SNAPFI COUNTRY STUDY

Lessons learned for international climate policy from the programming, implementation, and monitoring of the European Structural and Investment Funds in EU Member States

Europe

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About this report

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Project Lead
Karsten Neuhoff, Heiner von Lüpke, Nils May - Climate Policy Department, DIW Berlin

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Contacts
Simon Schäfer-Stradowsky and Aleksandra Novikova
Institute for Climate Protection, Energy and Mobility (IKEM)
Magazinstr. 15–16 | D-10179 Berlin
simon.schaefer-stradowsky@ikem.de and
aleksandra.novikova@ikem.de

Project in brief
The project explores how international climate finance can support the implementation of National Determined Contributions (NDCs) in emerging economies and EU Member States through comparative analyses and a better understanding of the interface between finance and policy implementation. This enables decision-makers in the target regions to implement their NDCs through effective mitigation and adaption policies, supported by national and international financial instruments. The cooperation among five research institutions facilitates an effective implementation of the NDCs, provides space for increased ambition levels and stimulates private and public investments in the low-carbon and climate resilient economic transformation. The envisaged impact is a reduction of greenhouse gas emissions as well as a contribution to development policies in the project countries.
Report Abstract

The report aims to draw the lessons learned for international climate policy from the programming, implementation, monitoring, and evaluation of the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) in EU Member States. The report focuses on finance disbursed by these funds for energy efficiency. The report analyses two case study countries, Lithuania and Slovakia in detail, it also refers to Latvia and Czechia. Specific questions of this report are: what are the key elements and features of programming and implementation of climate-related objectives by the ERDF and the CF, what changes and impacts have been achieved so far, which success and limitation factors have been observed, and which lessons learned could be drawn for the provision of international climate finance.
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Acronyms

ADB  Asian Development Bank
CF  Cohesion Fund
CIFs  Clean Investment Funds
CO2  Carbon dioxide
CPR  Common Provisions Regulation
DFI  Development finance institution
DFID  UK Department for International Development
EBRD  European Bank for Reconstruction and Development
EIB  European Investment Bank
ESIF  European Structural and Investment Funds
ETS  Emission Trading Scheme
ERDF  European Regional Development Fund
EU  European Union
IADB  Inter-American Development Bank Group
IP  Investment Priority
JESSICA  Joint European Support for Sustainable Investment in City Areas
GCF  Green Climate Fund
GDP  Gross Domestic Product
GEF  Global Environmental Facility
GIZ  Deutsche Gesellschaft für Internationale Zusammenarbeit
GHG  Greenhouse gas
IPCC  Intergovernmental Panel for Climate Change
MA  Managing Authority
MFF  Multi-annual financial framework
NECP  National energy and climate plan
NRP  National Reform Programme
NDC  Nationally Determined Contribution
R&D  Research and development
PA  Priority Axis
R&D  Research and development
SME  Small and medium-sized enterprises
TO  Thematic Objective
UNFCCC  United Nations Framework Convention on Climate Change
UNDP  United Nations Development Programme
WB  World Bank
Executive summary

The report aims to draw lessons learned for international climate policy from the programming, implementation, monitoring, and evaluation of the EU-level finance disbursed by two European Structural and Investment Funds (ESIF) - the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) in EU Member States. The report analyses two case study countries, Lithuania and Slovakia in detail, and refers to Latvia and the Czech Republic to a lesser extent. The report focuses on the analysis of climate change mitigation actions, in particular on energy efficiency. Specific questions of this report are: what are the features of programming and implementation of climate-related objectives by the ERDF and the CF, what changes and impacts have been achieved so far, which success and limitation factors have been observed, and which lessons learned could be drawn for the provision of international climate finance.

The ESIF are a part of the EU budget accounting for 43% of it during 2014-2020; the total EU budget scaled to ca. 1% of EU’s gross national income in 2019. Each Member State contributes to the EU budget based on its gross national income. The EU budget is implemented through a range of EU funds and programmes which disburse finance to beneficiaries located in the EU Member States. The beneficiaries include regional and local authorities, small and medium enterprises, large enterprises, farmers, non-governmental organisations, academic and research institutions, and others, and they obtain finance disbursed by the ESIF through grants and other financial instruments.

Lessons learned from European countries can help illustrate how long-term stable climate policy framework could be formed and financed. Many challenges which occur in Europe, in particular in the countries of Central and Eastern Europe have relevance in emerging countries too. The ESIF’s finance flowing from the EU budget to beneficiaries in the EU Member States bears certain similarities with the structure of international climate finance provided by developed countries to developing economies via development finance institutions (DFIs) and global climate funds.
However, one should be cautious drawing parallels between programming the ESIF and international climate finance and development finance flows. The ESIF is a solidarity mechanism among the EU Member States and a mean to reach common EU objectives, defined as economic and social cohesion. Global climate finance architecture is largely governed by the United Nations Framework Convention on Climate Change (UNFCCC), under which obliged developed countries committed to provide new and additional financial resources for climate actions in developing countries.

The EU cohesion policy is guided by the EU 2020 strategy for 2010-2020 and the Green Deal Agreement for 2020 - 2050. This policy, with its binding targets and indicators provide the framework for defining priorities and steering processes at national level. Specifically, the EU mandates its Member States to set national targets for energy efficiency, renewable energy, and greenhouse gas (GHG) emission reduction in line with the EU goals.

**Negotiation as a partnership and consensus building process**

The way how a negotiation process for identifying goals, objectives, and allocations of the ESIF resources at the national level is organized matters for the eventual success of the program. The focus on partnership building throughout negotiation process is important in order to formulate programming objectives and priorities in such a way that they are acceptable and politically feasible for both sides. Negotiations between the European Commission and Member States are perceived as between equal parties, with both sides having an equal impact on the outcome. In comparison, there is a smaller scope for negotiations in the process of international climate finance programming.

Even the language of the key documents carries an important sign, i.e. “Partnership agreement” versus “Grant agreement” or “Funding Agreement” as is the prevailing practice in the international climate finance. Partnership envisages collaboration towards achievement of common goals, whereas “grant” implies more unequal and top-down relationships between the parties. Even though we cannot draw full parallel between EU and international climate finance, the EU’s partnership-based approach does offer useful lessons for the architecture of global climate finance and the achievement of global climate goals.

**Consensus building inevitably requires more time than the top-down approach**

when priorities are defined by the donor. The EU decision-making processes are built on the consensus and negotiations between the European Commission and individual Members States. It starts with the negotiations on the EU long-term budget plan, referred to the Multiannual Financial Framework, forming the EU budget and subsequently ESIF contributions. Even though the lengthiness of negotiation process between the ESIF and EU Member States lasting 2-4 years is sometimes referred as its weakness, from the perspective of achieving the final goal and maximizing climate and local benefits it can be considered as a strength and an important success factor.
The way how the programming and funding directions are defined at the country, regional- and/or country-wide theme level as opposed to project-based programming typical for multilateral donors has also contributed to success. This approach where the detailed design of operational programmes and modalities of their implementation are left to Member States to work out has been found to be particularly instrumental. It enables the countries to take full account of domestic circumstances, constraints, as well as opportunities while staying within the general direction and framework determined by the Partnership Agreement.

Consultation process and alignment to national priorities

The ESIF negotiation and programming imply extensive analytical and consultation processes. The most important level is negotiation among individual ministries and central government bodies. It then involves several rounds of negotiations with the European Commission. It is required, that Member States negotiators involve national stakeholders, including ministries, business representatives, social partners and civil society into the consultation process. Such extensive preparatory process with stakeholders at various levels support the design of the program which best responds to national and local priorities as well as has been well received by stakeholders.

Maximum alignment of climate objectives and actions with national socio-economic and environmental priorities is critical to ensure buy-in, wider uptake, acceptance and demand from national stakeholders. Such close alignment is particularly important in the time of economic crisis, when the national authorities are seeking to utilize every opportunity to address domestic problems. We found the most successful measures those, which were programmed in line with national priorities. Lithuania’s experience offered a powerful example in this respect when a national building energy efficiency renovation programme launched with the ESIF support generated large positive co-benefits for the local economy in the form of jobs, support to small and medium enterprises (SMEs), improved liquidity of domestic financial markets, in addition to substantial CO2 emission reduction. Similarly, in Slovakia one of the most successful interventions implemented with the ESIF support were those with strong benefits for local communities, i.e. a technology modernization project at the steel factory leading to a significant improvement of air quality in the city of Košice.

One of the main points of the ESIF’s criticism by the climate community has been that the programming priorities did not always affect the most-emitting sectors and were not as ambitious as they had to be to allow meeting national GHG emission reduction targets. For instance, some EU Member States in Central and Eastern Europe were using the dramatic decrease in GHG emissions associated with their deindustrialisation in the 1990s as a negotiating position, arguing for the “right to develop” and “catch up” with more developed EU Member States in West Europe. Further, the ESIF programming priorities did not sufficiently recognize the potential and need to address GHG emission in the transport sector in spite of their rapid increase and they mostly ignored emissions in the agricultural sector across several Member States.
Socially-sensitive decarbonization policies and reforms

The ESIF have been used across the board to mitigate negative socio-economic impacts of decarbonization policies thus making it possible for many difficult policy decisions to take an effect. All in all, the overall design of the ESIF as the “development finance” instrument, as opposed to only “climate finance” instrument, has enabled the countries to go beyond direct climate actions, mitigation and adaptation. The ESIF enabled implementation of broader social and economic reform processes which are essential for achieving longer term decarbonization goals.

In Lithuania, massive ESIF-financed investment programme in energy efficient modernization of residential buildings has laid the grounds and prepared tenants for gradual removal of subsidies and liberalization of heat tariffs. This “difficult” policy has in turn created lasting incentive for consumers towards energy efficiency while at the same time saved a substantial amount of public money directed at subsidies and improved overall performance and competitiveness of the heat supply sector. In Czechia and the Slovak Republic, the ESIF have been used to support a painful, but essential reform process related to the transformation of the carbon-intensive industrial regions.

Use of financial instruments

Programming the ESIF through the use of non-grant financial instruments even though accounts for a very small share of the ESIF has been highly praised by many stakeholders as a good practice and more efficient and market-oriented approach to promoting low-carbon transition as opposed to grant-only mechanisms. Success of financial instruments in the ESIF programming can be attributed to the high potential leverage and involvement of private sector as a principal financier of climate actions with the ESIF playing mainly the role of a facilitator and a catalyser.

Our interview results suggest that financial instruments would only be effective and see the market uptake if there are no parallel grant or subsidy scheme which distort the market and disincentivize private engagement. One of important aspects here is to appoint a single responsible entity for the coordination of grant and non-grant instruments. The other important aspect which was identified is that EU regulations governing financial instruments would benefit from certain simplification.

It should be noted however that the design of financial instruments requires a thorough preparation and analysis of the current market conditions, barriers and opportunities to be presented in the form of “ex-ante assessment”. Not every policy area is suitable for a shift of traditional finance i.e. grants to more innovative financial instruments. Therefore, an application of any financial instrument requires a compulsory ex-ante assessment evaluating the necessity of it and defining the priorities for the allocation of resources.
Disregardless whether Member States use grants or financial instruments, the ESIF’s long-term budget planning horizon was said in all interviewed countries to be instrumental in making the instruments more mature, bringing on board the private sector and the financial sector, and remove numerous barriers. It could send long-term signal to the market about funding availability which would not be possible to achieve under the national annual budget planning framework.

**Technical assistance**

Workable implementation arrangements and provision of additional technical support throughout all ESIF project preparation and implementation process have been critical for the success, i.e. timely disbursement of funds and achievement of intended results. Experience of Member State provide ample examples of successful and not very successful practices which either contributed or on the contrary jeopardized implementation.

Lithuania is an example of putting in place an effective and well-coordinated institutional system to provide technical assistance for the renovation of multi-apartment buildings. A dedicated public agency, the Housing Energy Efficiency Agency (BETA) has been set-up to administer and coordinate the provision of technical support to various stakeholders throughout the project design and implementation in multi-apartment buildings. BETA assists housing administrators and municipalities with preparing and evaluating applications for energy efficiency retrofit of multi-family buildings, it supervises project implementation and assures quality of works, it also administers the ESIF grant support scheme which covers a share of total investment costs for the most needy households. BETA is also involved in a range of capacity building activities, trainings and information dissemination thus facilitating creating enabling environment for replication of energy efficiency retrofits across the country.

In contrast, limited capacities to identify and prepare quality funding proposals in line with all established requirements has been widely recognized by stakeholders as a major constraint for the ESIF implementation in Slovakia and Lithuania, prevalent among domestic SMEs and small municipalities. Larger companies and public authorities in bigger municipalities or regions are better positioned to access the ESIF funds due to higher staff capacities, access to information and prior institutional and/or corporate experience with such instruments.

**Administrative and regulatory hurdles**

Public procurement rules have emerged as a common theme and prevailing bottleneck in the implementation of the ESIF resources by public sector actors, in particular non-grant instruments. One of the main bottlenecks here is related to the fact that EU regulations treat grant and non-grant instruments as equal and the subject to the same set of rules defined in the legislation on the State Aid.
It was also found that the complexity and number of rules and requirements associated with the ESIF implementation have put an extra toll on administrative capacities of the Managing Authorities of the ESIF’ Operational Programmes often at the expense of strategic management, innovation and project support. Complexities of the rules have also deterred several categories (e.g. SMEs) of potential beneficiaries from applying for support.

Therefore, **standardization and simplification of project management, in particular for public procurement, as well as provision of targeted technical assistance to all market participants was identified to be essential** for private sector participation and buy-in of such schemes.

**Replication to other sectors and scale up**

The ESIF can play a critical role in promoting and scaling up climate investment across different economic sectors. Lithuania’s financial instrument, which had been initially set up for the energy efficiency program in residential buildings, has been gradually replicated to cover other buildings stock segments, including public, municipal, and historical. The Lithuanian experience with financing buildings energy efficiency also raised a lot of interest from other Member States and those outside of the EU.

The ability to leverage private capital with limited public finance for public goods is one of the key success features of ESIF-supported financial instruments. This is likely to be a long-term task for a developing market, but we do observe this success in Central and Eastern Europe. For instance, Slovakia set up in 2010 the Slovak Investment Holding with the objective of implementing ESIF-supported financial instruments and leveraging public and private investment in priority sector, including climate. The Slovak Investment Holding has now a portfolio of EUR 1.15 billion under management with at least 20% of this investment being earmarked for private sector-led climate actions in energy efficiency, renewable energy, and sustainable mobility. In regard to investment in energy efficiency specifically, in Lithuania **it took somewhat more than fifteen years to scale up private finance** for energy efficiency retrofit of the multi-apartment buildings: at present, the private sector contributes more than half of the program funds whereas in the beginning of the program it was zero.
Capacity of the market

In spite of the first indications of success in the countries of Central and Eastern Europe to implement programmes targeting climate mitigation and adaptation, there is still a long way ahead for the domestic markets to mature and be able to absorb large volumes of funding. For instance, the market for building renovation loans is still a niche in Lithuania. Only two of six banks, operating in Lithuania, are active in this market segment. Thereof, only for one bank with a market share of less than 10%, such products constitute a significant part of its commercial operations. The causes for this insignificance are the low total investment volume and the strict regulations of the soft loan lending scheme resulting in a limited interest of large commercial banks to participate in the scheme. In Slovakia, local energy service companies were not able to reap benefits from provided financial incentives also due to market conditions.

The ESIF’s objectives and targets have not always been possible to achieve also due to external constraints related to low level of sectoral or market readiness and capacities of the various stakeholders, i.e. the construction sector. Therefore, constrains on the market of low-carbon technologies and labour market are also important factors to consider when designing a programme.

Low-hanging fruits versus advanced technologies

In many countries, the ESIF proved to be an effective instrument to significantly scale-up mature low-cost carbon solutions, such as energy efficiency in particular building types and SMEs, as well as to leverage additional partnership and investment, including from the private sector. One can conclude that the ESIF has proved an effective mechanism to scale-up “low-hanging fruits” and maximize their social and economic impacts. Such focus on low-hanging fruits, however, came at the expense of advanced solutions, investment in research and development (R&D), new technologies and innovation.

In both Slovakia and Lithuania, investment in climate-oriented R&D and advanced solutions, such as digital and smart technologies, has been negligible. One reason for this is in general relatively low level of R&D spending in national ESIF programs, which has to do largely with low absorption and implementation capacities within the sector. Second, there is no system in place to track climate-related R&D investment in the portfolio. Nevertheless, the latest trends are positive: in Slovakia, for example, spending on R&D has been steadily increasing in the last decades and the target for the next ESIF programming period has been ambitiously raised, including specifically for climate-related R&D. Indeed, it is believed that a Member State should be using their ESIF resources more strategically and not only maximize the spread of existing solutions, but also to invest in the creation of new climate products, technologies and businesses. Identification of new niches for domestic climate investment and maximizing synergies with national development priorities is an important area where additional EU support is required which the ESIF and international donor support are well placed to provide.

Based on identified success and limitation factors, we would like to offer the following set of
lessons learned for international climate policy:

**Lesson 1:**

Strengthen **partnership aspects** throughout negotiation and implementation process, allow for enough negotiation time and involve comprehensive stakeholder consultation to ensure alignment with national priorities and maximization of non-climate benefits (i.e. inclusive growth, job creation, reduction of energy poverty);

**Lesson 2:**

Promote **national ownership of the program implementation**, including involvement of national institutions, financial organizations and civil society in program delivery to ensure sustainability and facilitate replication;

**Lesson 3:**

Invest in **quality program preparation**, including ex-ante assessment to know your market conditions and beneficiaries, understand your regulatory constraints such as State Aid and procurement rules, eliminate competing schemes, implement the market-oriented tariff reform, and ensure the market capacity is ready to absorb the programme;

**Lesson 4:**

**Standardize and simplify** the process as much as possible, in particular for public procurement, provide comprehensive technical assistance package to support project preparation and implementation, ensure coordination and alignment between technical assistance, grants and financial instruments under one funding framework;

**Lesson 5:**

Identify and promote **opportunities to use public finance to leverage private sector engagement** and scaling-up the private sector financing of low-carbon and climate resilient investment to ensure sustainability of programme impact on market creation.
CHAPTER ONE

Introduction
In 2019, many countries of the world have recognized the situation of climate emergency. Millions of people worldwide went to strike demanding from their governments to take urgent and ambitious actions. In this regard, the results of the 25th Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in December 2019 raise big concern. The negotiations focused on a set of provisions of the Paris Agreement with little agreement on them. The event made little progress if at all on speeding up the actual climate actions.

Both, additional investment into and restructuring of the portfolio of current investment are required to achieve decarbonization and adaptation goals, in all parts of the world. According to the Special Report of the Intergovernmental Panel on Climate Change (IPCC) on Global Warming of 1.5°C (2019), to limit the global warming to 1.5°C the world must reduce its emissions by 45% in 2030 versus 2010 and to zero by 2050; that leaves very little time to act. The annual average investment needs in the energy system only are estimated at 2.4 trillion USD2010 between 2016 and 2035, representing about 2.5% of the world Gross Domestic Product (GDP).

The investment challenge is unprecedented, especially in emerging economics having other numerous challenges. In 2010, developed countries committed to jointly mobilize USD 100 billion in climate finance annually by 2020 to address the needs of the developing world as sealed in the Copenhagen agreement (UNFCCC, 2010). Given the emergency of climate change, the magnitude of the commitment, and the little time left the question emerges how to provide this finance in the most impactful way.

