Midterm evaluation of the EEA and Norway Grants green programmes (2014-2021)

Final Report

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Acronyms and abbreviations

BG	Bulgaria
CAPEX	Capital expenditures
CZ	Czech Republic
DPP	Donor Programme Partner
EEA	Eauropean Economic Area
EE	Estonia
EIB	European Investment Bank
EMS	Energy Management System
ESIF	EU Structural and Investment Funds
EU	European Union
FMO	Financial Mechanism Office
GHG	Greenhouse Gas Emissions
GR	Greece
HR	Croatia
LV	Latvia
LT	Lithuania
MW	megawatt
MWh	megawatt-hours
NAP	National Adaptation Plan
NECP	National Energy and Climate Plan
NZEB	Near-zero energy buildings
NGO	Non-governmental organisation
O&M	Operations and Maintenance
PA	Programme Areas
PL	Poland
PT	Portugal
PV	Photovoltaic
RO	Romania
RE	Renewable Energy
RRP	Recovery and Resilience Plan
SI	Slovenia
SK	Slovak Republic

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Executive summary

The evaluation purpose, criteria, questions

The midterm evaluation of green programmes explores the **coherence, efficiency, and potential effectiveness** of **green programming** under the EEA and Norway Grants. The evaluation identifies success factors and obstacles and provides recommendations to inform the next programming period. Additionally, the evaluation assesses the extent to which programme design and implementation has considered bilateral cooperation. This includes consideration of the extent to which bilateral partnerships have added value, and how this may be enhanced in future programming. The set of pre-defined questions, alongside operationalised questions, is presented in the evaluation matrix in Annex VIII.

The evaluation covered 15 'Green Programmes' that have their outcomes linked to three interconnected Programme Areas (PAs): PA1 "Environment and ecosystems", PA12 "renewable energy, energy efficiency, energy security" and PA 13 "Climate change mitigation and adaptation", distributed among 12 beneficiary countries: Bulgaria, Croatia, Czech Republic, Estonia, Greece, Latvia, Lithuania, Poland, Portugal, Romania, Slovakia and Slovenia. The investment of the Financial Mechanism (FM) 2014-2021 in these 15 programmes amounts to €426 million. The evaluation considered a sample of projects contracted up until 4 October 2022.

Overall findings

Coherence

All green programmes show **a high degree of alignment with the objectives of the EU policy agenda** in this field, as well as with the beneficiary states' national priorities and needs in terms of filling funding gaps in respective thematic areas. The green programmes are also well aligned with evolved strategy priorities of the beneficiary states, as reflected in National Energy and Climate Plans (NECPs), Recovery and Resilience Plans (RRPs), and National Adaptation Plans (NAPs). External factors, like the unprecedented increase in energy prices and growing shortages of energy resources, not only strengthened the programmes' relevance for strategic objectives, but are also practically helping municipalities and businesses in the beneficiary states to cope with the negative consequences of the ongoing energy crisis.

There is **good complementarity between the EEA and Norway Grants and EU funding streams** at various levels. The programmes bring added value as they filled in funding gaps for strategic priorities, such as promotion of new green concepts and approaches, circular economy and nearly zero-energy buildings (NZEB), as well as helping ensure compliance with the emerging EU requirements in the field of environmental protection, air and water quality, and waste management. Many of the Grants' green programmes and EU funding are seen as mutually supportive: the EEA and Norway Grants were frequently used to fund new and innovative projects, conduct research, develop feasibility studies, build capacity, raise awareness, and undertake other essential preparatory activities, which laid the foundation and prepared beneficiary states to programme much larger EU investments in the same areas later. In several cases, programmes focused on areas that are not well covered by EU funding, such as hydropower and geothermal, and on target groups like smaller municipalities and SMEs. The focus on innovation and "first of its kind" projects is particularly important in the EEA and Norway Grants, because this type of riskier and complex initiative falls outside of the scope of the larger EU funding mechanisms.

Efficiency

Capacity of the Programme/Fund Operators to manage green programmes varies significantly among the beneficiary states depending on the scale, complexity and diversity of the programmes. For the most part, **capacities fit well with the programme requirements**. In general, Programme Operators that have previous experience with EEA & Norway Grants programmes tend to be very efficient in programme management. Some newly established Programme Operators faced serious challenges in

the first half of programme implementation, but the situation has improved as experience was gained. The main success factors of efficient programme delivery include good administrative capacity for grant management, availability of dedicated, proactive and committed staff, and knowledge of and continuous engagement with national stakeholders and project promoters.

Challenges that undermined efficiency include a lack of dedicated staff and frequent staff changes, lack of clarity or insufficient power of authority for decision-making within some Programme Operators, and very complex or inflexible programme designs. The high number of calls and projects to contract, administer, and monitor, as well as the continuous need for adaptive management and re-allocation of funds, reduces the administrative capacity to efficiently implement programmes in a timely manner, even for very experienced and well-resourced Programme Operators. Programme Operators of the larger programmes in the Energy and Climate Change programme areas in Bulgaria and Romania, targeting complex infrastructure projects, require greater human capacity than they currently have, advanced project management skills, closer and more proactive engagement with stakeholders, and technical expertise in the subject matter.

The role of the Donor Programme Partners in programme implementation, their input and experience both in subject matter and in programme administration is appreciated by the Programme Operators. Donor Programme Partners play an important role in facilitating bilateral cooperation, in preparing the concept note, in the work of the cooperation committees, in the design of the calls, and in the assessment of the applications. However, their ability to positively influence programme design and implementation depends on personal relationships and the willingness of Programme Operators to adopt the recommendations of the Donor Programme Partners, because their status as advisors does not give them decision-making authority.

The largest and most complex programmes and projects are delayed and face very high risk of underperformance, due to unpredictable and unique external factors which cause *force majeure* circumstances beyond the control of the Programme Operators/Fund Operator and project promoters. The feasibility of programme activities being implemented on time is determined by several factors. First, **programme design took too long**. As a result, the timeline allocated for implementation was in many cases insufficient from the start, given their complexity and scale. This is now being exarcebated by **unprecedented disruption of global supply chain, and inflation**. Larger capital-intensive projects - which require a longer preparation time, involve international procurement of inputs, and entail complex technical design and customised solutions - face higher risks of being delayed, or not being completed on time. Innovative projects, which are “first of its kind” in the beneficiary countries, are also at high risk due to the many unforeseen issues they need to resolve on top of high market uncertainty and volatility. Smaller projects and “soft” activities, such as capacity building and awareness raising, are feasible to implement within the remaining timeframe of the programmes. There is a very high likelihood that in most cases projects contracted in 2022 and those yet to be contracted (which will include public procurement) will not be able to complete all activities on time and on budget.

Effectiveness

The extent to which the EEA & Norway Grants green programmes will achieve planned results depends on the design of the programmes and complexity of the projects. Smaller projects without investment in infrastructure and public procurement are more likely to succeed. They are not affected by external factors and have sufficient implementation time. **Several of the largest and most complex projects are likely not to achieve planned results in full,** due to insufficient time and/or budget.

Programmes under the Energy programme areas cover a wide range of technologies and solutions, which for the most part will achieve planned results in terms of addition of new clean energy generation capacity, energy saving and greenhouse gas (GHG) emissions reduction. The cost-effectiveness of these programmes varies significantly among the countries and projects. It is higher for larger, private sector-led projects, due to economies of scale and the lower level of EEA and Norway grant funding in relation to total project cost. Smaller public sector projects, such as rural electrification or municipal energy efficiency improvement, as well as new and innovative projects, such as NZEB, tend to deliver GHG emission reductions less cost-effectively. The importance of these projects lies in their additional benefits for social cohesion and creating a knowledge base for the deployment of new green solutions by local stakeholders.

The special concerns related to hydropower and geothermal energy were reflected in the programme design. However, the timeline allocated to the implementation of these programmes does not match their complexity and the long preparatory time such projects require to be ready for financing. Hydropower and geothermal energy plants are unique compared to other power supply options; they are always custom-designed site-specific projects. There are substantial uncertainties and risks associated with hydrology and geothermal energy (which impacts power generation and revenues) and geology (which may substantially increase construction costs). Addressing these uncertainties requires time and additional investment in feasibility studies and resource assessment, such as drilling works to explore the availability of geothermal energy. Site licences and permits also take a long time to obtain as many stakeholders are involved, often with conflicting rights and responsibilities. For hydropower projects, environmental and social risks can be complex to address and require an extensive Environmental Impact Assessment process. Consequently, programmes focused on activities and results which were feasible to implement within the allocated timeframe. Support has been provided to modernisation and rehabilitation of existing hydropower plants. As regards geothermal energy, investment has been made in smaller building-level solutions and projects for which resource assessment has been conducted earlier, as well as on the preparatory works, feasibility studies, and resource assessment which lay the foundation for investment in the sector by other funders.

Special concerns, related to the need to address strategic priorities and compliance gaps of the beneficiary countries, were designed as pre-defined projects with the appropriate national agencies taking the lead. Those pre-defined projects are likely to deliver planned results, with a few exceptions where external factors, such as inflation and global supply chain disruption, can hamper their implementation.

Two calls in Romania and Poland aimed at addressing energy access and energy poverty failed to achieve planned results and were either significantly scaled down or cancelled. For example, in Romania the call failed to attract sufficient proposals because of municipalities' low capacity to design and implement rural electrification projects.

Areas where the green programmes are likely to achieve particularly impactful results include awareness raising, capacity building, local climate actions, strengthening EU environmental compliance, promotion of new and innovative solutions, business models and approaches to green transition (please refer to Annex VII: Case study 2: Inovation in EEA & Norway Green Programmes). In Latvia, the programme has also resulted in the adoption of national climate law. These types of projects are also more likely to sustain their results. For infrastructure projects, their sustainability hinges upon adequate provision for operations and maintenance (O&M), which is being addressed to varying degrees by project promoters and requires greater attention from Programme Operators at both project screening and implementation.

Bilateral Cooperation

All programmes considered bilateral objectives in their designs, but how these were implemented depended on the needs and capacities of programme operators and project promoters. Insufficient programme and project implementation timelines, aggravated by COVID-related restrictions, limited partnership and collaboration opportunities. Factors that enhance the bilateral outcome are the continuity of priorities and programming areas from previous programming periods, the proactive role of the relevant Programme Operators and Donor Programme Partners, and sufficient time to identify the right partner and operationalise the partnership. Building trust requires time, which in many cases was not sufficient to allow for new partnerships to emerge and mature.

At both programme and project level, bilateral cooperation brings significant added value. The utility of bilateral cooperation lies primarily in nurturing and sustaining partnerships and building the capacity of Programme Operators and project promoters in terms of technical competence and programme and project management. These partnerships will provide new market access for private businesses, with the possible delivery of goods and services in the future. Increased cooperation between authorities will contribute to a higher level of common solutions in Europe. There is potential for more strategic use of the EEA funds in the next financial mechanism period. Realising this potential requires a dialogue between donor and beneficiary countries to jointly define their strategic vision and objectives for bilateral cooperation.

Recommendations

Recommendations for the current EEA & Norway Green Programmes

1. **Improve risk and adaptive management**. Programme Operators/Fund Operator should proactively engage with project promoters to systematically identify, monitor, and manage risks. They should also provide quarterly updates to the FMO on the status of high-risk projects (largest and most recently contracted). In addition, Programme Operators/Fund Operator should communicate clearer guidance to all project promoters regarding programme timeline, deadlines, and implications of non-performance.

2. **Conduct an *ex-post* evaluation**. The FMO should undertake an *ex-post* evaluation of a sample of the largest projects to assess how mandatory sustainability clauses in project contracts have been complied with. An *ex-post* evaluation should also verify the amount of GHG emission reductions actually achieved by projects, and their cost-effectiveness. Findings should inform the design and cost-effectiveness benchmarks of the green programmes in the next Financial Mechanism.

