

GREEN FINANCING, SUPPORT TOOL FOR THE SUSTAINABILITY OF THE MOUNTAIN ECONOMY

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Abstract. *The concept of green financing has been widely publicized since 2019 and is associated with the European Green Agreement. Moreover, we estimate that by 2050, it will generate multiple financing models and innovative financial instruments supporting the economies of states globally, as well as all sectors of activity, including at the level of the mountain economy. At the same time, if until now we were used to the presence of environmentally friendly technologies in strategic development plans, now they are surpassed by the presence of green financing resources that impact all other categories of resources. In this paper, we propose, based on the research methodology, to highlight the main innovative green financing instruments and to propose a long-term package of measures to support the financing programs of the mountain economy at the national level, as well as at the European level.*

Keywords: financing instruments, green financing, green bonds, mountain economy, sustainability
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Introduction

At the global level, there have been many scientific concerns regarding the financial instruments intended for the financial support of the mountain economy, to be harmonized with the decisions and actions of the decision-makers regarding the phenomenon of global warming with a direct effect on climate change. A relevant example is given by the alarm signal raised, through the published report, by the *Intergovernmental Panel on Climate Change (IPCC, 2021)*, regarding the proposal of urgent measures regarding the limitation of climate change. The report once again provides the scientific evidence that global warming of the atmosphere, oceans and land is largely caused by human activities [Brühl, V., 2021].

Empirical research evidence supports the fact that by introducing the instrument of green financing, respectively its increase, it contributes to the development of activities in mountain areas that have a low impact on the environment, as well as the fact that green exposures are indeed less risky. One of the valuable works that supports this aspect, as well as the fact that caution is needed before introducing a supporting guide for increasing green finance, is the work [Brühl, V., 2021].

At the same time, considering the regulatory framework at European and national level, it is necessary to move from the current economic model to an economy

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based on ecological transformation at the level of all the activity sectors related to the mountain economy, but without limiting ourselves to the energy sector, the agri-food sector and inter-sectoral mobility. It is obvious that this transition can be achieved through a volume of investments (and in our case specifically investments specific to the mountain area) necessary for it, and it is very difficult to quantify due to the global nature, the multi-sector vision, as well as the lack of harmonization of existing reliable data at the global level.

In the context of these challenges, at a global level according to the study [Brühl, V., 2021] the estimates of the investments needed to achieve the transition to low carbon emissions were made and vary from USD 1.6 trillion to USD 3.8 trillion annually between 2016 and 2050, only for investments in the energy system (IPCC, 2018, 154).

Although climate finance has reached record levels, funding is still far below what is needed in a 1.5 °C scenario (Buchner et al., 2019). Of the global climate finance volume of USD 579 billion (2017/2018 two-year average), approximately USD 326 billion was provided by the private sector and USD 253 billion by the public sector.

Considering this fact, the financial sector plays an important role for a successful sustainable transformation of the mountain economy globally.

One of the most complete and predictable documents in current specialized literature, and which gives us a long-term vision of green financial instruments, is the European Green Deal, which stipulates that the EU will become neutral from a climate point of view by 2050 (European Commission, 2019), and recently, starting from 2021, the European Rural Pact. In 2022, within the Forum "*The Romanian economic model in the European Union Romania - Horizon 2040*", Mr. Acad. Prof. univ. dr. Radu Rey launched the "*Rural Mountain Pact from Romania*".

This intentional transformation of the EU will require enormous investment from both the public and private sectors. For example, at EU level it is estimated that around €350 billion of additional investment in the energy system alone is needed each year until 2030 to meet the 55% emissions reduction target (European Commission, 2021b).

The vision, with Horizon 2040-2050 and with the perspective of sustainability, considering the specificity given by the agro-zootechnical economic system in the mountains of Romania, which includes approx. 3 million hectares (2.3 million natural meadows), in small and medium-sized family farms widely spread in the mountain area, with viable, multi-century traditions, capable of providing quality human food components (~25% fruit, 30% milk, 15% meat - of the national agricultural total) - includes an associative-cooperative system, through unique cooperatives within the Administrative-Territorial Units (UAT), which ensures the collection of raw materials, "mountain products" (milk, vegetables, live animals), supply, etc. With the organization of inter-cooperative agro-mountain associations at the level of traditional micro-regions (mountain basins). At this level, it becomes necessary to invest in

medium-sized food industry objectives (milk, meat, vegetable factories) focused on the exploitation of high-quality "*mountain products*", guaranteed, as niche products, obtained under conditions of "zero" chemicalization and an unpolluted environment.

The mentioned microregional associative-cooperative system could solve the problem of granting incentive prices for family farms, able to delay mountain depopulation and contribute to the capitalization of small/medium mountain farms, with the perspective of limiting state interventions, as the system is strengthened.

Research methodology

Based on the data accessed/provided by the *European Commission*, the *Commission of the European Parliament*, the *European Economic and Social Committee* and the *Committee of the Regions* and from other sources, the authors present arguments supported by analytical materials regarding the need to approach and develop innovative financial instruments for the mountain economy.