The SNAPFI project aims to advice how international climate finance can support the implementation of Nationally Determined Contributions (NDCs) in emerging economies. To achieve this, it conducts comparative analyses of the link between climate finance and the climate policy development in different countries to enable the exchange with lessons learned. In this regard, lessons learned from the countries of the European Union (EU) can help illustrate how long-term stable climate policy framework could be formed. Many challenges which occur in Europe, in particular in the countries of Central and Eastern Europe have relevance in emerging countries too.
The role of a higher-level finance in shaping country’s energy transition and climate policy could be shown from the analysis of the European Structural and Investment Funds (ESIF). European funds and financial institutions offer beneficiaries of EU Member States finance for energy transition and decarbonisation processes. Among these, two ESIF funds, the European Regional Development Fund (ERDF) and the Cohesion Fund (CF), offer the largest amount of finance, largely grants, for low-carbon development and climate adaptation. Therefore, finance flows from the ERDF and the CF to beneficiaries of the EU Member States remind international climate finance flowing from donor budgets to beneficiaries in developing economies.
Lessons learned from the ESIF for international climate policy

The report aims to provide lessons learned for international climate policy from the programming, implementation, monitoring, and evaluation the EU-level finance disbursed by the ERDF and the CF in EU Member States. The report will analyse two case study countries, Lithuania and Slovakia in detail and refer to Latvia and Czechia in less detail. The report focuses on the analysis of climate change mitigation actions with a focus on energy efficiency. Specific questions of this report are:

› What are the key elements and features of programming and implementation of climate-related objectives by the ERDF and the CF?
› What changes and impacts in case study countries have been achieved so far?
› Which success and limitation factors have been observed and which lessons learned could be drawn for the provision of international climate finance?

The report consists of five chapters. Following the introduction, Chapter 2 defines the ERDF and the CF as a part of the EU budget and describes the evolution of climate goals in the EU Cohesion Policy. Chapter 3, Chapter 4, and Chapter 5 introduce selected features of the ESIF programming, implementation, monitoring, and evaluation. These three chapters also assess success and limitation factors, drawing the lessons learned. The chapters are written placing a focus on the ESIF, with boxes summarizing briefly the features discussed for international climate finance to enable easier understanding of the lessons learned1. Conclusion summarises key findings of our analysis. Annexes contain a literature review of previous similar reports and a questionnaire, which we used in interviews to gather information for this analysis.

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1 Overall, international experience with implementing climate finance programs and projects dates back to early 1990s when the first international instruments, such as the Global Environmental Facility (GEF) was established under auspices of UNFCCC. Throughout the decades which follow substantial knowledge and lessons have been accumulated by the agencies, programmes and recipient countries. While the present report focus on the ESIF analysis, we made our best attempt to briefly summarize these experiences in the boxes.
Lessons learned from the ESIF for international climate policy

First, literature review was conducted to identify and learn the key features of the programming and implementation of the ESIF in comparison with those of multilateral donors. Second, literature review was conducted to identify the impact of the ERDF and the CF on climate policy development in the case study countries. Based on this literature, hypotheses about the link between the ESIF finance and the climate policy in EU Member States were formulated. The draft report featuring the key elements of the programming, implementation, monitoring, and evaluation of the ESIF was also prepared.

To test the hypotheses, fifteen personal interviews were conducted. The questionnaire used in these semi-structured interviews is provided in the annex. The interviewees were representatives of the ministries involved into negotiation, management, and implementation of the ESIF, assisting them agencies and funds, as well as researchers.

Based on this work, preliminary conclusions were drawn, described in the draft report, and presented at a project workshop conducted online on the 27th March 2020. The workshop gathered twentyone participants, including the representatives of ESIF programmers and implementers in Central and Eastern Europe, programmers and implementers of multilateral donor support, and our project partners from Brazil, India, Indonesia, and South Africa. The interviewees and workshop participants are acknowledged in the acknowledgment section. Following the workshop conclusions, the draft report was finalized.

Following the SNAPFI project methodology, the draft report was submitted to two experts for their anonymous peer review. Reviewers were selected based on their expert knowledge of the national policy context and academic excellence in the field of climate finance. The feedback received was addressed and the next version of the report was submitted to all interviewees and workshop participants for their validation. After their comments were also addressed, the report was submitted for its final publication.
CHAPTER TWO
Climate actions in the ERDF and the CF
Lessons learned from the ESIF for international climate policy

The European Union has a budget. Besides covering operating costs of the EU, the budget is an EU tool to deliver common objectives of EU Member States at European level. It scales to ca. 1% of EU’s gross national income (GNI) or ca. 2% of all EU public expenditure that in 2019 was ca. EUR 148 billion (EC, online).

The EU budget has short and long-term spending plans. The short-term plans are scheduled for one year. The long-term plan often referred to a Multiannual Financial Framework (MFF) covers a period of five to seven years, usually seven years. Since 2000, there have been the following long-term budget periods: 2000 - 2006, 2007 - 2013, and 2014 - 2020. The next long-term budget plan is being prepared for 2021 - 2027.

The EU budget finances projects and measures, which create a value added across the EU: it finances public goods of European dimension that would not happen otherwise. It is an investment budget, which it aims to create a leverage effect: usually one euro from the EU budget leverages more than one euro in investment (EP, 2015).

Each project financed should protect European values, which are peace, democracy, and the rule of law. In the 2014 - 2020 budget, the main expenditure categories were competitiveness for growth and jobs; economic, social, and territorial cohesion; sustainable growth: natural resources; security and citizenship, global Europe i.e. foreign policy; and administration. In the 2021 - 2027 budget, the proposed expenditure categories are single market, innovation and digital; cohesion and values; natural resources and environment; migration and boarder management; security and defence, neighbourhood and the world; and European public administration (EC, 2019a).

At present, the EU budget is fed by contributions of EU Member States proportional to their gross national income, contributions of EU Member States proportional to value added tax collected by them, own resources such as customs duties on imports from outside the EU; and other revenue, including taxes from EU staff salaries, interest on late payments and fines, and contributions from third countries (EC, 2019a). As the contributions of EU Member States are different, they tend to consider a ratio between their contributions versus the disbursement their domestic beneficiaries receive and/or indirect benefits of EU budget disbursement, including the alignment of EU budget investment priorities to their national priorities.
In the 2021-2027 period, the EU budget will face many challenges. It will miss the contributions of the Great Britain due to its exit from the EU in 2019; the UK provided 11% or the 4th largest payment to it among 28 EU Member States (EC, 2019e). To reduce the share of contributions from EU Member States, the European Commission suggested introducing a range of new own sources. Furthermore, the EU budget has to address the impact of the COVID-2019 pandemic on the EU economic system. To complement the EU budget, the European Commission is working on the so called “Next Generation EU” - a new recovery instrument of EUR 750 billion which will be raised on the financial markets for 2021-2024¹.

The EU budget is mostly implemented by the European Commission and EU Member States. The largest share of 74% is spent under the framework of shared management, when the authorities of a Member State manage the expenditure under the supervision of the European Commission. About 18% of the budget is managed directly by the European Commission, and 8% of the budget is managed indirectly by other entities such as international organisations, non-EU countries, and others (EC, 2019a).

The EU budget is implemented through a range of EU funds and programmes which disburse finance to beneficiaries. The latter are regional and local authorities, small and medium enterprises, large enterprises, farmers, non-governmental organisations, academic and research institutions, and others. Out of the 2013-2020 budget, ca. 43% is being disbursed by five so-called European Structural and Investment Funds (ESIF) (EC, 2019a) delivering the cohesion among EU Member States, i.e. economic, social, and territorial solidarity. These are the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD), and the European Maritime and Fisheries Fund (EMFF). All these funds disburse finance for climate action, with the ERDF and the CF providing the most explicit and direct support and thus, they are the focus of our analysis for the current EU budget period of 2014-2020.

The ESIF’s finance flowing from the EU budget to beneficiaries in the EU Member States bear certain similarities with the structure of international climate finance provided by developed countries to developing economies via development finance institutions (DFIs) and global climate funds (Box 1). However, caution has to be exercised when drawing parallels between the ESIF programming and the international climate and development finance. The ESIF is a solidarity mechanism among the EU Member States and a mean to reach common EU objectives, defined as economic and social cohesion. Global climate finance architecture is largely governed by the UNFCCC, which obliged developed countries to provide new and additional financial resources for climate actions in developing countries.

BOX 1.

The sources of international climate finance for developing countries

International climate finance for developing and emerging countries is provided largely by the development finance institutions (DFIs), the global climate funds, as well as by multilateral and bilateral development agencies and programmes. The DFIs include for instance the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the InterAmerican Development Bank Group (IADB), and the World Bank (WB) Group, and others. The global climate funds are the Green Climate Fund (GCF), the Global Environmental Facility (GEF), and the Clean Investment Funds (CIFs). Bilateral development agencies and programmes include for instance the UNDP, the UN Environmental, die Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the UK Department for International Development (DFID), and others.

DFIs provide the majority of public finance for climate. Of these, six multilateral DFIs mentioned above account for the largest share, USD 58 billion or 23% of the total public finance in 2017/2018 (CPI 2020). Global climate funds are the second largest source: their annual financing amounted for to USD 3.2 billion in 2017/2018, up 43% from 2015/2016. The GCF in particular is the dominant player providing 50% of total finance from these institutions. The next largest contributors are the GEF and the CIFs, which provided 32% and 14%, respectively (CPI 2019).
2.2

Evolution of climate goals

The Multiannual Financial Framework aligns the EU budget spending to EU priorities. Climate was first mentioned in the 2000-2006 budget period, became an important element in the 2007-2013 budget period, and is set as a priority in the 2014-2020 budget period.

2.2.1. Budget period 2000–2006

In the 2000-2006 budget period, climate change mitigation has firstly been mentioned in the context of EU’s regional policy. However, it did not take up a separate place in the Cohesion Policy framework, but represented a subcategory related to environmental investments (DG Environment, 2017). These categories, assigning certain financial allocations to “direct” or “indirect” investment streams, only served the purpose of statistics, monitoring and evaluation (European Council, 1999). Consequently, even though it has already been stated in the Council’s Regulation regarding the EU Cohesion Policy in the 2000-2006 period, climate change mitigation did not constitute a certain aim of EU’s regional policy and only a minor share of the 2000-2006 budget was spent on climate-related issues.

2.2.2. Budget period 2007–2013

In the 2007-2013 budget period, climate objectives became an important element though not yet a core of the EU Cohesion Policy. They gained more momentum due to the implementation of the Lisbon Strategy (European Council, 2000), which promoted inter alia renewable energy and energy efficiency actions. The major goal of the strategy was the transformation of the EU into “the most competitive and dynamic knowledge-driven economy by 2010”.

Lessons learned from the ESIF for international climate policy
In order to comply with the Lisbon Agenda, several climate-related indicators, like number of renewable energy projects, additional capacity of renewable energy production, reduction of greenhouse gas (GHG) emissions, and similar were established. Altogether, EUR 9 billion were earmarked for renewable energy and energy efficiency projects in the 2007-2013 period accounting to 2.6% of the total ESIF (EC, 2019b). The total amount of climate change allocations over the entire period amounted to ca. EUR 48 billion, i.e. 14% of total ESIF and 8% of the EU’s overall budget (COWI, 2016). Nevertheless, climate change mitigation and adaptation were not included as a main objective of the EU Cohesion Policy in 2007-2013 (Hanger et al., 2015).

2.2.3. Budget period 2014–2020

In the 2014-2020 budget period, a quantitative climate target for the EU budget was introduced. The integration of climate objectives in the EU Cohesion Policy framework was determined by the Europe 2020 strategy for smart, sustainable and inclusive growth (EC 2010), which replaced the Lisbon Strategy. The EU 2020 Strategy featured for the first-time quantitative targets with respect to climate change mitigation and adaptation. As a result, on average 20% of the total EU budget in the current period was dedicated to climate-related spending, accounting to EUR 212 billion (Runkel et al., 2019). Thereby, the climate-related expenditures in the ESIF amount to ca. EUR 120 billion over the entire period.

The climate goals in the Cohesion Policy are embedded via two out of eleven Thematic Objectives. Two further Thematic Objectives comprise the potential to indirectly support climate action. The explicit inclusion of climate-related objectives in the primary priorities of EU Cohesion Policy and the specification of climate-related investment targets within the ESIF illustrates the risen importance of climate goals in EU’s Cohesion policy in the 2014-2020 programming period in contrast to the foregone period.
In December 2019, the European Commission presented the Green Deal Agreement (EC, 2019c). It plans to increase the EU’s GHG emission reductions target for 2030 to at least 50% and towards 55% as compared to 1990 levels in order to achieve climate-neutrality by 2050. To achieve the goals set by the Green Deal, the European Green Deal Investment Plan (EC, 2020a) plans to mobilize at least EUR 1 trillion in sustainable investments over the next decade.

The European Commission puts forward the aim of increasing climate-related expenditure in the future programming period 2021-2027 to 25% of the total EU budget. The 5% increase of climate-related spending in the EU budget translates into an absolute increase of EUR 111 billion. Therefore, the EU climate finance is going to surge by 50% in the upcoming programming period to EUR 320 billion (ERPS, 2019). Moreover, the linking of the ESIF allocation and national energy climate plans (NECPs), and the termination of fossil fuel supporting inventions funded by the Cohesion Policy shall further promote climate mainstreaming (EP, 2018a).

Besides the expansion of climate-related spending and the reinforcement of climate mainstreaming, the High-level Group on Own Resources established by the European Commission recommended introducing new EU resources, which contribute to the achievements of EU policy objectives (HLGOR, 2016). Thus, policy instruments like levies or taxes related to energy, environment and climate change will not only serve the purpose of monetarily disburden Member States but also creating incentives facilitating EU’s climate objectives.
CHAPTER THREE

Lessons learned: programming
3.1

Key elements

3.1.1. Target setting at national level

In 2014-2020, the EU Cohesion Policy is guided by the objectives of the Europe 2020 strategy for smart, sustainable and inclusive growth (EC, 2010), which defines the EU agenda for 2010-2020. The strategy prioritized smart, sustainable and inclusive growth to deliver jobs, productivity and social cohesion across the EU Member States. Adopted in 2010, it reflected the EU need to recover from the 2008 global crisis and lay the ground for its further development. It set five targets as listed in Figure 1, including the EU energy and climate targets to be achieved by 2020.

In relation to energy and climate, the strategy aimed by 2020 at a 20 % GHG emission reduction versus 1990, a 20% share of renewable energy sources in final energy consumption, and a 20% increase in the energy efficiency compared to 2005. In order to achieve the climate targets stated by the strategy, the European Commission introduced a quantitative objective to spend at least 20% of the EU budget on climate mitigation and adaption measures.

All the targets mentioned concern the EU average. Climate goals of individual Member States deviate from the average targets. The EU Effort Sharing legislation (EP, 2009; EP, 2018b) declares that a Member State featuring a high status of economic development has to contribute more to climate protection efforts, in comparison to a less developed Member State. This legislation related to emissions not covered by the EU Emission Trading Scheme (EU ETS), i.e. those of the transport, buildings, agriculture and waste sectors. The EU ETS implemented based on the cap and trade principle covers energy and heat generation, energy-intensive industry, and aviation.

The EU policy, with its binding targets and indicators provide the framework for defining priorities and steering processes at national level. For instance, it requires Member States financing the areas where they face infringements (e.g. the implementation of Air Quality Directive 2008/50/EC), have various difficulties during the transition period (e.g., the implementation of EU Water Framework Directive2000/60/EC), or are lagging behind the targets (e.g. the percentage of recycled municipal waste). The EU climate policy setting or requesting its Member States to set national targets for energy efficiency, renewable energy, and GHG emission reduction is an important part of the EU policy.
Example: Lithuania

To contribute to meeting the Europe 2020 targets, **Lithuania committed by 2020 to a not more than 15% increase in GHG emissions compared to 2005**, to a 23% share of renewable energy in final energy consumption, and to an increase in energy efficiency by 17% compared to 2005. To compare, in 2011 Lithuania achieved a 4.5% increase in energy efficiency and a 4% reduction in emissions compared to 2005, and a 20.3% share of renewable energy in final energy consumption (EC, 2014a).

Example: Slovakia

**Slovakia negotiated a rather generous target committing the country to limit its GHG emission growth to 13% until 2020, compared to their 2005 level.** It further committed to reach a share of renewable energy in gross final consumption of 14% in 2020 and a decrease of the final energy consumption by 11% in 2020, against the average of 2001-2005, formulated as an energy saving target. Slovakia also committed to achieve a 10% share of energy from renewable sources in all forms of transportation. To compare, in 2012 Slovakia featured a GHG emission level, which was 8.4% lower than that of 2005, well below the 2020 GHG target of +13%; the emissions of Slovakia has been however growing in the last two programming periods due to the country’s economic growth. In regard to the energy efficiency target, positive gains have been observed in energy efficiency in 2014-2020, in which Slovakia leads among the Visegrad countries. The renewable energy share in gross final consumption grew from 10.4% in 2012 to 11.6% in 2014, but fell back to 11.49% in 2017. This trend indicates that an achievement of the 14% objective may be problematic.
3.1.2. Partnership Agreements between the EU and Member States

As discussed, the ERDF and the CF are the key funds of the EU budget delivering the EU climate objectives. The common rules applicable to all five EU ESIF were set out in the Common Provisions Regulation (CPR) (EP, 2013a). To prepare it, the Common Strategic Framework (CSF) (EC, 2012) served as a strategic guide outlining the focus of each fund, coordination of the ESIF with other EU policies and principles, and key principles to consider in the ESIF implementation documents. The regulation describes the tasks, priority objectives, and organisation of the ESIF; the criteria that EU Member States and regions have to comply with to access their support; financial resources available, and criteria for their allocation. It further describes rules related to management and control of the ESIF implementation, financial management and accounts.

The CPR establishes the concentration of the ESIF use on eleven Thematic Objectives. They do not have associated targets, milestones, or indicators, but they form the basis for programming the implementation of the EU 2020 strategy targets (Figure 2). The CPR further details Investment Priorities for each fund within the scope of each thematic objective.

Further regulations provide specific rules for each ESIF (EP, 2013b, 2013c, 2013d, 2013e, 2014). They specify Investment Priorities for each fund based on eleven Thematic Objectives and set requirements for the allocation of ESIF. For instance, the ERDF can provide support to any of thematic objectives, but it concentrates on Thematic Objectives 1, 2, 3, and 4. The CF concentrates on Thematic Objectives 4, 5, 6, 7 and 11. Further, the support may additionally be concentrated on the areas of strategic relevance related to the thematic objective selected.

Partnership Agreements concluded between the European Commission and Member States translate CSF elements into the national context and describe strategic goals and investment priorities of the ESIF in each Member State. As there are 28 EU Member States, there are 28 Partnership Agreements. The core elements of Partnership Agreements are the identification of ESIF objectives and Investment Priorities persuaded. They further include an assessment of national challenges; budget allocation for the implementation of each ESIF; identification of Operational Programmes implementing Partnership Agreements planned and their budget; a coordination between the ESIF use and national interventions; the Member State assessment on administration capacity for the ESIF implementation, and others (EC, 2014c; European Court of Auditors, 2017).
Partnership Agreements are prepared by EU Member States on the basis of National Reform Programmes (NRPs). The preparation of NRPs on the annual basis was introduced since 2011 to address the need for better economic and fiscal policy coordination at EU level in order to prevent potential crises. They therefore identify specific policies that each Member State plans in order to stimulate employment and growth, and to prevent or correct imbalances. The European Commission assesses the NRPs and issues country-specific recommendations (CSRs) which should be integrated by EU Member States into their policymaking within the next 12-18 months.

**FIGURE 2**

*ESIF programming in the 2014-2020 budget period*

Source: adopted from Runkel et al., 2019.
3.1.3. Vertical climate mainstreaming

The principle of climate mainstreaming, i.e. the integration of climate change objectives and obligations in the ESIF can be understood as a two-tiered approach in the budget period of 2014 – 2020. Vertical mainstreaming is reached by the introduction of thematic objectives ensuring a defined amount of funding for climate mitigation and adaptation activities. Whereas, horizontal mainstreaming refers to measures and tools which guarantee that climate objectives are integrated in the investment decisions across the entire portfolio. The programming of climate actions by development finance institutions reminds the horizontal mainstreaming of the ESIF funds, as it is presented in Box 2. This section discusses the principle vertical mainstreaming, while the principle of horizontal mainstreaming will be discussed in section 4.1.2.

