In the table below (Table 1) are listed a selection of explanatory texts, issued by EU institutions.

Table 1: Main explanatory publications regarding the EU Taxonomy		
Name	Author, Date	Access

[22] These texts include among other: the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Human Rights at Work.

FAQ: What is the EU Taxonomy and how will it work in practice?	European Commission (EC), 2021	Link
FAQ: What is the EU Taxonomy Article 8 delegated act and how will it work in practice?	EC, 2021	Link
FAQ: How financial and non-financial undertakings should report their Taxonomy-eligible economic activities and assets in accordance with the Disclosures Delegated Act?	EC, 2021	Link
Notice on the interpretation of certain legal provisions of the Disclosures Delegated Act on the reporting of Taxonomy-eligible economic activities	EC, 2022	Link
Factsheet: Sustainable finance - Investing in a sustainable future	EC, 2023	Link
Factsheet: Complementary Climate Delegated Act on certain nuclear and gas activities	EC, 2022	Link
Factsheet: Sustainable finance	EC, 2021	Link
Factsheet: How does the EU taxonomy fit within the sustainable finance framework?	EC, 2022	Link
Final Report on Minimum Safeguards	Platform on Sustainable Finance (PFS), 2022	Link
Platform recommendations on Data and Usability as part of Taxonomy reporting	PFS, 2022	Link

2.1.3. Considering the EU Taxonomy for regional authorities: the example of green bond frameworks

While the EU Taxonomy should eventually be used comprehensively respecting all 3 cumulative criteria (qualifying the contribution to one objective, respecting the DNSH and respecting the minimum safeguards), the integration of **the EU Taxonomy in public policies is at its early stages. Partial integration** is used, though gaining growing interest from the public sector. For instance, this can take the form of solely using criteria to qualify the substantial contribution to one specific objective without any DNSH approach; integrating only one environmental objective out of the 6 objectives (often being the Climate Mitigation objective); etc.

Although it remains true that **a gradual integration of the Taxonomy by public authorities is being observed, this usage does not claim to qualify an economically sustainable activity** in the meaning of the EU Taxonomy.

One observation regarding European regions is **its use in the context of green and sustainable bond issuance**. Three examples of regional frameworks making use of the EU Taxonomy, “to the extent possible” i.e. on a best effort basis, are provided in the box below.

Box 2: Illustration of regional green and sustainable bond frameworks making references to the EU Taxonomy

- **Region of Stockholm**: Region Stockholm Green bond framework[23] (January 2022) sets green project categories that are eligible to the EU Taxonomy regarding the climate mitigation objective. Despite the Region is only using this objective, the projects funded must respect the technical screening criteria, the do no significant harm criteria ("DNSH"), and minimum social safeguards outlined by the EU Taxonomy, **to the extent possible**. This constitutes a **partial use of the EU Taxonomy.**
- **Municipality of Resita**: in Resita Green Bond Framework[24] (January 2023), the projects are verified and quantified regarding their environmental benefits. Projects need to have a positive long-term net environmental impact, to ensure compliance with sustainability criteria of the Framework and the EU Taxonomy, laws and regulations and relevant policies and guidelines, including on assessing social and environmental risks of projects (compliance with Do No Significant Harm criteria and Minimum Safeguards). **This seems to be a comprehensive use of the EU Taxonomy.**
- **Ile-de-France Region**: in its Green, Social and Sustainable bond Framework[25] (2021), categories of regional green projects are classified according to the environmental objectives as defined by the EU Taxonomy. The framework covers 2 objectives of the EU Taxonomy: Climate change mitigation, and Protection and restoration of biodiversity and ecosystems. **When possible**, concerning the main objective of Climate Change Mitigation, regional green projects are assessed according to their substantial contribution to the main objective of Climate change mitigation, and if the activity does not cause significant harm to other EU environmental objectives. This constitutes a **partial use of the EU Taxonomy.**

Ile-de-France Region even provides an example of its methodology to assess the **alignment by law** of "Clean transportation" category projects with the 1st objective of the European taxonomy, according to the green, social and sustainable bond framework of Region Île-de-France (**illustration available** **here**). The Region provides with an **analysis by law** of regional projects to assess their compliance with the DNSH criteria of the EU Taxonomy.

These observations both embodies the capacity of regions to integrate the EU taxonomy into their legislative framework (green bonds issuance frameworks), as well regular initiatives observed among regional authorities. Integrating EU Taxonomy dimensions can therefore **help regions identify eligible expenditures under their green and/or sustainable bond frameworks** thanks to its objectives or alignment criteria.

This aligns with the Platform on Sustainable finance recommendations for public authorities that is to "accelerate the issuance of green use-of-proceeds bonds directed at economic activities that are EU Taxonomy-aligned, in the process of aligning or transitional"[26]. Although, "green" expenditures eligible to their green bond frameworks remain **not "green" in the meaning of the EU Taxonomy if they do not fully align with it.** The issuer therefore must be **clear** with that (aligned/not aligned) to avoid misunderstanding.

[23] Region Stockholm Green bond framework, 2022. Available here.
[24] Resita Green Bond Framework, 2023. Available here.
[25] Ile-de-France Green, Social and Sustainable bond Framework, 2021. Available here.
[26] Platform on Sustainable Finance (PFS), Compendium of Market Practices: How the EU's Taxonomy and sustainable finance framework are helping financial and non-financial actors transition to net zero, 2024. Available here.

According to Natixis Green and Sustainable Hub (GSH) public sector experts[27], "the EU Taxonomy offers a standardized framework that enhances credibility and transparency in assessing project sustainability. By aligning with this framework, authorities can improve their attractiveness to investors, facilitating access to green finance and potentially lowering borrowing costs. The DNSH principle encourages a comprehensive approach to environmental impacts, ensuring that projects contribute positively across multiple sustainability objectives".

2.2. The implementation of the transversal Do not significant harm principle (DNSH)

2.2.1. Defining the transversal DNSH

The DNSH principle is a fundamental component of the EU's sustainable finance framework, embedded in several pieces of sustainable finance legislation, in particular the EU Taxonomy. It requires that an economic activity, even if it contributes substantially to one of the environmental objectives, must not significantly harm any of the other five objectives. Originating from the EU Taxonomy Regulation[28], article 17 provides that that economic activity shall be considered to significantly harm:

- **Climate change mitigation**, where that activity leads to significant greenhouse gas emissions.
- **Climate change adaptation**, where that activity leads to an increased adverse impact of the current climate and the expected future climate, on the activity itself or on people, nature or assets.
- **The sustainable use and protection of water and marine resources**, where that activity is detrimental:
  - to the good status or the good ecological potential of bodies of water, including surface water and groundwater; or
  - to the good environmental status of marine waters.
- **The circular economy**, including waste prevention and recycling, where:
  - that activity leads to significant inefficiencies in the use of materials or in the direct or indirect use of natural resources such as non-renewable energy sources, raw materials, water and land at one or more stages of the life cycle of products, including in terms of durability, reparability, upgradability, reusability or recyclability of products;
  - that activity leads to a significant increase in the generation, incineration or disposal of waste, with the exception of the incineration of non-recyclable hazardous waste; or the long-term disposal of waste may cause significant and long-term harm to the environment.
- **Pollution prevention and control**, where that activity leads to a significant increase in the emissions of pollutants into air, water or land, as compared with the situation before the activity started.
- **The protection and restoration of biodiversity and ecosystems**, where that activity is: significantly detrimental to the good condition and resilience of ecosystems; or detrimental to the conservation status of habitats and species, including those of Union interest.

[27] For the purpose of this study, a public sector expert team from Natixis Green and Sustainable Hub (GSH) was interviewed. Natixis GSH website is available here.
[28] EC, Taxonomy Regulation, 2020. Available here.

For each relevant environmental objective, technical screening criteria are set, for determining whether an economic activity in respect of which technical screening criteria have been established causes significant harm to one or more of those objectives.

2.2.2. The DNSH in the EU legislative framework

The DNSH principle, although initially enshrined in the EU taxonomy, is being developed on its own, with **potentially more flexible or different assessment criteria**. Its use differs from one regulation to another. **Therefore, the "implementation" of the DNSH** can be interpreted broadly. In the deployment of EU instruments, Member States are indeed not required to refer to the "technical screening criteria" (quantitative and/or qualitative criteria) established in accordance with the Taxonomy Regulation in order to demonstrate compliance with the DNSH principle. An exhaustive list of regulations incorporating the DNSH principle is provided in appendix 1.2.

The DNSH is used in several ways depending on the selected EU instrument.

A 2023 publication called "The implementation of the 'Do No Significant Harm' principle in selected EU instruments, a comparative Analysis" (Publications Office of the European Union, 2023)[29] shows that **three roles** are assigned to the DNSH principle: **exclusion** of investments in environmentally harmful projects; **improvement** of the climate and/or environmental performance of projects financed; and **selection** of projects with the highest environmental performance.

The paper provides with an analytical comparison of the application of the DNSH principle in the EU taxonomy and five public funding instruments. The following five EU instruments are analysed:

- The **Recovery and Resilience Facility** – RRF (2021, link), launched in February 2021 to serve the NextGenerationEU plan in the context of economic recovery in the midst of the Covid-19 pandemic;
- The **European Regional Development Fund** (ERDF) for the period 2021-2027 (2021, link), one of the five structural funds of the EU, launched in 1975 to invest in the social and economic development of all EU cities and regions;
- The **Cohesion Fund** (CF) for the period 2021-2027 (2021, link), also one of the five structural funds of the EU, created in 1992 to invest in environment and transport in least developed EU countries;
- The **Just Transition Fund** (JTF) for the period 2021-2027 (2021, link), providing funds to European regions since 2021 to finance social needs in the energy and ecological transition;
- The **InvestEU Fund** (2021, link), launched in March 2021 to mobilise public and private investments.

Covering 1 trillion euros between 2021 and 2027, half of the EU budget for this period, key takeaways from the analysis are that:

- The purpose of the DNSH principle **differs between the EU Taxonomy and public funding instruments**. In the EU taxonomy, the principle follows **a transparency logic**: it is used to identify which kind of economic activities can be considered as sustainable. In EU public

[29] Publications Office of the European Union, the implementation of the 'Do No Significant Harm' principle in selected EU instruments, a comparative Analysis, 2023. Available here.

funding instruments, the principle rather aims to **target specific interventions,** and is used as: an **exclusion criterion** for investments in environmentally harmful projects, as **an improvement criterion** of the climate and/or environmental performance of projects financed, or as **a selection criterion** of projects with the highest environmental performance.

- **The DNSH principle is integrated in various ways** according to the instrument. In the EU Taxonomy, **DNSH requirements are set** to qualify as taxonomy aligned. In 4 of the 5 policy instruments deciphered, the DNSH is an **eligibility requirement** for all measures (reforms and investments) or any action to be financed. Finally, in the InvestEU programme, the DNSH is a **screening requirement** but not binding for now.