Recommendations for the future EEA & Norway Green Programmes

3. **Rules for programme design**. The Donors should introduce binding rules for programme design to limit the number of outcomes, outputs and actions (calls, predefined projects or small grant schemes) per programme relative to its size. This will increase programme efficiency and reduce the administrative burden on Programme Operators. The following ratios are suggested:
    - Small programmes (10 million EUR and less) – maximum one outcome, two outputs and two actions;
    - Medium-size programmes (10 million EUR - 30 million EUR) – maximum two outcomes, four outputs and four actions;
    - Large programmes (over 30 million EUR) – maximum three outcomes, six outputs and actions.

4. **Programme development**. The Donors should introduce a binding timeline for programme development by National Focal Points and Programme Operators, and for their review by FMO. The total allowable timeframe for programme development and approval is suggested not exceed 12 months from the signature of the MoU. This is essential to ensure sufficient time for programme implementation, in view of green programmes' complexity.

5. **Programme relevance**. National Focal Points, Programme Operators, the FMO and Donor Programme Partners should continue the good practice of identifying synergies between national priorities, funding gaps and areas, where bilateral partners have advanced technical knowledge and expertise. National ownership and programme alignment with priorities of the beneficiary countries should prevail over the special interests and know-how of the Donors.

6. **Bilateral cooperation objectives**. At the programme development stage, Programme Operators and Donor Programme Partners should jointly identify programme outcomes where bilateral cooperation can bring added value. Strategic objectives for bilateral cooperation should be included in the programme agreements, for example, "*enhanced cooperation between institutions from Beneficiary State and Donor States in the area of X*". Calls through which these strategic objectives will be realised should also be specified in the programme agreement.

7. **Lifetime coherence.** Throughout implementation, Programme Operators should seek to ensure their programmes' coherence with the evolving sectoral and climate finance landscape. They should regularly consult with relevant sector stakeholders, EU fund operators, and public and private financial institutions to identify opportunities for co-financing and scaling-up. Best practices in enhancing coherence and alignment should be shared with FMO as part of an annual programme report.

8. **Enhanced cohesion.** The FMO and Programme Operators should consider establishing project development and implementation facilities to provide technical assistance (TA) to project

promoters for the development of technical documentation and applications, as well as provision of project implementation support. This TA should focus on countries with high regional inequalities and target project promoters from the least developed regions, to enhance territorial cohesion and ensure more equal benefit sharing of the EEA & Norway green grants within the countries. TA can be provided via a roster of qualified experts/firms, which should be different from the members of the selection committees, to avoid conflict of interest.

9. **Programme efficiency**. For large and complex programmes, the National Focal Points and Programme Operators should consider delegating programme management services fully or partially to a qualified national agency or a sub-contractor. These service providers should have expertise in managing infrastructure investment programmes in the country and sector. Such a practice proved efficient in several green programmes, as it helped address gaps in grant absorption capacity among Programme Operators resulting from the increasing volume of green funds under their management.

10. **Cost-effectiveness**. The Donors should be more flexible regarding benchmarks for the cost-effectiveness of GHG emission reductions. Prioritising highly cost-effective projects for grant provision may crowd out the private sector from financing climate actions and should be re-considered. Cost-effectiveness benchmarks should be waived for projects contributing to just transition, energy poverty alleviation and application of innovative climate solutions. Such projects bring high social and economic benefits and contribute to new market development but are less cost-effective and therefore not so attractive for private investors.

11. **Programme sustainability.** Programme Operators should review and monitor the adequacy of sustainability provisions at project selection and throughout implementation. For all infrastructure projects, operation & maintenance (O&M) plans should be presented with the application, including the availability of a sufficient budget for O&M and dedicated personnel.

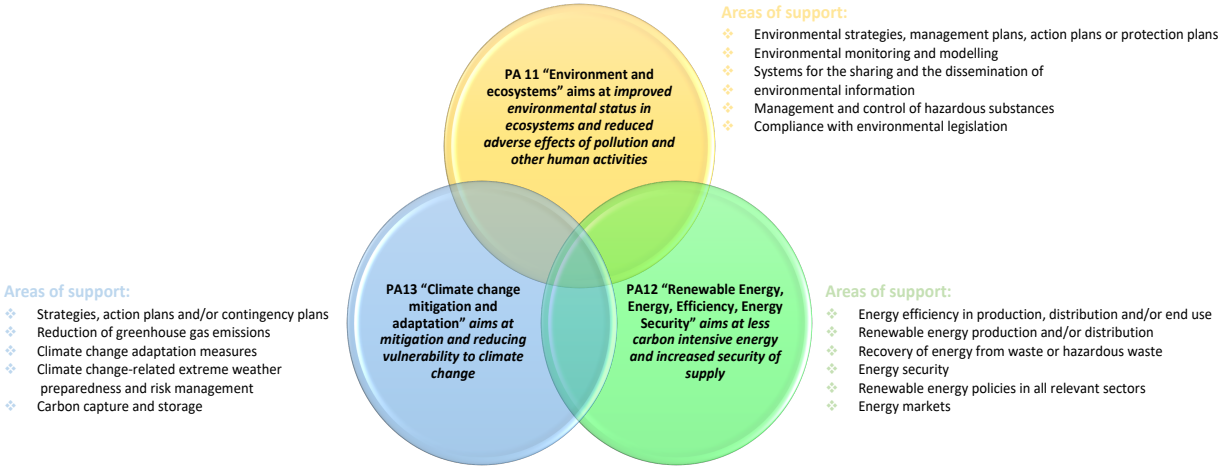
12. **Strengthened bilateral cooperation: from quantity to quality**. For those actions/calls where bilateral cooperation is considered strategically important, Programme Operators should consider elevating the role of the Donor Programme Partners and engaging other Donor country entities in their design and implementation. In these calls, projects with bilateral partnerships should be assessed based on qualitative indicators, such as the scale and nature of bilateral project partner involvement and contribution. To enable quality partnerships to be formed, more time should be allowed in these calls for project promoters to apply.

Background and context

Background: the reasoning for funding Green programmes

The EEA and Norway Grants represent the contribution of Iceland, Liechtenstein and Norway to EU cohesion policies, with a focus on two overall objectives: (i) reducing economic and social disparities and (ii) strengthening bilateral relations with 15 EU countries in Northern, Central and Southern Europe. The current Financial Mechanism of the EEA and Norway Grants supports five priority sectors. The main objective of the priority sector "Environment, Energy, Climate Change and Low Carbon Economy" is to ensure good environmental status of our ecosystems, adequate and timely climate change adaptation and mitigation measures, and increased use of renewable energy. Respectively, as outlined in the Blue book[1] this objective is pursued through providing support in three interconnected Programme Areas (PAs), as illustrated in Figure 1 below.

Figure 1. Programme Areas Objectives and Areas of Support



Source: own design based on Blue book

Environmental, climate and energy challenges have become even more important after the launch of the **EU's Green Deal** in 2019 and the adoption of the EU-wide goal of reducing net greenhouse gas (GHG) emissions by at least 55% by 2030, compared to 1990 levels. The **EU Just Transition** policies aim to ensure that the transition towards a climate-neutral economy happens in a fair way. Leaving no-one behind is also of relevance to the objectives of the EEA Green Programme and its beneficiary countries. Further, the Russian invasion in Ukraine in early 2022 put the goal of **energy security** and reducing reliance on Russian fossil fuel exports at the core of national priorities in many of the Financial Mechanism's beneficiary countries. The donor countries have been at the forefront of the low-carbon transformation and have accumulated substantial knowledge and expertise in the field, which can help the beneficiary countries in identifying and scaling innovative solutions for their climate and environmental challenges.

From this perspective the **added value** of this priority sector and respectively of the PAs under it is its potential contribution to: i) reaching the ambitions in the EU's Green Deal by filling in the substantial gap for investment in low-carbon and climate resilient infrastructure; (ii) building bilateral partnerships and facilitating transfer of technologies and know-how between the donor and the beneficiary countries; (iii) reducing energy poverty, ensuring Just Transition and strengthening climate resilience of the most vulnerable communities; as well as (iv) enhancing public acceptance of climate change mitigation measures.

[1] https://eeagrants.org/resources/eea-and-norway-grants-2014-2021-blue-book-overview-supported-programme-areas

Evaluation purpose and scope

The main purpose of this midterm evaluation is to explore the **coherence, efficiency, and potential effectiveness** of green programming under the EEA and Norway Grants, with a view to identifying success factors and obstacles and providing recommendations to potentially inform the next programming period. Additionally, the evaluation assesses the extent to which programme design and implementation has considered bilateral cooperation. This includes consideration of the extent to which bilateral partnerships have added value, and how this may be enhanced in future programming. The set of 12 pre-defined questions, alongside the evaluation matrix, are presented in Annex VIII.

The evaluation covered 15 green programmes that have their outcomes linked to three interconnected Programme Areas (PAs): PA1 “Environment and ecosystems”, PA12 ”Renewable energy, energy efficiency, energy security” and PA 13 ”Climate change mitigation and adaptation”, distributed among 12 beneficiary countries: Bulgaria (BG), Croatia (HR), Czech Republic (CZ), Estonia (EE), Greece (GR), Latvia (LV), Lithuania (LT), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK) and Slovenia (SL). The investment of the Financial Mechanism (FM) 2014-2021 in these fifteen programmes amounts to €426 million. This includes projects contracted up until end of November 2022 (Table 1).

Table 1 List of green programmes

Programme short name	Starting date	Duration of the programme in months	Elapsed time as per 26 NOV	Contracted rate as per 26 NOV	Total budget including PM cost (in EUR)*
BG-ENERGY	21/06/2018	78	68%	**72%**	28 000 000
BG-ENVIRONMENT	10/04/2018	80	69%	**98%**	13 000 000
CZ-ENVIRONMENT	20/02/2019	70	64%	**59%**	32 320 000
EE-CLIMATE	18/11/2019	61	59%	**86%**	6 000 000
GR-ENERGY	26/06/2019	66	62%	**100%**	10 000 000
GR-ENVIRONMENT	26/11/2019	62	60%	**67%**	5 200 000
HR-ENERGY	21/12/2020	48	48%	**93%**	17 000 000
LT-ENVIRONMENT	11/02/2020	58	57%	**99%**	12 000 000
LV-CLIMATE	23/04/2019	68	63%	**100%**	14 000 000
PL-CLIMATE	07/02/2020	58	57%	**83%**	146 042 000
PT-ENVIRONMENT	27/05/2019	67	63%	**100%**	24 999 999
RO-ENERGY	20/08/2018	76	67%	**96%**	62 826 500
RO-ENVIRONMENT	01/10/2019	62	60%	**43%**	20 000 000
SK-CLIMATE	23/09/2019	63	60%	**93%**	18 216 000
SI-CLIMATE	18/12/2019	60	58%	**75%**	16 309 499
		Total			425 913 998

Source: GRaCE

The evaluation has a dual nature – both formative and summative. It is formative, as it identifies answers to the questions at the mid-term of implementation, which are aimed at programme improvement in the time remaining for implementation. At the same time, it is also a summative exercise – it provides the Donor States and the Financial Mechanism Office (FMO) with the knowledge and emerging lessons to identify recommendations for optimised coherence, increased efficiency and effectiveness, and expanded benefit of bilateral cooperation in Grants’ green programming in the next FM programming phase.

Methodology

Description of the overall approach and methodology

For the purpose of this evaluation, a mix of qualitative and quantitative research and analytical methods were used. Such an approach allowed for triangulation of information sources and data, as well as gathering rich material and ensuring robust analyses.