Vertical climate mainstreaming or the thematic concentration on climate change objectives is promoted by those thematic objectives in the CPR which relate to climate protection. Two out of eleven objectives are highly relevant in the context of climate change: Thematic Objective 4 “Supporting the shift towards the low-carbon economy in all sectors” and Thematic Objective 5 “Promoting climate change adaptation and risk prevention and management”. Two additional objectives, namely Thematic Objective 6 on “Preserving and protecting the environment and promoting resource efficiency” and Thematic Objective 7 “Promoting sustainable transport and removing bottlenecks in key network infrastructures” could indirectly contribute to climate objectives.

Besides the thematic concentration on climate change objectives, the CPR also provides quantified earmarking figures with respect to climate change. Thereby, a minimum of 20% in more developed, 15% in transition and 12% in less developed regions of ESIF funded investments must be used to finance climate-relevant projects.

The Partnership Agreement incorporates climate-related ex-ante conditionalities which need to be fulfilled by Member States to secure the full disbursement of the ESIF. Ex-ante conditionalities are criteria-based conditions established in the CPR, meeting which is regarded as necessary for the effective and efficient use of the ESIF. Implementing Partnership Agreements, Member States must assess whether they fulfil these criteria.

Thus, in relation to Thematic Objective 4, the conditions are that a Member State must promote cost-effective improvements of energy end-use and cost-effective investments in energy efficiency of new and renovated buildings. Further, the actions must promote high-efficiency cogeneration of heat and power and have to support the production and distribution of renewable energy sources. In relation to Thematic Objective 5, the condition is that a Member State must provide national or regional risk assessment for climate-related disaster management. For each of these conditions, there is a list of criteria based on which it could be concluded whether they are fulfilled. In case of non-compliance with these ex-ante conditionalities, Member States are obliged to develop an action plan eliminating the occurred compliance gap.
Programming climate actions by DFIs and international climate funds

DFIs and climate funds’ programming framework for climate change differ. **DFIs within their broader development and poverty reduction objectives are taking actions to mainstream and maximize the share of their development portfolio to climate change** and phase-out investment in fossil energy. For example, the EIB’s Strategy for Climate Action and Environmentally Sustainability adopted by the Board in November 2019 aims to provide EUR 1 trillion in funding for investments in sustainable projects by 2030, to increase the share of its financing dedicated to climate action and environmental sustainability to reach 50% of its operations in 2025, and to end financing for fossil fuel energy projects from the end of 2021. **Climate funds have been set-up with primary goal of providing new and additional finance to developing and emerging countries to finance their national climate change mitigation and adaptation actions**, in line with commitments under the Paris Agreement and the principles outlined by UNFCCC.

DFIs and climate funds deploy a range of instruments to finance climate actions, predominantly debt at concessional terms complimented with grants (in the form of technical assistance). Increasingly, climate funds, such as the GCF and GEF, in their climate programming strategies are focusing on reducing risks and addressing barriers to investment in climate actions to create enabling environment for effective scaling-up of the impact; see for example the evaluation of GEF support prepared by its GEF IEO (2019a).

Example: Lithuania

In order to address **Thematic Objective 4**, Lithuania’s Partnership Agreement planned to support thermal efficiency retrofits of residential buildings, public buildings, and multi-apartment buildings; the latter - with help of Energy Service Companies (ESCO). Further investments were dedicated to support electricity and district heat production from renewable energy, installation of combined heat and power, and replacement of inefficient boilers in individual houses. To ensure the supply of renewable energy fuels, it was planned to develop a balanced biofuel collection and processing infrastructure. Moreover, power distribution networks were thought to be upgraded with advanced networks; more efficient transformers to be used. For the industrial sector, application of technological measures to increase industrial energy efficiency, and energy audits were planned.
Additional investments were allocated to the increase of biofuel use in the transport sector, coordinated, integral and sustainable public transport system in major cities, replacement of public transport with that featuring smaller adverse environmental impacts, introduction of pedestrian and bicycle transport infrastructure, integrated multimodal public transport, and combined transport travel systems. Further investment was for the modernisation of lighting systems in urban public spaces (EC, 2014a).

With respect to Thematic Objective 5, Lithuania planned funds for the reduction of the vulnerability of natural ecosystems and national economic sectors. Therefore, efforts thought to be undertaken to monitor and assess the impact of climate change on the Lithuanian territory, to forward information on the impact of climate change to various interest groups, and to improve the climate change-induced disaster management, including rescue services dealing with the consequences of floods and other climate change-induced disasters. These interventions especially thought to focus on regions most heavily affected by climate change, namely the Baltic sea cost and the Lower Nemunas River area. Further funds were allocated to develop and renovate wastewater treatment facilities.

Example: Slovakia

In regard to Thematic Objective 4, the Partnership Agreement of Slovakia planned investment to achieve GHG emission reduction via the introduction of cogeneration of power and heat and effective district heating systems. It also planned to support energy savings measures in public and residential buildings. Furthermore, it allocated funds to support energy efficiency in industrial buildings and small and medium enterprises (SMEs), the reduction of the energy intensity of energy installations, and the introduction of measurement and control systems in the industry sector.

The Partnership Agreement also planned to support the promotion of new renewable energy technologies and fostering the integration of decentralised energy production. A special attention was put on awareness raising and behavioural changes towards low carbon technologies. Moreover, policies reducing the administrative burden on data providers for energy consumption and energy production out of renewable energy sources were to introduce.

Persistent risks exist however in changes required in the entrepreneurial environment and the integration of renewable electricity into the network. The country’s greatest renewable energy potential, according to the Partnership Agreement and associated government energy policy, is biomass, with a theoretical potential of 120 PJ. However, its prices are growing whereas its use cannot always be accounted as sustainable. A further development of hydro energy faces technical and ecological limitations (e.g. a built-up countryside, important ecological areas and public resistance). The potential of biogas use faces problems with the use of agricultural land. The potential of solar and geothermal energy is underexploited, they still make up less than 1% of heat production.
With respect to **Thematic Objective 5**, Slovakia planned investment in climate adaptation projects, like ecosystem approaches, the creation of "green" jobs and public health protection. Slovakia also planned to implement measures preventing, mitigating and managing climate related risks like floods or landslides. Furthermore, it thought to support the development of climate change risk and emergency management systems by improving the system for collection, analysis and monitoring of climate risk data.

Slovakia also planned to promote activities which help to improve the land quality management, leading to an increase of the organic content in soil. Furthermore, the degradation of soils was to prevent, and the consequences of droughts to moderate, by supporting investments in advanced irrigation technologies. The afforestation of areas damaged by wind or climate change, to restore soil and water protection functions, was another key adaptation measure. In agriculture, investment in hydro amelioration and drainage systems were planned to increase the flood resilience and help to preserve areas with high nature value.
3.2

Success factors

3.2.1. Negotiation as a partnership and sufficient negotiation time

The way how negotiation process is organized matters a lot for the eventual success of the program. The focus on partnership building throughout the negotiation process is important in order to formulate programming objectives and priorities in such a way that they are acceptable and politically feasible for both sides. Several ESIF negotiators from Managing Authorities of Member States referred to the ESIF negotiations as negotiations between equal parties, when both could well impact the outcome, as regulated by the EU Regulation on the European code of conduct on partnership in the framework of the European Structural and Investment Funds (EP, 2014). In contrast, the programming of international donor support for climate has more a stakeholder consultation than negotiation flavour.

Even the language of the key documents carries an important sign, i.e. “the Partnership Agreement” as it is used in the ESIF programming versus “the Grant Agreement” or “Funding Agreement” as is the prevailing practice in the international climate finance, as presented in Box 3. Partnership envisages collaboration towards achievement of common goals, whereas “grant” implies more unequal and top-down relationships between the parties. Contrary to the grants for third parties, the ESIF are considered as a solidary mechanism among the EU Member States and a mean to reach common EU objectives, defined as economic and social cohesion. The EU cohesion policy is guided by the EU 2020 strategy for 2010-2020 and the Green Deal Agreement for 2020 - 2050. Even though we cannot draw full parallel between the EU and international climate finance, the EU’s partnership-based approach does offer useful lessons for the architecture of global climate finance and the achievement of global climate goals.
Implementation structure and legal arrangement for DFIs and climate funds vary. For example, the WB Group’s Country Partnership Framework (CPF) signed between the WB Group and the partner country government is aimed at making its country-driven model more systematic, evidence-based, selective, and focused on the Bank’s twin goals of ending extreme poverty and increasing shared prosperity in a sustainable manner. Within the framework of CPF individual projects are then signed off in the form of either Grant or Loan agreements depending on the instruments used to achieve specific project objectives.

Climate funds, such as the GCF, do not enter into legal partnership agreements with the governments, but act through the intermediaries, i.e. in case of GCF - Accredited Entities (AEs), domestic or international organizations which have passed through accreditation process with GCF Board and are eligible to apply for and implement GCF-funded projects. As of March 2020, GCF has approved USD 5.6 billion in funding for 129 projects across 108 countries and 95 Accredited Entities, including 43 national, 13 regional and 39 international Accredited Entities (GCF 2020).

Consensus building in a partnership inevitably requires more time than in the top-down approach the programming is dominated by the donor. Even though the lengthiness of negotiation process explained below and presented in Figure 3 has been cited as its weakness (European Court of Auditors, 2017), from the perspective of achieving the final goal and maximizing climate and local benefits it can be considered as a strength and an important success factor.

Formally, it took ca. one year to adopt all Partnership Agreements and ca. two years to adopt all Operational Programmes. The European Commission asked Member States to draft their Partnership Agreements and Operational Programmes by 2013. By the end of 2015, all these documents were adopted. European Court of Auditors (2017) estimated that it took in average 242 days to negotiate Operational Programmes from the 1st submission to their final adoption.
However, in reality the negotiation process took even longer. Prior to the adoption of Partnership Agreements, the European Commission and Member States negotiated on the background legislation, i.e. the CPR. Prior to drafting the CPR and CSF, the European Commission requested to conduct an Impact Assessment (EC, 2011), which suggested a range of new or revised features as compared to the previous regulation\(^2\). The negotiations on the adoption of CPR started at the end of 2011 and ended December 2013. By 2016, the European Commission adopted the secondary legislation embracing seventeen implementing and delegated acts (European Court of Auditors, 2017).

\(^2\) Each new initiative proposed at the EU level that are expected to have a significant economic, social or environmental impact must go through an Impact Assessment suggesting improvements and alternatives. Initiatives include legislative proposals, non-legislative initiatives that define future policies, as well as implementing and delegated acts. [https://ec.europa.eu/growth/about-us/impact-assessment_en](https://ec.europa.eu/growth/about-us/impact-assessment_en)
Besides the formal dialogue, there was also an informal dialogue between European Commission and Member States on Partnership Agreements and Operational Programmes, which facilitated their adoption. Prior to the drafting of Partnership Agreements and Operational Programmes, in 2012 the European Commission prepared a Position Paper for each EU Member State. In the papers, the European Commission analysed the main challenges faced by Member States in relation to the Europe 2020 strategy and provided its view at the most relevant priorities for ESIF funding. The European Commission’s position papers served as a basis for the European Commission’s negotiations with the EU Member States.

Once the European Commission received Partnership Agreement drafts, it further provided informal observations to them. Furthermore, the European Commission provided a large volume of general and thematic guidance notes to its own staff and Member States with detailed recommendations and instructions on different topics, for example ex-ante conditionalities and performance review (European Court of Auditors, 2017).

3.2.2. Consultation process and alignment to national priorities

An extensive analytical and consultation process during drafting Partnership Agreements and Operational Programmes, which involves not only the European Commission and Member States negotiators, but also national stakeholders, including ministries, business representatives, social partners and civil society (Figure 4) – is the other success factor (EP, 2014; EC, 2017). The process is regulated by the EU Guidelines of Stakeholder Consultation Processes.
Lessons learned from the ESIF for international climate policy

The consultation with national stakeholders also takes place for the monitoring of Operational Programme implementation. Such extensive preparatory process which feature both analytical activities and engagement with stakeholders at various levels have led to the design of the program which best responds to national and local priorities as well as has been well received by stakeholders.

Maximum alignment of climate objectives and actions with national socio-economic and environmental priorities is critical to ensure buy-in, wider uptake, acceptance and demand from national stakeholders. Such close alignment is particularly important in the time of economic crisis, when the national authorities are seeking to utilize every opportunity to address domestic problems. We found the most successful measures those, which were programmed in line with national priorities. The Slovakia’s Action Plan for the decarbonization of the Upper Nitra Region and the multi-apartment building renovation program in Lithuania are such examples. Similar conclusions were drawn from the provision of international climate finance as discussed in Box 4.

BOX 4

Role of local benefits in the success of international climate finance

“Win-win” situations are likely to result in success. There is growing evidence from the international climate finance portfolio that projects delivering strong local benefits are more likelier to deliver high climate change mitigation benefits as well. For example, the evaluation of the GEF sustainable transport portfolio of 80 projects with over USD 50 million in grant financing concluded that climate actions in the transport sector are likely to be successful when they are based on “win-win” situations, such as park-and-ride improvements and integration of stations with pedestrian and cycling infrastructure that the GEF has financed in 16 suburban railway stations in Cape Town. Apart from increased convenience to public transport users, these measures also led to GHG emissions reduction through the increased use of public transit facilities (GEF IEO 2019b).

Example: Lithuania

Lithuania’s experience offered a powerful example in this respect when a national building energy efficiency renovation programme launched with the ESIF support generated large positive co-benefits for the local economy in the form of jobs, support to SMEs, improved bank liquidity, in addition to substantial CO2 emission reduction.

During the financial crisis of 2008, Lithuania was cut out of the ability to borrow on the private lending market. Thus, the government was extremely tight with financial resources. Moreover, the country was heavily dependent on energy imports. Lastly, poverty including energy poverty were high and district heat bills were a heavy burden for many low-income families living in the so-called panel buildings, having very poor thermal performance.

The goal of the Lithuanian government was to utilize the available ESIF funds to address as many urgent national priorities as possible, in difficult times of the economic crisis. The thermal modernization programme allowed reducing natural gas consumption for heating these buildings (62% energy saving were late achieved in average), reducing heating bills for these families, providing jobs of renovation works (300 companies were contracted; 14,000 jobs were created), and income for local producers (90% of materials were local) (Bučys, 2018; Serbenta, 2020). It also offered a new niche of financial products for local banks to start.
The evaluation of the Modernisation Program for Multi-apartment Buildings (KPMG Baltics et al., 2017), the research on public opinion implemented by BETA (2016), surveys of households conducted by Ropaite (2016) and Leivo et al. (2016), and research by Ščerbinskaitė and Krupickaitė (2017) also confirmed that the motivation of households who participated in the program i.e. resulted in its success was related to various co-benefits rather than energy efficiency as such. The motivation factors identified were aesthetic benefits; living environment i.e. sound isolation, comfort including the possibility to control individual dwelling heating; economic including an increase in assets value and a reduction in the flat repair cost next to lower heating bills, psychological such as the advertisement and positive feedback on successfully renovated homes, and legal i.e. the retrofit was conducted more than half of the building’s apartment owners’ voted for it (Figure 5). Later evaluations showed that indeed these expectations were justified with the building lifetime extended by additional 20-25 years, and the value of apartments grown by 15-25% (Bučys, 2018; Serbenta, 2020).

**FIGURE 5**

*Reasons of household participating in the energy efficiency retrofits of multi-residential buildings in Lithuania, breakdown by responds ticked the reason*

![Reasons of household participating in the energy efficiency retrofits of multi-residential buildings in Lithuania, breakdown by responds ticked the reason](image)

*Source:* constructed based on Ropaite, 2016.
Example: Slovakia

Similarly, according to our interviews in Slovakia one of the most successful interventions implemented with the ESIF support were those with strong benefits for local communities such as the improvement of public infrastructure in transport and building sectors. This was for example the support for the railway better service; for this, the Slovak Investment Holding provided Slovak Railways with a long-term loan from the Operational Program for Integrated Infrastructure to purchase diagnostic vehicles which will assist in the effective monitoring and maintenance of the railway infrastructure. The other well-received intervention was that of the Slovak Investment Holding to finance the development of e-mobility charging network by the private company, GreenWay, a Central European leader in the construction and operation of charging stations for electric vehicles.

3.2.3. Enabling socially sensitive decarbonization policies and reforms

The ESIF have been used across the board to mitigate negative socio-economic impacts of decarbonization policies thus making it possible for many difficult policy decisions to take an effect. All in all, the overall design of the ESIF as the main EU’s funding mechanism to advance EU’s cohesion objectives (as opposed to purely “climate finance” instrument) has enabled the countries to go beyond direct climate actions, mitigation and adaptation. It enabled implementation of broader social and economic reform processes which are essential for achieving longer term decarbonization goals.

Example: Lithuania

In Lithuania, massive ESIF-financed investment programme in energy efficient modernization of residential buildings has laid the grounds and prepared tenants for gradual removal of subsidies and liberalization of heat tariffs. This “difficult” policy has in turn created lasting incentive for consumers towards energy efficiency while at the same time saved a substantial amount of public money directed at subsidies and improved overall performance and competitiveness of the heat supply sector.

Example: Slovakia and Czechia

In Czechia and Slovakia, the ESIF have been used to support a painful, but essential reform process related to the transition to renewable energy sources and the transition of the coal and carbon-intensive industrial regions. The Strategy for Economic Restructuring of the Czech coal regions, including Usti, Moravian-Silesian and Karlovy Vary - RE-START - has been enabled by the technical and financial assistance from the ESIF (EC, 2019d). Similarly, development and implementation of the Slovakia’s Action Plan for Transformation of Coal Mining Region Upper Nitra has been co-financed by the ESIF.
The socio-economic analyses to improve the use of the ESIF in support of coal transitions in Slovakia (Filčák, 2019) concluded that successful closure of the mines would inevitably require enabling structural changes in the economy and the creation of new labor opportunities. It also noted that “ESIF may, due to its programming focus, system of priorities, and links with the EU and national goals and objectives, provide the key leverage in the regional transformation” by creating such enabling condition and supporting labor market.

Indeed, as indicated in Figure 6, the European Union and its financial mechanisms became the key development factor in the Upper Nitra Region. The support from the ESIF in the period 2014-07/2018 in the region indicates that the total value of projects was EUR 33.9 million in the reported period. Despite the positive role of the ESIF in support of regional economic development in coal regions, the study also points to a number of specific challenges and limitations in linking the Action Plan/National Strategy with specific funding opportunities under the ESIF, which will be further discussed in sections with limitation factors. Even larger support is currently planned with the Just Transition Fund, which was recently approved by the EU to assist the coal-intensive regions with their transition.

**FIGURE 6**

*Financial development incentives for the Upper Nitra Region (2006 – July 2018), million EUR*

- **de minimis**: 1.7
- **State Aid**: 14.0
- **ESIF July 2014-July 2018**: 33.9
- **Social Fund/Cohesion Fund 2017-2015**: 144

*Source:* Filčák, 2019
CHAPTER FOUR

Lessons learned: implementation
4.1

Key elements

4.1.1. Operational programmes

Operational Programmes concluded between the European Commission and Member States implement Partnership Agreements. Operational Programmes target a specific geographical region or a country-wide theme, for ex. the environment. There are 219 Operational Programmes implementing the ERDF and the CF across the EU (EC, online c).

Operational Programmes consist of Priority Axes, which represent priorities of EU Member States linked to Thematic Objectives and Investment Priorities set in fund-specific regulations. Each Priority Axis could be linked to more than one Thematic Objective. Besides the description of Priority Axes, Operational Programmes also contain a financial plan, an assessment of specific country needs, description of administration capacity, the coordination between funds, EU financial intermediaries, national instruments, and some other provisions.