<u>Zoom on the ERDF: how is the DNSH incorporated into the European Regional Development Fund?</u>

The European Commission has decided to use the DNSH principle in the European Regional Development Fund (ERDF) regulation **to ensure that each region complies with European environmental policies** when implementing its projects (article 9 of the Common Provisions Regulations[30]).

The DNSH is used as an eligibility criterion in the ERDF. This implies that any measure supported by the ERDF must comply with the DNSH principle, and that a project which does not comply with the DNSH will not be financed by the ERDF. **The compliance demonstration goes to the project owner**, who must carry an analysis to determine if the project has a significant negative impact on the six objectives, by both by:

- Considering the overall impact of the project (direct and indirect impacts), and,
- Taking into account the entire life cycle of the project (supply; production; use; end of life).

As a consequence, tangible evidence is required on a risk-based approach. The project owner must be able to demonstrate compliance with the DNSH principle by:

- Considering all the possible risks of non-compliance with the DNSH for each of the six environmental objectives.
- Then, determining whether these risks can be avoided (or mitigated), and
- Giving a reasonable justification and proving it means of tangible evidence (certificates, labels, ISO standards, external audit, etc.). The evidence is collected and kept for 5 years after the end of the project, for control and audit purposes.

To better understand the DNSH regulatory implementation, a series of questions and answers and notices have been issued. Below are listed a selection of explanatory texts, issued by EU institutions (Table 2).

For instance, the EC technical guidance on the application of the DNSH principle under the RRF Regulation **offers a list of guiding principles and lays out indications on the scope**, legislative documents and technical screening criteria applicable to the analysis of measures and investments under EU funds and programmes. These allow for flexibility in the methods used to implement the DNSH principle. For instance, "proportionate climate risk assessments" may employ a variety of methods with different scopes and indicators.

[30] EC, The Common Provisions Regulations, 2021. Available here.

Table 2: Main explanatory publications on the implementation of the DNSH principle		
Text name	Author, Date	Access
Commission Notice Technical guidance on the application of "do no significant harm" under the Recovery and Resilience Facility (RRF) Regulation	European Commission, 2021	Link
Technical guidance on the application of "do no significant harm" under the Recovery and Resilience Facility Regulation	European Commission, 2023	Link
Commission explanatory note "Application of the DNSH principle under Cohesion Policy"	European Commission, 2022	Link
'Do No Significant Harm' definitions and criteria across the EU Sustainable Finance framework	ESMA, 2023	Link
Draft 'Do No Significant Harm' Technical Guidance for the Social Climate Fund for Consultation	European Commission, 2024	Link
Commission Notice on Technical guidance on sustainability proofing for the InvestEU Fund	EC, 2021	Link

2.2.3. The use of the DNSH principle in regional regulatory frameworks and initiatives

Regarding the integration of the DNSH into regions' regulatory framework, two predominant practices (among others) are observed. First, **European regions have adopted guidelines for implementing the DNSH** under regional programmes i.e., adopt a DNSH approach in the selection process of projects funded. In these guidelines are mainly found:

- DNSH implementation guidelines under the European Regional Development Funds (ERDF),
- DNSH implementation guidelines under the Recovery and Resilience Facility (RRF),
- DNSH implementation guidelines for climate proofing processes.

For instance, Romanian regions have issued **guidelines for implementing the DNSH under regional programmes.** The box below (box 3) lists them, and additionally **quotes other regional initiatives** (all texts and initiatives are accessible with links in appendix 3).

Second, the **DNSH is being used by some European regions in their green and sustainable bond frameworks**, as previously illustrated in **box 2**, as an exclusion criterion to finance "green" projects with regional debt.

Box 3: Illustration of regional guidelines regarding the implementation of the DNSH principle in regional programmes

- **South-West Oltenia** issued guidelines on completing the sections of a funding application which is processed in the digital system mysmis2021 under Sud-Vest Oltenia regional program 2021-2027 general recommendations.

- **North-West Region** published the methodology regarding compliance with the 'Do No Significant Harm' principle and the climate proofing process within the North-West Regional Program (PR NV) 2021-2027.
- **Central Region** issued the methodology regarding the approach of the DNSH principle in the Central Regional Program 2021-2027.
- **Bucharest-Ilfov Region** published the methodology regarding the approach to sustainable development aspects, compliance with the DNSH principle and ensuring climate proofing for the implementation of the Bucharest-Ilfov Regional Program 2021-2027.

At national level, the Romanian government issued a methodology regarding the assessment of compliance with the 'Do no significant harm' (DNSH) principle **in the framework of ecological financial instruments dedicated to supporting measures to improve energy efficiency in industry.**

Regarding nonofficial initiatives, **Brussels-Capital Region (Belgium)** issued a presentation document called "Introduction to the DNSH principle under its ERDF 2021-2027 programme"[31]. The purpose is to explain DNSH origins and definitions, the 6 EU environmental objectives, the implementation of the DNSH principle under the 2021-2027 ERDF programme and how to understand it.

2.2.4. A selection of existing guides and tools to enhance the EU Taxonomy and DNSH principle implementation

The following toolbox (Toolbox 2) brings essential **guidance and tools to understand the implementation of the UE taxonomy and the DNSH principle in practice.** They are emanating from EU institutions (e.g., digital tools or assistance), from national / or local authorities (e.g., implementation guidelines), and from international bodies (e.g., guidelines, methodologies, etc.).

Among the regional guidelines suggested below can for instance be found an **illustration of the application of Ile-de-France Region's methodology regarding the assessment of "substantial contribution" criteria** of projects funded through green or sustainable bonds. This can constitute a source of inspiration for other regional authorities willing to use the EU Taxonomy.

Toolbox 2: Guides and useful tools regarding the implementation of the EU Taxonomy and the DNSH principle

Name	Author, Date	Nature	Comments	Access
The EU Taxonomy Navigator	EC	Tool	A simple and practical guide for users: **the EU Taxonomy Navigator is a user-friendly website that offers a series of online tools** to help users better understand the EU Taxonomy in a simple and practical manner, ultimately facilitating its implementation and supporting companies in their reporting obligations. The EU Taxonomy Navigator offers 4 tools to help navigate the EU Taxonomy: 1) The EU Taxonomy Compass: a visual representation of	Link

[31] Brussels-Capital Region, "Introduction to the DNSH principle under its ERDF 2021-2027 programme". Available here.

			sectors, activities and criteria included in the EU Taxonomy 2) EU Taxonomy Calculator: a step by step guide on reporting obligations 3) FAQs repository: an overview of questions and answers on the EU Taxonomy and its delegated acts 4) EU Taxonomy User Guide: a simple guide on the Taxonomy for non-experts	
Green, Social and Sustainable bond Framework	Ile-de-France Region, 2021	Method in practice	**In the appendixes, Ile-de-France Region explains how it assesses the projects regarding the EU Taxonomy:** - their substantial contribution to the main objective of Climate Change Mitigation (appendix 1) - if the activity does not cause significant harm to other EU environmental objectives (appendix 2) Finally, it provides for the methodology of the Region's evaluation of green projects categories with regard to the Do No Significant Harm (DNSH) criteria defined for the corresponding economic activity in the draft Delegated Regulation and its annex (Commission Delegated Regulation supplementing Regulation (EU) 2020/852 & Annex, version published in November 2020) : illustration in the clean transportation category	Link
Methodology for the application of the DNSH principle at the national level in Czechia	Trinomics, 2022	Method	Despite the methodology being set up for a national authority, it is maliciously explained and divided into clear steps that could be applied to a regional authority. It introduces an **overarching draft methodological guidelines on the application of the DNSH principle and climate proofing** both for authorities managing public investments and for project implementers/grant beneficiaries. Outlines are suggested for such guidelines. In addition, **it provides for recommendations for roles and responsibilities in DNSH implementation** and data management.	Link
Introduction to the DNSH principle under its ERDF 2021-2027 programme [FR]	Brussels-Capital Region, 2023	Method	Brussels-Capital Region (Belgium) issued a non-official document called “Introduction to the DNSH principle under its ERDF 2021-2027 programme. The purpose is to explain DNSH origins and definitions, the 6 EU environmental objectives, the implementation of the DNSH principle under the 2021-2027 ERDF programme and how to understand it. This document is available online here.	Link
Questions & Answers on the DNSH [FR]	Wallonia Region, 2024	Q&A	The purpose of this document is to present, in the form of questions, the basics of the DNSH principle derived from European environmental policy. In addition to this FAQ, guides, checklists and models will be developed separately and may be updated and adapted as needs change, in order to facilitate the practical implementation of the DNSH principle by the	Link

			various players within the Federal State, the Regions and the Communities.	

2.3. Implementation of the regulation relating to the Adaptation of the infrastructures to climate change (Climate proofing of infrastructures)

2.3.1. Defining climate proofing of infrastructures in the EU

In the European Commission Technical guidance on climate-proofing of Infrastructures in the period 2021-2027 (2021)[32], "climate proofing" is defined as a **process that integrates climate change mitigation and adaptation measures into the development of infrastructure projects.** It enables European institutional and private investors to make informed decisions on projects that qualify as compatible with the Paris Agreement, regarding both objectives of neutrality and resilience.

The notice also defines "infrastructure" which is considered as **a broad concept encompassing buildings, network infrastructure, and a range of built systems and assets.** For instance, the InvestEU Regulation includes a comprehensive list of eligible investments under the sustainable infrastructure policy window.

2.3.2. Climate proofing of infrastructures' EU legislative framework

Climate change poses significant risks to infrastructure across Europe. To address these risks, the EU has established a robust legislative framework to support the adaptation of infrastructures to climate change. This framework **includes the Common Provisions Regulation**[33], which sets out the rules for the use of EU funds, and the Regulation establishing the InvestEU Programme, which provides financial support for sustainable infrastructure projects.

The EU has also **issued specific guidance on climate-proofing infrastructures**: the European Commission technical guidance on climate-proofing of infrastructures in the period 2021-2027. The guidance contained in this document meets the requirements laid down in the legislation for several EU funds, notably InvestEU, Connecting Europe Facility (CEF), European Regional Development Fund (ERDF), Cohesion Fund (CF), and the Just Transition Fund (JTF).

This guidance clearly finds its roots into two main European texts:

1) **The new EU Strategy on Adaptation to Climate Change**, titled "Forging a Climate-Resilient Europe"[34], adopted in February 2021.

Building on the 2013 Climate Change Adaptation Strategy[35], the aim of the new proposals was to shift the focus from understanding the problem to developing solutions, and to **move from planning to implementation.** The strategy sets out how the European Union can adapt to the unavoidable impacts of climate change and become climate resilient by 2050, and outlines 4 key areas of actions for Member States:

[32] EC, "EC Technical guidance on climate-proofing of Infrastructures in the period 2021-2027", 2021. Available here.
[33] EC, Common Provisions Regulation, 2021. Available here.
[34] EC, Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change, 2021. Available here.
[35] EC, Climate Change Adaptation Strategy, 2013. Available here.