Description of data sources

Desk research covered a range of documents and data, including:

- EEA Grants documents: Guidelines for the EEA Financial Mechanism and Norwegian Financial Mechanism 2014 – 2021, reports from previous evaluations of EEA and Norwegian Financial Mechanisms
- Financial and indicator data from the Grant Administration and Collaboration Environment (GrACE) system as of November 2022
- Programme-level documentation: Memorandums of Understanding, programme agreements, concept notes, Annual Progress Reports, risk assessments, information about calls
- National policy documents: National Enrgy and Climate Action Plans (NECP), Recovery and Resilience Plans (RRPs), National Adaptation Plans (NAPs),
- Publicly available information about EU funding mechanism via European Structural Investment Funds (ESIF) and funding to beneficiary states from the European Investment Bank (EIB).

Semi-structured in-depth interviews were conducted at the programme and project level with 123 representatives of Programme Operators, National Focal Points, Donor Programme Partners and selected project promoters. In Bulgaria, Croatia, Czechia and Poland physical meetings and visits to selected project sites were held. In other countries interviews were conducted online. All interviews were conducted based on topic guides prepared during the Inception Phase of the assignment and were approved by the FMO.

The evaluation also involved several rounds of discussion with representatives of the FMO at the inception and final phase of the evaluation. These consultations were conducted through six individual in-depth interviews and two group discussions.

Quantitative information on the experiences and opinions of project promoters and donor project partners was collected via two dedicated online surveys. Overall, 75 project promoters participated in the survey, out of the 460 email addresses contacted (a 16% response rate). Among the 75 donor project partners from donor countries, 18 completed the survey (a 24% response rate). Survey results are presented in Annex III and IV.

Analysis of available quantitative data coming from GrACE covered financial aspects (budget, disbursement rate, contracted rate and incurred rate), as well as other qualitative information, such as outcomes, stage of implementation, multi-level partnerships. GrACE data were also used to make *ex-ante* assessment of programme cost-effectiveness.

Two case studies have been prepared to provide further evidence on coherence and effectiveness and highlight best practice and lessons learnt. The focus of the first case study was on how EEA & Norway grants promoted innovation and new low-carbon and green solutions, markets and business models (Annex VII). The focus of the second case study was on assessment of the cost-effectiveness of the grants in reducing GHG emissions for different types of intervention, technology and solution. The purpose was to provide evidence regarding suitability of the adopted benchmark (EUR/tCO2e) for decision-making and grant allocation (Annex VI).

Limitations of the evaluation

The evaluation faced several challenges. The launch of the evaluation coincided with the summer vacation period and data gathering had to be extended to the end of October 2022 due to the limited availability of stakeholders.

The key limitations to the evaluation included:

- **Continuously changing implementation status**: The progress and number of projects contracted kept changing dynamically in the course of the evaluation.
- **Diversity of the programmes**: Due to the differences in the programmes' scope, area of focus, etc. the evaluation ensured an appropriate level of analysis of each programme. Varying levels of resources were earmarked for desk research, interviews, and reporting at programme level, with extra resources allocated to the largest and most diverse programmes.
- **The unavailability of some selected project promoters for interviews**: Several project promoters selected and contacted for interviews were unavailable or unwilling to participate. In response to this, the evaluation team selected substitute PPs in line with the sampling criteria. Particular focus was placed on the most recently contracted and innovative projects.
- **Generic email addresses in GRaCE:** The contact information of the project promoters and donor project partners made available to the evaluation team from GrACE often included generic email addresses. In effect, the overall response rate of the project proponents was lower than expected.

Findings

Coherence

1. To what extent are programme objectives and activities relevant to the beneficiary states' national context?

All green programmes show **a high degree of alignment with the objectives of the EU policy agenda** in this field, as well as with the beneficiary states' national priorities and needs in terms of filling funding gaps in respective thematic areas. The green programmes are also well aligned with evolved strategy priorities of the beneficiary states, as reflected in National Energy and Climate Plans (NECPs), Recovery and Resilience Plans (RRPs), and National Adaptation Plans (NAPs). External factors, like the unprecedented increase in energy prices and growing shortages of energy resources, not only strengthened the programmes' relevance for strategic objectives, but are also practically helping municipalities and businesses in the beneficiary states to cope with the negative consequences of the ongoing energy crisis.

The objectives of the green programmes show a high degree of alignment with, and relevance to, the EU policy agenda and Beneficiary States' national environmental priorities as reflected in the National Energy and Climate Plans 2030 (NECP), Recovery and Resilience Plans (RRP), and Climate Change Adaptation Plans (CCAPs). According to many project promoters, **external factors**, like the unprecedented increase in energy prices and growing shortages of energy resources, not only increased the relevance of programmes' long-term strategic objectives but also practically helped local stakeholders to cope with immediate negative consequences of the ongoing energy crisis.

To meet the EU's energy and climate targets for 2030, EU countries need to establish a 10-year integrated national energy and climate plan (NECP) for the period from 2021 to 2030. All nine programmes in the area of Energy (Croatia, Romania, Greece, and Bulgaria) and of Climate Change (Estonia, Latvia, Poland, Slovakia, and Slovenia) are well aligned with countries' **NECPs** by placing strong emphasis on **energy efficiency** and deployment of **renewable energy** sources. While not explicitly stated, these programmes also make an important contribution to the national **energy security** objectives of the beneficiary states.

As regards specific thematic priorities and technological solutions, there is a varying degree of alignment between the green programmes and the NECPs. **Hydropower development** is an area which is not prioritised in the national plans. For example, Poland in its NECP does not envisage any additional policies and financial support to promote hydropower and considers existing poilicies sufficient to achieve the intended increase in hydropower capacity[2]. Bulgaria adopted an even more cautious approach to hydropower development. Its NECP does not foresee any increase in hydropower generation and mentions some concerns about its potential negative environmental impact, biodiversity and the Natura 2000 network in the country[3]. Romania did not set up any hydro-power related targets in the NECP either[4].

A general observation regarding alignment of the Grants' green programmes with the NECPs is that the latter do not contain technology-specific goals, but rather **sectoral goals** for deployment of **renewable energy** sources in electricity generation, heating and cooling, as well as in transport. The relevance and contribution of the green programmes was highest in the first area, in particular via support for solar photovoltaic (PV) applications. As regards heating, the focus on geothermal energy in Romania, Bulgaria, Poland and Croatia made a positive contribution to increasing the share of renewable sources in heating. The transport sector received the least support.

[2] https://energy.ec.europa.eu/system/files/2020-08/pl_final_necp_part_1_3_en_0.pdf
[3] https://energy.ec.europa.eu/system/files/2020-06/bg_final_necp_main_en_0.pdf
[4] https://energy.ec.europa.eu/system/files/2020-06/ro_final_necp_main_en_0.pdf

In the **energy efficiency** (EE) domain, a high degree of alignment has been observed between the Grants' green programmes and the NECPs, with both prioritising EE building retrofits and EE improvements in municipal infrastructure (heating, lighting, waste, and water management).

The focus on municipal climate change adaptation and mitigation needs in several green programmes (PT-Environment, BG-Environment, SK-Climate, PL-Climate, EE-Climate) addresses urgent and massive need to localise and improve implementation of local climate actions in line with respective provisions of the NECPs and the **Climate Change Adaptation Plans (CCAPs)**. The strongest alignment between the green programmes and the CCAPs was observed in GR-Environment, CZ-Environment and SK-Climate. Several beneficiary states - Czechia, Estonia, Greece, Latvia, Portugal, Slovakia – have recently adopted their **Long Term Climate Neutrality Roadmaps,** to which their respective green programmes make an important direct contribution.

Alignment with EU and national environmental objectives: Six programmes in the environment programme area have a more diverse set of objectives, reflective of specific national circumstances and national priorities in this field. For example, the marine water component in the BG-Environment programme responds to the monitoring and reporting requirements of the EU Marine Strategy Directive and the Bulgarian Marine Strategy 2022-2027[5]. The delayed reporting on the status of the Black Sea water environmental status could result in the opening of an infringement procedure against Bulgaria – an example of urgent national priority and needs which this Programme seeks to address. The municipal waste component of the same programme addresses another urgent priority: in November 2021, the EU Commission initiated an infringement procedure against Bulgaria for failing to comply with EU waste legislation[6]. The programme plays a critical role in addressing the needs and gaps in implementation of the EU Circular Economy Package, the Waste Framework Directive and the National Waste Management Plan of Bulgaria. The LT-Environment Marine Strategy component contributed to the development of a much needed methodology for monitoring and evaluation of microplastics in marine water. This provided them with the data needed for the reporting as well as for the design of management measures. Biodiversity and ecosystems components in BG-Environment, PT-Environment, PL-CLimate, RO-Environment contribute strongly to the EU Biodiversity Strategy 2030 and relevant national goals. In Portugal, for example, the programme supports 11 biosphere reserves covering 1,312,565 ha, which are defined as "the privileged territories for the nature conservation and promotion of sustainable development practice" in the National Strategy for Nature Conservation and Biodiversity 2030. In Romania, the programme supports the restoration of 50 of the 74 significantly degraded wetlands and peatlands. They are both priority habitats and a carbon sink.

Good alignment of the green programmes with national needs and priorities was achieved, *inter alia*, due to **wider stakeholder consultations**. This enhanced the programmes' coherence, and allowed multiple priorities of the beneficiary states to be addressed. However, such an approach often led to very complex design of the programmes, which reduced their efficiency. Furthermore, since the programme design, the national priorities in the environment, climate and energy areas have evolved as reflected in NECPs and their sectoral context has also changed. The consequences of external contextual factors like the COVID-19 pandemic, the war in Ukraine, and other external factors, have caused some changes in the economies of the benefciary states, as compared to the time when the Programmes were designed, calls were opened, and applications were assessed. For the programmes' **lifetime coherence** with evolving needs and rapidly changing circumstances it is important that the national consultation process continues throughout programmes' implementation, and that there is greater flexibility built into their design to provide for necessary adaptation.

The high degree of alignment and relevance of the green programmes has not always been supported by **communication** about their contribution to national priorities. In Bulgaria and Poland, for example, this is an area where improvements can be made to bring greater visibility to the programmes' added value, especially in new and innovative fields.

[5] https://www.bsbd.org/bg/index_bg_4247096.html
[6] https://ec.europa.eu/atwork/applying-eu-law/infringements-proceedings/infringement_decisions/index.cfm?lang_code=EN&typeOfSearch=true&active_only=1&noncom=0&r_dossier=&decision_date_from=&decision_date_to=&EM=BG&DG=ENV&title=&submit=Search

2. To what extent do programmes complement or have synergies with other funding sources, such as the EU and the World Bank?

There is **good complementarity between the EEA and Norway Grants and EU funding streams** at various levels. The programmes bring added value as they fill in funding gaps for strategic priorities, such as promotion of new green concepts and approaches, circular economy and nearly zero-energy buildings (NZEB), as well as help ensuring compliance with the emerging EU requirements in the field of environmental protection, air and water quality, and waste management. Many of the Grants' green programmes and EU funding are seen as mutually supportive: the EEA and Norway Grants were frequently used to fund new and innovative projects, conduct research, develop feasibility studies, build capacity, raise awareness, and undertake other essential preparatory activities, which laid the foundation and prepared beneficiary states to programme much larger EU investments in the same areas later. In several cases, programmes focused on areas which are not well covered by EU funding, such as hydropower and geothermal, and on target groups like smaller municipalities and SMEs. The focus on innovative approaches and "first of its kind" projects is particularly important in the EEA and Norway Grants, because this type of riskier and complex initiative falls outside the scope of the larger EU funding mechanisms

In assessing the coherence of the green programmes it is important to consider that this support is taking place within a much larger and complex national and EU-wide climate and environment finance landscape. One of the largest sources of financial support to the beneficiary states is the European Structural and Investment Funds (ESIF)[7]. In the 2014-2020 programming period ESIF provided to beneficiary states over 150 billion EUR in grant support for green transition and environment protection. In addition, the European Investment Bank (EIB) – the European Union's primary financier of climate action and environmental sustainability - has been financing climate actions via a range of instruments, concessional loans, equity, and technical assistance. The World Bank's operations in the area of climate and environment in the beneficiary states is very limited and therefore has been excluded from the scope of the evaluation. Annex II provides a detailed account of ESIF and EIB funding for these thematic areas. Against this funding landscape, beneficiary states adopted a range of approaches to identify funding gaps and strategic niches for the green programmes, to ensure their complementarity and maximise their added value. Please refer to Annex I for discussion of the funding gaps in the concept notes.