To fulfil the objectives of Operational Programmes and ultimately Partnership Agreements, EU Member States implement a range of projects. The selection process of suitable projects is exclusively due to each Member State.

4.1.2. Horizontal climate mainstreaming

Horizontal climate mainstreaming implies that climate objectives are integrated in the investment decisions across the entire portfolio of Operational Programmes implementing Partnership Agreements. To introduce it, the CPR contains a guiding principle which is related to horizontal climate mainstreaming, the horizontal principle of sustainable development. According to it, Member States shall ensure mainstreaming of sustainable development into the ESIF.
It requires Managing Authorities of Operational Programmes to minimize environmentally harmful effects as well guarantee social, environmental, and climate benefits. For this, they should integrate climate objectives into the entire programming lifecycle, while (a) use most resource-efficient and sustainable options, (b) avoid environmental harmful investments, (c) incorporate “life-cycle” cost of investment decisions and (d) increase the green public procurement. Furthermore, Member States shall consider climate change mitigation and adaptation potential of all ESIF investment.

The CPR includes general provisions and rules on the content and adoption of operational programmes. Thereby, Article 96 (7) (a) of the CPR implies that an Operational Programme has to include a description of actions which will be taken in order to consider climate change mitigation and adaptation in the project selection, among other aspects.

Moreover, Operational Programmers of each Member State need to contain additional, more detailed information on climate change considerations, among other environmental impacts, for all major projects financed by the ERDF and the CF, in order to ensure their sustainability with respect to climate. Figure 7 present both vertical and horizontal climate mainstreaming in the ESIF.
Example: Lithuania

To implement strategic goals listed in **Thematic Objective 4** of the Lithuania’s Partnership Agreement, the Lithuania’s Operational Programme formulated **Priority Axis 4 “Promoting energy efficiency and production and use of renewable energy”**. The Priority Axis identifies five Investment Priorities.

The first Investment Priority “Promoting the production and distribution of energy derived from renewable sources” aimed at the **substitution of expensive imported natural gas by cheaper local biofuel in the district heating sector**. The two major projects of the investment priority were the modernisation of the district heating sector and the modernisation of cogeneration power plant using renewable energy in Vilnius and Kaunas. These regions account for almost 50% of district heat produced in the country (Republic of Lithuania, 2014).
The second Investment Priority “Promoting energy efficiency and renewable energy use in enterprises” tackled the **high energy intensity in Lithuania’s industrial enterprises**, which was twice as high as the EU average (Republic of Lithuania, 2014). The measures to support were the installation of cogeneration power plants and the promotion of renewable energy-based power generation capacities. Further, the introduction of energy audits of industrial enterprises was planned.

The third Investment Priority “Supporting energy efficiency, smart energy management and renewable energy use in public infrastructures, including in public buildings and in the housing sector” aimed to **reduce energy consumption in public buildings, multi-residential buildings, and improve energy efficiency of district heat networks**. Hence, the priority planned thermal retrofits of multi-residential buildings, thermal retrofits of buildings owned by the central government, modernisation of streetlighting infrastructure, modernisation of the district heating transmission networks to reduce heat losses, and replacement of inefficient boilers with efficient biofuel boilers in residential houses.

The fourth Investment Priority “Developing and implementing smart distribution systems at low and medium voltage levels” planned to foster the **testing and introduction of smart grid technologies**. Consequently, it planned to support investment in smart distribution network management technologies which provide new services to consumers, facilitate their active participation in the electricity market, and enable a more efficient and smoother grid management.

The fifth Investment Priority “Promoting low-carbon strategies for all types of territories, in particular urban areas, including the promotion of sustainable multimodal urban mobility and mitigation-relevant adaptation” planned to **promote sustainable mobility and develop environment-friendly transport** (Republic of Lithuania, 2014). The measures to support were the modernisation of public transport infrastructure, the prioritization of public transport by traffic control measures, development of the Park& Ride and Bike& Ride systems, and the promotion of the comparability of public and private transport.

**Priority Axis 5 “Environment, sustainable use of natural resources and adaptation to climate change”** combines all investments allocated to Thematic Objective 5 and Thematic Objective 6. It had six Investment Priorities, with one of them Investment Priority “Supporting investment for adaptation to climate change, including ecosystem-based approaches” explicitly linked to climate change. It addressed the increases in occurrence of floods, natural and catastrophic meteorological phenomena. To reduce their impacts on environment, infrastructure, economy and human health, the investment priority aimed to introduce of a **climate change database, an environmental monitor system and early disaster control stations**.
The total amount of the ESIF allocated Lithuania under the Operational Programme in the 2014-2020 period is EUR 6.7 billion. Thereby, EUR 3.5 billion is financed by the ERDF, EUR 2.1 billion by the CF and EUR 1.1 billion by the ESF (ESTEP Vilnius and Visionary Analytics, 2019). The amount of EU funds earmarked for projects under Priority Axis 4 “Promoting energy efficiency and production and use of renewable energy” is EUR 925 million, while the funds allocated to Priority Axis 5 “Environment, sustainable use of natural resources and adaptation to climate change” amount to EUR 37.8 million. Considering, that only a fraction of total investments under Priority Axis 5 relate to climate-relevant projects, in the current programming period, climate-related investment financed by the ESIF aggregates to EUR 1.0 billion, corresponding to a 15.4% share of the total ESIF in Lithuania (EC, 2020b).

Example: Slovakia

There are several Operational Programmes in Slovakia. The one which relates directly to climate change is the “Operational Programme: Quality of Environment” (Ministry of Environment of the Slovak Republic, 2014). To implement Thematic Objective 4 of the Partnership Agreement, the programme formulated Priority Axis 4 “Energy efficient low-carbon economy in all sectors”. The priority is divided into five Investment Priorities.

Investment Priority 4.1 “Promoting the production and distribution of energy derived from renewable sources” contained two specific objectives. The first objective “Increasing the share of renewable energy sources in gross final energy consumption of Slovakia” was to achieve by the construction and/or renovation of plants using biomass, biomethane, hydropower, thermal energy or renewable energy. The second objective “Increase of installed capacity of renewable energy sources -based small-scale installations in the Bratislava self-governing region” was to achieve by supporting the construction of small-scale plants using renewable energy.

Investment Priority 4.2 “Promoting energy efficiency and renewable energy use in enterprises” included the specific objective “Reduction of energy intensity and increasing the use of renewable energy sources in enterprises”. It was planned to be achieved by the provision for energy audits at SMEs and the implementation of measures arising from them.

Investment Priority 4.3 “Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector” defined the specific objective “Reduction of energy consumption in the operation of public buildings”. It planned to improve energy performance of public buildings and to support efficiency improvement and fuel switch to renewable energy in district heating systems.
Investment Priority 4.4 “Promoting low-carbon strategies for all types of territories, in particular for urban areas, including the promotion of sustainable multimodal urban mobility and mitigation-relevant adaptation” contains the specific objective “Increasing the number of local plans and measures related to the low-carbon strategy for all types of territories”. The aim was to achieve by supporting energy audits and the EU environmental management and audit schemes, by the development of energy services based on energy efficiency contracts for public administration at regional and local level, by the introduction of a system for regular consulting and raising awareness for public sector, energy managers, auditors, providers of energy services, and by extension of monitoring energy efficiency and use of renewable energy and other low-carbon measures.

Investment Priority 4.5 “Promoting the use of high-efficiency co-generation of heat and power based on useful heat demand” includes the specific objective “Development of more efficient district heating systems based on useful heat demand”. Therefore, two measures were planned: building, renovation and modernisation of heat distribution system, and building, renovation and modernisation of plants for high efficiency cogeneration of electricity and heat.

The priority axes of the Operational Programme: “Quality of Environment”, which are directly linked to climate change adaptation are Priority Axis 2 “Adaptation to the adverse effects of climate change with the focus on flood protection” and Priority Axis 3 “Promoting risk management, emergency management and resilience to emergencies affected by climate change”.

Priority Axis 2 consisted of Investment Priority 2.1 “Supporting investment for adaptation to climate change including ecosystem-based approaches” having two specific objectives. The objective “Reducing the risk of flooding and negative effects of climate change” planned to employ preventive flood protection measures, water retention measures in the urbanised landscape, update flood hazard and flood risk maps, update flood risk management plans, develop methodologies for assessment of investment risks related to adverse effects of climate change, and establish information programs on adverse effects of climate change and proactive adaptation options.

The second objective of Priority Axis 2 “Improving the effectiveness of remediation, revitalization and safeguarding of extractive waste repositories” planned to introduce a “polluter pays” principle, which should lead to recultivation of closed repositories and abandoned repositories of extractive waste.

Priority Axis 3 consists Investment Priority 3.1 “Promoting investment to address specific risks, ensuring disaster resilience and developing disaster management systems”. It included three specific objectives. The first objectives “Increasing the level of preparedness to manage emergencies affected by climate change” aimed to support modelling the development of emergencies, monitoring and evaluation of the risks related to climate change, and creating the systems of risk assessment and early warning and preparedness to deal with emergencies associated with climate change.
The second objective of Priority Axis 3 “Increasing the effectiveness of preventive and adaptation measures to eliminate environmental risks” planned to promote prevention, survey and remediation of emergency landslides directly related to excessive precipitation activity, and to conduct a hydrogeological survey focused on identification of water deficit areas and provision of sources of drinking water. The third objective “Increasing the effectiveness of management of emergencies affected by climate change” planned to optimize systems and services as well as strengthen the intervention capacities for management of emergencies at local and regional level and to create technical and institutional support of specialized rescue modules.

In Slovakia, the total amount of the ESIF allocated over the programming period 2014-2020 is EUR 15.3 billion. Additional to the transfer by the EU, Slovakia provides EUR 4.7 billion of own national contributions as co-financing. Thereby, 48.9% of the total budget, which amounts to EUR 20.0 billion is financed by the ERDF, while the Cohesion Fund contributes 26% to total available funds. Around EUR 1.4 billion was designated to projects under Thematic Objective 4 “Promoting energy efficiency and production and use of renewable energy”. Furthermore, EUR 1.1 billion was assigned to Thematic Objective 5 “Environment, sustainable use of natural resources and adaptation to climate change”. Consequently, climate-related investment allocated by the ESIF reaches EUR 2.4 billion in the period 2014-2020, which is equivalent to a 12.2% share of the total ESIF allocations in Slovakia (EC, 2016).

4.1.3. Grants or financial instruments

The financial support of selected, ESIF-financed projects can be issued via grants or financial instruments. Financial instruments in the understanding of the ESIF are other than grants financial instruments including loans, guarantees, equity or other risk-bearing instruments. Managing Authorities of Operational Programmes could disburse finance to financial instruments set up at EU level, managed directly or indirectly by the European Commission (Article 37 CPR). They could also disburse finance to financial instruments set up at national, regional, transnational or cross-border level, managed directly or indirectly by Managing Authorities. The disbursement can occur through financial intermediaries or a holding of financial intermediaries (a Fund of Funds).
The 2014 published **Investment Plan for Europe** set out the goal to at least double the use of financial instruments in the current programming period compared to 2007-2013 (EC, 2014e). The goal is justified by the following positive features of financial instruments (EP, 2016). They feature a revolving nature, meaning investment via financial instruments need to be repaid by the beneficiaries. Consequently, the funding via financial instruments implies a more efficient use of public funds than grants. The repayable nature of financial instruments further implies incentives for better performance, as projects financed by financial instruments have to prove themselves financially superior compared to grant-based projects. Moreover, financial instruments attract additional public and private funds, which increases the overall capital available, resulting in a leverage effect. Public institutions utilizing financial instruments also profit from the expertise of EU institutions and other involved administrating financial intermediaries for investment decisions, commercial operations and achievement of returns. Similar goals were set by international donor community as presented in Box 5.

To facilitate this, in the current EU budget period, a significant amount of **EU-funded technical assistance in project development is available**. Through the European Local Energy Assistance (ELENA), the Joint Assistance to Support Projects in European Regions (JASPERS), Joint European Support for Sustainable Investment in City Areas (JESSICA), as well as a few Horizon 2020 calls for Project Development Assistance. Furthermore, the European Investment Advisory Hub (EIAH) and the financial instruments advisory service Fi-Compass provide advice, practical know-how and learning tools.

Even though, each Member State is responsible for the implementation process of ESIF investment on the national level, **the EU also offers technical assistance to Member States for the implementation of financial schemes**. The main actor supporting EU countries in the disbursement of EU funds, is the European Investment Bank (EIB). Thereby, **the EIB acts as a fund manager, which supervises those national funds involving more complex and innovative financial instruments for which a Member States leaks institutional, technical or personal capacity.**

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**BOX 5**

**Financial instruments for implementing international climate finance**

Innovative climate finance instruments are required to de-risk climate investment and scale it up through private finance. There has been a lot of experimentation and innovation in the field of climate finance by DFIs and climate funds. Financial risk management products piloted by the World Bank, such as the Caribbean Catastrophic Risk Insurance Facility and Malawi weather derivatives— together with financing arrangements for Ethiopia’s Productive Safety Net Program— showed how to improve disaster relief financing (WB 2013).
The World Bank-led Partnership for Market Readiness (online) provides grant funding to building countries’ capacity to develop and implement domestic carbon pricing instruments needed for GHG mitigation and NDC implementation. Another good example is the UNEP’s Finance Unit, which through its flagship programs the Mediterranean Investment Facility, the Seed Capital Assistance Facility, the Renewable Energy Performance Platform and the GCF Readiness Programme, has helped leverage a projected USD 4.26 billion in sustainable finance in 43 countries featuring a wide range of financial tools and mechanisms: grants, fiscal measures, concessional loans, revolving funds, cost-sharing arrangements, equity, guarantees, and insurance mechanisms.

Example: Lithuania


When the first climate-related ESIF investments entered Lithuania in 2009 via the establishment of the JESSICA Holding Fund supporting energy efficiency projects in buildings, similar programmes had already been in place in Lithuania for more than 10 years. In 1996, the first Energy Efficiency Housing Pilot Project started in Lithuania, aiming at energy efficiency improvements in the residential building stock. The program established in cooperation with the World Bank, the Danish Ministry of Housing and Urban Development and the Netherlands Ministry of Foreign Affairs, was exclusively funded by public money and involved relatively limited financial resources of USD 28.6 million over the entire program period of 1996-2004 (Sirvydis, 2014).
In 2004, Lithuania adopted the Housing Strategy for the Multi-Apartment Buildings Renovation Program, in order to fulfil EU requirements on legislations fostering increased energy savings of households. The newly established Multi-Apartment Buildings Renovation Program financed out of the national budget, aimed to facilitate energy efficiency investments by combining commercial loans with up to 50% in state grants. Even though, the program was very successful among apartment owners, the relatively generous public grants scheme and the limited public financial resources assigned to the program resulted in the program’s suspension in 2007 due to the lack of sufficient public funding (Skema and Dzenajaviciene, 2017).

In 2009, building on the program Lithuania founded a lending scheme for energy efficiency in buildings relying on the JESSICA framework, a financial instrument developed by the European Commission and the European Investment Bank (EIB), managed by the EIB and financed by the ERDF. The JESSICA Holding Fund (Interreg, 2014) included a total fund size of EUR 227 million in the programming period 2007-2013, of which 127 million EUR were funded by the ERDF and EUR 100 million were co-financed by Lithuania’s national budget. The JESSICA Fund supplied financial resources to private banks, acting as financial intermediaries, disbursing money to apartment owner via concessional loans.

These soft loans consist of fixed interest rates below private market rates and a 2-year grace period during the construction phase, while no third-party guarantee and no loan insurance is required as well as maximal minor self-financing. Moreover, the scheme includes a 100% grant for the preparation of the renovation documents and 15% interest subsidy via debt write-off if a minimum of 20% energy savings are achieved and an extra 25% write-off if energy savings reach a minimum of 40%. The scheme further includes a 100% reimbursement of all renovations in apartments owned by low-income families (Kazlauskaite and Bumelyte, 2016). All financial measures based on grants are financed by the Lithuanian budget and not by the ERDF.

The aim of the lending scheme, relying on loans but also partially on grants, was to overcome the gap on the market for energy efficiency renovation in buildings using public financial resources most efficiently while realizing high energy savings. The lending scheme primarily focused on loans allowed the reuse of public financial resource in the medium to long term, whereas the grants based on actual energy savings provided the incentive to achieve high energy efficiency improvements. Furthermore, the simplification and professionalization of the implementation process, i. a. the introduction of an ESCO model relieving individual apartment owners from the loan administration, lead to a significant increase in the demand for loans under the JESSICA scheme (Sirvydis, 2014; Bučys, 2018).
With the end of the programming period 2007-2013, the JESSICA funding scheme was revised and improved, in order to attract more private capital, integrating private actors more intensively in the lending processes. The renewed JESSICA II Fund of Fund, established in 2014, uses private actors not only as financial intermediaries disbursing public funds to private debtors, but rather acquires half of its total EUR 300 million on the private capital market from pension funds and private banks, enabling the expansion of the entire program by a factor of two. The actual lending scheme of the multi-apartment renovation programme was only slightly adapted in the current programming period as the today’s maximal interest subsidy via debt write-off, cannot exceed 30% of the total loan amount (Kazlauskaite and Bumelyte, 2016).

The JESICCA Holding Fund did not set the targets to reduce CO2 emissions as such, but the calculated amount of CO2 reduction after the renovation significantly contributes to the country’s energy efficiency targets. KPMG Baltics et al. (2017) reports that the short-term target of Lithuania was to renovate 3500 – 4000 apartment buildings (9-11% of total apartment buildings in Lithuania) and that this would result in the reduction of CO2 emissions by 182-208 000 tones until 2020. The long-term goal is to continue 2015-2020 renovation process until 2030, renewing more than 4000 apartment buildings that would help reduce CO2 emissions by 208 000 tones.
4.2

Success factors

4.2.1. Shared management

The scope of Partnership Agreement and the way funding directions are defined at the country, regional- and/or country-wide theme - level as opposed to project-based programming typical for multilateral donors has also contributed to success. This approach where the detailed design of operational programmes and modalities of their implementation are left to Member State to work out has been found to be particularly instrumental. It enables the countries to take full account of domestic circumstances, constraints, as well as opportunities while staying within the general direction and framework determined by the Partnership Agreement.

This approach of the EU’s Cohesion Policy works is referred to the principle of shared management (refer to Article 14 and 15 in European Commission 2006). In the framework of shared management, the interaction between the EC and EU Member States is organized via regulations and guidelines. It declares, even though the European Commission is formally responsible for the implementation of the EU funds, the implementation is outsourced to Member States (Figure 8). Thus, these are Member States who assign the funds to the end recipient, i.e. companies, farmers, municipalities, etc. In order to ensure the systems effectiveness and to prevent irregularities, Member States have the responsibility to establish a management and control system, while the European Commission supervises if this system complies with EU regulations (Bachtler, 2011).

The shared management scheme features a high degree of flexibility. Depending on institutional system of a country, the scheme assumes a certain shape (Bachtler et al., 2017). In centralized Member States, the framework of shared management relies on centralized structure, too. Whereas, in federal countries, shared management build on regionalized systems with a significant devolution to regional self-governments. In mixed governmental systems, one can find a combination of sectoral and regional programs, sharing responsibilities between regional authorities and the central state. Due to the framework of shared management in a country, the institutional actors consist of a single or multiple Managing Authorities and implementing bodies like central government ministries, state agencies, regional offices of the state, regional development agencies and specialist management and delivery bodies.
The principle of shared management entails various benefits. It fosters the broad participation of social organizations in the promotion of economic growth. Moreover, the involvement of various policy levels results in the design of well-suited programs and projects. The principle further promotes the use of new public management practices and positive spillovers on domestic policy (Bachtler, 2011).