- Make adaptation smarter: improving knowledge and availability of data, managing the inherent uncertainty brought by climate change;
- Make adaptation faster: the strategy focuses on developing and rolling out adaptation solutions to help reduce climate-related risk, increase climate protection and safeguard the availability of fresh water;
- Make adaptation more systemic: supporting policy development at all levels of governance, society and the economy and in all sectors by improving adaptation strategies and plans;
- Stepping up international action for climate resilience: increase EU support for international climate resilience and preparedness through the provision of resources, by prioritising action and increasing effectiveness, through the scaling up of international finance and through stronger global engagement and exchanges on adaptation.

The strategy emphasizes the importance of improving knowledge and data availability to manage the inherent uncertainties of climate change. It also supports the development of adaptation policies at all levels of governance, ensuring that climate resilience is integrated into every sector of the economy.

2) **The European Climate Law**[36], adopted in July 2021.

The law establishes a framework for achieving climate neutrality within the EU by 2050 (that is, a balance of EU-wide greenhouse-gas emissions and their removal regulated in EU law) and comprises the aim of achieving negative emissions in the EU thereafter. To that end, it sets binding targets (net domestic reduction in greenhouse-gas emissions by at least 55% compared to 1990 levels by 2030) and introduces rules to ensure continuous progress towards the global adaptation to climate change goal in the Paris Agreement. Among other rules, **Member States must adopt and implement national adaptation strategies** and plans.

The Climate Law also includes measures to **keep track of progress** and adjust Member States actions, accordingly, based on existing systems such as the governance process for Member States' national energy and climate plans, regular reports by the European Environment Agency, and the latest scientific evidence on climate change and its impacts. Finally, **the law outlines actions and guidelines for adapting infrastructures to climate change impacts.**

Besides the two below mentioned strategy and law, climate proofing of infrastructures and its process was defined or referred to in different EU legislative acts, from which can be quoted (a more exhaustive list can be found in the appendixes):

- **Technical guidance on climate-proofing of Infrastructures in the period 2021-2027 (2021, link)**
- Common Provisions Regulation (2021, link)
- Regulation establishing the InvestEU Programme (2021, link)
- The Net-Zero Industry Act (NZIA) Regulation (2024, link)
- Directive on the energy performance of buildings (2024, link)

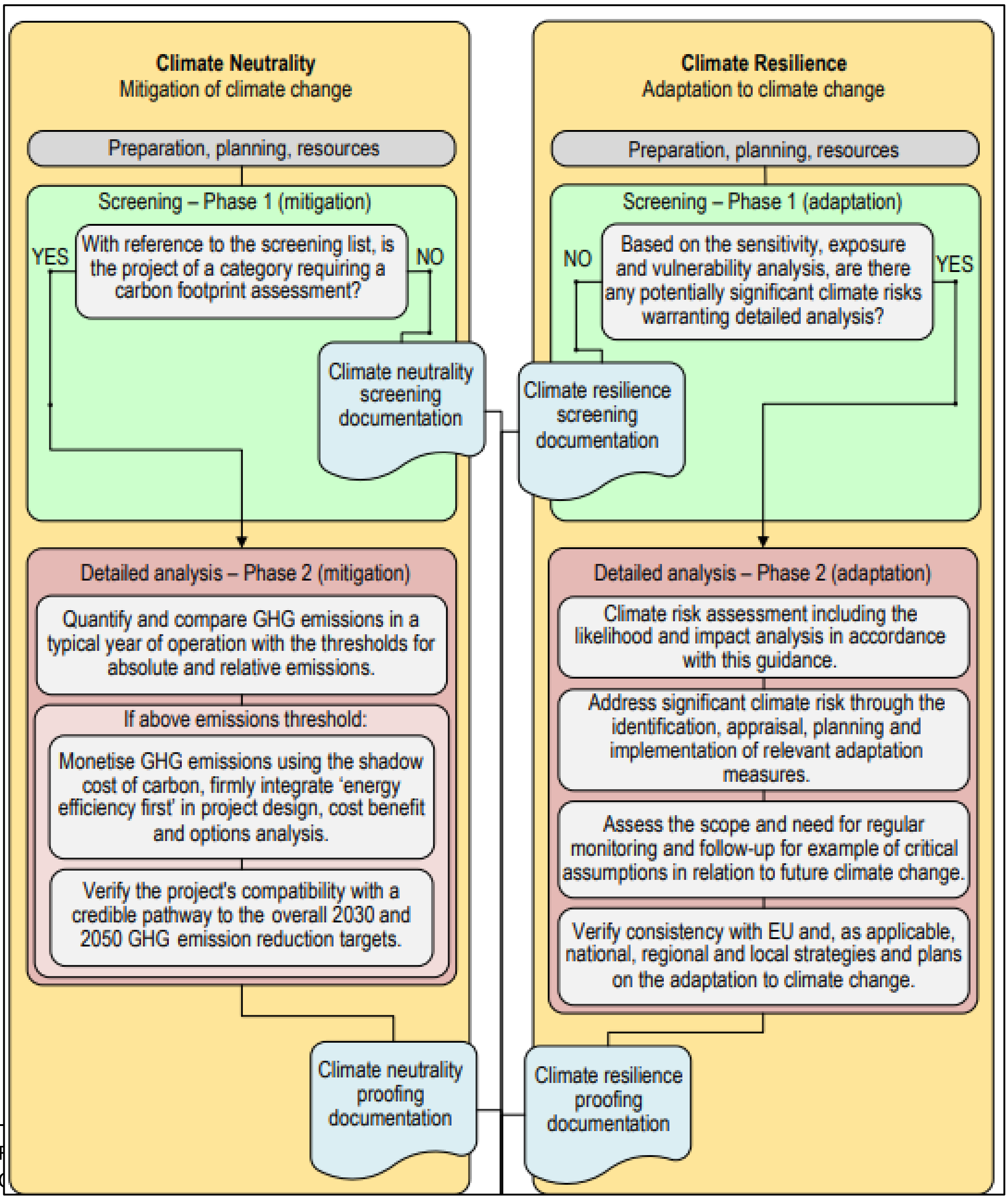
Zoom on the EC Technical guidance on climate-proofing of Infrastructures in the period 2021-2027

[36] EC, European Climate Law, 2021. Available here.

This document provides technical guidance on the climate proofing of investments in infrastructure covering the programming period 2021-2027. While the InvestEU Regulation[37] requires the Commission to develop sustainability guidance, which the Notice on climate proofing is part of, it is also deemed **a relevant reference for the climate proofing of infrastructure under the Common Provisions Regulation**[38].

Based on lessons learnt from climate proofing major projects over the period 2014-2020, this guidance integrates climate proofing with project cycle management (PCM), environmental impact assessments (EIA), and strategic environmental assessment (SEA) processes, and it **includes recommendations to support national climate-proofing processes in Member States**. The process is summarised into the following scheme (illustration 4).

<u>Illustration 4</u>: Overview of the twofold climate-proofing process laid down in the EC Technical guidance on the Climate proofing of infrastructure in the period 2021-2027



[37] EC, F
[38] EC, (

Source: EC Technical guidance on climate-proofing of Infrastructures in the period 2021-2027

The process is divided into two pillars (mitigation, referred as "climate neutrality" and adaptation referred as "climate resilience") **and two phases** (screening and detailed analysis). During the screening phase, project promoters must determine whether their projects fall into categories that require a carbon footprint assessment. If significant climate risks are identified, the project must undergo a detailed analysis to quantify and compare greenhouse gas emissions, assess compatibility with EU climate targets, and incorporate adaptation measures to mitigate these risks. The detailed analysis phase also requires project promoters to verify the project's consistency with EU and national adaptation strategies. This ensures that all infrastructure projects supported by EU funds are aligned with broader climate resilience goals.

After this two-phase analysis, the Commission advises to make consolidated documentation gathering both climate neutrality and climate resilience proofing documentations. This final document shall be **subject to verification, carried out by an independent verifier and/or the financier itself** as an initial step in the process leading to the investment decision. The verification should be documented in a report to the project promoter and other relevant recipients.

In the end, this whole process should lead the public authority to its investment decision.

To better understand the EU climate adaptation and mitigation strategies, as well as climate proofing of infrastructures' EU approach, complementary documentations have been issued by EU institutions. In the table below (Table 3) are listed a selection of explanatory texts.

For instance, the Commission Technical guidance on sustainability proofing for the InvestEU Fund provides with the **methodologies and tools needed to perform the InvestEU screening and proofing** of proposed direct financing and investment operations, for the three sustainability dimensions (climate, environment and social). In particular, the proposed approach for **InvestEU sustainability proofing** of direct financing and investment operations covers the following steps: 1) Assessment of compliance with EU and national legislation, 2) InvestEU screening to identify potential risks and impacts on the 3 dimensions, 3) Further assessment and proofing for the relevant elements at risk under each dimension, and 4) Conclusion of the sustainability proofing.

Table 3: Explanatory publications regarding climate proofing of infrastructures' EU regulatory framework

Text name	Author, Date	Access
Questions and Answers: New EU strategy on adaptation to climate change	European Commission, 2021	Link
Support for the Development of Practical Sectoral Guidance on Climate Resilient Proofing	JASPERS, 2024	Link
Commission Technical guidance on sustainability proofing for the InvestEU Fund	European Commission, 2021	Link

Questions and Answers: The Net-Zero Industry Act and the European Hydrogen Bank	European Commission, 2023	Link
EU Net-Zero Industry Act: making the UE the home of Clean Tech Industries	European Commission, 2024	Link
Assessment of progress on climate adaptation in the individual Member States according to the European Climate Law	European Commission, 2023	Link

2.3.3. Examples of climate proofing of infrastructures' national and regional legislative frameworks and initiatives

One first observation is that **climate strategies are broadly adopted by European regions or local authorities**. We can for instance quote the **City of Geneva Climate change-strategy**[39], as well as **Trentino Clima 2021-2023**[40], the Climate change work programme of the Autonomous Province of Trento, indicating the way forward for the adoption of a provincial strategy for mitigation and adaptation to climate change.

In addition, several initiatives are observed in regions regarding adaptation to climate change, and in particular climate proofing of infrastructures. Overall, these initiatives serve to implement regional strategies and policies on climate change. Some relevant examples are provided int the box below (box 4).

Box 4: Illustrations of regional initiatives regarding climate-proofing of infrastructure's frameworks

- **The Creation of the provincial agency CasaClima, in the Autonomous Province of Bolzano (Italy):** established in 2002, the 'CasaClima' agency became part of the provincial administration in 2014, assuming responsibility for energy-related matters. The agency is a renowned center of expertise in energy efficiency and sustainability in construction, both for new buildings and the renovation of older ones. Its standards have become a benchmark for such activities across Italy and Europe. Over the years, the ambitious CasaClima standards have progressively raised the bar, positioning South Tyrol as one of the first regions in Europe to adopt the A energy standard (energy consumption below 30 kWh/m²a) as a minimum requirement for new buildings since 2017. **The agency also promotes numerous awareness initiatives**, including the CasaClima Energy Check, a tailored assessment of a building's energy consumption that identifies inefficiencies and suggests effective interventions to address them.
- **Governance system for the regional Sustainability Strategy in Land Tyrol (Austria):** one of the objectives of the new 2021 Climate and Sustainability Strategy (Nachhaltigkeits- und Klimastrategie) is to **streamline and systematize coordination between departments at the regional level.** The strategy's development and implementation are structured around two complementary coordination levels: **(1) within the administration and (2) between the**

[39] City of Geneva Climate Strategy, 2022. Available here.
[40] Trentino Clima 2021-2023. Available here.

administration and political representatives. Initially conceived for the development of the 2019 Sustainability Strategy, this governance framework has since been **established as a permanent process.** Its added value lies in fostering institutionalised coordination between departments, as well as between political and administrative leadership, specifically to integrate climate change at a sectoral level. This mechanism is not confined to the strategic policymaking phase but is designed to remain active throughout the entire policy cycle, including during implementation.