Firstly, the green programmes were used to fill funding gaps for strategic priorities in the beneficiary states for which support was not available from other sources. In Bulgaria, Croatia, and Greece, support for Near Zero Energy Buildings (NZEB) is critical to test and operationalise this concept in the national context, in view of EU requirements that all new buildings be nearly zero-energy by the end of 2020[8]. Implementation of NZEB at scale requires not only funding but knowledge and skills among a diverse range of construction industry stakeholders, which these programmes are helping to develop.

In the environment programme area, green programmes were used to help ensure **compliance with EU environmental legislation**. The BG-Environment programme gave practical support to the monitoring and management of the sea waters to ensure compliance with both the Marine Strategy Framework Directive and the Water Framework Directive. LT-Environment also supported compliance with the Marine Strategy Framework Directive by developing the methodology for microplastic litter in marine waters, collecting and analysing the data. GR-Environment supports the implementation of innovative measures for water quality and quantity assessment under the Programme of Measures developed under the Water Framework Directive. In the field of circular economy, BG-Environment and PT-Environment support a number of local initiatives aimed at recycling and better utilisation of the waste collected.

One of the most impactful examples of green programmes' complementarity is when they were used to fund **new and innovative projects** (Please refer to Case Study 2 for a more detailed account of innovation in green programmes), conduct research, develop feasibility studies, build capacity, raise awareness, and undertake other essential preparatory activities, which **laid foundations** and prepared

[7] ESIF is composed of five funds, namely the European Regional Development Fund (ERDF), European Social Fund (ESF), Cohesion Fund (CF), European Agricultural Fund for Rural Development (EAFRD), and European Maritime and Fisheries Fund (EMFF)

[8] https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/nearly-zero-energy-buildings_en

Beneficiary Countries to programme **much larger EU investments** in the same areas. EE-Climate, LT-Climate and BG-Energy provide good examples of such an approach. EE-Climate supported the development of the first ten municipal climate action plans in the country. The Ministry is now planning to replicate this approach to develop local climate action plans for the remaining 79 Estonian municipalities under the ESIF[9]. BG-Energy provided a blueprint for the Government on how support to geothermal energy can be structured, which was later incorporated into the scope of the national Recovery and Resilience Plan (RRP).

Some green programmes have been designed to **focus on geographic areas or target groups** that would be covered to a very limited extent or **not covered at all by EU funding** in the same country. In Czechia, EU funding has been allocated for projects improving air quality due to coal combustion and heating houses in the winter time for municipalities and cities larger than 5,000 inhabitants. To complement EU funds, the green programmes provided resources to fund similar activities in municipalities with less than 5000 inhabitants. A similar approach has been adopted in Poland, where the EU supports municipal climate mitigation and adaptation measures in large cities and the green programmes focus on similar measures in smaller municipalities not eligible for EU funds.

The green programmes have also been used as a **source of "bridged" financing** to support projects which were ready for funding but for which the demand exceeds the available aid funds, such as street lighting and other municipal EE projects in Bulgaria. Based on interviews with project promoters in Croatia, Bulgaria and Romania, at the time of application the green programmes were the only available funding source to support their EE and RE projects. However, with the launch of new EU funds, such as the new ESIF programme phase and RRP, the range of funding sources has expanded, providing promoters with greater opportunities to replicate and scale-up their experience from the green programmes.

The complementarity of the green programmes with EU and other funds proved better when the responsible Programme Operator was also the agency in charge of EU funding, as in the case of BG-Environment, EE-Estonia, LV-Climate, or PT-Environment. These Programme Operators are well positioned to follow on a continuous basis the evolution of both funding needs and priorities, and to allocate funding from green programmes to maximise relevance and strategic value to the country.

[9] Interview with PO of Estonia

Efficiency

3. To what extent are the programmes fit for the current institutional and administrative capacities of the Programme Operators, Fund Operator (IN) and project promoters?

The capacity of the Programme/Fund Operators to manage green programmes varies significantly among the beneficiary states depending on the scale, complexity, and diversity of the green programmes. For the most part, capacities fit well with the programme requirements. In general, Programme Operators that have previous experience with EEA & Norway Grants programmes tend to be very efficient in programme management. Some newly established Programme Operators faced serious challenges in the first half of programme implementation, but the situation has improved as experience was gained. The main success factors of efficient programme delivery include good administrative capacities for grant management, availability of dedicated, proactive, and committed staff, and knowledge of and continuous engagement with national stakeholders and project promoters.

Challenges which undermined efficiency include a lack of dedicated staff and frequent staff changes, lack of clarity or insufficient power of authority for decision-making within some Programme Operators, and very complex or inflexible programme designs. The high number of calls and projects to contract, administer, and monitor, as well as the continuous need for adaptive management and re-allocation of funds, reduce administrative capacity to efficiently implement programmes in a timely manner, even for very experienced and well-resourced Programme Operators. Programme Operators of the larger programmes in the Energy and Climate Change programme areas in Bulgaria and Romania, targeting complex infrastructure projects, require greater human capacity than they currently have, advanced project management skills, closer and more proactive engagement with stakeholders, and technical expertise in the subject matter.

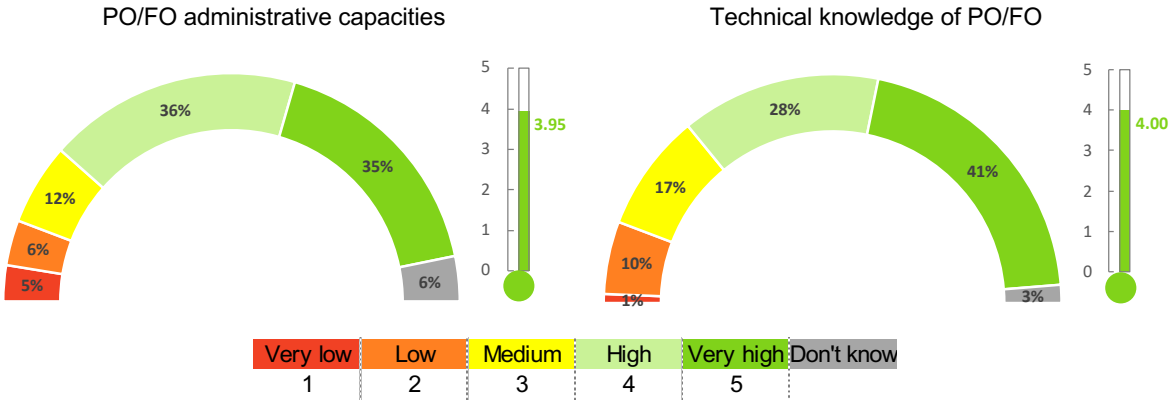
Programme Operators (POs)/Fund Operator (FO)

The **institutional set up of Programme Operators/Fund Operators varies, as does the design of the programmes** in terms of level of funding, thematic scope, combination of PAs, priority outcomes and set of modalities[10]. Most of the programmes (especially with host area PA11 and PA13) are led by Ministries with mandate for the relevant sector of climate, energy or environment (Bulgaria, Estonia, Greece, Czechia, Latvia, Poland, Portugal, Romania and Slovakia). The rest of the programmes are implemented by other types of ministry or central agencies responsible for fund management, not always directly linked thematically to the priority PAs (e.g. Slovenia, Croatia and Lithuania). In Romania the energy programme is led by a Fund Operator – Innovation Norway.

The majority of Programme Operators/Fund Operators have been found to have sufficient capacity to implement the programmes, as confirmed by interviews with National Focal points, Donor Programme Partners, project promoters and the survey. Project promoters' average assessment of Programme Operators' financial and administrative capacity on a scale from 1 to 5 stands at 3.87 and 3.95 respectively. Reporting and technical knowledge of subject matters are the areas with the lowest ranking and therefore, potential for improvement. This is illustrated in Figure 2.

[10] In total the 15 programmes accommodate 21 Predefined projects (PDPs), 59 open calls for proposals and 25 small grants schemes (SGSs).

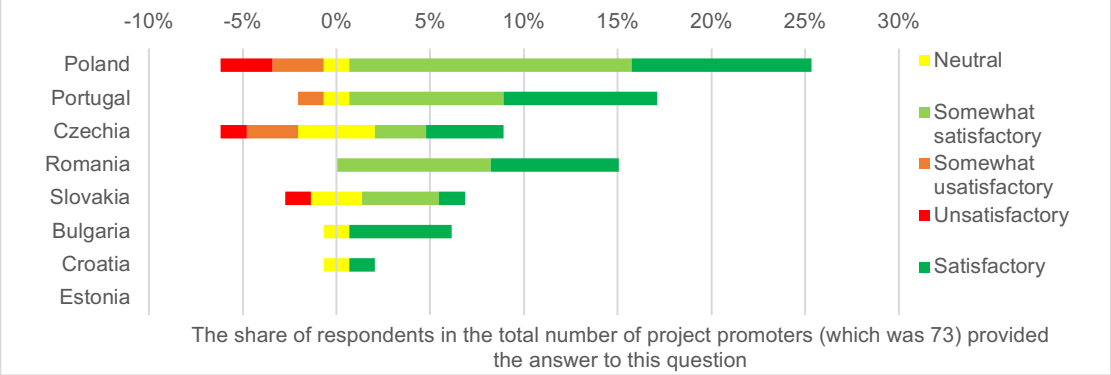
Figure 2. Assessment of administrative capacity and technical knowledge of Programme Operators/Fund Operators
Question: As a project promoter, please assess your Programme Operator/Fund Operator. Please rate on a scale from 1 to 5, where 1 is very weak and 5 is very strong (N/A – the category is not relevant for the respondents)



In Poland, the highest share of respondents (5-10%) indicated that the capacity of their Programme Operator was not satisfactory, in particular in such areas as knowledge of EEA grant mechanisms, financial management and administrative capacities (Figure 3 and Annex III). The following factors have been found to be the most critical for the efficient Programme Operator/Fund Operator: good administrative capacity for grant management, thanks in part to institutional memory and experience from past EEA & Norway grant rounds (GR-Energy, PT-Environment, PL-Climate), availability of dedicated staff (PT-Environment, almost all), knowledge of and engagement with local stakeholders/networks (HR-Climate), and proactive attitude and commitment of Programme Operators' staff. As regards dedicated staff availability, Bulgaria offers valuable comparative experience: BG-Energy, with around 42 people involved in programme implementation, is not progressing as well as the BG-Environment which has only 3 or 4, but fully dedicated full-time staff.

From the efficiency standpoint and the ability of the Programme Operator/Fund Operator to ensure timely programme implementation, administrative knowledge is more important than specific thematic expertise. In the opinion of several Programme Operators/Fund Operators, the programme puts greater emphasis on the administrative requirements, and as a result the knowledge and ability to write reports often outweighs the need for knowledge of the technical subject and field.

Figure 3. The assessment of POs/FOs by project promoters



Institutional set-up where a non-subject matter agency co-implements the programme with a technically competent national organisation, as is the case in Croatia, proved very efficient and effective, as the competencies of these organisations are complementary, e.g. grant administration skills and knowledge of local stakeholders and their needs with technical knowledge in the climate, energy, and environment field. Similarly, in Estonia, according to National Focal point, a two-tier institutional set-up proved to work very well: "*We had an extensive experience with our implementing agencies. They are trustworthy and we've been using them since 2004 as also for the Structural Funds*". In cases where implementing agencies were involved, the high-level content and alignment with national priorities came from the PO/Ministry, while the technical, financial and administrative support was provided by the implementing

agency. This type of arrangement allows staff shortages in the line Ministries to be addressed while still allocating dedicated personnel for programme implementation.