Nevertheless, the systems flexibility cause also a wide variation of regions/ local authorities’ participation in the ESIF policy. Furthermore, non-public sector actors are still underrepresented in the scheme and there are issues with sustainability of system, as strong and active partnerships across various institutional levels are hard to preserve (Bachtler, 2011).
The system of management and control that Member States had to set up under the framework of shared management according to the requirements of EU Regulations is rather complex. To set it up, the European Commission provided significant amount of technical assistance and played a supervisory role monitoring the compliance of Member States’ the arrangements. The system implies a complex system of multiple checks where the EU, national and programme-level bodies participate in a sequence of internal and external management and control activities. The system was referred by our interviews as the best practice: many of its elements they replicated into their national practices for other processes.

**Example: Lithuania**

The main institutional actors which were involved in the negotiation and programming process in the 2014-2020 programming period of climate-related projects in Lithuania funded by the ESIF are the EU Commission, the Ministry of Finance, the Ministry of Environment, the Ministry of Energy, and the Ministry of Transport and Communications. Figure 10 illustrates the responsibility assignment of the institutional actors at the different programming stages.

**Management and control system of the ESIF**

![Diagram of management and control system of the ESIF](source: OECD, 2020.)

Note: Lines and texts in orange suggest all the checks and control activities; Cohesion Policy expenditure is also subject to audit by the European Court of Auditors, although this is not visually presented in the graph.

**Example: Lithuania**

The main institutional actors which were involved in the negotiation and programming process in the 2014-2020 programming period of climate-related projects in Lithuania funded by the ESIF are the EU Commission, the Ministry of Finance, the Ministry of Environment, the Ministry of Energy, and the Ministry of Transport and Communications. Figure 10 illustrates the responsibility assignment of the institutional actors at the different programming stages.
In the first phase, the European Commission formulates the ESIF strategy with the contribution of Member States regarding the forthcoming programming period via regulations and guidelines. After the European Commission has defined the EU strategy with respect to the ESIF and determined the ESIF budget for each Member State, in phase two the Ministry of Finance as the Managing Authority in Lithuania, outlines the national strategy in the Partnership Agreement. It is developed with assistance of three other ministries – the Ministry of Environment, the Ministry of Energy, and the Ministry of Transport and Communication - depending on the respective area of intervention. The preparation goes hand in hand with a stakeholder consultation process. Thereafter, the European Commission has to authorize the final version. The Ministry of Finance was said to be an effective choice of a negotiator with the European Commission and mediator between the ministries because it is not biased to individual sectors or measures and because it can effectively monitor and analyse expenditure.

FIGURE 10

ESIF Programming in Lithuania

Source: Authors’ own illustration

In the next phase, the implementing ministries prepare the Operational Programme. Each implementing ministry is responsible for measures in its field of expertise, while the composition of the entire document is coordinated by the Ministry of Finance, backed up by an extensive public consultation process. The final Operational Programme has to be approved by the European Commission.

In the fourth phase, the measures stated in the Operational Programme are implemented by the relevant ministries. They create guidelines and eligibility criteria, regulating the selection mechanism and implementation process of climate-relevant projects.
Figure 11 illustrates the financial architecture for Priority Axis 4/Investment Priority 3 in the current programming period 2014-2020. There is no direct flow of investments from ESIF to distinct projects, but rather there exists national holding funds which channel ESIF investments via financial intermediaries to certain projects. The Ministry of Finance and the Ministry of Environment are the most important institutional actors, responsible for its design and supervision. There are two sources of capital flows to climate related projects. First, public investors like the ESIF or the national government provide capital. Second, private investors namely commercial banks or pension funds complement the public capital flow.

These funds are channelled to two different actors which manage holding funds in Lithuania: the European Investment Bank (EIB) and the Public Investment Development Agency (VIPA). The EIB is the world’s largest multilateral financial institution allocating finance to projects which support EU objectives. In contrast, the VIPA is a state-owned Lithuanian institution, founded in 2012, featuring the aim to increase and improve growth and modernisation of public infrastructure by providing financial instruments to private and public actors. Both actors provide finance via diverse funds serving different purposes and aims to commercial banks, which disburse the money to climate-relevant projects either by loans or guarantees. Certain lending schemes, financing energy efficiency projects in buildings, are further supported by grants and technical assistance of the Housing Energy Efficiency Agency BETA.

In the subsequent monitoring phase, the performance of projects is assessed via yearly progress reports issued by the implementing ministries, via a mid-term evaluation of the national program by the Ministry of Finance and via audits held by the European Commission. Due to the evaluations rather the implementing ministries or the European Commission are allowed introducing amendment proposals for selected projects, which have to authorized by the European Commission.

In the last phase of the ESIF programming, the European Commission conducts a comprehensive ex-post evaluation, examining the achievements and challenges of the ESIF investments in every Member State.
4.2.2. Long-term budget

Programming the ESIF through the use of non-grant financial instruments even though accounts for less than 3% across the whole EU has been highly praised by many stakeholders as a good practice and more efficient and market-oriented approach to promoting low-carbon transition as opposed to grant-only mechanisms. Success of financial instruments in the ESIF programming can be attributed to the high potential leverage and involvement of private sector as a principal financier of climate actions with the ESIF playing mainly the role of a facilitator and a catalyser.

It should be noted that the design of financial instruments requires a thorough preparation and analysis of the current market conditions, barriers and opportunities to be presented in the form of “ex-ante assessment”. Not every policy area is suitable for a shift of traditional finance i.e. grants to more innovative financial instruments (Figure 12). Therefore, an application of any financial instrument requires a compulsory ex-ante assessment evaluating the necessity of it and defining the priorities for the allocation of resources. Article 37 CPR requires to support financial instruments, which are on one hand expected to be financially viable and on the other hand do not give rise to sufficient funding from market sources. Dedicated manuals were issued on request of the European Commission to prepare ex-ante assessments for several thematic objectives (Fi-Compass online).
Disregardless whether Member States use grants of financial instruments, the ESIF’s long-term budget planning horizon was said in all interviewed countries to be instrumental in making the instruments more mature, bringing on board the private sector and the financial sector, and work out numerous barriers. It could send long-term signal to the market about funding availability which would not be possible to achieve under the national annual budget framework.

**Example: Lithuania**

The evolution of institutional framework of energy efficiency funds in Lithuania reflects the diverse challenges which accompanied the transformation process of basic grant-based programmes towards effective and efficient financial tools achieving significant climate-relevant outcomes and overcoming these challenges is only possible having a long-term commitment. **The first step in the evolution process has been the Energy Efficiency Housing Pilot Project initiated by the World Bank implemented in 2003.** It acted as a testing laboratory for the implementation of residential energy efficiency projects in Lithuania and paved the way for further national funded programmes by building up institutional capacities via the provision of technical assistance accompanying the pilot program.
The successful transfer of knowledge in Lithuania can be identified by the fact that the country managed to establish an own national program of energy efficiency in buildings after the end of program coordinated by the World Bank. However, well received by apartment owners, the loan-based scheme, relying on commercial loans secured by a state-owned insurance agency and supported by an up to 50% state funded allowance depending on the energy performance achieved, quickly run out of money as the financial resources allocated to the program were limited. With the cut back of state’s subsidies and the cease of additional support by the municipalities amidst the financial crisis, renovations came to an end due to the unwillingness of private banks issuing own renovation loans (Sirvydis, 2014).

The suspension of the program highlights the difficulties programmes in an underdeveloped market environment relying on generous grant schemes are facing. Those programmes bear the risk of an excessive demand caused by highly favourable conditions for borrowers may leading to financial bottlenecks if the resources of funding parties are restricted. Moreover, it is unlikely that the generated demand remains and is meet by a private supply after the subsidy is abrogated, as the market gap causing the mismatch of demand and supply potentially outlasts any state’s short-term intervention.

In the Lithuanian case, the low liquidity on the private lending market in the aftermath of the financial crisis in 2008, was overcome by the utilization of EU’s structural funds providing capital to commercial banks disbursing money to apartment owners for energy efficiency renovations. Furthermore, the redesign of the grant scheme, reducing the burden on the Lithuanian budget, was essential in order to prevent another shortage in the funding of the program.

The redesign included the trimming of the maximal subsidy by 20%. Therefore, a 15% write-off was granted if the renovation activities resulted in minimum energy savings of 20%. An extra 25% write-off of the loan sum was given if more than 40% energy savings were accomplished by the renovation. While the 15% subsidy was still financed by Lithuanian budget, the extra 25% allowance was covered by funds of the Climate Change Program which feed from revenues from the EU ETS (Bumelyte, 2013). The reduction of total percentual allowance per renovation loan and the distribution over multiple funding sources, caused a discharge of the national budget by 70%.

Besides the financial relief, the establishment of the JESSICA holding fund implied a major scaling up of the former nationally funded program, which was accompanied by the provision of a large amount of technical assistance, ensuring the design of efficient lending schemes and their effective supervision. With total financial allocations reaching EUR 227 million new challenges in the programme implementation occur. When the renewed programme was launched in 2010, ERDF funds ensured an adequate supply of well-designed soft loans for apartment renovations. However, this supply did not lead to a large increase in the demand for the soft loans among apartment owners.
There were several reasons impeding the demand increase for soft loans (Sirvydis, 2014). First, all apartment owners had to cooperate on the decision-making process regarding the building renovation. In practice, the often-diverse social status of apartment owners per building and their lack of energy efficiency knowledge prevented them from cooperatively taking the necessary decisions. Moreover, the renovations required from the apartment owners to commission a technical project, to negotiate contract details and to supervise the renovations, demanding tasks many apartment owners featuring little education cannot conduct. The difficult economic situation further discouraged apartment owners to apply for loans issued by commercial banks incorporating repayment obligations.

In order to overcome the administrative and economic obstacles and to stimulate the demand for soft loans, the Lithuanian government developed the “EnerVizija” implementation methodology (Skema and Dzenajaviciene, 2017). Under this scheme, building renovations are initiated by the municipalities, which appoint project administrators responsible for the project implementation and energy saving achievements. Homeowners solely decide via simple majority if they want their building being renovated under the investment scheme proposed by the municipality.

Furthermore, renovation loans are taken centrally by the building administration company and being repaid through each apartment’s monthly building-management fees, removing the burden of individual loans from apartment owners, enabling building administration companies to assess the overall credit risk.

For the management of the construction projects, technical assistance is provided to the municipalities by a consulting preparing technical documents which simplifying the supervision of work, the contracting and the management procedure. Thereby, the selection of building upgrades follows a standardized scheme based on a cost-benefit analysis, taking advantage of economies of scale via renovation projects comprising several similar buildings.

While the “EnerVizija” methodology and the introduction of a 100% grant covering all up-front costs of the technical documentation and project management resolved the barriers impeding borrowing applications leading to a significant rise in the demand of soft loans, the least wealthy apartment owners were still lacking strong incentives to participate in the loan scheme. Low income families in Lithuania usually receive state assistance for domestic heating expenses. Consequently, these families do not profit monetarily from the energy efficiency renovations.

In order to create incentives for low income apartment owners, a 100% subsidy for families receiving supplementary assistance was introduced covering all renovation costs (Bučys 2018). Simultaneously, in 2013 a law was passed, allowing the cut back of domestic heat compensation for low income families refusing to participate in the renovation scheme. The 100% allowance for all renovation costs and the potential cut-back of domestic heat compensations dissolved the insufficient involvement of low-income apartment owners in the renovation activities.
4.2.3. Implementation arrangements and technical support

Technical Assistance is eminently important for the self-empowerment of less developed countries enabling them to continue projects without outside support in the medium- to long-term, as many of them lack strong institutions and extensive experience on managing complex policies. Workable implementation arrangements and provision of additional technical support throughout all ESIF project preparation and implementation process have been critical for the success, i.e. timely disbursement of funds and achievement of intended results. Experience of Member State provide ample examples of successful and not very successful practices which either contributed or on the contrary jeopardized implementation. The importance to wisely design technical assistance is also identified by experiences in international donor support for climate, as discussed in Box 6.

BOX 6

Technical assistance in the provision of international climate finance

International experience with implementing climate finance programs and projects dates back to early 1990s when the first international instruments, such as the GEF, has been established under auspices of UNFCCC. Throughout the decades which follow substantial knowledge and lessons have been accumulated by the agencies, programmes and recipient countries.

They attest that policy changes, investment support and donor coordination should go hand in hand for the climate actions to happen at scale. The EBRD’s experience in Ukraine with the energy efficiency sector reform is one of the best illustrations of the effectiveness of such approach due largely to a good combination of skills, knowledge of local context, availability of resources for stand-alone technical assistance projects, embedded technical assistance and grants in large and small-scale investment projects, and strong coordination mechanisms established with other international financial intermediaries and donors working in the country (EBRD 2014).
Example: Lithuania

As detailed in the previous section, Lithuania is an example of putting in place an effective and targeted institutional system to provide technical assistance. Lithuania’s Housing Energy Efficiency Agency (BETA) has been set-up specifically to support the implementation of energy efficiency-related Operational Programmed and it has played a critical role in enabling Lithuania to implement one of Europe’s largest building modernization program and reach a scale. It has assumed the following functions:

- support to the housing administrators and municipalities with project preparation and implementation;
- providing technical administration of the energy efficiency project implementation (evaluation of the applications, supervision of project implementation, monitoring, administering ESIF grants provided to the project implementers);
- organizing capacity building programs, trainings and public information activities (Bučys 2018; Serbenta 2020).

The experience clearly demonstrates the impact of the right choice of technical assistance made at a certain stage. Once the municipalities started being involved as a partner of multi-apartment building retrofits, the number of completed projects grew factor five (see Figure 13).

**FIGURE 13**

*Results of Lithuania’s residential energy efficiency building program 2005 - 2019*

![Graph showing results of Lithuania’s residential energy efficiency building program 2005 - 2019.](source: Serbenta (2020).)
Example: Slovakia

The government of the Slovak Republic introduced a number of policy changes and practical measures to address the shortcoming related to the ESIF implementation. First, methodological instructions have been developed to ensure coordination of synergistic effects between the ESIF and other instruments of the EU and Slovak support. In addition, in 2017, the Action Plan aiming at strengthening transparency and simplifying implementation of ESIF has been developed and adopted by the Government of the Slovak Republic. For each of the two areas, transparency and implementation, the Action Plan describe a comprehensive set of measures covering the complete spectrum of processes from project initiation, measures related to electronic communication, measures aimed at a transparent evaluation process, possibility of using open data, etc. In total, the Action Plan contains 38 measures in 26 areas as presented in Figure 14 (Office of the Deputy Prime Minister of the Republic of Slovakia for Investment and Digitalization, 2017).

One of the best practices in the ESIF programming identified by the Action Plan is related to participatory preparation of the calls for proposals with representatives of target groups and civil society organizations. Such participatory approach helped improved the quality of the selection process, as well as the quality of the actual implementation of projects. At the same time, a suitably set call, understandable for applicants, helps to reduce the number of questions from potential applicants and thus to reduce the administrative burden. In the 2014-2020 programming period, the level of cooperation between the ESIF Management Authorities and representatives of non-governmental organizations, as well as representatives of professional and sectoral associations in Slovakia, increased significantly.
One specific example of institutional set-up to implement participatory approach in practice is the working group under the Monitoring Committee for the Support of Green Measures established to support preparation of the Calls for Flood Protection under the Operational Program “Environmental Quality”. The members of the working group are representatives of organizations operating in the sector, including representatives of non-governmental organizations. Due to the good practice in the preparation of the calls in question, the Operational Programme’s Managing Authorities plans to extend the scope of the working group to the preparation of other calls in the area of water management.
4.3

Limitation factors

4.3.1. Limited project preparation and implementation capacities

Limited capacities to identify and prepare quality funding proposals in line with all established requirements has been widely recognized by stakeholders as a major constraint for the ESIF implementation, in particular prevalent among domestic SMEs and small municipalities. Larger companies and public authorities in bigger municipalities or regions are better positioned to access the ESIF funds due to higher staff capacities, access to information and prior institutional and/or corporate experience with such instruments.

Our interview results suggest the importance of well-coordinated and targeted provision of technical assistance throughout program delivery and implementation. This is particularly relevant when it comes to design of non-grant financial instruments; to be effective it is essential to ensure there are no parallel grant or subsidy scheme which distort the market and disincentivize private engagement.

Example: Slovakia and Lithuania

In Slovakia, for example, weakness in capacities for project development has been identified as a major constraint in research and innovation (EC, 2019d), which can partially, explain the low share of this sector in the ESIF portfolio. In spite of the horizontal climate mainstreaming requirement, the research and development (R&D) disbursement linked to climate is negligible. This experience re-emphasizes the importance of targeted technical assistance and special provisions to support smaller, less capacitated stakeholders and/or less developed regions within the country to a level playing field and ensure their more equal participation and benefit sharing from the ESIF.
Experience of Lithuania with creating BETA, the Housing Energy Efficiency Agency, demonstrated the importance of having a single responsible entity for coordination of technical assistance and grant assistance with the financial instruments in the residential energy efficiency sector. In contrast, the absence of such single body, which would support and coordinate the implementation of energy efficiency investment in buildings has created a certain fragmentation of the sector in Slovakia, where the Slovak Investment Holding being responsible for non-grant instrument targeting SMEs and residential buildings, while the Agency for Innovation and Energy being in charge of grant support scheme for energy efficiency in public buildings. Similarly, in Lithuania, relatively lower progress with energy efficiency in public sector buildings have been attributed to the presence of parallel grant-financed scheme though the state budget, which has disincentivized municipalities from applying for loan financing. Such parallel implementation structures and mixed used of grant and non-grant instruments for similar measures does not create a strong signal to the market and consequently limited the scalability and potential of the programme to have transformative impacts.

4.3.2. Administrative and regulatory hurdles

Public procurement rules have emerged as a common theme and prevailing bottleneck in the implementation of the ESIF resources by public sector actors. The main bottleneck here is related to the fact that EU regulations treat grant and non-grant instruments as equal and the subject to the same set of rules defined in the legislation on the State Aid.

It was also found that the complexity and number of rules and requirements associated with the ESIF implementation have put an extra toll on administrative capacities of the Managing Authorities often at the expense of strategic management, innovation and project support. Complexities of the rules have also deterred several categories (e.g. SMEs) of potential beneficiaries from applying for support.

Therefore, standardization and simplification of project management, in particular for public procurement, as well as provision of targeted technical assistance to all market participants was identified to be essential for private sector participation and buy-in of such schemes.
Example: Slovakia

The need to comply with stringent public rules and procedures have been found particularly detrimental to the speed and effectiveness of the ESIF implementation in Slovakia. It has been cited by several stakeholders across different sectors as the main reason for some of the lowest in EU rates of the ESIF spending which in 2019 (i.e. 4 years before the end of implementation period for 2014-2020 program) stood at 33% (Figure 15). In 2017, the Slovak Government adopted the "Action Plan for Strengthening Transparency and Simplifying Implementation of the ESIF" (Office of the Deputy Prime-Minister of the Republic of Slovakia for Investment and Digitalization, 2017), but with limited impact so far.

Administrative and regulatory hurdles described above have also jeopardized and limited the scope for innovation as regards design and implementation of financial instruments. Several innovative ideas proposed by the Slovak Investment Holding (e.g. issuance of the corporate bonds by SMEs or equity investment in energy service companies) were not possible due in part to contradictory EU regulations.

FIGURE 15

The ESIF implementation Progress for Slovak Republic (2014-2020)

Source: European Commission online b.