At the same time, we make a general analysis of the problem of the existing sustainable financing system at the European level by identifying all the existing financing programs. In this study, the authors applied research methods such as:

- ❖ the monograph, the comparison of data and the graphic method that determines the entire process of sustainable financing at the level of the member states of the European Union, according to the bibliographic sources and the data identified and presented in the study.
- ❖ National and European regulations regarding Natura 2000 sites.
- ❖ The regulations related to changes in land use, and within which limitations are found in terms of the creation or improvement of infrastructures and facilities, which affect the improvement and innovation in practices associated with the value chains of the mountain product and service, so necessary for safety and food security at the national and international level.
- ❖ Identification of financing instruments managed by the European Commission and intended to finance the mountain economy.

Research Results/Discussion

In order to finance the *European Green Deal*, in 2019, the EU Commission announced that a total of 1 trillion euros will be invested in the ecological transformation of the European economy with direct implications in the economies of the member states. The funds will be generated, among others, under the *Multiannual Financial Framework (MFF) 2021-2027* and the *Next Generation EU programme*, with a total volume of EUR 750 billion. Although at a first assessment it seems a large amount, there is a financing need gap of at least EUR 2.5 trillion, and this would be financed predominantly by the private sector, for which adequate regulatory framework conditions and incentives are needed to further promote *environmental, social and governance (ESG) investments*, supported both through European-level

regulations and directives, but also through national legislation specific to each Member State.

Multi-disciplinarity, inter-disciplinarity, trans-disciplinarity and pluridisciplinarity, support the complementarity and interdependence between the different climate protection programs and sustainable financing activities established so far in the European Union, and the innovative financial instruments that are adapted and respond to the current needs of the beneficiaries (including those in mountain areas). Key regulatory initiatives such as the Taxonomy Regulation as well as disclosure frameworks and other aspects of financial market regulation are explained in the context of the European Sustainable Finance Strategy. Finally, some missing elements are discussed that could contribute to the further mobilization of capital to finance the *European Green Deal*.

At the basis of the design of innovative financial instruments are several factors that directly influence this process, respectively: according to the needs of the categories of beneficiaries of financial resources, as well as according to the existing strategies at the international, European and national level in the field of sustainable financing.

The EU Sustainable Financing Strategy is a strategic document with a direct impact on innovative financial instruments. Through the *Multiannual Financial Framework 2021-2027*, as well as following *NextGenerationEU* with implications for the recovery and resilience of member states' economies, sustainable finance is receiving more attention in both academic research and the financial sector. It is conceptually very important to make a clear distinction between sustainable finance and green finance or climate finance, and especially the financing of mountain areas with particular specificities and influencing factors.

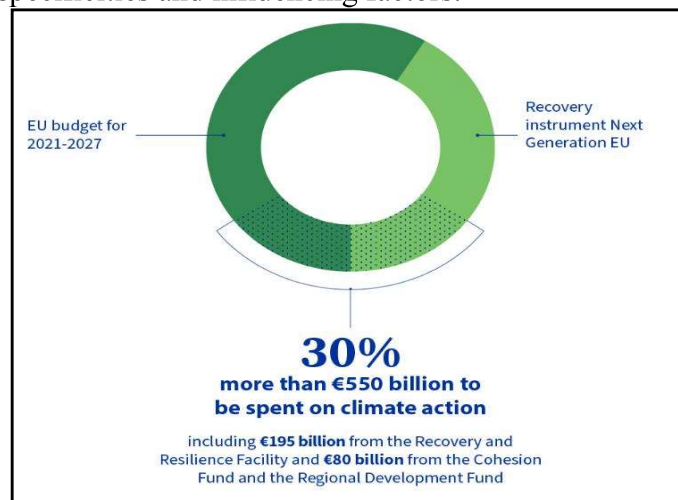


Figure 1. EU Sustainable Financing Strategy 2021-2027

Source: European Commission, 2023

Sustainable finance refers to the process of taking ESG considerations into account when making investment decisions in the financial sector. Environmental considerations could include *climate change mitigation* and adaptation as well as *biodiversity conservation*, pollution prevention and the circular economy (European Commission, 2021e; Berrou et al., 2019).

In the context of sustainability, there are many ways to define *green finance* (European Commission, 2017). For the purpose of this paper, we define green finance as the financing of investments that deliver environmental benefits, such as reducing air, water and land pollution, reducing GHG emissions, improving energy efficiency, and mitigating and adapting to climate change.

This definition is in line with the *Taxonomy Regulation* and the objectives of the *European Green Deal* and is also close to the definition provided by the *G20 Green Finance Study Group (2016)* as we understand green finance as a subset of sustainable finance.

In this context, climate finance refers to the financing of public and private investments that aim to support climate change mitigation and adaptation and can therefore be considered a subset of green finance (Hong et al., 2020).