In other cases, **availability of technical expertise** and inputs were ensured via strong collaboration with relevant line ministries. For example, according to one Donor Programme Partner, in Czechia in the former period, the Programme Operator was in the Ministry of Finance and brought on board knowledge of environmental matters via close collaboration and engagement with the Ministry of Environment, which was very closely involved in the programme implementation, as part of the evaluator team. In the current programming period, the State Environmental Fund, which serves as the Programme Operator, combines in-house expertise in both grant administration as well as technical expertise in environment. In other situations, Programme Operators rely on a network of external evaluators or collaborators with strong subject matter expertise.

Programme Operators' ability and willingness to reach out to potential project promoters is an important factor in determining the success of the programme. In the words of one Donor Programme Partner: "*Good ideas come often from the field, the problems also*." Programme Operators (Czechia, Greece, Portugal, Croatia, Latvia and Estonia) with access to local networks and with willingness and capacity to maintain continuous interaction with stakeholders proved highly relevant and efficient. The Programme Operator in BG-Energy showed a certain reluctance for closer engagement, citing their insufficient capacity and potential conflict of interest as the main reasons. Such an approach often results in programme design and implementation being less reflective of local needs and circumstances.

Related to that is the ability of the Programme Operator to communicate effectively and provide information about the possibility of obtaining EEA grants to its targeted audience. In some countries, Programme Operators have been very effective in their ability to reach out and promote the programme via websites in the national language and social media (Twitter, Facebook, LinkedIn). Czechia has a very good example, with very good communication links to the Programme Operator, as does Poland. Programme Operators/Fund Operators' communication in Romania and Bulgaria was less effective.

Programme design complexity and lack of flexibility in the programme agreement for re-allocation of financial resources and change of modalities have been cited by several Programme Operators and Donor Programme Partners as factors which jeopardise efficiency. Changes in the programme agreement require time and involvement of Programme Operators, FMO, and Donor Programme Partners to justify and agree on a new budget, priorities and modalities. In several countries, this lengthy PA amendment process has caused additional delays against an already very stretched and insufficient timeline. Lastly, several Programme Operators and project promoters which have experience with both EEA & Norway grants and EU funding noted that management and control systems for EEA & Norway Grants are as complex as, or even more complex than, those of much larger EU funds, and consequently the administrative costs of running the programme/projects are much higher relative to the funding available.

Some DPPs have a similar view of the unnecessary complexity of the programme design, which jeopardises its efficiency: "*All the number of calls and different topics: It's again up to us. Still, I'm working for this for about four years, and I don't make any distinction between the small grant scheme and the calls for proposal. Maybe there is some distinction, but I really can't find some. While the processes are simpler in comparison to the EU structural funds, still there is some more room for simplification*".

The need for streamlining, simplification and focus on impacts rather than process have also been emphasised by several National Focal Points. In Estonia, both the National Focal Point and Programme Operator have recognised the need for the programme to be more focused, but they also note the limitations on the beneficiary side to limit the number of priorities and prioritise because "*all ministries want something*", and this is the area where "*donors could also think about how to help beneficiary states to focus*". Based on current experience, the Czech Programme Operator recognised the need to keep the future number of calls limited and appropriate to its administrative capacity.

Large infrastructure-oriented programmes in energy and climate programme areas require greater capacity, sector-specific skills and a different level of project management skills among Programme Operators, compared to smaller programmes. Additional due diligence is required when identifying and assessing the capacity of the Programme Operator. To ensure efficient delivery of complex infrastructure projects, Programme Operators should be capable of anticipating issues and risks,

assessing the capability of the project promoters to address them, and jointly navigating through all the complexities and potential pitfalls.

Based on the evaluation findings regarding the success and limiting factors, Table 2 provides comparative analysis of how Programme Operator/Fund Operator capacity fits with the complexity of their programme (where the complexity is a function of the funding volume, the number of actions and outcomes to which they have to contribute).

Table 2 Programmes' fit with Programme Operator/Fund Operator capacity

Country-Programme	Programme complexity	Description	Comments on capacity
BG-Energy	High	- 28 million € - 10 actions (2 PDPs, 5 Calls, 3 SGS) - 2 outcomes	- Lack of dedicated personnel and clear distribution of roles and responsabilities - Decision-making power is at the political level, which makes operation difficult.
BG-Environment	High	- 13 million € - 10 actions (3 PDPs, 3 Calls, 4 SGS) - 4 outcomes	- Small, but motivated and dedicated team; - Experienced head of PO with decision-making power
HR-Energy	Medium	- 17 million € - 7 actions (1 PDP, 4 Calls, 2 SGS) - 2 outcomes	- Efficient and effective set-up, strong team with operational and technical capacity. - Potential to scale-up
CZ-Environment	High	- 32 million € - 11 actions (7 Calls, 4 SGS) - 4 outcomes	- Experienced PO overwhelmed by demanding administration of too many calls.
EE-Climate	Medium	- 6 million € - 5 actions (4 Calls, 1 SGS) - 3 outcomes	- Efficient and effective set-up, strong team with operational and technical capacilities.
GR-Energy	Low	- 10 million € - 1 action (1 Call) - 1 outcome	- Strong technical expertise of PO. Programme design allowed to reduce admin capacity requirements
GR-Environment	Low	- 5 million € - 4 actions (3 Calls, 1 SGS) - 1 outcome	- Strong technical expertise of PO
LV-Climate	Medium	- 14 million € - 3 actions (2 PDPs, 1 Call) - 3 outcomes	- Efficient and effective set-up, strong team with operational and technical capacilities.
LV-Environment	Medium	- 12 million € - 8 actions (7 PDPs, 1 SGS) - 5 outcomes	- Strong grant management expertise in the PO - Programme design (only PDPs) minimised admin requirements
PL - Poland	High	- 146 million € - 15 actions (3 PDPs, 11 Calls, 1 SGS) - 4 outcomes	Motivated and competent staff at the Ministry of Climate and Environment and the National Fund of Environmental Protection and Water Management. This two-tier management structure, however, does not work in full sync, and according to project proponents creates additional administrative burdens
PT-Environment	High	- 25 million € - 10 actions (3 PDP, 4 Calls, 3 SGS) - 3 outcomes	- Very professional, dedicated team with both professional and technical expertise and strong leadership
RO-Energy	High	- 63 million € - 15 actions (1 PDP, 9 Calls, 5 SGS) - 5 outcomes	- Insufficient staff for such a large programme and type of projects
RO-Environment	Medium	- 20 million € - 5 actions (1 PDP, 4 Calls, 1 SGS) - 4 outcomes	- A combination of experienced and new team members; - New head of Programme Operator and detached decision-making power at the political level - Risk of micro-management of projects (e.g.monthly technical reports required by PP)

SK-Climate	Medium	- 18 million € - 5 actions (1 PDP, 4 Calls, 1 SGS) - 2 outcomes	- Experienced Programme Operator
SI-Climate	Medium	- 16 million € - 1 action - 4 outcomes	- Experienced PO, but subject to staff turnover, actions and decisions of politicians (delayed due to elections)

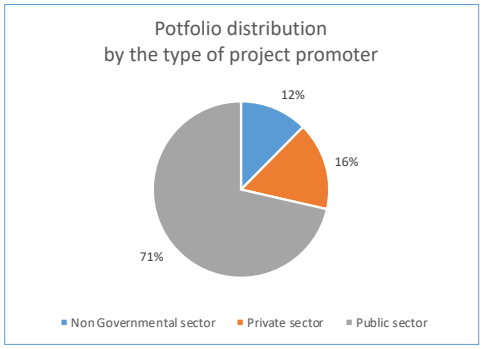
As a reference point against which the capacity of the Programme Operator has been assessed, the case of PT-Environment was used. PT-Environment is a programme of medium size (25 million EUR), but very complex programme structure, with 10 actions spread across 3 diverse outcomes and 60 contracted projects. The programme is being implemented by a dedicated, highly motivated interdisciplinary team of 6 full-time employees in addition to the head of Programme Operator, which combines this function with her regular role in the General Secretariat of the Ministry for Environment and Energy Transition. The staff of the Programme Operator have various backgrounds, including engineering, environment, biology, management, financial and legal expertise. The team has grown since its set-up in 2017 and the core staff remain stable throughout. PT-Environment is the only highly complex programme which does not experience delays and risk of under-performance. In the view of the evaluation team, this is largely due to the team's sufficient capacity and motivation, clear and well-aligned management and decision-making processes.

In three other highly complex programmes (BG-Energy, BG-Environment, and RO-Energy) the evaluation team observes the gap between the programme requirements and the capacity of its operator, in terms of availability of qualified and dedicated staff, clarity of management and reporting arrangements. In PL-Climate, the Programme Operator (the Ministry and National Fund) has a strong and well-resourced team with strong regional presence. However, according to project promoters, the main weakness of the existing set-up is often the overlapping reporting requirements from the National Fund and the Ministry, resulting in higher administrative burdens. RO-Energy, managed by the Norwegian company, experienced significant delays in the beginning, but laterally made good progress and reached neary 100% contracting rate. Overall, project promoters assessed the capacity of Innovation Norway as very good compared to other Romanian entities, and operators of EU and other donors' programmes. Nevertheless, some project promoters were concerned that they were not able to contact and receive feedback from the Fund Operator for a few weeks, and lacked guidance on contractual issues and implications of delayed implementation. The rest of the programmes fit well with the capacity of their operators. In some cases, the evaluation team observes that operators have the capacity to absorb even more funding. GR-Energy is a good example of a focused and efficiently-run programme which prioritises quality over quantity. Simple programme design enabled the Programme Operator to invest more time and resources in the preparation of its only call, selecting and supporting implementation of the best quality and most innovative projects featuring NZEB retrofits of public buildings.

Project Promoters

At the **project promoters level**, the programmes have been designed to target different categories of promoters, with a main focus being on public sector, as reflected in Figure 4 below. As of November 2022, of 644 contracted projects 71% were led by public sector organisations, primarily local authorities.

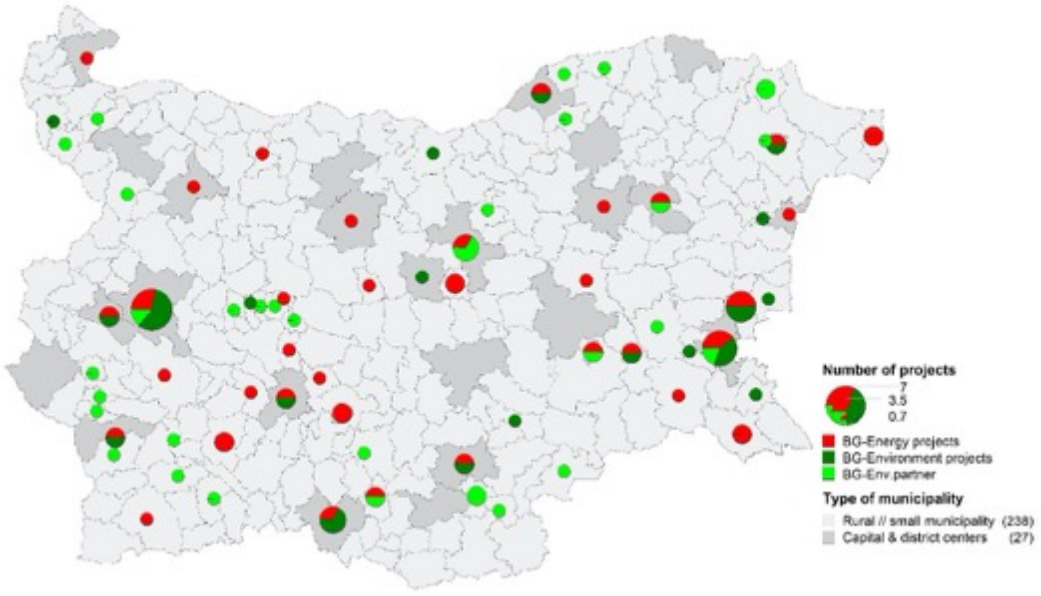
Figure 4. Portfolio distribution by the type of project promoter



Source: GrACE, data extracted as of 26.11.2022

Among local authorities in the beneficiary countries, high heterogeneity of capacity can be observed depending on their size and location (centre versus periphery). Based on interviews with Programme Operators/Fund Operators, location of the projects across the countries has been rather balanced in this respect. This finding has been confirmed by the detailed regional analysis of the projects in two Bulgarian programmes – BG-Environment and BG-Energy. Under both programmes there is just a slight dominance of centrally-located project promoters versus those from smaller rural localities: 40% of available funding has been allocated for projects in small and rural municipalities versus 60% for central ones (see Figure 5). Nevetheless, interviews with project promoters in several countries (Bulgaria, Croatia, Poland, Romania) indicated their need to engage external consultants to prepare applications and implement projects. Municipalities from least developed regions and other promoters with limited own budgets may therefore have less possibilities to apply and benefit from the green programmes.