- **An index for the reduction of the impact of buildings in the City of Bolzano (Italy):** the RIE (Reduction of Building Impact) index measures the impact of any type of building on soil permeability, aiming to prevent soil sealing. Maintaining adequate soil permeability and green coverage helps mitigate and adapt to climate change, as it can contribute to reducing CO2 emissions and countering extreme weather events, such as flooding and heavy precipitation. In accordance with Article 3 and subsequent provisions of the Municipal Building Regulation, "Annex 3 – Reducing Building Impact", the Municipality of Bolzano **requires all new buildings to comply with the RIE index value corresponding to the area where the project is being developed**. Permissible RIE values for each area are established in municipal planning documents. In this context, effective tools for environmental mitigation and compensation include the integrated application of stormwater management and recovery technologies, such as infiltration and surface disposal systems, green roof technologies, bioengineering solutions, and, where feasible, traditional green infrastructure.

At national level, as the EC technical guidance on climate-proofing of Infrastructures in the period 2021-2027 says that **"it may be complemented with additional national and sectoral considerations and guidance", national authorities adopted such guidelines** as illustrated by the three following examples:

- Slovenia - National Guidance on the Climate proofing of infrastructures for the period 2021-2027[41]
- Italy - National Guidelines on the Climate proofing of infrastructure projects 2021-2027[42]
- Hungary - Climate proofing – the proof of the pudding[43]

Based on the EU guidance issued in 2021, the texts overall present the national methodologies adopted for the climate proofing of infrastructure projects. They introduce the methodology, the scope of application, the instruments for analysing climate vulnerability, **and the methodology for integrating the DNSH into the process of climate proofing.**

2.3.4. A selection of existing guidelines and tools regarding climate proofing of infrastructures

The following toolbox (Toolbox 3) brings essential **guidance and tools to help with the implementation of the regulation relating to the adaptation of the infrastructures to climate change.** They are emanating from the EU institutions (e.g., digital tools or assistance), from national / or local authorities (e.g., implementation guidelines), and from international bodies (e.g., guidelines, methodologies, etc.).

[41] Slovenian National Guidance on the Climate proofing of infrastructures for the period 2021-2027, 2024. Available here.
[42] Italy - National Guidelines on the Climate proofing of infrastructure projects 2021-2027, 2023. Available here.
[43] Hungary - Climate proofing – the proof of the pudding, 2021. Available here.

It can be tools, examples of application of certain methodologies (examples in practice), questions and answers (Q&A), good practices and guidelines.

For instance, **the Do it yourself (DIY) manual for mobilising and engaging stakeholders and citizens in climate change adaptation planning and implementation**, published on the EU Mission Implementation Platform for Adaptation to Climate Change (MIP4Adapt) in the context of the Regional Adaptation Support Tool (RAST), aims to help regions and local authorities in the making of a local adaptation strategy while involving all local stakeholders. Key elements suggested to mobilise and engage stakeholders and citizens effectively and collaboratively are:

- **Communication** to/with a broad range of stakeholders and citizens who may be overwhelmed by the extent of information that they receive on a regular basis,
- **Engagement** with an inclusive spectrum of organisations and individuals,
- **Connection** of stakeholders and citizens with decision-makers in ways that facilitate deliberation about policies and measures,
- **Enabling** of stakeholders and citizens to act collectively and individually.

Toolbox 3: Guides and useful tools on the implementation of climate change adaptation policies

Name	Author, Date	Nature	Comments	Access
Support for the Development of Practical Sectoral Guidance on Climate Resilient Proofing	JASPERS, 2024	Method	This presentation summarizes the EU Guidance on Climate Proofing of Infrastructures.	Link

Green Infrastructure Handbook - Conceptual & Theoretical Background, Terms and Definition	Interreg Central Europe, 2019	Method & good practices	The Interreg Central Europe project Managing Green Infrastructure in Central European Landscapes - MaGICLandscapes works on the **operationalisation of the Green Infrastructure (IG) concept in Central Europe**. It will provide land managers, policy makers and communities the tools and the knowledge, at different spatial levels that they need to ensure the persistence of GI functionality and consequent benefits to society. This handbook contains the fundamentals of green infrastructure (GI). **The handbook covers issues such as definitions of important terms or GI and its relationship to territorial law/policies of the five partner countries (Austria, Czech Republic, Germany, Italy and Poland) and EU regulations and programmes.** Furthermore, it **covers the territorial/international needs for a green infrastructure approach and its contribution to sustainable development.** It shows, how a green infrastructure approach can address specific territorial and common challenges. This handbook for **practice-oriented information is based on a review of GI literature and legislation** as well as practical experiences of the project partners and stakeholders.	Link
Climate change adaptation of major infrastructure projects	EC, 2018	Tool	A **stock-taking of available resources** to assist the development of climate resilient infrastructure.	Link
Criteria for creation of MESTRI-CE Sustainable Building Methodology	Interreg Central Europe - MESTRI-CE, 2024	Method	Based on analyses, this first set of conclusions of the MESTRI-CE Interreg Programme introduces **a list of 68 indicators belonging to 11 different thematic areas of building sustainability.** **This constitutes the first step in the development of the MESTRI-CE Building Methodology:** the definition of a comprehensive list of criteria and key indicators that can be used to assess and report the performance of buildings addressing all core areas and dimensions of sustainability. The aim of the MESTRI-CE Sustainable Building Methodology is to **promote and support the development of ambitious action plans for the transition towards a climate neutral and sustainable building stock in all MESTRI-CE pilot countries**, creating a common language and framework that will improve	Link

			existing standards, while respecting regional differences and specifics.	
The EU Mission on Adaptation to Climate Change portal	EC	Tool	A Mission Implementation portal **providing relevant knowledge, data and resources** to European regions and cities to prepare and plan for climate resilience regarding infrastructures and assets.	Link
Assessing the costs and benefits of climate change adaptation	EEA[44], 2023	Method	This briefing summarises the **main assessment concepts, key methods and related challenges and constraints,** and provides practical examples of approaches relevant to the EU.	Link
DIY manual for mobilising and engaging stakeholders and citizens in climate change adaptation planning and implementation	EU Missions, 2023	Method / guidance	A Citizen Engagement Manual to **guide regions and cities on how to engage stakeholders and citizens throughout the six main steps** of the climate change adaptation planning process.	Link
Climate-ADAPT	EU	Tool	The authoritative European platform for adaptation knowledge, linking it up with other relevant knowledge portals and sources and making it more accessible for citizens, local governments and other stakeholders. In particular, the Regional tool the Regional Adaptation Support Tool (RAST) is based on the concept of the adaptation policy cycle and foresees an iterative approach in the application of its six main steps: (1) Preparing the ground for adaptation, (2) Assessing climate change risks and vulnerabilities, (3) Identifying adaptation options, (4) Assessing adaptation options, (5) Implementing adaptation and (6) Monitoring and Evaluating adaptation.	Link

2.4. Integration of green budgeting principles into budgetary exercises

Green budgeting is an essential tool for integrating environmental and climate considerations into public financial management. The European Union has been a pioneer in promoting green budgeting practices among its Member States and regions. In 2019, subnational governments were responsible for 63% of climate-relevant public expenditure and 69% of climate-relevant public investment, on average, across 33 OECD and EU countries (OECD, 2022[45]).

[44] European Environment Agency.
[45] OECD, Subnational government climate expenditure and revenue tracking in OECD and EU Countries, 2022. Available here.

2.4.1. *Defining green budgeting in the EU*

The European Commission defines "green budgeting" as using the tools of budgetary policymaking to help achieve climate and environmental goals[46]. It is a process whereby the environmental contributions of budgetary items and policies are identified and assessed with respect to specific performance indicators, with the objective of better aligning budgetary policies with **environmental goals**.

Eventually, green budgeting aims to recognise and measure the impact that broader spending, investment, and revenue-raising decisions have on governments' environmental goals.

This definition is not restrictive, and paves the way for a **variety of practices and frameworks**. This is embodied in the EU Green budgeting reference framework[47] introduced below, providing for a gradual approach to budget frameworks' level of advancement according to their practices. It would therefore more accurate to talk about "**green budgeting practices**" than "green budget" at all.

2.4.2. *Green budgeting's EU legislative framework*

The **European Green Deal**[48], adopted in 2019, emphasizes the need to "green" national budgets and send the right price signals to support the transition to a sustainable economy. This is further reinforced by the **2021 Renewed Sustainable Finance Strategy[49]**, which calls for an increased use of green budgeting tools and strengthened tracking methodologies for climate and biodiversity spending.

The main regulatory texts that can be quoted regarding the implementation of green budgeting in the EU are the following (more details can be found in appendixes):

- **European Union Green Budgeting Reference Framework (2022, link)**
- **Climate Mainstreaming Architecture in the 2021-2027 Multiannual Financial Framework (Staff working document) (2022, link)**
- Revised EU Budgetary Framework Directive (2024, link)
- Communication on Public procurement for a better environment (2008, link)
- Common EU Green Public Procurement Criteria (link)

Zoom on the EU Green Budgeting Reference Framework

To support the implementation of green budgeting, the European Commission introduced the EU Green Budgeting Reference Framework[50] in January 2022. This framework provides a structured approach to green budgeting, allowing Member States to develop practices that are consistent across the EU while remaining adaptable to national contexts. While the framework is primarily intended for national governments, **subnational authorities, such as regional and local governments, can also adopt and customize it** to develop their own green budgeting practices.

[46] EC, Green budgeting in the EU. Available here
[47] EC, European Union Green Budgeting Reference Framework, 2022. Available here.
[48] EC, The European Green Deal, 2019. Available here.
[49] Strategy for financing the transition to a sustainable economy, 2021. Available here.
[50] European Union Green Budgeting Reference Framework, 2022. Available here.

The framework complements the broader OECD Green Budgeting Framework[51], which offers an overarching approach to integrating green budgeting into policymaking, **while the EC's framework provides more practical, operational guidance for implementation.**

The EU Green Budgeting Reference Framework is **based on five key components** that are:

1) **The scope/coverage** of environmental and climate objectives, budgetary items, and public sector entities covered.
2) **The methodologies** employed to assess the alignment of budgetary policies with green objectives: tagging methodologies, accompanied with *ex-ante* and *ex-post* assessment.
3) **The deliverables** specified in legal provisions or administrative documents related to green budgeting: identification in annual budget, reporting, estimates in multi-annual plans, etc.
4) **The governance structure**, clearly defining the roles and responsibilities of all stakeholders involved. This evaluates the degree of integration of the topic into the public administration.
5) **The transparency and accountability** of the green budgeting process and its methodologies: external assessments of the methodology used, public deliverables, etc.