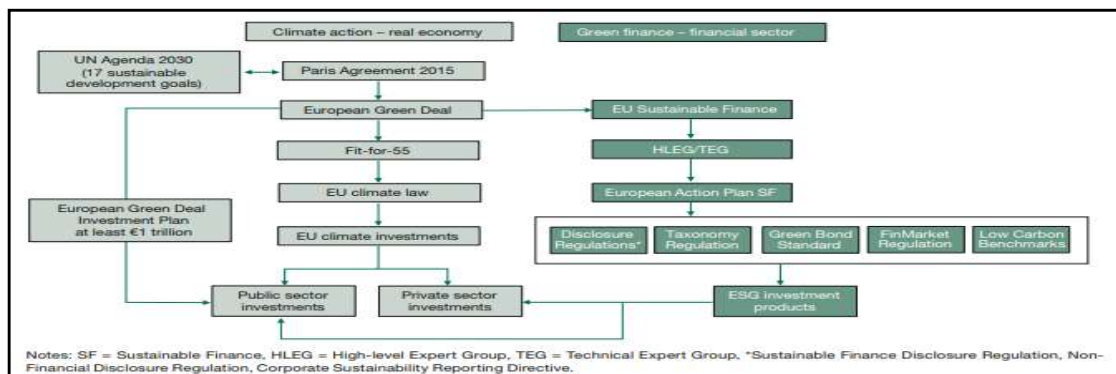


Figure 2. The interaction between climate protection and green finance in the EU

Source: Brühl, V. Green Finance in Europe — Strategy, Regulation and Instruments. *Intereconomics* 56, 323–330 (2021). <https://doi.org/10.1007/s10272-021-1011-8>

Establishing an EU taxonomy for sustainable activities

A precise classification system is needed to define exactly the criteria that must be met by sustainable or green investment products. Such a taxonomy should support investor decisions, avoid greenwashing and help channel capital flows to sustainable investments. The Taxonomy Regulation (Regulation (EU) 2020/852 establishing a framework to facilitate sustainable investment) entered into force on 12 July 2020, but many details are set out by delegated acts.

As shown in Figure 3, the *Taxonomy Regulation* distinguishes six environmental objectives by which economic activities can be classified as sustainable. Firstly, climate change mitigation covers activities that contribute to the reduction of greenhouse gas emissions in line with the objectives of the *Paris Agreement*, e.g., through a greater use of renewable energies. Second, adaptation to climate change refers to activities that substantially reduce the negative effects of current and future climate change on people or nature (e.g., reforestation). The other environmental objectives set out in the *Taxonomy Regulation* relate to the sustainable use and protection of water and marine resources, the transition to a circular economy, the prevention of pollution and the protection of biodiversity and ecosystems.

All these environmental objectives are also specific to the mountain economy, namely the transition to a circular economy, pollution prevention and the protection of biodiversity and ecosystems, with a direct focus on the development of the mountain product and service.

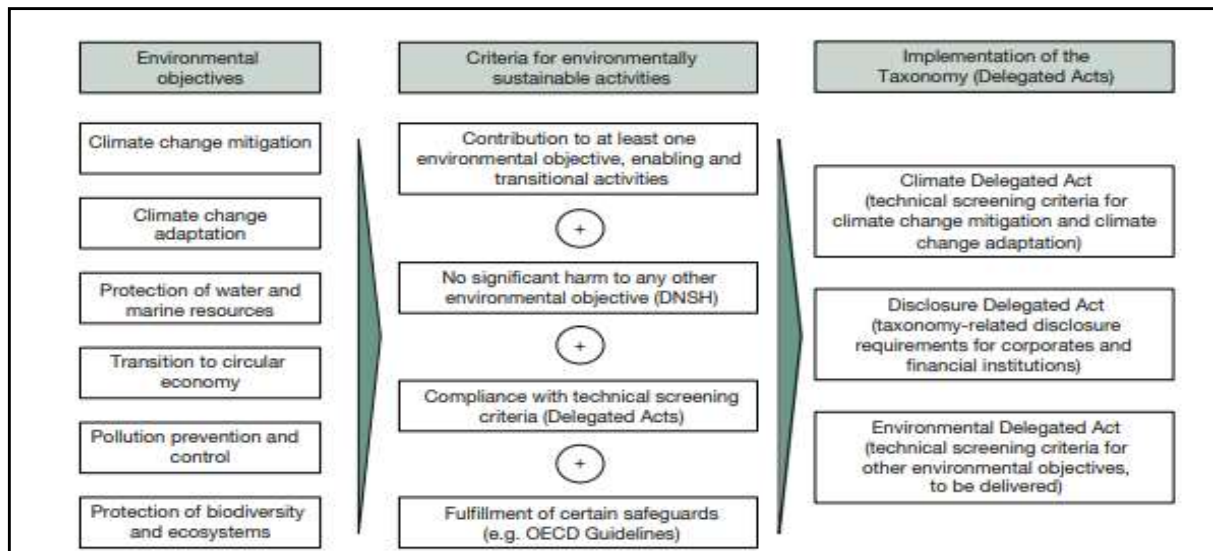


Figure 3. The fundamental bases of the Taxonomy Regulation

Source: Brühl, V. Green Finance in Europe — Strategy, Regulation and Instruments. *Intereconomics* 56, 323–330 (2021). <https://doi.org/10.1007/s10272-021-1011-8>

The Taxonomy Regulation is the first delegated act to set technical screening criteria for activities that contribute substantially to climate change mitigation or adaptation (C(2021) 2800 final, Climate Delegated Act, see figure 2). It applies from 1 January 2022 and covers sectors that are responsible for almost 80% of direct GHG emissions in Europe. It includes sectors such as energy, forestry, manufacturing, transport and buildings. The delegated act on the other four environmental objectives

(*Environmental Delegated Act*) was adopted by the Commission at the end of 2021 and applies from 1 January 2023.