Figure 5 Location of project promoters and project partners of BG-Energy and BG-Environment



Source: Map produced by Y.Kazakova based on project promoters and partners data in GrACE. Classification of municipalities is based on the categorisation published by Ministry of Regional Development. Capital and district centres include municipality categories 0 and 1; smaller/rural municipalities include categories 2 to 5.

The capacity of public sector promoters to prepare and implement projects is on average lower than in the private sector. All public sector promoters face an issue with public procurement rules, which often causes delays. They also have less ability to mobilise co-financing, especially NGOs. Several other limitations have been identified via survey and interviews, such as, for example: "*We are having difficulty receiving an advance payment. The program provides for an advance payment after providing a bank guarantee or promissory note. We are 4 public schools and there is no way to get a bank guarantee. A promissory note cannot also be issued by the director. This order is issued by the Minister of Education*." Reliance on external consultants to help prepare and manage grants is a common practice, especially in municipal projects, but this option is only available for those proponents which can afford such services.

As regards private sector promoters, they are generally better positioned to manage risks and deliver projects due to high-quality personnel, experience with similarly complex projects, and less complex procurement requirements. Similarly, NGOs are well positioned to carry on some of the green programme activities, but in some countries the role of the private sector and NGOs has been rather limited due to the restricted nature of the calls. In Bulgaria, National Focal point suggested expanding the eligibility criteria to a broader range of promoters, in particular NGOs and the private sector. Only two of the six Environment programmes supported NGOs – PT- Environment and CZ - Environment. In BG-Environment, NGOs were also involved, but not as a lead partner. This puts them at a disadvantage, as the selection of NGOs in such cases is a prerogative of a lead partner. Even though RO-Environment was open to NGOs as potential beneficiaries, high co-financing requirements (10% co-financing) compared to 100% grant provision for the public sector was a major limiting factor, and reduced NGO participation.

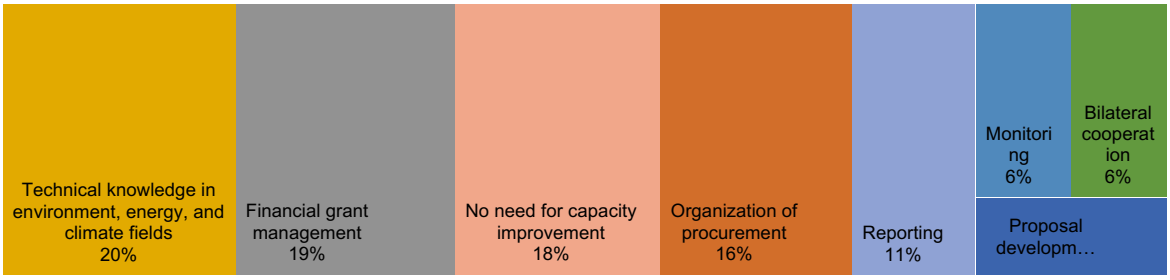
As illustrated in Figure 6, for the most part, in the survey project promoters self-assessed their capacity for project management as high to very high. At the same time, areas where improvements are needed most include thematic knowledge, followed by financial grant management and procurement (See Figure 7). This has been confirmed by Programme Operatos/Fund Operator which cite insufficient capacity for public procurement management among the key bottlenecks in project delivery by public sector entities. On the other hand, several project promoters noted that "*the administrative and reporting requirements under the programmes are set very high, consuming a lot of project staff capacity, and also that these requirements for procurement procedures are above those required by the national law*". Other project promoters noted that requirements are equally complex as those that are in place for much larger EU and national funding mechanisms. One project promoter which also has experience with a non-governmental Fund Operator of the Active Citizens programme highlighted how much more difficult it is to implement projects with a governmental ProgrammeOperator.

Figure 6. Self-assessment of project promoters' capacity

Question: As a project promoter, please assess your organisation's capacity, rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong (N/A – the category is not relevant for the respondents).

Figure 7. Areas for improvement for project promoters

Question: In which areas do you, as a project promoter, consider that your organisation's capacity needs most improvement to ensure effective and efficient implementation of the current project (up to 3 most relevant characteristics per project promoter)



4. To what extent are Donor Programme Partners able to support and positively influence programme development and implementation?

The role of the Donor Programme Partners in programme implementation, their input and experience both in subject matter and in programme administration, is appreciated by the Programme Operators. Donor Programme Partners play an important role in facilitating bilateral cooperation, preparing the concept note, in the work of the cooperation committees, in the design of the calls, and the assessment of the applications. However, their ability to positively influence programme design and implementation depends on personal relationships, and willingness of Programme Operators to adopt recommendations of the Donor Programme Partners, because their status as advisors does not provide them with decision-making authority. In the programmes where Programme Operators lack expertise in subject matter, Donor Programme Partners could be given greater power to contribute to the design and evaluation of the calls.

Overall, Programme Operators are appreciative of the support from Donor Programme Partners, rating it from excellent to very good, especially their input and experience in both subject matter and in programme administration. Bilateral cooperation is considered to be effective or very effective and beneficial by all Programme Operators/Fund Operators with donor programme partners (only 2 programmes out of 15 do not have a programme partner). Donor Programme Partners play an important role in facilitating bilateral cooperation, preparing the concept note, in the work of the cooperation committees, and in the design of the calls. For example, in the words of an Estonian Programme Operator "*Donor Programme Partner provided good comments to make the call text better for the applicants*". Donor Programme Partners also see their role in promoting and emphasising bilateral cooperation in the design of the calls by stating clearly that this gives extra points in the evaluation.

Donor Programme Partners in general sufficiently understand country-specific contexts, but it also depends on the particular person and how long s/he works with the relevant beneficiary countries.

Donor Programme Partners' ability to positively influence programme design and implementation depends largely on informal factors and, often, personal relationships, as one Programme Operator reflected on these issues in the interview: "*We have a long term and operation history, and it's always important to have this personal links - this is the most important. We know these people and they know us for many years. We speak frankly and find joint interests*".

Donor Programme Partners' status of observers and non-voting members in the project selection committees does not give them decision-making authority in this process. One programme partner reported several instances when selection committees comprised of independent external experts have taken decisions which were very contrary to the recommendations they made, and were reflective neither of the opinion of the Donor Programme Partners, nor the Programme Operator's priorities. In another example, a Donor Programme Partner's recommendations regarding the design of the call were not taken on board by the Programme Operator, which, in view of the Donor Programme Partner, led to sub-optimal allocation of resources.

The role and value added of the Donor Programme Partner also very much depends on their own competencies, mandate and expertise. The National Energy Authority of Iceland and the Norwegian Water Resources and Energy Directorate played a critical role in structuring and promoting geothermal and hydropower power calls, whereas Innovation Norway contributed with its private sector engagement expertise for the green programme in Portugal. The Norwegian Environmental Agency acted as a Donor Programme Partner for 8 green programmmes, and has been commended by Programme Operators for its continuous support, engagement and advice, which often go beyond their TOR and agreed roles.

Donor Programme Partners' assistance with matchmaking and finding donor project partners was particularly noted. However, this is also an area where the need for improvements has been identified. Partnership and trust-building at both programme and project level takes time and must be allocated a realistic timeframe, which was not always the case.

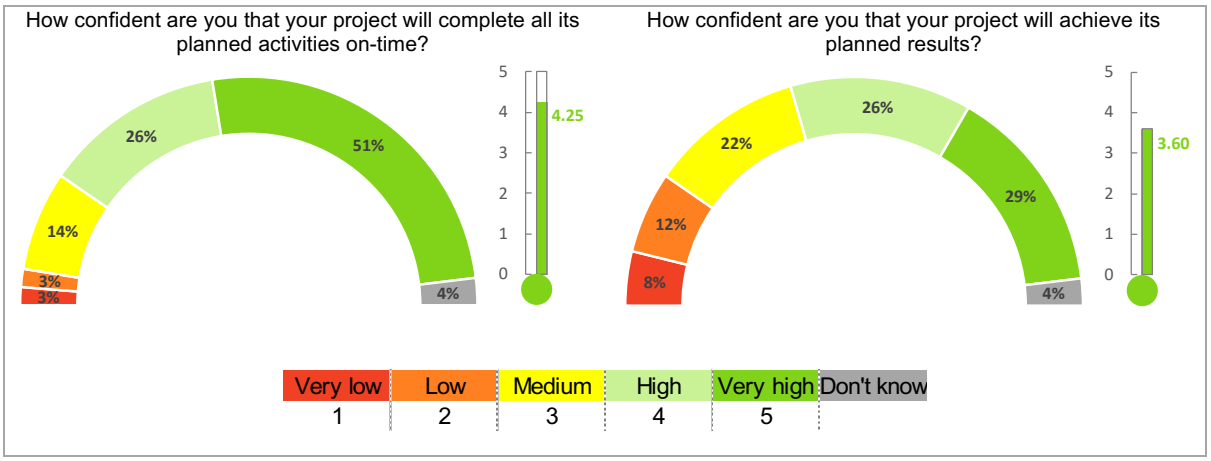
5. To what extent are programme activities feasible to implement in each of the beneficiary states?

The feasibility of programme activities to be implemented on time is determined by several factors. First, **programme design took too long**. As a result, the timeline allocated for implementation was in many cases insufficient from the start, given their complexity and scale. This is now being exacerbated by **unprecedented disruption of global supply chain, and inflation**. Larger capital-intensive projects, which require a longer preparation time, involve international procurement of inputs and entail complex technical design and customised solutions, face higher risks of being delayed or even not being completed on time. Innovative projects which are "first of its kind" in the beneficiary countries are also at high risk due to the many unforeseen issues they need to resolve on top of high market uncertainty and volatility. Smaller projects and "soft" activities, such as capacity building and awareness raising, are feasible to implement within the remaining timeframe of the programmes. There is a very high likelihood that in most cases projects contracted in 2022 and those yet to be contracted (and which will include public procurement) will not be able to complete all activities on time and on budget.

Based on the survey among project promoters, 77% assess the likelihood of having their project completed on time as high or very high, however only 55% of the same respondents are equally confident that their projects will achieve their planned results, and 20% of them have low to very low level confidence in their ability to achieve intended results (Figure 8). These survey findings have to be considered with caution because it did not cover those projects which were contracted in 2022. Since then a few hundred new projects have been contracted, all of them face even greater risks of delays.

Figure 8. Confidence in the success of the projects by promoters

As a project promoter, please assess the level of your confidence in the success of your project rating it on a scale from 1 to 5, where 1 is very low and 5 is very high (N/A – the category is not relevant for the respondents).