These 5 components are designed to ensure that green budgeting practices are comprehensive, transparent, and effective in aligning public spending with environmental and climate objectives. Based on the ambition and comprehensiveness of a national authorities' green budgeting approach across these five elements, **the framework classifies practices into three levels: essential, developed, and advanced.**

The framework therefore encourages public authorities to adopt tagging methodologies that **classify budgetary items according to their environmental impact**. This can include tagging expenditures as **favorable, unfavorable, or mixed** in terms of their contribution to climate and environmental goals. The framework also promotes the use of **independent expert assessments** to validate green budgeting methodologies and ensure their robustness.

However, while green budget tagging is a valuable tool, it also presents challenges, particularly at the subnational level. Regions and municipalities may **lack the necessary staff, expertise, or financial resources to implement green budgeting effectively.** Additionally, there may be methodological challenges, such as the lack of commonly agreed-upon environmental indicators at the regional level (European Commission, 2023[52]).

<u>Synergies between green budgeting principles and the EU Taxonomy</u>

Institute for Climate Economics (I4CE)'s climate budget assessment methodology for local authorities[53] categorizes both current and investment expenditures based on their impact on climate change mitigation and adaptation. This classification approach aligns with the EU Green Taxonomy on Sustainable Activities established by the European Commission. As a result, the definition of expenditures with positive or negative effects on climate mitigation and adaptation **adheres to the criteria set out in the EU Taxonomy. Leveraging the Taxonomy helps to bypass technical debates**, allowing greater focus on practical, operational considerations.

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[51] OECD, Green Budget Tagging - Introductory Guidance & Principles, 2021. Available here.
[52] EC, European Commission survey on green budgeting, 2021. Available here.
[53] I4CE, Framework for Climate budget assessment for cities, 2021. Available here.

In the table below (Table 4) are presented relevant EU explanations on the EU regulatory framework regarding green budget tagging – of which can be found content details in appendix 1.4. For instance, the **Opinion of the European Committee of the regions on the implementation of green budgets at local and regional levels (2022)** mentioned in the table recommends that local and regional authorities **disseminate green budget monitoring reports among citizens** to promote efficiency, accountability, and transparency of policies regarding climate and environmental action. It also calls for regular external audits of the green budgeting methodologies, and in particular of the underlying hypothesis. Finally, it promotes green budgeting as a tool used to classify expenditure and revenue in order to ensure accountability.

The following table (Table 4) lists some EU guidance on green budgeting in the EU, in order to understand its regulatory framework. Explanations of these documents can be found in appendix 1.

Table 4: Explanatory publications regarding green budgeting's EU regulatory framework

Text name	Author, Date	Access
Report on the progress made on the implementation of Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants	European Commission, 2020	Link
Communication on the performance framework for the EU budget, under the 2021-2027 multiannual financial framework (Volume II)	European Commission & European Parliament, 2021	Link
Opinion of the European Committee of the regions — The implementation of green budgets at local and regional levels	European Commission, 2022	Link

2.4.3. Green budgeting in national and regional legislative frameworks

Green budget tagging is method used by several EU countries to assess the environmental impact of their budgetary decisions. This process involves categorizing expenditures based on their contribution to environmental objectives, such as climate mitigation or biodiversity conservation.

Countries like France, Italy, and Spain have implemented green budget tagging as part of their broader green budgeting practices. In France, for instance, an inter-ministerial working group leads the tagging process, with the central budget authority supervising the work. The results are presented in a green budget report attached to the draft national budget, providing transparency and accountability in the government's environmental spending (European Commission, 2024[54]).

Regardless of their mandatory nature, **European regions also show a wide range of initiatives** regarding green budget tagging, of which inspiring examples are provided int the box below (box 5).

[54] EC Workshop, Green Budgeting in the EU / HP4 Workshop: Using Green Budgeting to Strengthen the Alignment of Public Financial Flows with Climate and Environmental Objectives, 2024. Available here.

Box 5: Illustrations of national and regional green budgeting frameworks or initiatives[55]

- **Italy's catalogue of environmentally friendly and harmful subsidies:** The Italian Ministry of Environment, Land, and Sea produces a catalogue of environmentally beneficial and harmful subsidies in response to a parliamentary request. This initiative is part of a larger governmental effort toward fiscal reform. The catalogue's purpose is to pinpoint areas for potential tax system reform, adhering to the polluter pays principle, while also identifying measures that could drive environmental fiscal changes and opportunities to reduce overall public spending. It examines subsidies across various sectors—such as agriculture, energy, transport, and VAT—taking into account both fiscal incentives and direct financial aid.
- **Danish municipal climate plans - the DK2020 initiative**: The DK2020 Danish Municipalities project was launched in 2019 with 20 municipalities to develop local climate action plans aligned with the Paris Agreement's goal of achieving carbon neutrality by 2050. In 2021, the **initiative was expanded to include nearly all Danish municipalities and the five Danish regions**, through a partnership with KL (the Danish Association of Municipalities). Finalized climate action plans for all participants were expected by mid-2023.
  Through the DK2020 project, Danish municipalities receive support from C40 Cities, CONCITO (a Danish climate think tank), and Realdania (an environmental non-profit). C40 Cities provides a climate action planning framework, while CONCITO analyzes existing practices across municipalities. One **key aspect of the project is the sharing of best practices among participants.**
- **Andalusia's Green Budget Fund**: As part of its comprehensive green budgeting initiative, the government of Andalusia established a EUR 1 million Green Budget Fund to support projects that integrate environmental considerations into the regional budget. Proposed projects must address at least one of several green objectives, such as environmental protection or combating climate change. Additionally, proposals must meet one of three budget-programming objectives: promoting climate impact assessments; fostering the development and monitoring of budget objectives, actions, and indicators; and enhancing capacity building and climate change awareness among public officials, particularly regarding the link between climate change and the budgeting process.
  - Regarding Andalusia's regulatory framework on green budgeting, the **2018 Decree of Structure Regional Ministry of Economy**, Finance and European Funds assigns their roles to each governing institution involved in the green budgeting making and monitoring process i.e., the General Secretariat of Budgets, Expenditure and European Financing, the General Directorate for Budgets, and the General Directorate of Treasury and Public Debt[56].
- **Oslo's Climate Budget goals**: Oslo's climate budget was developed as a tool to help the municipality achieve its carbon dioxide emissions reduction targets. It ensures that the municipality implements and finances initiatives to lower its scope 1 CO_2 emissions and takes responsibility for monitoring the progress of these measures. Regular monitoring exercises are conducted to evaluate outcomes and track progress toward the emissions

[55] Most of these examples come from the following source: OECD, 2022, Subnational Green Budgeting Self-assessment Tool. Available here.
[56] Junta de Andalucia, How does green budgeting help decision making? "Green budgeting at the regional level, in the context of green and social bond issuance", 2023. Available here.

reduction goals. The climate budget is reviewed annually to adjust the course when necessary, and the document remains transparent, providing decision-makers and stakeholders with a clear understanding of the challenges and the municipality's priorities in reaching its targets.

- Another initiative to mention is the existence of **a "Green Fund"[57] in Greece** (at national level). The purpose of the Green Fund is to enhance development through environmental protection by providing administrative, economic, technical and financial **support for programmes, measures, interventions and actions aimed at promoting and restoring the environment**, supporting the country's environmental policy and serving the public and social interest. Despite being a green budget as such, it is a tool enhancing the achievement of environmental policies.

2.4.4. A selection of existing guidelines and tools regarding green budgeting implementation

The following toolbox (Toolbox 4) brings essential **guidance and tools to help with the implementation of green budgeting practices.** They are emanating from the EU institutions (e.g., digital tools or assistance), from national / or local authorities (e.g., implementation guidelines), and from international bodies (e.g., guidelines, methodologies, etc.). It can be tools, examples of application of certain methodologies (examples in practice), questions and answers (Q&A), good practices and guidelines.

For instance, **the OECD has formulated six guidelines aimed at regions and cities to assist them in developing and implementing their own subnational green budgeting practices**. These guidelines, which come with recommendations for supranational bodies, national and subnational governments, as well as a self-assessment tool, are designed to help subnational governments, regardless of their size, responsibilities, or type, establish the conditions necessary to initiate or strengthen green budgeting practices. They **build on concrete regional practices which have been analysed**, with the goal to ensure the sustainability of these practices over time.

Toolbox 4: Guides and useful tools regarding green budgeting implementation

Name	Author, Date	Nature	Comments	Access
Aligning Regional and Local Budgets with Green Objectives	OECD, 2022	Method & guidance	This paper includes **subnational green budgeting guidelines**: the OECD has developed a **set of six guidelines for regions and cities** to use in developing and launching their own subnational green budgeting practice.	Link
Climate assessment of local authority budgets: methodological guide	I4CE, 2021	Method & guidance	This methodological guide is made for staff and official elected that will be in charge of doing a climate assessment of the local budget. The guide is accompanied by a synthesis for elected officials and top management, by a technical appendix on mitigation, a technical appendix on adaptation of climate change. These documents are available for	Link

[57] Green Fund. Available here.

			all local governments that want to launch a climate assessment of their budget. This presents a **methodological guide, a dedicated methodology for climate mitigation, climate adaptation and biodiversity.**	
Socio-climate budget tagging	I4CE, 2022	Method & guidance	Socio-Climate Budget Tagging: a method proposed by I4CE to highlight joint climate and social effects of government budget measures.	Link
Opinion of the European Committee of the regions — The implementation of green budgets at local and regional levels	EC,2022	Policy recom-mendations	The European Commission: - Recommends that local and regional authorities **disseminate green budget monitoring reports** among citizens to promote efficiency, accountability, and transparency of policies regarding climate and environmental action. - **Calls for regular external audits of the green budgeting methodologies**, and in particular of the underlying hypothesis. - Stresses that **green budgeting can be used to classify expenditure and revenue** in order to ensure accountability and to ultimately enhance public trust in the process.	Link
Greener, better, stronger: Factors for the successful implementation of green budgeting in EU Member States	I4CE, 2023	Examples	This report presents insights gathered through the delivery of the EU Green Budgeting training in 23 Member States. **It highlights resources and opportunities that facilitate the implementation of green budgeting** among Member States: - the willingness to exchange on good practices with peers, - EU requirements to develop climate and environmental strategies which provide context for green budgeting, and - the uptake of outcome-responsive budgeting in several countries. This report also points out **challenges and suggests options** to circumvent them to ensure that green budgeting is implemented in a robust manner, is nationally owned, and effectively serves as a decision-making tool to align budgets with national climate and environmental objectives.	Link
Good Practice Library	EC	Examples & good practices	This constitutes a **compilation of green public procurement (GPP) good practices.** Since January 2010, the European Commission has been promoting good practice experiences on GPP to illustrate how public authorities in Europe have successfully 'greened' a public tender or procurement process. These include the use of life-cycle costing (LCC), circular economy principles and approaches fostering sustainable innovation, among others. These good	Link

			practice cases also provide some 'lessons learned' for those wishing to replicate experiences.	
Self-assessment tool on subnational green budgeting	OECD, 2022	Tool	**Cities, regions and their partners can download this self-assessment tool** to identify their strengths and potential gaps for starting a green budgeting practice or improving an existing one.	Link

2.5. Sustainable debt management and the green and sustainable bonds emission

Sustainable debt management is another critical aspect of the EU's sustainable finance framework. The issuance of green and sustainable bonds to finance projects that contribute to environmental and social objectives takes part to sustainable debt management. In particular, environmentally sustainable bonds are one of the main instruments for financing investments related to environmentally sustainable technologies, energy and resource efficiency as well as environmentally sustainable transport infrastructure and research infrastructure. Financial and non-financial undertakings, as well as non-corporate entities such as sovereigns and subnational authorities, can issue such bonds, **mobilizing both private and public finance**.