The taxonomy is a key element of the *European Sustainable Finance Strategy* as it affects the disclosure regulation of both financial institutions and corporations, as well as the *Green Bond Standard*. Given the granularity and precision of the definitions for sustainable activities and the technical criteria to be met, the EU taxonomy is by far the most advanced compared to other alternatives on the market (OECD, 2020). The financing instrument "Green Bonds" is the most recommended for the financing of investments specific to the mountain economy, due to the advantageous conditions in terms of financing structures and their maturity (until 2058).

The second pillar of a sustainable finance strategy concerns the disclosure requirements of financial institutions and corporations that enable investors to make informed investment decisions and provide other stakeholders with information related to sustainability. We can already see portfolio managers from major asset management firms and investment funds challenging the boards of listed companies on sustainability issues, especially as demand for ESG investment products has increased in recent years.

According to a survey (Blackrock, 2020), many investors plan to double their sustainable assets under management over the next five years, with the "environment factor" clearly seen as the top priority for most investors (88%). However, 53% of participating investors cited the poor quality of ESG data to date as one of the biggest barriers to greater ESG investing. Therefore, an adequate regulatory framework for non-financial reporting by both corporations and financial institutions is important in terms of turning growing investor appetite into real investment decisions. Therefore, the *Sustainable Finance Disclosure Regulation*, the *Non-Financial Reporting Directive* and the new *Corporate Sustainability Reporting Directive* are important components of a successful sustainable finance ecosystem.

Sustainable Finance Disclosure Regulation

The *Sustainable Finance Disclosure Regulation (SFDR)*, which applies generally from 10 March 2021, imposes clear ESG disclosure obligations on asset managers and other financial market participants (Regulation (EU) 2019/2088). The SFDR is a directly applicable regulation that extends the already existing disclosure requirements of financial market participants under relevant sectoral legislation (AIFMD, UCITS, Solvency II, IDD and MiFID II). The SFDR requires asset managers and financial advisers to disclose how they consider sustainability risks in their investment process. At the entity level, the SFDR requires firms to disclose information about how an entity integrates sustainability risks into its investment decision-making process or financial advice.

Corporate Sustainability Reporting Directive

There has been criticism that only a small proportion of firms have to comply with NFRD requirements, and that the information disclosed is often not relevant or

detailed enough for investors to integrate sustainability information into their investment process (e.g., Umweltbundesamt, 2021). On 21 April 2021, the Commission adopted a proposal for a directive on corporate sustainability reporting (COM(2021) 189 final), which will extend the scope of sustainability reporting to all larger companies, including those operating in the mountain economy. In addition, it aims to broaden and deepen the content of sustainability reporting, which will be harmonized and aligned with the requirements set out in the Taxonomy Regulation and the SFDR.

The structure, content and format of sustainability reporting will be standardized and more detailed to facilitate comparability and external assessment of sustainability risks. Since the reported information will be part of the management report, at least a limited assurance (audit) by a third party will be required. The draft standards will be developed by the *European Consultative Group on Financial Reporting* based on the work of established initiatives, such as the Global Reporting Initiative, the *Sustainability Accounting Standards Board*, the *International Integrated Reporting Council* or the *Climate Disclosure Standards Board*. If the legislation is finalized in the first half of 2022, the new set of reporting standards for companies could apply to reports published in 2024, covering the 2023 financial year.

Standards and labels for green financial products

The regulatory initiatives to improve sustainability disclosure pave the way for building a bridge between business activities in the "real economy" of mountain areas and products/services in the financial sector. The development of standards for "green" financial products can support the further development of ESG-oriented financial market segments by helping investors identify products that meet low carbon criteria, for example. If investor confidence in the credibility of such standards increases over time, barriers to investment and transaction costs could be reduced.

To credibly combat greening, strict oversight of the asset management industry by responsible authorities is vital to ensure that green product characteristics and reporting requirements are consistently met. An important example is the European Green Bond Standard, which is a first step towards a wider spectrum of green financial products (European Commission, 2021f) so necessary to finance the mountain economy. The project to create an EU eco-label for retail financial products could particularly facilitate sustainable investment decisions for retail investors (European Commission, 2021c).

The European standard for green bonds

The green bond market continues to experience strong growth, particularly over the past five years, with total issuance volume estimated at US\$270 billion, representing a compound annual growth rate of 60% since 2015 (Jones, 2021). To avoid greenwashing, several market standards have been established, of which the Green Bond Principles formulated by the International Capital Market Association have so far been widely used in Europe. However, rather than a precise classification

scheme, these guidelines provide more of an exemplary list of green activities suitable for green bond financing.

Therefore, the *European Green Bond Standard* (COM (2021) 391 final) should create a high-quality voluntary European standard available to all issuers (private and sovereign within or outside the EU) to help finance sustainable investments.

To overcome the weaknesses of existing labels in the market, bonds that qualify as green according to European standards must meet, among others, the following criteria: Funds raised by bonds must be fully allocated to economic activities that are sustainable according to the Taxonomy Regulation. In addition, the use of the funds must be reported annually by the issuer in a *European Green Bond Allocation Report*. Compliance with the standards must be monitored by external assessors who are registered and supervised by the European Securities and Markets Authority.