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3 The second lowest in EU after Croatia which stood at 31% by end of 2019.
Example: Lithuania

The interviews with the municipalities and the apartment buildings administrators showed that the respondents usually evaluate the suitability of modernization as positive or average (Lipnevič, 2015). Nevertheless, they experienced the number of administrative and regulatory hurdles. First, the challenge was uncertain and frequently changing legal regulations. For example, the supervision rules of the apartment building modernization were changed seventeen times during the programme existence. Second, the obligations of entities involved in the modernization of apartment buildings were not sufficiently clear for the apartment buildings administrators. For instance, they were not always sure in VIPA’s obligations, financier responsibilities, and payment deadlines. Third, different institutions involved had different requirements for payment documents. This concerns BETA and financial institutions. Forth, the energy distributor, AB “Energijos skirstimo operatorius” could not disclose debtors due to personal data protection. This did not allow the administrator to address the debtor to agree on different payment options. Certain financial institutions have the requirements not to exceed indebtedness; for example, AB Šiaulių Bankas requires that indebtedness of all the apartment building do not exceed the limit of 10 %.
CHAPTER FIVE

Lessons learned: impact
5.1 Key elements

In order to ensure the effectiveness and quality of each Operational Programme, a Member State shall carry out ex-ante evaluations, monitoring during the programming period, and ex-post evaluations. Each Member State establishes a monitoring committee to monitor the implementation of an Operational Programme. The European Commission also provide regular reports which serve as the basis for their discussion at the European Parliament as presented in Figure 16. To assist the Member States with the establishment of these processes, the European Commission provides significant amount of technical assistance.

FIGURE 16

Key ESIF-related reporting of the European Commission and EU Member States

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<td>By the Member States</td>
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<tr>
<td>Annual Implementation reports for each OP</td>
<td>May/Jun(*)</td>
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<td>Progress reports for the Partnership Agreements</td>
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<td>By the Commission</td>
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<td>Report on the outcome of negotiations of Partnership Agreements and programmes</td>
<td>Dec.</td>
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<tr>
<td>Summary reports based on Member States’ annual implementation reports</td>
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<tr>
<td>Strategic reports based on Member States’ progress reports</td>
<td></td>
<td>Dec.</td>
<td>Dec.</td>
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<tr>
<td>Synthesis of ex ante evaluation reports (only for EMFF)</td>
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<tr>
<td>The European Parliament, the council, the CoR, the EESC</td>
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<tr>
<td>Reports on implementation of common CAP monitoring and evaluation framework</td>
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<td>Spring</td>
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<tr>
<td>Report on implementation of a monitoring and evaluation report</td>
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<td>Spring</td>
<td>Spring</td>
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[*] As regards the cohesion policy and the EMFF, the AIRs for 2016, 2018, 2020 have to be submitted by the end of May, while for the EAFRD—by the end of June

Source: EC, 2015.
5.1.1. Monitoring and evaluation

Ex-ante evaluations have to be undertaken by the Managing Authority in each Member State, which is responsible for the programmes’ preparation and need to be submitted to the Commission simultaneously with the submission of the corresponding Operational Programme. The ex-ante evaluations shall contribute to the EU strategy for smart, sustainable and inclusive growth, while taking into account the respective thematic objectives and priorities, the national and regional need, potential chances for development and the learnings from previous programming periods. Further they shall comprise the requirements for strategic environmental assessment by considering climate change mitigation actions.

Each Member State submits annual implementation reports of Operational Programmes reflecting the performance of the ESIF use. The reports provide information on financial data, the common and programme-specific indicators, as well as quantified target values. Further, a more extensive analysis is presented in two progress reports towards the implementation of Partnership Agreements in 2017 and 2019. The progress reports discuss the changes in development needs, report on the progress towards the Europe 2020 Strategy, and the fulfilment of programming principles.

Following the submission of annual implementation reports by Operational Programmes, the European Commission prepares an annual summary report of the progress achieved across the EU. By the end of 2017 and 2019, the Commission presents a strategic report and conclusions drawn from Member State progress reports to the Council, the European Parliament, the Committee of the Regions and the European Economic and Social Committee. Following their debate, the European Commission prepares reports on implementation of a monitoring and evaluation reports.

The monitoring of results follows a standardised approach, relying on a set of common output indicators, which help to assess the progress of all Operational Programmes at EU level. They correspond to the investment priority and type of action. The monitoring is further complemented by programme specific result indicators and programme specific output indicators, which are defined by the European Commission but only additionally introduced by the Member State if they match its national goals stated in the Operational Programme.

The most relevant common output indicators of the ERDF and CF investments with respect to climate change mitigation are:

› Additional capacity of renewable energy production (MW).
› Number of households with improved energy consumption classification (households).
› Decrease of annual primary energy consumption of public buildings (kWh/year).
Lessons learned from the ESIF for international climate policy

The most important common output indicators relating to climate change adaptation are:

› Population benefiting from flood protection measures (persons),
› Population benefiting from forest fire protection measures (persons),
› Total surface area of rehabilitation (hectares),
› Surface area of habitats supported in order to attain a better conservation status (hectares).

Table 1 presents the common output indicators as reported by Lithuania and Slovakia for the 2014-2020 budget period as of January 2020 (note: the budget period is not yet closed).

### TABLE 1

**Reporting of common output indicators by Lithuania and Slovakia, as of January 2020**

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Lithuania</th>
<th>Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of households with improved energy consumption classification</td>
<td>Planned: 30,000 Households; Decided: 54,150 Households; Implemented: 31,151 Households.</td>
<td>Planned: 37,799 Households; Decided: 37,799 Households.</td>
</tr>
<tr>
<td>Decrease of annual primary energy consumption of public buildings</td>
<td>Planned: 60 000 MWh/year; Decided: 50 219 MWh/year.</td>
<td>Planned: 279 585 MWh/year; Decided: 161 183 MWh/year; Implemented: 4 298 MWh/year.</td>
</tr>
<tr>
<td>Estimated annual decrease of GHG</td>
<td>Planned: 510 000 tCO2-eq; Decided: 509 606 tCO2-eq; Implemented: 66 070 tCO2-eq.</td>
<td>Planned: 760 290 tCO2-eq.; Decided: 231 272 tCO2-eq.; Implemented: 54 010 tCO2-eq.</td>
</tr>
<tr>
<td>Additional capacity of renewable energy production</td>
<td>Planned: 526 MW; Decided: 349 MW; Implemented: 8 MW.</td>
<td>Planned: 624 MW; Decided: 177 MW; Implemented: 145 MW.</td>
</tr>
<tr>
<td>Number of additional energy users connected to smart grids</td>
<td>Planned: 10 000 Users; Decided: 102 304 Users.</td>
<td></td>
</tr>
<tr>
<td>Total surface area of rehabilitated land</td>
<td>Planned: 20 Hectares; Decided: 18 Hectares; Implemented: 3 Hectares.</td>
<td>Planned: 351 Hectares; Decided: 175 Hectares.</td>
</tr>
<tr>
<td>Surface area of habitats supported in order to attain a better conservation status</td>
<td>Planned: 1 150 Hectares; Decided: 1 097 Hectares.</td>
<td>Planned: 20 131 Hectares; Decided: 8 305 Hectares; Implemented: 935 Hectares.</td>
</tr>
</tbody>
</table>

**Source:** European Commission, online b.

Note: Decided: values from selected projects; Implemented: values from fully implemented projects.

Lessons learned from the ESIF for international climate policy
After the completion of the programming period, the European Commission or the Member State in close cooperation with the Commission shall perform ex-post evaluations. These evaluations have the purpose to assess the effectiveness and efficiency of the ESIF and their contribution to the EU 2020 strategy for smart, sustainable and inclusive growth. All ex-post evaluations must be completed by 31 December 2024.

5.1.2. Tracking climate expenditure

To measure the progress towards meeting the climate-related share in the EU budget, the EC adopted a climate-marker tracking methodology based on Rio markers\(^4\) to identify the climate-relevant share of 2014–2020 disbursement from the ESIF. Three types of expenditures were defined: investments with a significant contribution counted to 100%, investment with a moderate contribution counted to 40% and investment with no contribution counted to 0% as climate-relevant spending (Figure 17). Each investment under the Cohesion Policy can be characterized by EU intervention codes defining nine broad categories of intervention and 123 separate intervention fields (EC, 2014d).

During the programming period, an evaluation plan shall be issued by the managing authority in each country. The plan shall determine the timeline for evaluations assessing the effectiveness, efficiency and impact throughout the implementation period, while including at least one study examining the impact of ESIF on achieving each priorities’ specific objectives. Moreover, all evaluations are audited by the European Commission, which may also carry out own evaluations of programmes.

FIGURE 17

**EU climate markers applied to the ESIF**

![EU climate markers (coefficients) applied to ESIF](image)

Source: adopted from European Commission, 2014d.

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\(^4\) In 1998, the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD) introduced ‘Rio markers’ to monitor and systematically track finance flows relevant to the Rio Conventions on biodiversity, desertification, climate-change mitigation, and adaption.
5.2

Success factors

5.2.1. Impact on climate policy development and implementation

The EU policy, with its binding targets and indicators provide the framework for defining priorities and steering processes at national level. For instance, Member States shall finance the areas where they face infringements (e.g. the Air Quality Directive 2008/50/EC), have difficulties with transition periods (e.g., EU Water Framework Directive 2000/60/EC), or are lagging behind the target numbers (e.g., the percentage of recycled municipal waste). The EU climate policy setting or requesting its Member States to set national targets for energy efficiency, renewable energy, and greenhouse gas (GHG) emission reduction is an important part of the EU policy.

In the EU, climate ambitions of Member States are very different: some countries are highly committed to climate protection, others do not have a strong national commitment. The results of our interviews show that clear EU climate targets were crucial in order to push the Member States with less ambitious commitments towards more climate protecting policies. Especially prominent is the impact of the ESIF on the climate policy implementation in Member States.

Example: Lithuania

According to the interviews conducted, the role of the EU Funds was significant for the development of climate policy in Lithuania in the programming period 2007-2013. Climate change was not the core of the political agenda of Lithuania during the 2007-2013 programming period. The Lithuanian government was looking for any source of funding to stimulate the demand in the aftermath of the financial crisis. At that time, many programmes have already been in place, however being tight with public budget, the government was searching for programmes which did not compromise these already tight resources. Therefore, it tried to redesign those programmes, which did not require significant national public budget inflow and which have not been implemented yet. It further tried to speed up their implementation process, in order to soften the economic downturn by an increased consumption rate.
The upfront investment requirements for climate change programmes were and are very high and so are the perceived risks of such investment by the domestic financial sector: the returns are distributed over a longer period of time than the market can support (Rogoža et al. 2017; Ruzgys et al. 2013). Therefore, the ESIF played a crucial role addressing the long payback period and access to affordable capital. Thereby, it does not make a difference if a programme is nationally co-funded or entirely financed by the EU funds. In the absence of EU funding, many ongoing climate programmes probably would not be in place.

Example: Latvia

According to the interviews conducted, the EU Funds did not affect the decisions regarding the design and ambitions of climate policy of Latvia, because the country already supported international climate policy, even before the EU Funds included climate targets in their regulations. However, the ESIF played a crucial role in the implementation of this policy: at present, the implementation of Latvia’s climate policy is almost fully financed by the ESIF. In absence of EU Funds, Latvia would only be able to provide a small share of funds to support the delivery of climate projects as compared to the current volume. There have been however complex bureaucratic processes associated with the ESIF implementation, which resulted in delays of programmes’ implementation.

Example: Slovakia

In case of Slovakia, the ESIF implementation informed development of the two main strategic documents in the environmental and climate change sectors, the Strategy of the Environmental Policy of the Slovak Republic until 2030 (Envirosstrategy 2030) and the Low-Carbon Strategy of the Slovak Republic until 2030 with a view to 2050 (Low-Carbon Strategy). Flood protection is one of the intervention areas featured strongly in the Envirosstrategy 2030, including the commitment of the state to ensure financing of flood protection measures consistent with plans to target areas identified as being at significant risk for floods. Similarly, the Strategy puts a significant emphasis on energy efficiency as an area where additional public sources will have to be provided to further promote deep retrofit of public and residential buildings, as informed by the ESIF experience with financing energy efficiency building retrofits, including via non-grant financial instruments.
5.2.2. Replication to other sectors

The diversification of portfolio of national funds by transferring best practice to various fields, which demonstrate market inefficiencies in the provision of public goods, illustrates Lithuania’s ambition to apply revolving financial schemes in order to use public funds most efficiently. Even though, not all new funds exhibit convincing results so far, the history of the multi-apartment building renovation programme in Lithuania highlights the success of long-term financial schemes, adjusting their design to market conditions and allowing the learning of both private and public actors. The Lithuanian experience also raises a lot of interest from other Member States and even outside of the EU. Its elements are being studied and considered for replication at least by three other countries.

Example: Lithuania

Besides JESSICA II Fund of Funds, Lithuania established several new funds have been in the period 2014-2020 (Dapkutė–Stankevičienė, 2018). Managed by the state-owned VIPA agency, founded in mid-2013, they exemplify the transfer of knowledge and know-how from European institutions like the EIB to national entities in the operation of complex financial schemes. The funds exhibit a similar design as the JESSICA fund in the previous programming period but target at different energy efficiency projects, like modernisation of street lighting, governmental and municipality buildings and investment in cultural heritage sites and wastewater management.

Thus, the design of the Multi-Apartment Renovation Programme was transferred to (Dapkutė–Stankevičienė, 2018):

- The Energy Efficiency Fund uses a loan-based lending scheme for renovations of central government buildings and a guarantee-based scheme supporting loans granted by commercial banks for street lighting modernization projects.
- The Municipality Owned Buildings Fund provide financial resources for renovation loans of municipal buildings,
- The Cultural Heritage Fund targets the market irregularities in the provision of loans for privately owned cultural site renovations.
- The Leverage Fund provides guarantees to commercial banks so that they would in turn provide loans for the modernisation of multi-residential buildings.
- Similar funds are planned offsetting market failures of public goods like water and waste management, transport, education and health, and others.
5.2.3. Private sector engagement and scale up of private finance

Being able to scale up private capital with limited public finance for public goods is one of the key success features of a financial instruments. As discussed in 4.2.2, this is likely to be a long-term task for a developing market, but we do observe this success in Central and Eastern Europe. While it took somewhat more than fifteen years to scale up private finance for the multi-apartment buildings in Lithuania, it now contributes more than half of the program funds starting from zero (Figure 18). The next step of Lithuania is to leverage private finance also for other measures in its other funds.

**FIGURE 18**

*EU climate markers applied to the ESIF*

- **1996-2004:** 100% World Bank grant
- **2004-2007:** 50% State budget, 50% Private banks
- **2009-2013:** 56% State budget, 44% ESIF
- **2014-2020:** 67% ESIF, 33% Private banks and pension funds

*Source:* Authors’ own illustration

*Lessons learned from the ESIF for international climate policy*
Slovakia’s experience similarly demonstrates the importance of the private sector involvement in design and financing of climate investment. According to interviews, the ESIF’s support for Slovakia’s SMEs has been critical in both improving energy efficiency and raising competitiveness of this important economic sector. Involvement of local banks, as delivery partners for ESIF-financed financial instruments for energy efficiency projects, played an important role in developing a more market-based approach and creating confidence among financial institutions about bankability of such investments.

**Example: Lithuania**

The design of financial instruments has become more sophisticated since the introduction of the first EU fund, in order to attract more private capital for climate-relevant projects. The evolution from the JESSICA to the JESSICA II fund very well illustrates the maturing of financial instruments in Lithuania. Private actors changed from exclusively being financial intermediaries disbursing public funds in the JESSICA scheme, to active investors providing half of total capital for JESSICA II. In the last two decades, Lithuania with support of ESIF accomplished a major transformation in financing its climate investment in building sector from the publicly funded grant-only approach to the one where public funding is used much more strategically to de-risk private investment and provide essential technical assistance and financial incentives to the most socially vulnerable households.

The climate fund structure in Lithuania in the beginning of 2018 is described in Table 2. The EIB manages in the current programming period **the JESSICA II Fund of Funds and the Leverage Fund**. The Fund of Funds comprises EUR 150 million public money from the ESIF and has attracted EUR 70 million private capital from pension funds and banks by 2018. The leverage fund uses EUR 100 million ESIF money as leverage in order to collect EUR 500 million on the private lending market.

JESSICA II, featuring an established funding scheme, has already collected and disbursed the majority of its capital in the start of 2018. The Leverage Fund, while being a new and innovative financing scheme, is still in the development phase and has only started issuing governmental backed guarantees in 2018. The fund aims to achieve a leverage of 5 times the amount of public money invested by the ERDF. Banks engaged in the leverage fund will finance the loans for the modernisation of multi-apartment buildings solely with their own funds, only supported by the First-loss Portfolio Guarantee instruments financed by the ERDF. These guarantees offer an 80% risk coverage on a loan by loan basis with cumulative losses capped to 25% at the portfolio level (Gražinytė, 2018). The resulting overall portfolio coverage of 20% leads to a **5 to 1 multiplicator of public investments** and a potential mobilisation of EUR 500 million of private capital.

The VIPA also manages a fund which finance energy efficiency projects in multi-apartment buildings. The **“Multi-Apartment Modernization Fund”** consists of EUR 74 million ESIF and EUR 50 million capital from private sources, which is used to finance loan-based lending schemes managed by private banks for private apartment owners. By 2018, this fund has already disbursed over EUR 80 million for more than 237 projects.
Moreover, the VIPA manages the “Energy Efficiency Fund” including 98.6 million EUR, of which EUR 79.6 million come from the ESIF and EUR 19 million come from private sources. The financial resources of the Energy Efficiency Fund are used to finance loans for the renovation of central government building and for guarantees for loans granted by commercial banks for street lighting modernization projects. The Energy Efficiency Fund has already provided 3 signed loans and 4 issued guarantees by 2018.

The “Municipality-Owned Buildings Fund” supervised by the VIPA has total capital of EUR 17.3 million from the ESIF which is used to provide loans for renovation of municipal buildings. The “Cultural heritage Fund” includes EUR 5.2 million of ESIF funds and EUR 0.9 million of privately financed capital. The aim of this fund is to supply private owners of cultural heritage sites with loans for renovation activities. In the beginning of 2018, both funds did not show yet tangible results with respect to signed loans.

The comparison of the table with the investment need numbers shows that Lithuania is on the way to address the investment need. The investment need in energy efficiency in buildings in Lithuania was very significant. For the planning of ESIF allocated, the government relied on the estimate of the investment need in the residential energy efficiency of EUR 1.4 billion and the public infrastructure of EUR 0.7 billion (Dilba 2019).
Example: Slovakia

The Slovak Investment Holding has been set-up by the Government of Slovakia specifically with the purpose of implementing non-grant financial instruments supported through the ESIF and by doing so promoting public and private investment in the priority sectors (Table 3). One of the successful examples of the Holding’s investment is a partnership launched in 2018 with OTP Banka Slovensko to provide preferential loans to owners of apartments and non-residential premises for deep energy efficient renovation. The program provides financing for up to a total of 500 buildings. The combination of the Slovak Investment Holding’s and OTP Banka resources created EUR 56.3 million in loan financing. The Holding is also undertaking preparations for future financial instruments to increase energy efficiency for both residential and non-residential buildings and public buildings as well as small and medium-sized enterprises. Another example of the Holding’s work is the investment in the Slovak GreenWay Company in the form of a loan with warrant. GreenWay is a Central European leader in the construction and operation of charging stations for electric vehicles. SIH’s investment enabled the company to continue its R&D activities as well as improving and expanding its services in Slovakia and other Central and Eastern European countries.