2.5.1. *Defining sustainable debt management and green and sustainable bonds in the EU*

EU Green Bond Standard Regulation[58] defines "green bond" or "bond marketed as environmentally sustainable" as a bond whose issuer provides investors with a commitment or any form of pre-contractual claim that the bond proceeds are allocated to economic activities that contribute to an environmental objective. It is called use-of-proceeds bonds as it is aimed at financing specific expenditures. Another form of sustainable bonds are "sustainability-linked bonds" which are bonds whose financial or structural characteristics vary depending on the achievement by the issuer of predefined environmental sustainability objectives. In other words, these are general-purpose bonds. **Green and sustainable bonds must therefore be considered tools to finance the transition to a low carbon economy.**

"Debt sustainability" defined in the sense of the solvency of the public sector is fulfilled when governments are able to meet all their debt obligations through future primary fiscal surpluses (European Parliament, 2023[59]). Sustainable debt management consequently is the means used to meet debt sustainability thanks to the investments choices made by the government from a risk-management viewpoint.

Regarding climate change consequences on assets' riskiness, green and sustainable bonds can **help improving the management of financial risk related to climate and the environment** by investing in less risky or sustainable assets thanks to their characteristics (e.g., assets contributing to climate change adaptation). Eventually these contribute to the sustainable debt management of the issuer. However,

[58] EC, EU Green Bond Standard Regulation, 2023. Available here.
[59] European Parliament, Debt sustainability analysis as an anchor in EU fiscal rules, 2023. Available here.

diverging definitions of environmentally sustainable activities make it **difficult for investors to effectively compare bonds across the Union with respect to their environmental objectives**.

2.5.2. Sustainable debt management, and green and sustainable bond's EU legislative framework

In its **2018 Action Plan for financing sustainable Growth**[60], the EU had established the objective of "Reorienting capital flows towards a more sustainable economy". To this end, the EU had introduced a set of actions related to the issuance of **green and sustainable bonds**, aiming at enhancing their consistency. It also set actions to **facilitate the identification** of environmentally sustainable investments through clear labels so to prevent greenwashing and improve assets' risk management, with the aim to further increase "green" investment opportunities.

To this end, the EU has paved the way for a **comprehensive regulatory framework based on transparency** (disclosure rules) and criteria to define a "sustainable investment" (classification). The following texts can be quoted to understand EU sustainable debt management regulatory context, including the issuance of green and sustainable bond:

- Next Generation EU - Green Bond Framework (2021, link)
- EU Green Bond Standard Regulation (2023, link)
- Sustainable Finance Disclosure Regulation – SFDR (2019, link)
- Delegated Regulation on the EU Climate Benchmarks (2020, link)
- MiFIDII Delegated Regulation on the integration of sustainability factors, risks and preferences (2021, link)
- ESG rating Regulation – *proposal* (2023, link)
- Guidelines on funds' names using ESG or sustainability-related terms (ESMA, 2024, link)

In order to better understand the regulatory context of green and sustainable bonds in the EU, the following focuses on 2 impacting texts. Descriptions of the other rules can be found in appendix 1.5.

Zoom on the EU Green Bond Standard (EUGBS) Regulation

In the **2018 Action Plan for financing sustainable Growth**[61], the Commission sets the action of **creating standards and labels for green financial products**. In October 2023, the **EU Green bond Standard Regulation was adopted**.

While international standards already exist and progressively became references for the issuance of green and sustainable bonds (i.e., the ICMA bonds principles), the EU has established the EU Green Bond Standard (EUGBS) with a regulation adopted in October 2023. The aim was to **enhance the credibility and transparency of the green bond market in the EU**. The EUGBS sets out stringent criteria for green bonds, requiring issuers to demonstrate that all proceeds are used to finance projects **aligned with the EU Taxonomy,** provided the sectors concerned are already covered by it**.** For those sectors not yet covered by the EU taxonomy and for certain very specific activities, there will be a flexibility pocket of 15%. This is to ensure the usability of the European green bond standard from the start of its

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[60] EC, Action Plan: Financing Sustainable Growth, 2018. Available here.
[61] EC, Action Plan: Financing Sustainable Growth, 2018. Available here.

existence. **Taxonomy Regulation is clearly used as a tool to better identify eligible categories for green expenditures** (see part 2.1).

Current EU Taxonomy-aligned green bonds (nowadays "best-in-class") are therefore future great candidates to the EUGBS. Among EU sovereigns, the Netherlands Government and the Kingdom of Denmark have already issued Taxonomy-aligned green bonds (Bloomberg, 2024[62]).

Under the EUGBS, issuers are **required to obtain a pre- and post-issuance review** from a registered external reviewer to ensure compliance with the standard. The EUGBS also introduces a **supervisory regime and registration system for external reviewers**, coordinated by the European Securities and Markets Authority (ESMA). This centralized registration and supervisory regime ensures that all external reviewers meet high standards of expertise and integrity.

In parallel, the regulation provides for **voluntary disclosure requirements** (opt-In regime) for other environmentally and sustainable bonds not yet ready for EUGBS standardisation, and for sustainability-linked bonds issued in the EU.

Three complementary delegated acts to the EUGBS Regulation are expected:

- The template for the opt-in regime including sustainability-linked bonds[63];
- The procedure for ESMA to impose fines;
- The registration process for external verifiers.

The EUGBS Regulation will fully apply starting on December the 21st, 2024.

Zoom on the ESG Rating Regulation

Finally, the proposed **ESG Rating Regulation** aims to bring transparency and reliability to the methodologies used by ESG rating agencies. The regulation proposal was adopted in 2024 first semester but is still not published in the European Union Official Journal.

The intention is to regulate how ESG ratings are developed and used by investors, and also **interacts with the work on green bonds standards and EU climate benchmarks.** Regarding the European Green Bond Regulation, issuers of future EU green bond standards are required to disclose the taxonomy-alignment of projects funded by their bonds (refer to the next section for more information). For that purpose, they may seek ESG ratings to obtain underlying data that would feed into their projects assessments. **The information disclosed in ESG ratings helps investors**, **including green bond investors**, to better assess the overall non-financial performance of undertakings.

In the table below (Table 5) are presented relevant EU guidance on the EU regulatory framework regarding green and sustainable bond issuance (a more exhaustive list with descriptions is available in appendix 1).

Table 5: Explanatory publications regarding green and sustainable bond issuance's EU regulatory framework

[62] BloombergNEF, Complexity of EU Green Bond Standard Will Limit Uptake, 25 September 2024.
[63] Article 21 of the EUGBS.

Text name	Author, Date	Access
Guidelines on Enforcement of Sustainability Information	ESMA, 2024	Link
Public Statement on the first application of the European Sustainability Reporting Standards (ESRS)	ESMA, 2024	Link
Sustainability-related disclosures in the financial services sector	EC, 2019	Link
Consolidated questions and answers (Q&A) on the SFDR and the SFDR Delegated Regulation	ESAs, 2024	Link
Commission Notice on the interpretation and implementation of certain legal provisions of the EU Taxonomy Regulation and links to the SFDR	EC, 2023	Link
Handbook on Climate Transition Benchmarks, Paris-Aligned Benchmarks, and Benchmarks' ESG disclosures	TEG, 2019	Link

2.5.3. Examples of green and sustainable bonds in national and regional legislative frameworks

Public issuers are gradually aligning bond allocations with the EU Taxonomy on a voluntary basis, or at least making reference to it. Public actors issued over 40% of green bonds with assurance in the EU, and 90% of them referenced the EU Taxonomy[64]. From comparing the 4 regional and local green and/or sustainable bond frameworks presented in the box below (box 6), patterns observed can be:

- 3 out of 4 of the examples of green or sustainable bond frameworks **refer to the EU Taxonomy** and the DNSH principle (box 2).
- **None of them yet mention the EUGBS** (yet entered into force but first consultations and publications happened in 2020).
- Subnational green or sustainable bond frameworks **follow the International Capital Market Association (ICMA) Principles,** which provide globally recognized voluntary guidelines to promote transparency, integrity, and best practices in the issuance of bonds aimed at financing sustainable projects. This implies that the following frameworks all **publish annual allocation and impact reports**, which consequently is monitored and measured through **sustainability key performance indicators** (KPIs).

Box 6: Comparison of 4 regional and local green and sustainable bond frameworks

	Autonomous Community of Madrid (Spain)	Land Baden-Wuerttemberg (Germany)	City of Gothenburg (Sweden)	Autonomous Region of Andalusia

[64] Platform on Sustainable Finance (PFS), Compendium of Market Practices: How the EU's Taxonomy and sustainable finance framework are helping financial and non-financial actors transition to net zero, 2024. Available here.

Green Bond Framework ("GBF")	Sustainable Finance Framework (2020)	Green Bond Framework (2022)	Green Bond Framework (2022)	Sustainability Finance Framework (2021)
Reference to EU Taxonomy	Yes	Yes	Yes	No
Follow ICMA principles	Yes	Yes	Yes	Yes
Reference to EUGBS	No	No	No	No
KPIs	Yes	Yes	Yes	Yes
Annual impact and allocation reports	Yes	Yes	Yes	Yes
External review	Second party opinion (Sustainalytics)	Second party opinion (Moody's ESG Solutions)	Second party opinion (CICERO)	Second party opinion (Sustainalytics)

Regarding the benefits for public authorities to issue green and sustainable bonds, public sector experts from Natixis Green and Sustainable Hub (GSH) consider that "issuing green and sustainable bonds provides dedicated funding for environmentally beneficial projects, enabling authorities to implement initiatives that may lack traditional financing. These bonds often support long-term investments that lead to job creation in sectors like renewable energy, clean transportation, or infrastructure for sustainable activities. The economic resilience fostered by these investments helps local economies adapt to climate impacts, while also generating significant environmental benefits, such as reduced greenhouse gas emissions and enhanced biodiversity."