EU Regulation on low carbon benchmarks

The benchmark plays an important role in financial markets as it serves as a benchmark for pricing financial instruments and transactions, e.g., in credit markets, equity and debt capital markets and derivative markets in various asset classes. Benchmarks are also used to measure the performance of financial instruments and determine financial obligations arising from financial contracts.

Therefore, a high level of transparency and quality regarding the underlying methodologies and data is essential for benchmarks to work effectively.

In the EU, the *Benchmarks Regulation* which is applicable from 1 January 2018 (Regulation (EU) 2016/1011) provides the regulatory framework for benchmark administrators. The regulation requires the publication of benchmark statements to help users understand the scope of the benchmark and the calculation method, as well as the reliability of the input data and its susceptibility to manipulation. In addition, appropriate governance and control processes must be implemented to avoid conflicts of interest and ensure consumer and investor protection.

As many institutional and retail investors invest in benchmark portfolios, it is important to establish regulated sustainable investment benchmarks to attract additional capital flows to green investments.

On 27 November 2019, the Benchmarks Regulation was amended to introduce EU climate transition benchmarks, EU-aligned benchmarks and sustainability information for benchmarks (Regulation (EU) 2019/2089), which entered into force on 10 December 2019.

Regulations ((EU) 2020/1816 and (EU) 2020/1817) on ESG disclosure entered into force on 23 December 2020. The introduction of such benchmarks should facilitate investments in diversified ESG portfolios with assets from issuers committed to a decarbonization path by increasing transparency and comparability.

An *EU Climate Transition Benchmark* is a benchmark in which the underlying assets are selected, weighted or excluded so that the resulting benchmark portfolio is on a decarbonization trajectory.

A Paris-aligned EU benchmark denotes a portfolio of benchmarks whose carbon emissions are aligned with the objectives of the Paris Agreement without significantly harming other ESG objectives. For this purpose, a decarbonization trajectory means a measurable, science-based and time-bound trajectory towards alignment with the goals of the Paris Agreement. It should be noted that decarbonization involves carbon emissions generated directly from the respective entity (scope 1), emissions from the consumption of purchased electricity, steam or other energy sources (scope 2) and all indirect emissions that occur along the value chain of the reporting company (scope 3).

Changes in financial market regulations

On 21 April 2021, several changes to financial market regulations (the April package) were adopted to ensure that customer preferences for sustainable investment products are discussed by investment advisers, to clarify the obligations of financial firms when assessing the sustainability risks of investments, and to consider sustainability factors when designing financial products. These measures are expected to help prevent the greenwashing of financial products. As a result, important financial market regulations such as the Undertakings for Collective Investment in Transferable Securities Directive, the *Alternative Investment Management Directive*, the *Insurance Distribution Directive*, *Solvency II* and *MiFID II* have been amended. These changes are expected to enter into force by October 2022 (European Commission, 2021d).

Additional tools

The *EU Sustainable Finance Strategy* has significantly improved the regulatory framework for financial products by creating a precise taxonomy, increasing transparency for both corporate and financial institutions and changing financial market regulations. However, given the apparent need to speed up the implementation of the *European Green Deal*, additional financial incentives should be discussed to boost green investment. One aspect could be the establishment of tax incentives for green investment in the corporate sector. These could be provided, for example, by allowing accelerated amortization programs for ecological capital expenditure in supporting the economies of states, and in particular the mountain economy.

Another component of efforts to more effectively align business activities with climate protection goals could be to require that top management compensation be tied to concrete GHG emission reduction goals. Although ESG criteria already play a role in the remuneration of board members at several larger, predominantly listed companies, target setting is often very vague, only qualitative in nature and of minor overall importance compared to KPIs that measure a company's financial performance. A rebalancing of the relative importance of financial and non-financial objectives should therefore be considered, with the latter placing a clear emphasis on environmental objectives. One possibility could be to use the taxonomy's technical

screening criteria to clearly define the appropriate objectives and metrics to measure management's environmental performance.

One highly controversial element concerns the introduction of a "green backstop" in banking regulations so that banks do not have to commit so much capital when making green loans. The promoters of such an initiative hope that bank loans will contribute more than before to accelerating the transition to a climate-neutral economy. As a result, green loans would be treated as less risky than "brown" loans with higher carbon consumption, which could ultimately lead to lower financing costs for green investments. However, such an environmental enabler would essentially involve a departure from the fundamental risk-based regulation of capital requirements for banks and other financial institutions that was put in place after the financial crisis.

Over the past ten years, various regulatory initiatives have contributed to a much more robust and resilient financial sector, and this progress should not be jeopardized. However, it would be beneficial to learn more about the impact of climate risk on the default risk of companies in different sectors and geographies and how to integrate climate risk into current models that measure credit, market and operational risks. So far there is no empirical evidence that green exposures are less risky than others. Furthermore, it is doubtful whether such an environmental enabler would have a substantial impact on banks' lending decisions (Dankert et al., 2018).

The idea of a "*green branding*" could be applied not only to bonds, but also to other financial products such as stocks, loans or asset-backed securities. Finally, the integration of ESG factors into the architecture of the main stock market benchmarks should also be considered (Brühl, 2020).