TABLE 3

Investment areas of the Slovak Investment Holding

<table>
<thead>
<tr>
<th>Investment area</th>
<th>Funds, EUR million</th>
<th>Financial instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>140</td>
<td>Mezzanine for the D4R7 public-private partnership project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loan for railway safety diagnosis vehicles project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electromobility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Alternative fuels</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>151</td>
<td>Portfolio Risk Sharing Loan for banks for energy efficiency in residential buildings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concessional loans for energy efficiency in public buildings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concessional loans for energy efficiency in SMEs and large companies</td>
</tr>
<tr>
<td>Waste management</td>
<td>73</td>
<td>Equity for financial management in waste management sector</td>
</tr>
<tr>
<td>SMEs</td>
<td>229</td>
<td>Equity for financial management for seed phase SMEs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Direct equity for growth phase SMEs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk sharing loan for banks for SMEs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First Loss Portfolio Guarantee for banks for SMEs</td>
</tr>
<tr>
<td>Cultural and Creative Industry</td>
<td>17</td>
<td>Concessional loans for creative sector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concessional loans for companies in cultural/creative industry</td>
</tr>
<tr>
<td>Social economy</td>
<td>72</td>
<td>Equity instrument for social housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guarantee instrument for banks for social economy</td>
</tr>
<tr>
<td>COVID-19 aid package</td>
<td>446</td>
<td>Allocated resources to help companies hit by COVID-19</td>
</tr>
</tbody>
</table>

5.3 Limitation factors

5.3.1. Impacts on GHG emission reduction

According to the results of our interviews and the workshop, the results of the ESIF implementation are foremost reported and monitored through the disbursement of these funds, rather than through their actual carbon reduction impact. Whereas the Member State do report their implementation based on the common output indicators as discussed in section 5.1.1 and presented below for Lithuania and Slovakia, these numbers were said as difficult to trust. Furthermore, these numbers do not play a role in negotiations of the ESIF allocations and there is not penalty structure, in case Member States will not achieve them.

This phenomenon is a result of the broad EU climate programming which leads to a difficulty to examine the precise carbon reducing impact of climate-related projects. As discussed in section 3.2.3, the overall design of the ESIF as the “development finance” instrument, as opposed to only “climate finance” instrument, has enabled the Member States to go beyond direct climate actions, mitigation and adaptation. In particular, the ESIF enabled the implementation of broader social and economic reform processes which were essential for achieving longer term decarbonization goals. This however could not be always directly translated to immediate emission reductions and therefore it is unclear how substantial contribution of the ESIF has been in relation to national GHG mitigation targets in general. Therefore, the impact assessment which includes GHG emission reductions has little if at all any sense due to the ESIF multiple cross-cutting objectives.
The other point of the ESIF’s criticism by the climate community is that programming priorities did not always affect most-emitting sectors and were not as ambitious as they had to be to allow meeting national GHG emission reduction targets. For instance, some EU Member States in Central and Eastern Europe were using the dramatic decrease in GHG emissions associated with their deindustrialisation in the 1990s as a negotiating position, arguing with the “right to develop” and “catch up” with more developed EU Member States in West Europe. Some experts argue that ESIF programming priorities do not sufficiently recognize the potential and need to address GHG emission in the transport sector given their rapid increase and mostly ignore emissions in the agricultural sector across several Member States. The latter is however because most of EU investments in agricultural sector are provided through the Common Agricultural Policy and a separate Operational Program “Rural Development Program”. These do include a number of dedicated climate change measures both in mitigation and adaptation, but according to our interviews, the implementation remains not sufficient.

In contrast to the ESIF practices, the estimates of GHG emission reductions of climate-related projects are very important to access international climate finance. The GHG emission reduction estimate is an important award criterion, to deliver which the implementing country will be held responsible. Receiving parties have to take part in highly competitive tender procedures in order to get international climate finance: its impact is then extensively monitored by donors (Box 7), and the recipients could be penalized in case of non-compliance with agreed targets. This is because, the regulation framework at international level is more focused on specific projects rather than broad climate programmes like in the EU.

**BOX 7.**

**International climate finance: estimating and monitoring climate impacts**

The GEF and the GCF require every climate change project to provide an estimate of the avoided or reduced amount of GHG emissions the project expected to deliver at the ex-ante stage, as well as ex-post after the termination of the project. For example, GCF has ex-ante estimated that its initial investment totalling USD 5 billion in GCF resources since its establishment through 2019, would have reduce 1.48 gigatonnes of CO2-eq. (GCF 2019). The World Bank’s ex-post estimates of the impact from its GEF-funded energy efficiency projects in the period of 1992-2009 totalled nearly 100 million tonnes of CO2-eq. in direct emission reductions over the lifetime of the projects, and close to 300 million tonnes of CO2-eq. in indirect emission reductions.
To aid countries and agencies in project-based GHG emission accounting, the GEF Scientific and Technical Advisory Panel (STAP) developed an ex-ante methodology for calculating GHG emissions reductions for energy efficiency and renewable energy projects. For this, it provided a complete, and easy-to-use spreadsheet tool that embeds standardized guidance in the form of algorithms for component-specific calculations, conservative default factors as well as dynamic baselines. The methodology has four modules to allow for calculations of GHG emission reductions: standards and Labelling, Building Codes, Demonstration and Diffusion, and Financial Instruments (STAP 2013). A similar tool has been designed to assist with calculating GHG emission benefits of the sustainable transport project financed by the GEF (STAP 2011).

Example: Lithuania

As illustrated by Figure 19 the implementation of Priority Axis 4 measured by the projects funded and already financed is the most rapid among all thematic objectives. In late 2018, in Priority Axis 4 82% of the total funding amount was allocated and 43% of total funds was already disbursed. Whereas, with respect to all priority axes, on average only 64% of total funds are allocated and 30% of total payments made.

However, the progress of implementation in Priority Axis 4 varies regarding to a competent ministry. While, the Ministry of Environment allocated 100 % and disbursed 75% of total funds in its responsibility, the Ministry of Energy has allocated 75% and disbursed 17.5%, and the Ministry of Transport and Communications has only allocated 34% and disbursed 7.4%.

FIGURE 19

Financial progress of the Operational Programme implementation, percentage of funds allocated in late 2018

Source: ESTEP Vilnius and Visionary Analytics, 2019
The slow pace of the financial progress of projects supervised by the Ministry of Energy is due to the revision of its main investment strategy and other legal acts during the Operational Programme implementation. Further delay has been caused by the complex justification process of large-scale high-efficiency cogeneration projects in Vilnius and Kaunas. The protracted implementations of projects under the administration of the Ministry of Transport and Communications is due to involvement of regional planning in scheduling priority lists, delaying the implementation process, as well as necessity to carry out certain projects in succession (ESTEP Vilnius and Visionary Analytics, 2019).

In the current programming period, EU funds’ investment in the expansion of renewables mainly finances projects in the heat sector and only few projects in the electricity production and transport sector. Consequently, established targets in the latter sectors regarding the consumption of renewable energy will likely be underachieved (ESTEP Vilnius and Visionary Analytics, 2019). The investment logic of the ESIF is due to the existence of national regulation schemes already promoting the use of renewable energy sources in the electricity production. Nevertheless, the share of renewables in the transport sector is decreasing, highlighting the need for greater government involvement.

In the area of energy efficiency Lithuania’s efforts in achieving its 2020 target are the most significant. Under Objective 4.3.1, addressing energy consumption of public infrastructure and in multi-apartment buildings, almost 60% of all climate-relevant investment is allocated by late 2018, e.g. EUR 496 million (ESTEP Vilnius and Visionary Analytics, 2019). With help of this support, by January 2018 almost 20,000 households were renovated. They accounted for ca. 10% of the national multi-apartment stock. KPMG Baltics et al. (2017) estimated that by 2017 the apartment building renovation programs’ impacts were 1.3 million tonnes CO2 (equivalent to EUR 47.6 million), 3,100 tonnes (EUR 17.7 million) NOX, SO2 and KD10 exhaust gasses reduction, and the common effect on the environmental pollution reached EUR 63 million. Figure 20 demonstrates the calculations of the monetized impacts of modernization of apartment buildings over 2005-2016.

Based on estimations of the National Audit Office, the undertaken regulatory and investment measures are however still insufficient to reach the energy efficiency targets of 11.67 TWh energy savings by 2020. The reason for the potential underachievement of the energy efficiency target, are the delayed implementation of the renovation of public buildings owned by the central government and the municipalities (ESTEP Vilnius and Visionary Analytics, 2019). While the difficulties regarding governmental owned public buildings have been addressed by new legal obligations and financial measures, the difficulties with municipality buildings persist, leading to a high risk of not achieving related targets and indicators.

The inventions with respect to the reduction of GHG emissions, besides energy efficiency in buildings and renewable energy, are largely focused on measures targeting the transport sector by ensuring effective management systems and implementing sustainable mobility measures. The respective projects are not implemented yet, therefore their impact is not evaluable so far.
Overall, common criticism is regarding the fact that **it is unclear how substantial contribution of the ESIF has been in relation to national GHG mitigation targets in general.** The early evidence which is available suggest that such contribution has been insignificant. For example, Lithuania planned to achieve 510,000 tCO2-eq. in GHG emission with the ESIF support. The actual result as of 2019 (one year before the end of programming period) has been - 66,070 tCO2-eq., i.e. 0.4% of the national GHG emission target for the year 2020 (EC, online b).

**FIGURE 20**

**Economic value of decreased CO2, NOx, SO2, and KD10**

![Economic value of decreased GHG](image)

**Source:** constructed based on the data of KPMG Baltics et al (2017).
Example: Slovakia

The absorption rate of the ESIF in the various operational programmes in Slovakia differ substantially. In the Operational Programme “Quality of Environment”, which covers the majority of all climate related investments, the average contracting rate was 51% on the 31st December 2018, implying that half of all available funds of the Operational Programme “Quality of Environment” have been allocated to suitable projects by the end of 2018. The average spending rate in Operational Programme “Quality of Environment”, which outlines the share of disbursed funds, reached 16% on the 31st December 2018. In contrast, the average contracting rate of all Operational Programmes was 54%, while the average spending rate amounted to 19% in the end of 2018, underlining the slightly below average absorption rate of the Operational Programme “Quality of Environment” (Figure 21).

FIGURE 21

Economic value of decreased CO2, NOx, SO2, and KD10

<table>
<thead>
<tr>
<th>PA 1</th>
<th>PA 2</th>
<th>PA 3</th>
<th>PA 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>3476</td>
<td>855</td>
<td>365</td>
<td>261</td>
</tr>
<tr>
<td>327</td>
<td>88</td>
<td>151</td>
<td>461</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PA 1 – Sustainable use of natural resources through environmental infrastructure development
PA 2 – Adaptation to adverse effects of climate change with the focus on flood protection
PA 3 – Promoting risk management, emergency management and resilience to emergencies affected by climate change
PA 4 – Energy efficiency and low carbon economy in all sectors


Examining the different priority axes of the Operational Programme “Quality of Environment”, highlights the significant differences in the absorption rate of the Operational Programme’s priority axes. The highest absorption rate can be found in Priority Axis 1 “Sustainable use of natural resources through environmental infrastructure development”, featuring a contracting rate of 58% and a spending rate of 22%. However, this Priority Axis falls under Thematic Objective 6 rather than Thematic Objective 4 or Thematic Objective 5 and thus is at most indirectly linked to climate change.
Priorities and direction of interventions to fulfil the objectives concerning adaptation to climate change, crisis prevention and management were defined on two principal levels. The first as the increase of the country’s adaptability and the second as the strengthening of capacities for the resolution of crisis situations. Measures on the first level were directed primarily at the recultivation of land in less developed regions. At the second level, the focus was put on addressing flooding through the strengthening of early warning systems, the creation of specialized rescue modules and the general increase in the percentage of the population using flood control measures. In 2019, the percentage of use of the funds reached 30.5%, and 50.6% were contracted, so further progress can be expected, particularly with regard to investments into adaptational measures in agriculture and the strengthening of resolution capacities addressing crisis situations.

With respect to GHG emissions, it becomes vivid that the country will very likely achieve its target. During the entire period, GHG emissions in Slovakia were pretty stable around a level of 85% of GHG emissions compared to the base year 2005. The development of the share of renewable energy sources in the energy mix is less obvious. Even though, the country managed to increase the share of renewable energy sources in the production of electricity until 2015 to almost 13% since then the share decreased, while only in the last year of record the negative trend reversed again, leaving the country with a 11.9% share of renewable energy sources in the energy mix in 2018. The final energy consumption in Slovakia increased over the period 2012-2018, ending up at value of 11.1 Mtoe in 2018, well above the energy efficiency target of 2020. Therefore, Slovakia potentially underachieves its renewable energy and energy efficiency target for 2020.

The criticism of the ESIF use in Slovakia is also its unclear contribution to national GHG mitigation targets and its significance. Furthermore, it is also not sufficiently clear for all measures, how they are linked to their results.

5.3.2. Absorption capacity of the market

In spite of the first indications of success in the countries of Central and Eastern Europe to implement programmes targeting climate mitigation and adaptation, they still are able to absorb a small amount of available finance. There is still a long way ahead for the market to be mature and use the investment effectively delivering their purposes.

The ESIF’s objectives and targets have not always been possible to achieve also due to external constraints related to low level of sectoral or market readiness and capacities of the various stakeholders. Therefore, constrains on the market of low-carbon technologies and labour market are also important factors to consider when designing a programme.
Example: Lithuania’s financial market

In regard to the financial market, renovation soft loans are still a niche in the Lithuanian market for loans. Two of six banks, operating in Lithuania, participate in the lending scheme. Thereof, only for “AB Šiaulių bankas” with a market share of less than 10%, the renovation soft loans constitute a significant part of its commercial operations (Kazlauskaitė and Bumelytė, 2016). The causes for this insignificance are the low total investment volume and the strict regulations of the soft loan lending scheme resulting in a limited interest of large commercial banks to participate in the scheme.

The Renovation Program of Multi-Apartment Buildings raised the demand for the construction industry experts, while Lithuania is relatively a small country. The capacity of the construction sector was not sufficient and the country had to import the workers. Due to the growing demand for the retrofit works, the market started growing too quickly and the quality of words went down. This calls for the long-term signal and preparation of the construction sector for the next gig of works. Also, as the mid-term evaluation recorded, the actual energy saved was usually less than calculated; this was because competition based solely on the principle of the lowest price does not normally guarantee the quality of the work (KPMG et al. 2017).

Example: Slovakia

Absorption capacity is a major problem in Slovakia’s R&D sector. The Slovak system of research and development is small. Apart from the Slovak Academy of Science and few universities, only 655 natural and legal persons hold a certificate of competence to perform research and development. The system is also inefficient. For example, in the Scimago Institutions Ranking, the Slovak Republic does not have a single institution in the top 500. In the Slovak Republic, in addition to the ESIF, other forms of support for R&D are also applied. Some of them provide a lower amount of support compared to the ESIF, but at the same time are much easier to implement and do not require public procurement. The Slovak law does not allow to receive support for the same project from multiple sources. This limitation further reduces the number of potential beneficiaries and participants.

5.3.3. Low-hanging fruits versus advanced technologies

In many countries, the ESIF proved to be an effective instrument to significantly scale-up mature low carbon solutions, such as energy efficiency in particular building types having very low performance and SMEs, as well as to leverage additional partnership and investment, including from the private sector. One can conclude that the ESIF has proved an effective mechanism to scale-up “low-hanging fruits” and maximize their social and economic impacts. Such focus on low-hanging fruits, however, came at the expense of more advanced solutions, investment in R&D, new technologies and innovation.
Overall, the earmarking of the ESIF finance for climate activities was a good first move by the European Commission, to help less developed EU Member States to reach their climate targets. However, the important question is about the actual use of this finance. Our interviewees argued that most of the ESIF finance so far has not been really used to build green economy capacities in each beneficiary Member States, but rather to support green technologies produced in more advanced Member States, leading to a dependency in knowledge and technology of less developed Member States. In order to overcome this dependency in the future, smart specialization strategies must also support the development and production of green technologies in less developed countries.

The lesson learned is that on the world arena the first mover countries with respect to effective climate regulations and advanced green technology, will be the future economic winners, as they are going to export technology to countries, which today do not feature a strong focus on climate change preventing policies. Therefore, the success of international climate policy will be about such support schemes, which will enable less developed countries to link climate change policies with economic, social and environmental benefits at local level and build their own development and production of green technologies. This will allow realizing them their potential for green innovation and international climate actions will be successful.

**Example: Lithuania and Slovakia**

In both Slovakia and Lithuania, investment in climate-oriented R&D and advanced solutions, such as digital and smart technologies, has been negligible, even though they somewhat increased during the last two programming periods. This has been identified as a weakness and a shortcoming in the ESIF programming. It is believed that a Member State should be using their ESIF resources more strategically and not only maximize the spread of existing solutions, but also to invest in the creation of new climate products, technologies and businesses. Identification of new niches for domestic climate investment and maximizing synergies with national development priorities is an important area where additional EU support is required which the ESIF is well placed to provide. It has to be noted that there is no official reporting specifically on climate-related R&D investment. In Slovakia, according to experts interviewed, there is a positive dynamics in R&D spending and therefore similar trend can be assumed for climate-related R&D. Slovakia has proposed much more ambitious targets for R&D support through the ESIF in the next programming period, including for climate.
CHAPTER SIX

Conclusion
The research aimed to analyse the programming, implementation, monitoring, and evaluation the EU-level finance disbursed by the ERDF and the CF actions in EU Member States and provide lessons learned for international climate policy. By means of literature review, it looked at the key features of the ERDF and the CF, as well as international climate policy. With help of interviews and a discussion workshop, it studied the changes and impacts these funds brought to EU Member States, placing a special focus on Lithuania and Slovakia, and examined success and limitation factors which have been observed. These conclusions were looked at through the prism of international climate finance policy and what lessons learned could be drawn for its donors and recipients. One need to note that not all lessons from the EU are easily transferrable or applicable in the international climate finance regime, due to the very different legal nature of the ESIF compared to climate-related development finance. The report focused on the analysis of energy efficiency actions.

We concluded on the following set of success and limitation factors bringing us to the lessons learned for international climate policy:

1. The way how negotiation process is organized matters for the eventual success of the program. **Negotiations perceived as between equal parties**, as it was confirmed by Latvian and Lithuanian interviewees, are important in order to formulate programming objectives and priorities in such a way that they are acceptable and politically feasible for both sides. The interviewees from the Slovak Republic put a strong emphasis on the quality of negotiation process being more important than just following through formal requirements and administrative steps.

2. Consensus building based on a **partnership principle** inevitably requires more time than the top-down approach. Even though the lengthiness of negotiation process between the ESIF and EU Member States lasted 2-4 years, it was an important success factor. On the other side, consensus often reflects the least common denominator and it is therefore important that besides targets, there is also a strong leadership and vision in the negotiations.

3. The ESIF are managed by the EU Member States themselves based on the Partnership Agreements. The way how the programming and funding directions are defined at the country, regional- and/or country-wide theme - level as opposed to project-based programming typical for international climate-related development finance has contributed to success. This approach where the detailed design of investment and operational programmes and modalities of their implementation are left to a Member State to work out has been found to be particularly instrumental.

4. Extensive analytical and consultation processes accompanying negotiations with stakeholders at various levels have led to the design of the program which best responds to national and local priorities as well as has been well received by stakeholders. Maximum **alignment of climate objectives and actions with national socio-economic and environmental priorities** is critical to ensure buy-in, wider uptake, acceptance and demand from national stakeholders.
This was confirmed by the modernisation program for multi-apartment buildings in Lithuania helping to address many social tensions and the steel plant modernisation in Kosice contributing to better air quality.

5. The overall design of the ESIF as a source of development finance, i.e. broader than just climate finance instrument, has enabled the countries to go beyond direct climate actions, mitigation and adaptation to support implementation of broader social and economic reform processes which are essential for achieving longer term decarbonization goals, as illustrated in Slovakia and the Czech Republic for measures assisting the economic transformation of coal regions.

6. Financial instruments would only be effective and see the market uptake if there are no parallel grant or subsidy scheme which distort the market and disincentivize private engagement. One of important aspects here is to ensure close coordination between entities involved in the ESIF programming, in particular those dealing with grants and financial instruments respectively to avoid such overlap, as demonstrated by the Lithuanian experience.

7. Not every policy area is suitable for a shift of traditional finance i.e. grants to more innovative financial instruments. Therefore, an application of any financial instrument requires a compulsory ex-ante assessment evaluating the necessity of it and defining the priorities for the allocation of resources.