2.5.4. A selection of existing guidelines and tools regarding sustainable debt management, and in particular the issuance of green and sustainable bonds

The following toolbox (Toolbox 5) brings essential **guidance and tools to help in the implementation of sustainable debt management practices, and in particular the issuance of green and sustainable bonds.** They are emanating from EU institutions (e.g., digital tools or assistance), from national / or local authorities (e.g., implementation guidelines), and from international bodies (e.g., guidelines, methodologies, etc.). It can be tools, examples of application of certain methodologies (examples in practice), questions and answers (Q&A), good practices and guidelines.

The International Capital Market Association (ICMA) Principles, encompassing the Green Bond Principles (GBP), Social Bond Principles (SBP), Sustainability Bond Guidelines (SBG), and Sustainability-Linked Bond Principles (SLBP), are predominant in the selection below as they became mainstream for green and sustainable bonds issuers. They promote **four core components for green bond issuances** that are: the identification of use of proceeds, a description of the process for project evaluation and selection, explanations on the management of proceeds, and reporting.

Toolbox 5: Guides and useful tools regarding sustainable debt management, and in particular the issuance of green and sustainable bonds

Name	Author, Date	Nature	Comments	Access
Guidance Handbook	ICMA, 2024	Method	This handbook provides explanations and guidance on the ICMA Principles, **including the Green Bond Principles, to further enhance the accessibility and user-friendliness of the information.** It takes the form of a **question & answers** which tackles the following topics: - Fundamentals of the ICMA Principles, - Core components of the CBP/SBP (Social Bond Principles), - Secured GSS Bonds, - Core Components of the SLBP, - Market and Technical Issues, - Governance and Membership, - Other Market and official sector initiatives, - Indicative examples of types of social and sustainability bonds.	Link
Green Bond Principles - Voluntary Process Guidelines for Issuing Green Bonds	ICMA, 2021-2022	Method	The Green Bond Principles (GBP) outline best practices when issuing bonds serving environmental purposes through global **guidelines and recommendations that promote transparency and disclosure,** thereby underpinning the integrity of the market. **Four core components of the GBP** are therefore presented and explained: - Use of Proceeds, - Process for Project Evaluation and Selection, - Management of Proceeds, and - Reporting.	Link
Sustainability Bond Guidelines	ICMA, 2021-2022	Method	These guidelines have been published to confirm the relevance of the ICMA Principles (Green Bonds Principles (GBP), Social Bonds Principles (SBP), and Sustainability-Linked Principles (SLBP)), and **facilitate the application of their guidance on transparency and disclosure to the Sustainability Bond market.**	Link
Guidance for sovereign bond issuers	IFC, 2018	Method	This document was made for Sovereign issuers in order to **help them in the process of issuing green bonds.** Bringing methodological inputs, it also builds on lessons learnt from Fiji's First Emerging Economy Sovereign Green Bond – *though this study focuses on Sovereigns, it can still incorporate interesting guiding elements for subnational governments.*	Link

2.6. Implementation of innovative financing tools to support the sustainable transition of regional SMEs

Small and medium-sized enterprises (SMEs) are the backbone of the European economy, and their transition to sustainability is crucial for achieving the EU's environmental goals. However, SMEs often face significant challenges in accessing the finance they need to invest in sustainable projects.

A 2022 OECD paper[65] shows that the **pressure on SMEs to adopt greener practices is increasing**. On the one hand, investors are placing greater emphasis on ensuring their funds are directed toward projects that deliver positive environmental and social outcomes. On the other hand, regulators are also pushing for enhanced transparency by introducing non-financial disclosure requirements for the operations and investments of FIs. SMEs' participation in value chains, access to finance, and overall competitiveness are therefore increasingly tied to their ability to measure, report, and improve their sustainability performance. This shift is largely driven by the ripple effects of new **regulatory requirements imposed on financial institutions (Fis) and large corporations**. Although SMEs are generally exempt from mandatory reporting in the near term, many will be indirectly affected: (i) by their **involvement in the supply chains of larger companies** that are required to disclose the sustainability performance of their entire value chain, and (ii) by **obtaining financing from FIs** that must report on the environmental performance of their investment portfolios.

Finally, the OECD paper explains that as FIs work to meet mandatory environmental reporting requirements, **SMEs risk being excluded from sustainability-linked financing** due to their limited capacity to generate data on their sustainability performance, including ESG assessments.

In this context, the EU has worked on a regulatory framework to enhances SMEs' access to sustainable finance.

2.6.1. Defining the sustainable transition of regional SMEs in the EU and its financing

Regarding different EU regulatory sources[66], the "sustainable transition" of SMEs can be defined as the achievement of their full potential towards the transition to a sustainable economy, i.e., an economy aligned to a carbon-neutral economy (Paris-aligned trajectory). It can be both about SMEs' transition to mitigate their impact on the environment, and their own adaptation to climate change from a risk-management perspective by mitigating their exposure to climate and environmental risks (double-materiality approach).

Governments are pivotal in mobilizing private sector funding to drive the green transition of SMEs. Environmental policy measures generally fall into three main categories: (1) regulatory frameworks and tools, (2) information-based strategies, and (3) financial tools (OECD, 2024[67]). As part of this last category, "[innovative] financing tools" can both refer to:

- **Funding or financing instruments** put in place by the public authority in order to directly support SMEs in their sustainable transition. Governments can provide credit guarantees for sustainability-linked or green loans, promote equity financing for innovative green projects

[65] OECD, Financing SMEs for sustainability, 2022. Available here.
[66] EC, An SME Strategy for a sustainable and digital Europe, 2020. Available here / EC, A sustainable finance framework that works on the ground, 2023. Available here / EC, Corporate sustainability reporting directive (CSRD), 2023. Available here.
[67] OECD, 2024, Which SMEs are greening? Cross-country evidence from one million websites. Available here.

through partnerships and intermediaries, and put in place mechanisms like subsidies and tax incentives, aimed at encouraging sustainability initiatives.

- **Enabling measures for SMEs** to raise finance for their sustainability transition, such as inclusiveness, usability and proportionality measures.

2.6.2. Supporting the sustainable transition of SMEs in the EU legislative framework

Despite these initiatives, only a small number of green policy tools are aimed directly at SMEs (according to some estimates, less than 5% of policy measures worldwide specifically focus on SMEs (OECD).

Zoom on the SME Strategy for a Sustainable and Digital Europe

To address these challenges, the European Commission adopted the **SME Strategy for a Sustainable and Digital Europe**[68] in 2020. This strategy builds on the existing SME policy framework and support programs, such as the **2008 Small Business Act**[69], the Competitiveness for Small and Medium-sized Enterprises (COSME) Programme[70], and the 2016 Start-up and Scale-up Initiative[71]. Regarding funding SMEs' support actions, the Horizon Europe programme[72] and the European Structural Investment Funds[73] are the most supportive.

The objective of the EU strategy is to **unleash the power of Europe's SMEs to lead the complementary twin transitions** (sustainable and digital). To this end, strategy puts forward actions based on three pillars, essential for EU member States and Regions to implement innovative financing tools to support the sustainable transition of regional SMEs:

1) **Capacity-building and support for the transition to sustainability** and digitalization: on the one hand, a quarter of SMEs in Europe already enable the transition by offering green products or services (EC, 2017[74]). On the other hand, it is essential to support SMEs in this process and equip them with instruments to understand environmental risks and mitigate those covering specific sectors. This includes financial, advisory, and network instruments.
2) **Reducing regulatory burden and improving market access:** complying with regulations, standards, labels and administrative formalities affects SMEs more than bigger companies due to their limited financial and human resources. As corporate extra-financial disclosure requirements are increasing with the Corporate Sustainability Reporting Directive – CSRD (2022, link), extra-financial information are also key for investors to comply with their own disclosure obligations (The Sustainable Finance Disclosure Regulation – SFDR, available here). Investors are therefore keener to invest if they can gather so. Adapt these disclosure requirements for SMEs is therefore key for their access to finance.

[68] 2020, SME Strategy for a sustainable and digital Europe. Available here.
[69] EC, Small Business Act, 2008. Available here.
[70] EC, COSME – Leaflet, 2013. Available here.
[71] EC, Europe's next leaders: the Start-up and Scale-up Initiative, 2016. Available here.
[72] EC, Horizon Europe Regulation, 2021. Available here.
[73] EC, The European Structural Funds are composed of 5 funds, including the ERDF, the European Social Fund, and the Cohesion Fund.
[74] EC, SMEs, resource efficiency and green markets, 2017. Available here.

3) **Improving access to financing:** access to finance is essential for SMEs to finance the investment needs for their transition. Amongst other, the strategy aims at mobilising EU, national and private financing for SMEs through the InvestEU programme[75].

EU regulatory framework aiming at enhancing the financing of SMEs sustainable transition can therefore be divided into 3 categories:

- **Simplifying procedures and requirements**: providing additional guidance, or adapt the legislative acts to SMEs, especially regarding sustainability reporting requirements. This includes the creation of **voluntary standards** (e.g., for non-listed SMEs, the Commission has engaged the drafting of an EU Sustainability Reporting Standard for non-listed SMEs, as these do not fall into the scope of the Corporate Sustainability Reporting Directive (CSRD) – see more details below).
- **Capitalising on the full potential offered by EU programmes to SMEs:** dedicated actions for SMEs are created in EU funding instruments or programmes, where SMEs have access to a wide range of financial and technical support.
- **Encourage financial institutions to include green SME financing in their business models**: for instance, by enhancing supporting tools for green loans and green mortgages targeting SMEs and assessing an SME-friendly adaptation of the Green Asset Ratio[76].

A series of actions to provide relief and strengthen the competitiveness and resilience of SMEs can be found in the European Commission **SME Relief Package** (2023)[77], summarized in the tables in appendixes.

<u>How are regional authorities involved into the SME Strategy for a sustainable and digital Europe?</u>

Under this strategy, Member States and regions are encouraged to make **use of the European Social Fund Plus and of the new possibilities to invest European Regional Development Funds** in developing skills for smart specialisation, **industrial transition** and entrepreneurship. In 2020, the 2 supports Programmes deployed by Regions, the European Regional Development Fund (ERDF) and the European Social Fund (ESF) had reached out to over 900.000 and 500.000 SMEs in Europe respectively (EC, 2020[78]).

In addition, **innovation by regional SMEs** is encouraged by increasing the opportunity for SMEs to participate in local innovation ecosystems in particular in regions that lag behind in terms of innovation**.** This should be implemented through a dedicated outreach instrument, **such as the regional innovation scheme**[79], strengthening ecosystems where it matters the most. The aim of this initiative is to enhance SMEs' accessibility to the European Institute of Innovation and Technology (EIT) and its Knowledge and Innovation Communities (KICs).

Finally, the Strategy encourages to make use of the 2006 Services Directive[80] as a key instrument against market barriers. **Partnerships among border regions is encouraged,** which aim to enhance cooperation

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[75] EC, InvestEU Programme, 2021. Available here.
[76] The Green Asset Ratio (GAR) shows the proportion of financial institutions' on-balance-sheet financing of activities (via loans, debt, and equity investments) that meets sustainable criteria in the meaning of the Taxonomy Regulation: the GAR quantifies EU Taxonomy-aligned assets as a percentage of total covered assets.
[77] EC, SME Relief Package, 2023. Available here.
[78] EC, An SME Strategy for a sustainable and digital Europe, 2020. Available here.
[79] European Institute of Innovation and Technology (EIT), EIT Regional Innovation Scheme. Available here.
[80] EC, Services Directive, 2006. Available here.

between regional authorities, and can **help SMEs overcome market barriers** in the provision of services.