The European Commission has issued EUR 6 billion of *NextGenerationEU Green Bonds* in the fourth syndicated transaction for 2023, according to the press release of 28 March 2023

The European Commission has issued €6 billion of *NextGenerationEU Green Bonds* in its fourth syndicated transaction for 2023. The single-tranche transaction was executed through a tap of the Green Bond maturing on 4 February 2048.

Investors showed strong interest in the deal, which was oversubscribed more than 12 times. The European Commission plans to finance 30% of its *NextGenerationEU* recovery program by issuing *NextGenerationEU Green Bonds*. This will make the Commission the largest issuer of green bonds in the world.

The March 2023 transaction brought the total volume of *NextGenerationEU Green Bonds* issued to date to €42.5 billion. The proceeds of these bonds will be used to finance green projects in Member States' National Recovery and Resilience Plans (PRPs) – the roadmaps for *NextGenerationEU* spending. The pool of eligible spending for *NextGenerationEU Green Bonds* under Member States' RDPs currently stands at €187 billion, which is set to increase as funding applications continue to be submitted.

Through the transaction mentioned above, the Commission has raised €39.4 billion of its total funding target of €80 billion for the first half of 2023, or 49% of the

total. Of the EUR 80 billion funding target, approximately EUR 70 billion will go to the NextGenerationEU recovery program and approximately EUR 10 billion to the MFA+ program for Ukraine. A detailed overview of the transactions planned under the unified financing approach for the first half of 2023 is available in the EU Financing Plan.

The European Commission borrows on international capital markets on behalf of the European Union and disburses funds to Member States and third countries under various loan programs.

Its largest program is *NextGenerationEU*, which aims to support Europe's recovery from the coronavirus pandemic with up to around €800 billion in investments in Europe's sustainability, digital solutions and resilience. To date, around €145 billion has already been disbursed to EU countries under the Recovery and Resilience Facility. Additional support was provided to other EU programs benefiting from NextGenerationEU funding [EC, 2022]. Of the funds disbursed to Member States under the Recovery and Resilience Facility to date, €21.4 billion has been reported as eligible for green bond financing.

Under the NextGenerationEU green bond programme, expenditure is confirmed as eligible for ex-post green bond financing after EU countries have demonstrated what the funds were used for.

Real-time information on eligible and allocated spending is available on the *NextGenerationEU Green Bond Real-Time Dashboard*.

Another reporting tool under the program is the allocation report, the first edition of which was published in autumn 2022. The first impact report to assess the climate impact of projects financed by *NextGenerationEU green bonds* will be released later in 2023.

"NextGenerationEU" Green Bond

Due February 4, 2048, this bond has an interest rate of 2.625% and had a reoffer yield of 3.348% equivalent to a price of 87.930. The mid-swap spread is +68 bps, which is equivalent to +98.8 bps over the Bund due August 2046 and +13.9 bps over the OAT due May 2048. The final order book was over €73 billion.

The lead managers of this transaction were Bank of America, Deutsche Bank, JP Morgan, Nomura and Nordea.

Table 2. NextGenerationEU green bond

Geography	
UK	18.60%
Germany	15.90%
France	12.30%
BENELUX	11.40%

Nordics	11.30%
Italy	8.90%
APAC	6.80%
Other EU	6.70%
Iberia	6.50%
Other Europe non-EU	1.10%
Americas	0.40%
Middle East and Africa	0.10%
TOTAL	100 %

Source: European Commission, 2023

Table 3. NextGenerationEU Green Bond Investors

Investors type	
Fund Managers	37.50%
Bank Treasuries	28.40%
Insurance and Pension Funds	17.50%
Central Banks / Official Institutions	12.50%
Banks	2.60%
Hedge Funds	1.50%
TOTAL	100 %

Source: European Commission, 2023

Environmentally sustainable bonds are one of the main instruments for financing investments related to green technologies, energy efficiency and resource efficiency, as well as sustainable transport infrastructure and research infrastructure, and which we believe could be used to finance investment objectives specific to the mountain economy.

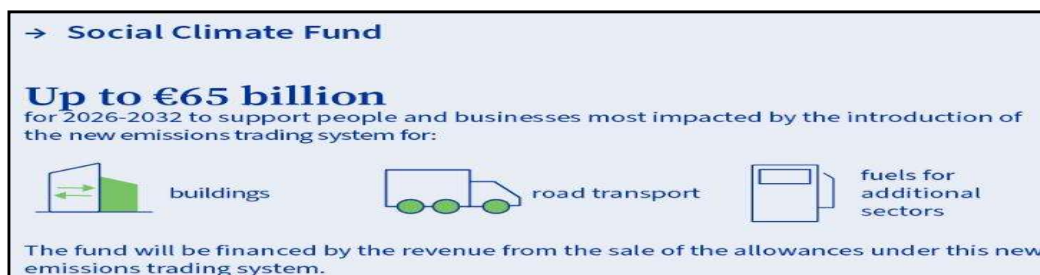
According to the provisional agreement, all revenues obtained by the EuGB will have to be invested in economic activities that are aligned with the *EU taxonomy* (including activities specific to the mountain economy), provided that the sectors in question are already covered by it. For those sectors 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 use of the European Green Bond standard from the beginning of its existence. The use and need for this pocket of flexibility will be reassessed as Europe's transition to climate neutrality progresses and with the growing number of attractive and green investment opportunities expected to become available in the coming years.