There are three categories of factors which render implementation of certain projects and programmes unfeasible. The first factor is the match of the **complexity of the programme** (number of calls, themes and modalities) **with the capacity of Programme Operator/Fund Operator and allocated timeline**. When the programme is too complex, the capacity of Programme Operators does not correspond with programme scope and the timeline is not sufficient – the programme, as a whole, is not feasible to implement. A good illustration for such a mismatch is RO-Energy, one of the largest Grants' green programmes totalling 62 million EU in grant funding, comprising 20 thematic calls and targeting a very wide range of climate solutions and beneficiaries. It is implemented by Innovation Norway, a Norwegian public entity with no prior experience of delivering such a complex energy programme in Romania.

Larger capital-intensive projects, such as hydropower or geothermal energy, which require a longer preparation time, involve international procurement of inputs, and entail complex resource assessment, technical design and customised solutions, face higher risks of being delayed or even not being completed on time. It takes a relatively longer time to develop geothermal energy sources as compared with other energy sources. This is attributed to the long time involved in exploration and feasibility studies, the lengthy decision-making and regulatory approval process, the need for private sector

operators to secure additional financing, lengthy contract negotiation periods, etc. The experience of countries with an advanced geothermal energy sector clearly indicates that this is the sector where long-term sustainable public support is required before a robust pipeline of shovel-ready projects can be developed and ready for financing. Similarly, for new hydropower projects the lead time is between 5 and 7 years. Challenged by emerging controversies over their negative environmental impact, this type of investment project is increasingly difficult to plan and implement adequately within the allocated timeframe. For both hydropower and geothermal projects, the most feasible are those solutions which deal with rehabilitation and improving the efficiency of the existing plants (hydro), and those dealing with exploration of geothermal energy for which preparatory work has already been undertaken by promoters (geothermal), which limits the potential scope of applications and demand for funding.

Another factor which limits projects' feasibility, especially for some pre-defined projects, is their very specific nature or "first of its kind" design, which is inherently riskier and involves issues and risks which could not have been envisaged or anticipated at the design stage. For example, in BG Environment, one pre-defined project (PDP-2) stands out as the most problematic project. It is implemented by the Black Sea Basin Directorate, but requires collaboration with the competent maritime organisation to undertake required measurement of the Black Sea water status as per the EU Marine Strategy Framework Directive. The limited timescale for project implementation, the need to collect data for at least three consecutive seasons, and now the impact of military operations in the Black Sea Basin, makes it impossible to implement under current circumstances.

Similarly, a pre-defined project in Lithuania which requires procurement of complex and customised IT solutions is at risk of not being delivered on time due to major supply chain disruption, and increased global demand for IT security/emergency monitoring products, which makes it hard to secure reliable suppliers to provide services on time and on budget. Another "first of its kind" pre-defined project, promotion of the NZEB approach in Croatia, is facing a number of challenges, which were not possible to foresee at project design: regulatory approvals, funding shortfalls, emergence of new regulatory requirements, etc. A more realistic timeline was needed from the start, or the possibility of continuing funding over two programme periods.

6. To what extent does the choice of Programme Operator affect progress in implementation and the likely achievement of results?

The choice of Programme Operator affects programme implementation. The Programme Operator's capacity and implementation set-up should match the complexity and the scale of the programme. Programme Operators of the large programmes in Energy and Climate Change areas, targeting complex infrastructure projects, require greater capacity, project management skills and technical expertise in subject matter. Technical expertise of the Programme Operators in subject matter is not essential for efficient programme delivery, but it does help improve quality, and ensure sustainability and better alignment with strategic priorities.

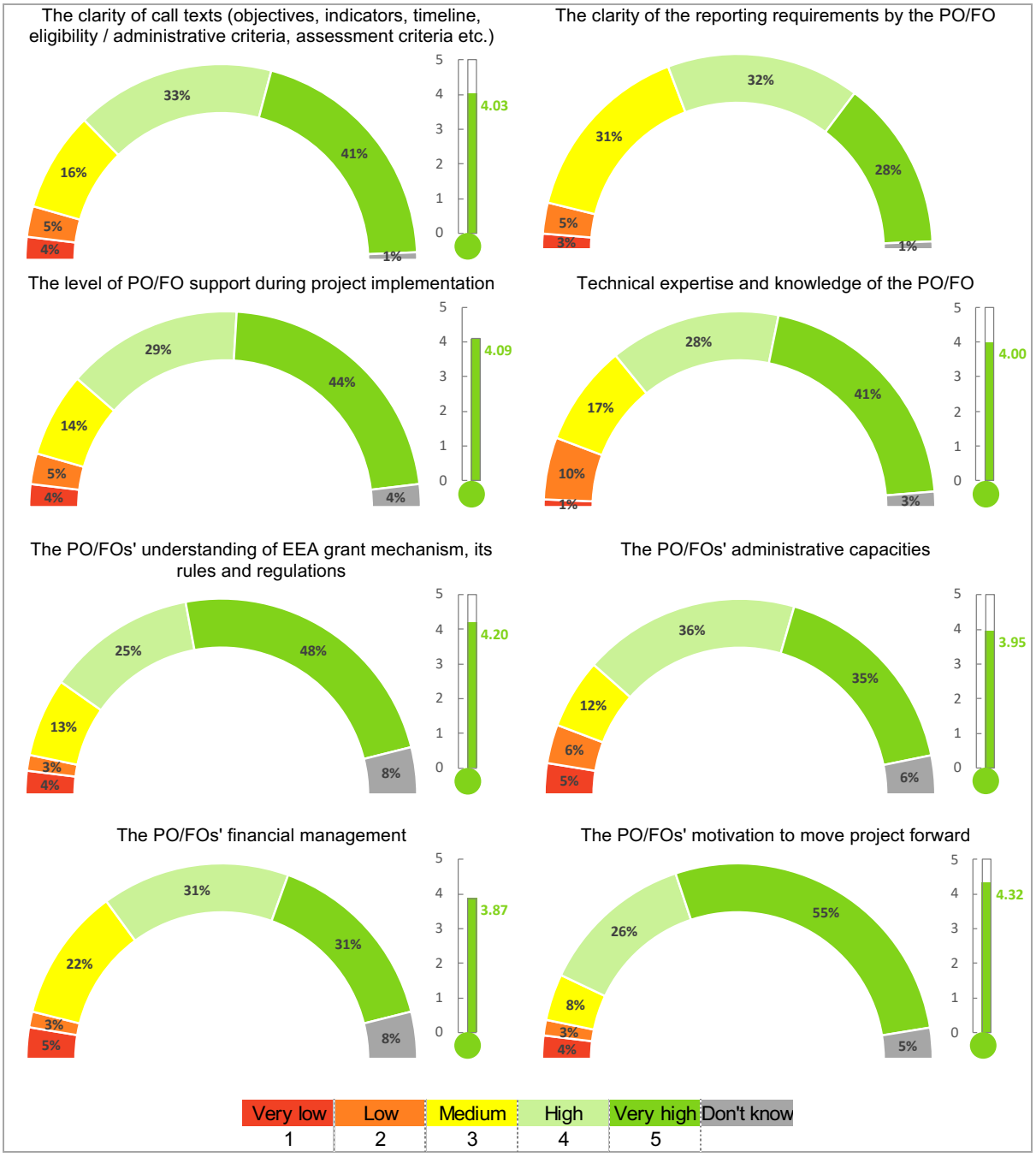
Challenges which undermine efficiency and negatively affect progress have been posed by the lack of dedicated staff and frequent staff changes, lack of clarity, or insufficient power of authority for decision-making within the Programme Operator, and the very complex and inflexible design of the programmes. The high number of calls and projects, as well as the need for programme re-design and fund re-allocation, reduce administrative capacity to efficiently implement programmes in a timely manner, even for very experienced and well-resourced Programme Operators.

The choice of Programme Operator plays an important role in programme implementation. In the current programming cycle, this role became even more important as the global energy and supply chain crisis unfolded. Better-resourced POs with dedicated, competent and experienced staff are better at managing their programmes at times of crisis. For example, the Programme Operator of PT-Environment had already started to closely monitor risky projects in February 2022, when the first instances of potential delays and supply chain disruption occurred. As a result, this programme had sufficient time for adaptive management and correction. In other countries, the National Focal Point and Programme Operator have jointly sent guidance to project promoters on the potential steps they can implement to address funding shortfalls or delays. Overall, the level of motivation to move projects forward among Programme Operators/Fund Operator have been assessed by 81% of project promoters as being high to very high (Figure 9); as reflected in the comments of one project promoter: "*They are always willing to help!*".

However, in a few instances (7% of the responses) Programme Operators have been insufficiently proactive, as reflected in the results and the statements made by several project proponents, for example: "*We hope to have instructions from the PO regarding the high growth of inflation in recent months. The project was budgeted in 2020, approved at the end of 2021 and implemented in 2022 and 2023. Currently, the price growth for most of the activities that are related to travel and logistics has tripled. At the present moment, it is extremely difficult to predict what the situation will be in the coming months and especially at the beginning of next year, which would become a huge challenge for the project implementation. We would love to have more autonomy and flexibility in adapting the project implementation to the current reality in order to achieve the ambitious goals of the project, even if some of the activities and targets need to be changed*".

Figure 9. Assessment of Programme Operator/Fund Operator capacities by project promoters

Question: As a project promoter, please assess your PO/FO. Please rate on a scale from 1 to 5, where 1 is very weak and 5 is very strong (N/A – the category is not relevant for the respondents).



Overall, it is the existence of sufficient and qualified Programme Operator/Fund Operator staff, and their ability and willingness to network effectively, proactively engage with and support project promoters, that is most important in the choice of the Programme Operator/Fund Operator.

As regards institutional set-up, in the view of the evaluation team there is no preferred option. Involvement of national implementing agencies, Environmental Fund or specialised technical institutions, proved to work well in Croatia and Estonia. Programme Operators located in the Government/Cabinet office (SI-Climate), have been affected by staff changes after the elections and the requirement to redraft a call, which led to further delays. This type of set-up is best avoided.

The evaluation team also noted that non-governmental Programme Operators can be more efficient and effective than governmental entities in terms of their ability to provide upfront financing and significantly lower the administrative burden on project promoters.

7. To what extent are the delays hampering programme implementation and what are the potential consequences of this?

The largest and most complex programmes and projects are delayed and face a very high risk of underperformance, due to unpredictable and unique external factors which cause *force majeure* circumstances beyond the control of the Programme Operators/Fund Operator. External factors, starting from COVID and the consequences of the war in Ukraine and related supply chain disruption, are the primary reason for delays, in particular for large projects with complex input supply and procurement arrangements. Within the very limited timeline allocated for programme implementation, many Programme Operators and project promoters cannot mitigate the negative impact of these external factors. There is a high likelihood that projects contracted in 2022 and those yet to be contracted, involving any type of investment in infrastructure and public procurement, may not be able to complete all activities on time and within the envisaged budget. The programmes facing particularly high risk of delays are BG-Energy, PL-Climate, and RO-Energy.

Delays are the single biggest risk to successful implementation of the EEA and Norway Grants green programmes in the current programming period. Although most Programme Operators indicated their confidence that the results will be delivered on time, there is mounting evidence to the contrary. The delays are more likely to affect projects contracted in 2022, for which the procurement of inputs has not been completed, and therefore neither project promoters, nor Programme Operators can yet provide the exact timeframe and final budget required for project implementation.

The delays the programmes are facing result from a wide range of external and internal factors. One of the underlying factors for the delay is the **lengthy programme development period,** which shortened the time-period available for actual project implementation. Several Programme Operators, National Focal Points and Donor Programme Partners raised concerns over the unnecessarily lengthy programme design period, and suggested that the FMO re-assess the timeframe for programme development. The lengthy programme development process has also been acknowledged as a bottleneck in the recent assessment of the Grants programme development approach[11].