Zoom on the Corporate Sustainability Reporting Directive (CSRD)

The recent Corporate Sustainability Reporting Standard Directive[81] (CSRD), adopted in 2022, significantly expands sustainability reporting requirements within the EU. It builds on the previous Non-Financial Reporting Directive (NFRD)[82]. Its key contributions include:

- **A wider scope**: The CSRD applies to a larger number of companies, including both listed and large non-listed companies, financial institutions, and insurance companies. It also **applies to listed SMEs.**
- **Detailed sustainability reporting based on a double-materiality approach**: Companies must report on a wide range of environmental, social, and governance (ESG) factors, including how their business models affect sustainability and how sustainability impacts their business (double materiality approach).
- **Harmonized reporting standards**: The CSRD introduces common reporting standards across the EU, aligning with the European Sustainability Reporting Standards (ESRS) developed by the European Financial Reporting Advisory Group (EFRAG). This harmonization is designed to ensure consistent and comparable sustainability data across the EU.
- **Mandatory assurance of corporate's reporting**: There is a requirement for external verification (audit) of the reported sustainability information, aimed at enhancing the credibility and reliability of the disclosures.

In order to adapt the European Sustainability Reporting Standards (ESRS)[83] to in-scope SMEs (listed SMEs, for which the first annual reporting under the CSRD is due in 2027), EFRAG is working on a **dedicated sustainability reporting standards for SMEs called "LSME"[84]**. The idea is to develop a simplified standard for listed SMEs, small banks and captive insurers (together "LSME"), acknowledging the resources constraints of smaller companies. An exposure draft was published in January 2024.

On the other hand, the EFRAG is also developing **a voluntary standard for SMEs (VSME)[85]** outside the scope of the CSRD. Many will be indirectly impacted through their involvement in the supply chains of larger companies that must report on the sustainability of their entire value chain. The aim is therefore to encourage SMEs to report on their sustainability performances, **so they are not excluded from sustainable financing.**

Illustration 5: The two European Sustainable Reporting Standards for SMEs under development

[81] Corporate Sustainability Reporting Standard Directive, 2022. Available here.
[82] EC, Non-Financial Reporting Directive, 2014. Available here.
[83] EFRAG, ESRS Delegated Regulation, 2023. Available here.
[84] EFRAG, Reporting standard for listed SMEs (LSME) - Exposure Draft, 2024. Available here.
[85] EFRAG, Voluntary reporting standard for non-listed SMEs (VSME) - Exposure Draft, 2024. Available here.

	ESRS for listed SMEs LSME	Voluntary standard for non-listed SMEs VSME
Mandatory force	**Yes: part of EFRAG mandate** in CSRD's delegated act (effective 01/01/26).	**No: outside the CSRD mandate** EC SME Relief Package of September 2023: to support SMEs in accessing sustainable finance.
Scope of application	**Public-interest relevance:** • SMEs with bonds, shares and other securities traded in regulated market in the EU • Small and non-complex institutions (SNCIs) • Captive insurers/ reinsurers	• **Non-listed microenterprises** • **Non-listed SMEs**
Reasoning	**To set requirements proportionate and relevant to the scale** and complexity of the activities and to the capacities and characteristics of LSMEs.	**Simple reporting tool to assist in responding to requests for sustainability information** from business counterparts in an efficient and proportionate manner
Objective	Expected to: • **Support LSMEs[86] in better access to finance** • **Avoid discrimination against LSMEs** on the part of financial market participants	Expected to: • Facilitate SMEs transition to sustainable economy • Standardise the current multiple ESG data requests by reducing the number of uncoordinated requests they receive.

Source: Shape the new European sustainability reporting standards for SMEs, EFRAG, 2024. Available here.

More broadly, the Platform on Sustainable finance (PFS) is currently working with the European Commission to **simplify the application of the EU Taxonomy for SMEs**, whether on a mandatory or a voluntary basis.

In the table below (Table 6) are listed relevant EU guidance on the EU regulatory framework regarding the sustainable transition of SMEs and its financing. Descriptions are available in appendix 1.

Table 6: Explanatory publications on the EU regulatory framework regarding the sustainable transition of (regional) SMEs

Text name	Author, Date	Access
Commission Recommendation on facilitating finance for the transition to a sustainable economy	EC, 2023	Link
Opinion of the European Banking Authority on green loans and mortgages	EBA, 2023	Link

[86] LSME: Listed SMEs

[ESRS] Materiality Assessment Implementation Guidance (MAIG)	EFRAG, 2024	Link
[ESRS] Compilation of explanation	EFRAG, 2024	Link
Facilitating Access to Sustainable Finance for SMEs	Chair of the Platform on Sustainable Finance, 2024	Link

2.6.3. Examples of national and regional legislative frameworks and initiatives regarding sustainable transition of (regional) SMEs

Several initiatives can be observed regarding the sustainable transition of regional SMEs. Local initiatives made to **gather the SME ecosystem with financiers on specific environmental thematic** are notably observed. Otherwise, **financial incentives** (grant and subsidies' amount often linked to the companies' size) are also a lever used by regional authorities.

Box 7: Illustration of regional initiatives regarding (financing) tools supporting the sustainability transition of regional SMEs

- **Local based partnership for circular economy SMEs in Northern Denmark:** The Northern Denmark Smart Specialisation Strategy (S3)[87] emphasizes strong local partnerships to drive innovation-based development, with the industrial area of Aalborg identified as a key growth hub. Between 2017 and 2020, a local partnership initiative focused on industrial symbiosis was established in the Port of Aalborg, **bringing together SMEs, Aalborg University, local public authorities, and public utilities**. This collaboration, part of an enhanced Entrepreneurial Discovery Process (EDP) for green transition, led to the **creation of 42 circular business models for industrial symbiosis involving 25 companies.** The project, titled 'Facilitated Industrial Symbiosis for Energy and Resource Efficiency,' was governed by a Reference Group comprising local partners from the 'triple helix' model, with an active role for local authorities and contributions from national authorities and external symbiosis experts for knowledge exchange.
- **The Green Economy Observatory of Emilia-Romagna:** A general lack of understanding of the Circular Economy has been identified among companies, as many do not yet see it as a business opportunity. These companies require not only information but also exposure to practical examples of other businesses that have successfully generated profits from circular and green investments. The Observatory monitors the regional green economy, with its main activities including managing a database of green companies in Emilia-Romagna, collecting and analyzing best practices and case studies, providing thematic insights and statistical analysis on key supply chains, and promoting the Green Economy through information and communication efforts in the region. Being a member of EREK, a European Commission initiative for the exchange of experience and knowledge, **the Observatory's activities play a role at regional level, in particular for the dissemination of the European Resource**

[87] Northern Denmark, S3 facilitates circular economy transition for local companies in Northern Denmark, 2020. Available here [EC website].

Efficiency Self-Assessment Tool for SMEs. The initiative is available on Interreg good practices webpage.[88] • **The Ecology premium plus [89] in Flanders:** In Flanders, Belgium, an ecology bonus (i.e., a financial subsidy) is provided to SMEs and large companies realising investments green technologies in the Flemish Region. With the ecology bonus, the Flemish government aims to encourage companies to organise their production process in a more environmentally friendly and energy-efficient manner, and therefore pay a proportion of the extra cost involved in such investment. The ecology premium is only granted to technologies that are on a limitative technology list (about 30 technologies) that are whether environmental or energy focused. The bonus's amount is comprised between 15 to 55% of the extra cost of the investment, **depending on the scope of the enterprise and technology.**

2.6.4. A selection of existing guidelines and tools regarding the implementation of innovative financing tools to support the sustainable transition of SMEs

The following toolbox (Toolbox 6) brings essential **guidance and tools to help in the implementation of innovative financing tools to support the sustainable transition of (regional) SMEs.** They are emanating from EU institutions (e.g., digital tools or assistance), from national / or local authorities (e.g., implementation guidelines), and from international bodies (e.g., guidelines, methodologies, etc.). It can be tools, examples of application of certain methodologies (examples in practice), questions and answers (Q&A), good practices and guidelines.

For instance, the French government has made a compilation of existing national financing tools supporting the sustainable transition of French SMEs. This may constitute a source of inspiration for other national and regional authorities.

Toolbox 6: Guides and useful tools regarding the implementation of innovative financing tools to support the sustainable transition of (regional) SMEs				
Name	Author, Date	Nature	Comments	Access
OECD Recommendation on SME Financing	OECD, 2023	Guideline	These recommendations are building on 2022 Updated G20/OECD High-Level Principles on SME Financing, first developed in April 2015, and welcomed by G20 Leaders. They provide a set of 14 actions to **develop cross-cutting policy strategies to enhance SMEs' access to finance**, as well as a framework for the monitoring and evaluation of these strategies.	Link
Fostering collaboration across entrepreneurial ecosystems: Guide	EASME[90], 2020	Guidance	This guidebook supports and provides guidance to regions to foster their entrepreneurial ecosystems through interregional collaboration and to implement related strategic actions in interregional partnerships. **Step-by-step guidance is provided on how to identify**	Link

[88] Interreg Europe, The Green Economy Observatory of Emilia-Romagna, Good practices. Available here.
[89] Flanders Region, Ecology premium plus. Available here.
[90] Executive Agency for Small and Medium-sized Enterprises.

to mapping, action plan design and peer learning for regions			**and map entrepreneurial ecosystems and existing linkages across regions**, and how to design interregional Action Plans along strategic themes for the regions and implement related peer-learning exercises.	
OECD Platform on Financing SMEs for Sustainability	OECD	Tool	The OECD Platform on Financing SMEs for Sustainability is a multi-stakeholder platform seeking to facilitate SMEs' access to sustainable finance and to increase momentum toward the green transition.	Link
SinCE-AFC (Enchancing the Entrepreneurship of SMEs in Circular Economy of the Agri-Food Chain) outputs	Interreg Europe	Tool	SinCE-AFC (Enchancing the Entrepreneurship of SMEs in Circular Economy of the Agri-Food Chain) aims at involving SMEs of the Agri-Food chain in circular economy through the promotion of the appropriate managing and financial horizontal mechanisms.	Link
The main mechanisms for the ecological transition of micro and small-to-medium enterprises (SMEs) [FR]	France, 2024	Example of existing financing tools	The document compiled the existing financing (or not) tools put in place by the French government to support SMEs sustainable transition.	Link
ESRS Q&A Platform	EFRAG, 2024	Q&A	The ESRS Q&A Platform by EFRAG aims to offer **non-authoritative guidance on technical implementation** questions related to European Sustainability Reporting Standards (ESRS). This Q&A therefore address questions regarding SMEs' concerns, and the LSME and the VSME standards.	Link