In terms of supervision, the national competent authorities of the designated local by Member State (under the Prospectus Regulation) will supervise whether issuers meet their obligations under the new standard. In order to achieve the climate, environmental and social sustainability goals, major public and private investments are needed at the level of the economies of the member states and particularly of the mountain economy.

The EU and its Member States are the largest provider of public climate finance in the world, with €23.04 billion allocated in 2021.

In the framework of the European Green Agreement 2050, the need to mobilize private financial and capital flows towards ecological investments at the level of the economies of the member states and particularly of the mountain economy was emphasized

Presentation of the main financial instruments supported by the programs financed by the European Commission:









→ **Just Transition Mechanism**

Around €55 billion
to address the social and economic effects of the green transition, focusing on the most challenged regions, industries and workers.

Three pillars

1 - Just Transition Fund
€19.2 billion expected to mobilise over **€25 billion** in investments:






-  productive investment in SMEs and creation of new firms
-  R&D, digital innovation and connectivity
-  clean and renewable energy
-  enhancement of circular economy and land restoration
-  retraining of workers and job seekers
-  activities in the areas of education and social inclusion

2 - Just Transition Scheme within InvestEU
Dedicated InvestEU budget guarantee scheme to mobilise up to **€15 billion** of investment in the most affected regions

3 - Public sector loan facility
€1.5 billion in grants from the EU budget
€10 billion in loans from the European Investment Bank (EIB)
Goal: to increase public sector investments for regional development needs to **up to €18.5 billion**

→ **Modernisation Fund**

Around €48 billion*
between 2021 and 2030 is allocated to 10 lower-income member states to be spent on:

-  renewable energy
-  energy efficiency
-  energy storage
-  energy networks
-  just transition in carbon dependent regions

The Modernisation Fund is financed through the auctioning of allowances under the EU emissions trading system (EU ETS), initially 2% of the total allowances for the 2021-2030 period.

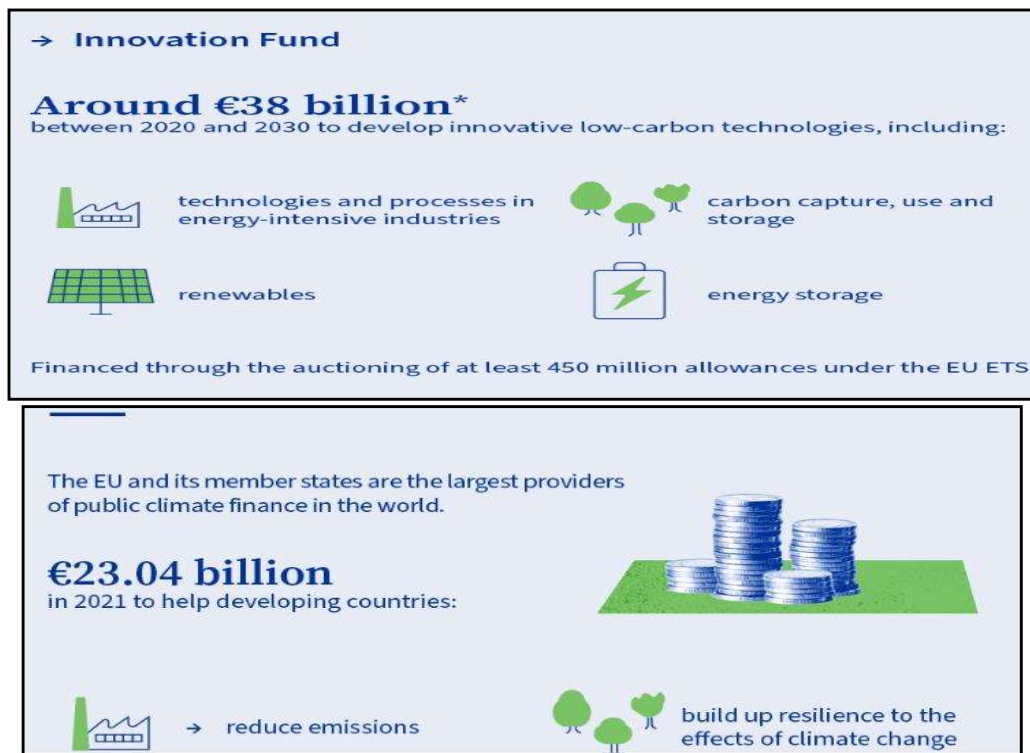
In first two years, **€4.11 billion** disbursed to support **61 projects** in eight countries.

→ **Horizon Europe**

€95.5 billion through the EU's key funding programme for research and innovation.

35% of the funds to be spent on climate-related projects:

-  tackling climate change
-  achieving the UN's sustainable development goals
-  boosting the EU's competitiveness and growth



"Rural areas constitute the fabric of our society and are what give our economy its vital rhythm. They are an essential part of our identity and our economic potential. We will value and preserve our rural areas and invest in their future", Ursula von der Leyen, President of the European Commission.