8. Disregardless whether Member States use grants of financial instruments, the ESIF’s long-term budget planning horizon was said in Latvia, Lithuania, Czechia, and Slovakia to be instrumental in making the instruments more mature, bringing on board the private sector and the financial sector, and work out numerous barriers. It could send long-term signal to the market about funding availability which would not be possible to achieve under the national annual budget framework.

9. Workable implementation arrangements and provision of additional technical support throughout all ESIF project preparation and implementation process have been critical for the success, i.e. timely disbursement of funds and achievement of intended results. Experience of Member State provide ample examples of successful technical assistance, well aligned to the actual measures for all stakeholders involved, as in Lithuania, and not very successful practices due to its fragmentation and weak alignment to actual measures, as in Slovakia, which respectively either contributed or on the contrary jeopardized implementation.

10. Therefore, standardization and simplification of project management, in particular for public procurement, as well as provision of targeted technical assistance to all market participants was identified to be essential for private sector participation and buy-in of such schemes.
11. The **diversification of portfolio** by transferring best practice to various fields help to bring transformation effect to the market, as illustrated by several recently introduced funds in Lithuania. Although being able to scale up private capital with limited public finance for public goods is one of the key success features of a financial instruments, this is likely to be a long-term task for a developing market, but we do observe this.

12. In spite of the first indications of success in the countries of Central and Eastern Europe to implement programmes targeting climate mitigation and adaptation, they still are **able to absorb a small amount of available finance**, even in the best practices presented. The causes for this insignificance are the low total investment volume and the strict regulations of the soft loan lending scheme resulting in a limited interest of large commercial banks to participate in the scheme.

13. The ESIF’s objectives and targets have not always been possible to achieve also due to **external constraints related to low level of sectoral or market readiness and capacities** of the various stakeholders, for instance the construction sector in Lithuania and the market of energy service companies in Slovakia. Therefore, constrains on the market of low-carbon technologies and labour market are also important factors to consider when designing a programme.

14. In many countries, one can conclude that the ESIF has proved an effective mechanism to **scale-up “low-hanging fruits”** and maximize their social and economic impacts. Such focus on low-hanging fruits, however, came at the expense of more advanced solutions, investment in R&D, new technologies and innovation. This has been identified as a weakness and a shortcoming in the ESIF programming. It is believed that a Member State should be using their ESIF resources more strategically. Identification of new niches for domestic climate investment and maximizing synergies with national development priorities is an important area where additional EU support is required which the ESIF and international donor support are well placed to provide.

Based on identified success and limitation factors, we would like to offer the following set of lessons learned for international climate policy:

1. **Lesson 1**: Strengthen partnership aspects throughout negotiation and implementation process, allow for enough negotiation time and involve comprehensive stakeholder consultation to ensure alignment with national priorities and maximization of non-climate benefits (i.e. inclusive growth, jobs, energy poverty);

2. **Lesson 2**: Promote national ownership of the program implementation, including involvement of national institutions, financial organizations and civil society in program delivery to ensure sustainability and facilitate replication;
3. **Lesson 3**: Invest in quality program preparation, including ex-ante assessment to know your market conditions and beneficiaries, understand your regulatory constraints such as State Aid and procurement rules, eliminate competing schemes, implement the market-oriented tariff reform, and ensure the market capacity is ready to absorb the programme;

4. **Lesson 4**: Standardize and simplify the process as much as possible, in particular for public procurement, provide comprehensive technical assistance package to support project preparation and implementation, ensure coordination between technical assistance, grants and financial instruments under one funding framework;

5. **Lesson 5**: Identify and promote opportunities for the private sector engagement and scaling-up the private sector financing of low-carbon and climate resilient investment to ensure lasting impacts on market creation.


Lessons learned from the ESIF for international climate policy

Lessons learned from the ESIF for international climate policy


Lessons learned from the ESIF for international climate policy


Lessons learned from the ESIF for international climate policy


Lessons learned from the ESIF for international climate policy


Office of the Deputy Prime-Minister of the Republic of Slovakia for Investment and Digitalization. 2017. Action plan for strengthening transparency and simplifying implementation of the ESIF.


Lessons learned from the ESIF for international climate policy

In their study, (Nekvasil and Moldan, 2018) measure the impact of the EU Cohesion Policy in achieving its climate change mitigation goals. The influence is examined over a period of 20 years including the three last programming periods of 2000-2006, 2007-2013 and 2014-2020. They select five indicators, quantifying the extent to which the Cohesion Policy supported EU climate change mitigation. The indicators chosen in the evaluation are: 1) The estimated annual decrease of GHG emissions; 2) The decrease of annual primary energy consumption of public buildings; 3) The additional capacity of renewable energy production; 4) The share of climate-related investments in the overall Cohesion Policy funds; 5) The cost-effectiveness of climate change mitigating investments. The authors conclude, even though Cohesion Policy has mainly excluded the issue of climate change mitigation in the beginning of 2000s, climate objectives became a key element of the current programming period.

6.1.1. Budget period 2007-2013

(Baltzar et al., 2009) investigate the role of the current Cohesion Policy in supporting climate-proof investments and programs in order to reduce the carbon intensity of programs financed under the EU Structural and Cohesion Fund. First, the report examines how climate change issues are incorporated into the National Strategic Reference Frameworks (NSRFs) at the programming level. The authors find that linking NSRF objectives with other national strategies, e.g. explicitly include climate change measures and map their potential for economic growth and job creation, can increase the consistency and coherence of efforts. Two main strategies to foster the integration of climate objectives into project development and preparation are identified: 1. Through project application documents featuring questions related to emissions reduction and energy consumption. 2. Through assistance and guidance to project applicants via the consultation of environmental sustainability managers, the organization of environmental panels and the innovation of environmental sustainability checklists and guides. Moreover, introducing monitoring systems quantifying the outcome of respective programs may increase the pressure on individual MS to extend their GHG mitigation efforts on the national level. (Baltzar et al., 2009) conclude that low-carbon investments further provide the opportunity to foster environmentally driven growth supporting the future viability of the European economy.

Annex I:

Literature review

In their study, (Nekvasil and Moldan, 2018) measure the impact of the EU Cohesion Policy in achieving its climate change mitigation goals. The influence is examined over a period of 20 years including the three last programming periods of 2000-2006, 2007-2013 and 2014-2020. They select five indicators, quantifying the extent to which the Cohesion Policy supported EU climate change mitigation. The indicators chosen in the evaluation are: 1) The estimated annual decrease of GHG emissions; 2) The decrease of annual primary energy consumption of public buildings; 3) The additional capacity of renewable energy production; 4) The share of climate-related investments in the overall Cohesion Policy funds; 5) The cost-effectiveness of climate change mitigating investments. The authors conclude, even though Cohesion Policy has mainly excluded the issue of climate change mitigation in the beginning of 2000s, climate objectives became a key element of the current programming period.
Lessons learned from the ESIF for international climate policy

(Hanger et al., 2015) explore the extent to which climate mainstreaming impacted the EU regional development policy in the 2007-2013 programming period by evaluating the normative commitment of Member States to climate change concerns via an assessment of the National Strategic Reference Framework (NSRFs) and the substantive commitments via the member state’s allocation of SCF funds to climate mitigation and adaption actions. The authors assume, that the level of the normative commitment of a member state is linked to the level of detail in which climate-relevant aspects are included in the national action plan. Therefore, they analyze relevant documents using the software MAXQDA in order to count the nomination of keywords related either to mitigation or to adaptation. The level of substantive commitment is measured following the Rio marker methodology developed by the OECD. This method differentiates between three categories of investments, weighting its relevance with respect to climate change mitigation (or adaption) from 100% in the first category (climate change as principal objective), over 40% in the second category (climate change as significant objective), to 0% in the last category (climate change not as an objective).

The analysis by Hanger et al. results in five insights regarding the level of mainstreaming in the EU regional development policy from 2007 to 2013. 1) While mitigation is widely supported in most Member States both in terms of normative commitments and substantive allocations, adaption is only hardly considered. 2) Even though a member state rhetorically commits itself to climate change mitigation and/or adaption, that does not mean it also allocates a substantial amount of SCF money to mitigation and adaption projects. 3) Neither mitigation-relevant priorities and allocations of SCF funds relate to high mitigation targets of the respective member state, nor adaptation-relevant priorities and allocations to a low adaptive capacity. 4) Particularly in the area of adaption there is notable potential to improve climate relevant SCF support. 5) Regional policy could assist as a policy tool to reduce climate-based inequalities between the EU Member States.

(Le Den et al., 2017) provide an extensive ex-post evaluation of energy efficiency interventions financed by the ERDF and CF in the period from 2007 to 2013. They investigate the outcome of 48 operation programs in 13 different MS accounting for more than 80% of the total funding allocated to energy efficiency in public and residential buildings. Further, six in-depth case studies, each dealing with a particular program, broaden their analysis. The evaluation design employed by Le Den et al. (2017) is not determined by a logic model but rather kept broad and flexible, in order to account to the lack of clear and detailed intervention logic for ERDF/CF support to energy efficiency. Thereby, the assessment demonstrates the substantial variation in the target setting and achievements across all investigated programs due to a substantial number of inventions featuring unclear rationales and inadequate output measurement tools. Hence, the authors identify the need to improve the quality of the monitoring system, an improved intervention design, a diversification of the type of supported interventions, a more extensive use of energy efficiency audits and an enhanced inter-agency communication and peer-learning.
6.1.2. Budget period 2014-2020

(Medarova-Bergstrom and Volkery, 2012) examine the options to introduce climate change concerns into the 2014-2020 EU Mult-Annual Financial Framework (MFF), particularly for the EU Cohesion Policy (CP)- and the Connecting Europe Facility (CEF)-fund. Their analysis states the mainstreaming provisions in the Commission’s proposals for future CPs, namely horizontal principles, thematic objectives and quantified earmarking, plus the proposed conditionality systems and performance framework as beneficial in supporting climate change relevant activities. However, the designated budget of 30 billion euro assigned to mitigation projects will not be sufficient to achieve the ambitious EU climate goals. Consequently, the authors recommend **strengthening the climate-oriented provisions in the current CP (and CEF) proposals to ensure an adequate scale of funding**. Thereby, the development of tracking methodologies for climate expenditures on EU and national/regional level are essential in order to avoid inefficient investments. Moreover, the greater elaboration of key regulatory provisions will be necessary to prevent detrimental lock-in effects and to ensure an overall climate-friendly performance of the EU funding. The Commission should further promote climate change expenditure by providing information for the managing authorities regarding the opportunities, technical feasibilities and multiple economic and social benefits related to low-carbon economy transitions. Ideally, the commission and the **MS build appropriate institutional capacity in order to raise awareness and develop the knowledge base for climate change mainstreaming**.

(Illes and Medarova-Bergstrom, 2014) develop a guidance briefing for managing authorities facilitating the integration of climate objectives into the 2014-2020 Cohesion Policy, the **so-called climate mainstreaming**. Therefore, they review the new legislative framework for the 2014-2020 EU Cohesion Policy identifying the relevant legal provisions and their potential to deliver the desired outcomes regarding climate mainstreaming. The evaluation further includes four case studies with examples of climate mainstreaming demonstrating its benefits. Finally, (Illes and Medarova-Bergstrom, 2014) provide a set of questions for managing authorities serving as a potential checklist during programming and implementation activities and encourage climate mainstreaming in future Cohesion Policy programs.

(IEEP, 2017) examine programs funded by the ERDF and CF in the ongoing 2014-2020 programming period with respect to their impact in fulfilling climate policy objectives in contrast to the experience made in the previous period (2007-2013). Moreover, it assesses the effect of the Paris Agreement on future programming periods. The evaluation grounds on a review of the relevant literature including legislation, policy documents and guidelines as well as an appraisal of the monitoring information supplied by the DG REGIO.

*For the programming period 2007-2013, the authors already find many attempts to integrate climate objectives in cohesion programs, even though these actions missed a clear overarching structure and the lack of common mechanisms impeded a straightforward comparison of their effectiveness.*
Conversely, the explicit aim of spending 20% of the EU budget on climate objectives in the 2014-2020 period and the introduction of new mechanisms measuring the outcome of ERFF and CF expenditures, characterize the high level of ambition and completeness of climate-relevant policies in the ongoing programming period. Nesbit et al. nevertheless find some weaknesses regarding the integration of climate objectives in the current EU Cohesion Policy as a common methodology for assessing the climate mitigation impact of all relevant investments and programs has not been developed yet. Moreover, considering the reinforced importance to meet the 2030 targets due to the approval of the Paris agreement in 2015, the authors recommend to formulate the expected contribution of future cohesion programs to the overall EU climate goals in quantitative terms.

(Thoidou, 2017) reports on the impact of the EU Cohesion Fund, fostering comprehensive and integrated climate adaptation strategies on the regional level, while examining EU funded urban climate projects in Greece. Even though the integration of EU Climate Change Policy into EU financial policies has been implemented already in the 2007-2013 programming period, only with the start of the period 2014-2020, climate action received an actual budget, as being included in two of eleven thematic objectives specifying the new Europe 2020 strategy. Nevertheless, the study relies on evidence coming from the period 2007-2013, due to data availability. The author concludes that for 2007-2013 a gap between the project level and the urban level of climate adaptation actions appears. Due to the restriction of EU funding to individual projects, the EU cohesion fund has failed in supporting a comprehensive climate adaptation strategy on the regional level. However, the intervention of EU climate adaptation tools in recent years, might promote climate adaptation planning in the programming period 2014-2020.

### 6.1.3. Budget period 2021-2027

(Runkel et al., 2019) evaluate the potential to strengthen the climate performance of the EU policy framework in the future programming period 2021-2027. Therefore, a two-day workshop including representatives of civil society organizations (CSOs) has been held, discussing the opportunities to improve the climate impact of the next EU budget by concentrating on the state of negotiations, possibilities of involvement and barriers for CSOs. Further, a survey has been conducted analyzing the answers of 42 experts and representatives of civil society on their experience and perspectives on needs of the current MFF (2014-2020) and their advice for the future period (2021-2027). The examination reveals significant disapproval with the present system of EU funding for climate, as an important part of EU money has been spent inefficiently or even for environmentally harmful projects. Furthermore, the lack of proper project indicators, conditionalities and monitoring and control mechanisms, has often led to EU funded actions contradicting EU climate policy objectives. The significant lack in climate-relevant investments in order to meet national energy and climate plans is attributed to weaknesses in the tracking and monitor system. The absence of effective public participation caused by inadequate transparency and information, further induced a poor legitimacy of EU spending.
The shortcomings of the current programming period call for a better climate performance of the next MFF. Consequently, 40% of the budget of 2021-2027 shall be allocated to climate and implementations of Country-specific Recommendations in the European Semester shall be enforced via the MFF. Whereas an enhanced public participation shall support the legitimacy and efficiency of EU spending. At the same time, investments counteracting climate objects shall be blacklisted and all EU funded investments shall be supervised by the European Anti-Fraud Office to prevent the misuse of EU money, while the development of climate tracking methodology would ensure that EU funds are spend in a genuine and value-adding way, inhibiting the opportunity of “green-washing”. Further, the enhancement of the climate proofing of EU funds would guarantee the compatibility of these funds with the EU’s climate objectives.
Annex II:

Questionnaire

Part I. **Formulation of climate policy objectives at national and subnational levels**

Questions to policy-makers

**General:**

1. Who are the relevant stakeholders (national and subnational) negotiating on the climate-related parts of the Partnership Agreement and Operational Programmes of the Cohesion Fund (CF) and the European Regional Development Fund (ERDF)?

2. Which actors are involved into programming and management of CF/ERDF funds?

3. How did negotiations for EU funding differ from budget debates for state funding?

4. What mattered most for formulating the climate objectives and actions in the Partnership Agreement and Operational Programmes?

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5. Was the way in which the European Commission verified whether the programme was coherent with the objectives of the CF and the ERDF transparent to you? The question particular relates to climate objectives.
EU’s climate objectives impact on national policy:

6. Did the promised amount of the ERDF and CF funds impact on the climate goals in the country’s NECP of the future programming period? Did it have an impact on other country’s energy and climate goals in the Partnership Agreements?

7. Did the allocation of the ERDF and CF funds to climate-relevant investments increased/decreased the government’s own spending on climate change mitigation actions?

8. Has the country introduced new energy efficiency, renewable, and climate policy measures due to the provision of funds from the ERDF and CF? If yes, which?

9. If the ERDF and CF would not provide funds for climate-related projects, would they be anyway funded in the nearest future by the national or subnational policy measures from national or subnational public budgets (3-5 years)?

Part II. Implementation of the ERDF and CF
Questions to policy-makers

General:

10. From your perspective, which factors were of help in implementing the climate part of the Operational Programmes, and which factors led to difficulties in implementation?

   a. These are for instance lack of staff in the managing authority
   b. Lack of high quality applications?
   c. Others?

11. Does the number of project applications on average exceed the number of approved projects? If demand exceeds available funding, how is spending prioritized?
12. What matters most for project selection?

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13. What happens with projects that do not qualify for EU funding? Do they then receive national or regional funding?

**Financial Architecture:**

14. What are the most important facilities delivering the climate objectives of Operational Programmes?

15. Why did you go for the use/set of these particular facilities?

16. Which institutional tools invented by the EU did you use, to set-up your own national funds disbursing for climate/energy efficiency actions? E.g. JESSICA, JASPERS etc

17. How did the government manage to attract private investment flows into operation programs?

**Questions to agencies/FIs**

**Grants vs. Financial Instruments (FIs)**

18. Which were the rationalities for choosing the type of financial instruments including grants?

19. How did the government decide what share of totals funds is allocated to distinct financial instruments (grants, guarantees, loans or equity)?

20. Which was the best performing FI with respect to climate-related investments?

21. What are the advantages/disadvantages of these FIs compared to grants?
22. How did grants for climate actions for TO4 (low carbon economy) and TO5 (climate change adaptation) evolve over time? Did they become more mature? What type of technological interventions were covered before and now? What share of eligible costs was covered before and now? How did the sector coverage and volume change over time? Could you provide the documentation about the design of instruments from the setting up moment until now to make the analysis of their evolution possible?

23. What kind of FI's (i.e. other than grants) did you use, in order to provide money from the ESIF to comply with EU climate objectives, namely TO4 (low carbon economy) and TO5 (climate change adaptation)? What type of technological interventions were covered before and now? What share of eligible costs was covered before and now? How did the sector coverage and volume change over time? Could you provide the documentation about the design of instruments from the setting up moment until now to make the analysis of their evolution possible?

24. Have there been approaches to combine grants with certain financial instruments?

25. What is the further plan for using grants and financial instruments for climate?

26. Which were limitations and enabling factors of using grants and financial instruments?
   a. Lack of interest of financial intermediaries?
   b. Limited experience of disbursing finance to energy efficiency/climate related projects?
   c. Limited experience of disbursing large amounts?
   d. Lack of demand for financing products for climate/energy efficiency?
   e. Lack of legal provisions?
   f. Other

Part III. Delivery of policy objectives
Questions to policy makers

27. What kind of key performance indicators did you use to evaluate the use of the ERDF and CF funding besides those requested by the EU?

28. How relevant are evaluation results for previous or existing programmes in your decision-making process?

29. Are you considering any programme modifications?

30. Which objectives of the programme are likely to be achieved?
Part IV. Market transformation and learning
Questions to policy makers

31. Did you observe replication of financial instruments that were designed for the ERDF/CF disbursement by other market actors? Other sector/technologies? Other countries?

32. Did you observe scale up of private capital into climate related measures due to the ERDF/CF implementation?

33. Did you observe additional capacity and learning due to the work with the ERDF/CF funds?

Questions to agencies and FIs

34. Would you provide financial products for climate/energy efficiency in the absence of ERDF-CF funds?

35. Did you replicate financial instruments that were designed for the ERDF/CF disbursement to any other part of your portfolio? i.e. financing provided by other donors? Other sector/technologies? Other countries?

36. Did you gain additional capacity and learning due to the work with the ERDF/CF funds?