Conclusions and proposals

The *mountain economy* has played and continues to play these important roles, which is why the European Commission has developed several supporting documents in which it establishes the long-term vision for the rural areas of the EU until 2040, including the rural-urban partnership specific to the mountain economy. The fields of action are oriented towards stronger, connected, resilient and prosperous rural areas and communities, as is the pilot project proposed by Acad. Prof.univ.dr. Hello REY.

A Mountain Pact and an Action Plan for mountain areas at the EU level with concrete emblematic projects and new financial instruments will contribute to achieving the objectives of this vision in the medium and long term of the European Commission, as is also provided for in the European Green Agreement.

Attractive spaces, created within a harmonious territorial development, that unlock their specific potential, turn into opportunities and offer solutions to address the local effects specific to the mountain economy, of global challenges.

Actors involved in multi-level and reality-based governance of the mountain area to develop integrated strategies using collaborative and participatory approaches and benefit from tailored policy combinations and interdependencies between urban and rural areas in mountain areas.

Providers of food security, economic opportunities, goods and services for society in general, such as providers of biomaterials and energy, but also of high-quality local (mountain products) and community products, energy from renewable sources, to keep a fair share of the generated value.

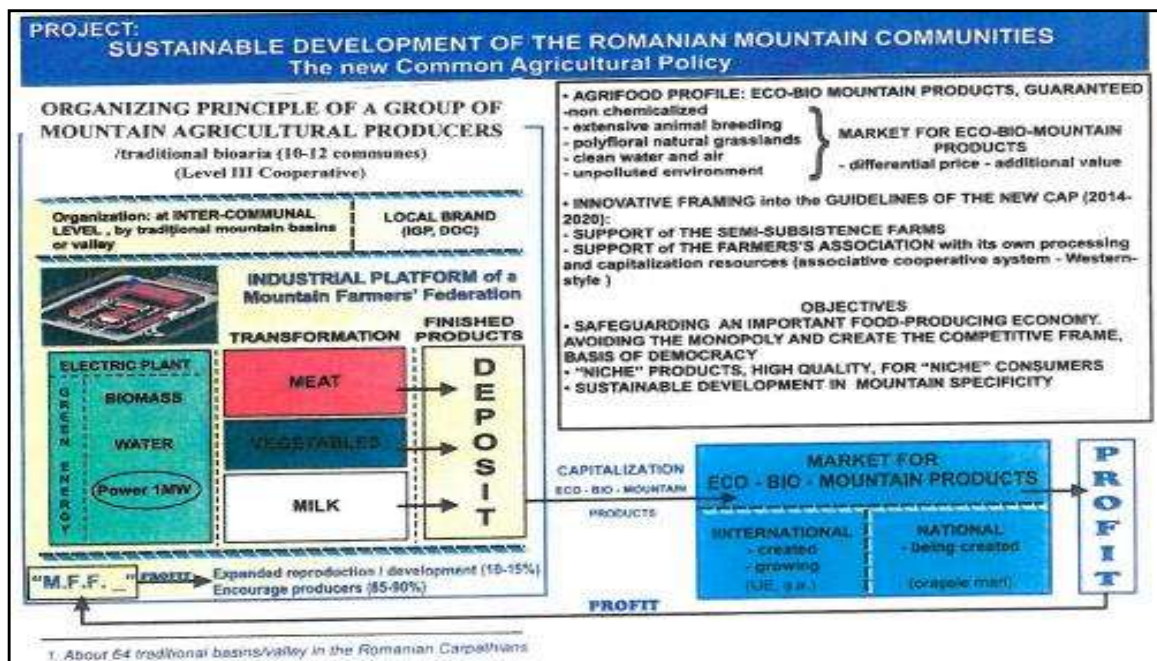


Figure 10. The Sustainable Development of Mountain Communities Project in Romania

Source: author's own concept Prof. univ. dr. Radu Rey, President of the Romanian Mountain Forum

The project can ensure the application of the "Mountain Law" no. 197/2018 according to the guidelines of the European Green Pact, Horizon 2050 and rapidly imposes a "reform" aimed at 4.89 million people (21.97% of the total), of which two million in family farms, as well as the use of innovative financial instruments such as green bonds.

Dynamic communities focused on the well-being of mountain dwellers, including livelihoods, equity, prosperity and quality of life, where all people live and work well together, with adequate capacity to support each other.

Inclusive communities that promote intergenerational solidarity, equity, renewal and equal opportunities for all and are open to newcomers to mountain areas.

Flourishing sources of nature, which are reinforced by the objectives of the European Green Deal and contribute to their achievement, including climate neutrality, as well as the sustainable management of natural resources.

Full beneficiaries of digital innovation, with equal access to emerging technologies, widespread digital literacy of mountain dwellers and opportunities to acquire more advanced skills.

Enterprising, innovative and skilled people who together lay the foundations of technological, ecological and social progress in the economic development of mountain areas.

Vibrant places with efficient, accessible and affordable public and private services, including cross-border services, that provide tailored solutions (transport, education, training, health and care, including long-term care, social life and retail) and needed by local communities in mountain areas.

Places of diversity, which make the most of their assets, talents and unique potential.

Through the instruments and innovative funding programs specific to mountain areas, all the actions mentioned above can lead to the successful implementation of integrated projects in mountain areas and in the interest of the inhabitants of mountain areas.

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