The average time from the MoU signature to the approval of the programme agreement was 23 months, which is significantly higher than the anticipated time for programme development defined in the Regulations, i.e. 12 months. Even in the best cases, such as CZ-Environment, BG-Environment, and LV-Climate, PA development took between 15 and 17 months. The programmes most affected by the lengthy development timeline, i.e. with a programme agreement design phase of 25 months and above, are: SK-Environment, RO-Environment, PL-Climate, EE-Climate, HR-Energy. Of these five, RO-Environment has the lowest contracted rate as of November 2022 at 43%. As mentioned earlier, it is important that the actual implementation timeline corresponds with the scale and complexity of the programme. For example, due to initial delay with programme agreement signature and Programme

[11] Centre for Strategy & Evaluation Services. (2020). Assessment of the Programme Development Approach: Final Report, p57, https://eeagrants.org/resources/assessment-programme-development-approach

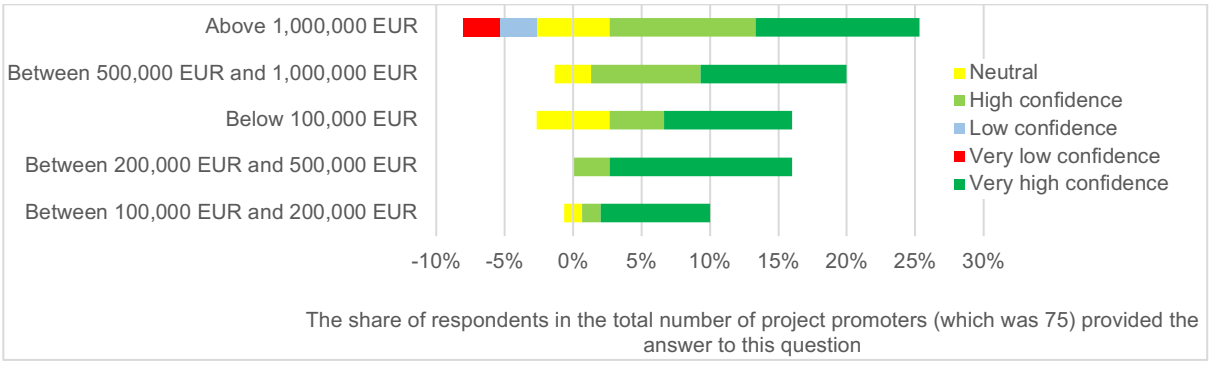
Operator's set-up, HR-Energy was one of the latest programmes to announce its call in September 2021 and award its first projects in May 2022. It still has a good chance of being completed within the allocated timeline, due to the relatively straightforward and small-scale projects, which are feasible to implement even within a 1-year period. In contrast, the largest programme, PL-Climate, was allocated a bit less than 5 years to deliver a much more complex and sizeable (146 million EUR) investment, which would be problematic to deliver under normal circumstances, let alone in an ongoing crisis, also bearing in mind that Poland is among the countries most affected by the Russian aggression in Ukraine.

Another internal reason for major delays (over a year) was related to the time it took to set up the Programme Operator (HR-Energy, RO-Energy), develop a management and control framework (GR-Environment, BG-Energy, RO-Environment), secure government co-financing (GR-Energy), and deal with the consequences of staff changes after elections (SK-Climate). While hard to predict, it is possible to allocate some contingency space in the programe implementation period, and timebound KPIs for Programme Operators.

However, there are external factors causing delays that put a significant amount of EEA & Norway green funding at high risk, the scale and impact of which could not be imagined or foreseen at the programme design stage. COVID, and associated lockdowns and restrictions imposed in all countries in May 2020, exactly around the time the programmes were entering practical implementation stage, was a first significant bottleneck. It had widespread implications on both capacity of Programme Operators/Fund Operator to administer the calls and on the capacity of project promoters to participate in the calls and execute the projects in terms of securing contractors and inputs for the works.

COVID-related disruption of the global supply chains, in particular prolonged lockdown in China, which is a major supplier of equipment for clean energy projects, is another critical external factor which puts a large number of projects at risk. Solar PV projects (large scale, over 1 MW) are particularly affected. Supply chain disruption affects all projects which require inputs from global markets, including key commodities and goods constituting important inputs for the green programmes, such as semi-conductors, solar PVs, heat pumps, etc. Larger, technically complex projects (different inputs from different locations) which require customised solutions are most affected. Based on the survey results, this situation primarily concerns large projects (over 1 million EUR) in Poland with private sector proponents (Figure 8). However, the survey does not present the full picture, because it does not cover projects contracted in 2022. Those projects which do not have supply contracts in place as of October 2022 all face potential risks of delays. For example, several promoters of solar PV projects quoted the time needed for their potential suppliers to deliver systems at between 6 and 12 months, which will make implementation very tight, given the remaining programme timeframe.

Figure 8 Confidence of project promoters in timely project completion, by project size
Rating it on a scale from 1 to 5, where 1 is very low confidence and 5 is very strong confidence, results by project budget size



This is how the situation is seen by one of the affected project promoters "*The problem that we are facing now is the limited time of the programme itself. According to the contract we are supposed to finish the project before the end of April 2024.. … At the moment we are facing enormous problems with price rising and disruption of supply chain. As the project itself is unique there is a limited number of technology suppliers and they all inform about delays in supplies time… Time is crucial, because with limited time remaining the suppliers dictate prices that are much over the budgets*".

Another external factor which contributed to the delay was the need to deal with the consequences of Russian aggression and the influx of Ukrainian refugees to beneficiary states, in particular those that neighbour Ukraine, like the Baltic countries, Poland and Romania. According to Programme Operators, their administrative capacity, and also that of municipal project promoters, has been overstretched due to the urgent need to manage the migration crisis.

Effectiveness

8. Given the current status of implementation and the time remaining, how likely are the programmes to achieve the planned results, including taking into account the special concerns of each programme?

As of November 2022, the 15 green programmes have contracted 644 projects for the toal amount of 357 million EUR or 84% of the available funding, with most of the contracting activity taking place in 2022. Between May 2022 and November 2022, 93 million EUR or 22% of available funding have been contracted, these projects face a high risk of not achieving planned results on time. In total, **38% of the green programme budget** are at risk of not being delivered on time. The evaluators consider that completing project activities by 30 April 2024 (the final date for eligible project expenses) is very unlikely for several programmes, due to a range of external factors largely outside of POs'/PPs' control. In view of this, the evaluators suggest that **a time extension of between six months and one year would help overcome these challenges and, as a result, improve the quality of outputs and achievement of intended outcomes.**

The special concerns related to hydropower and geothermal energy were reflected in the programme design. However, the timeline allocated to the implementation of these programmes does not match their complexity and the long preparatory time such projects require to be ready for financing. Consequently, programmes focused on activities and results which were feasible to implement within the allocated timeframe. Support has been provided to modernisation and rehabilitation of existing hydropower plants. As regards geothermal energy, investment has been made in smaller building-level solutions and projects for which resource assessment had been conducted earlier, as well as on the preparatory works, feasibility studies, and resource assessment which lay the foundation for investment in the sector by other funders.

Special concerns, related to the need to address strategic priorities and compliance gaps of the beneficiary countries, were translated into pre-defined projects with the appropriate national agencies taking the lead. Those pre-defined projects are likely to deliver planned results, with a few exceptions where external factors, such as inflation and global supply chain disruption, can hamper their implementation.

Two calls in Romania and Poland aimed at addressing energy access and energy poverty failed to achieve planned results and were either significantly scaled down or cancelled. In Romania, for example, the call failed to attract sufficient proposals because of municipalities' low capacity to design and implement rural electrification projects.

Areas where the green programmes are likely to achieve particularly impactful results include awareness raising, capacity building, local climate actions, strengthening EU environmental compliance, promotion of new and innovative solutions, business models and approaches to green transition (please refer to Annex VII: Case study 2: Innovation in EEA & Norway Green Programmes). In Latvia, the programme also results in the adoption of national climate policy. These types of projects are also more likely to sustain their results. For infrastructure projects, their sustainability hinges upon adequate provisions for operations and maintenance (O&M), which is being addressed to varying degrees by project promoters and requires greater attention from Programme Operators at both project screening and implementation.

Implementation status of programmes

As of November 2022, the 15 green programmes have contracted 644 projects for the toal amount of 357 million EUR or 84% of the available funding, with most of the contracting activity taking place in 2022. Between May 2022 and November 2022, 93 million EUR or 22% of available funding have been contracted, these projects face a high risk of not achieving planned results on time. In total, **38% of the green programme budget** are at risk of not being delivered on time. Table 3 outlines the progress of the individual programmes in the 12 countries, starting date, months remaining for implementation until April 2024 by when all projects must be finished, number of contracted projects, percentage of the overall budget contracted, and the risk assessment of individual programmes.

Four green programmes (GR-Environment, LV-Climate, PT-Environment and SK-Climate) are at lowest risk of underperformance and are more likely to achieve their planned results within the available timeframe. These programmes account for 15% of the total budget of the green programmes. Five programmes totalling 18% of the green programmes allocation are at medium risk. The remaining six programmes, with a total grant amount of 269 million EUR, or 63% of the total budget, face high risk of not achieving planned results on time due to negative external factors and insufficient timeline. While many POs and national focal points remained positive about achieving the planned outcomes, there is a growing realisation that issues beyond their control may jeopardise workplans. This is confirmed by the feedback from project promoters (interviews and the survey).

The evaluators consider that completing project activities by 30 April 2024 (the final date for eligible project expenses) is very unlikely for several programmes due to a range of external factors largely outside of POs'/PPs' control. In view of this, the evaluators suggest that **a time extension of between six months and one year would help overcome these challenges and, as a result, improve the quality of outputs and achievement of intended outcomes.**

Table 3 Green Programme status and risk rating

Programme name	Elapsed time*	Contracted rate**	Total budget, EUR	Risk rating	Comments
BG-ENERGY	**65%**	**72%**	28 000 000	3	The programme is signficantly delayed with several capital-intensive and innovative calls to be completed in 2022. Very likely to under-perform. Most of the contrating activities took place between May and November 2022.
BG-ENVIRONMENT	**66%**	**98%**	13 000 000	2	PDP2 Black Sea water is not feasible under current circusmtances. PDP1 at risk. Call1+SGS1 were cancelled and their budgets relocated within the same priority.
CZ-ENVIRONMENT	**61%**	**59%**	32 320 000	2	Despite low contracted rate and project selection under 2 calls expected in 2023, PO expects (based on feedback from project promoters) all projects including those with investment components to be delivered in time. The remaining call is for "short/quick" projects - PO does not expect any problems with delivery. There are, however, uncommitted funds in the programme and uncertainty whether this can be absorbed in the last two calls.
EE-CLIMATE	**56%**	**86%**	6 000 000	2	The remaining call focusing on implementation of local climate actions: projects have been selected and contracting is ongoing. Since the focus is primarily on local solutions the risk of non-performance is medium.
GR-ENERGY	**59%**	**100%**	10 000 000	2	Despite high contracting rate, risks remain that some of the projects may be delayed or affected by inflation, especially those featuring imported equipment (heat pumps)
GR-ENVIRONMENT	**56%**	**67%**	5 200 000	2	Actual contracting rate is 87%, GrACE not synchronised, the PLIs budgets' sum up to 87%. Only the SGS1 not contracted yet, but underway.
HR-ENERGY	**44%**	**93%**	17 000 000	2	Projects have been contracted late, but as a rule, are not very complex and should be feasible to implement within remaining timeframe. Efforts by PO to manage risks can be commended. PDP on NZEB is at high risk due to its innovative nature and unforeseen risks
LT-ENVIRONMENT	**53%**	**99%**	12 000 000	3	Two PDPs are at risk due to supply chain disruption and the unique/special inputs these projects require.
LV-CLIMATE	**60%**	**100%**	14 000 000	1	Most projects contracted in 2020 and 2021 and are largely on track to be completed on time.
PL-CLIMATE	**53%**	**31%**	146 042 000	3	Efforts by PO to manage risks should be commended. However, due to highly capital intensive projects which have been particularly affected by risking inputs costs and disruption of supply chain the programme is at risk. Several projects already withdrawn.
PT-ENVIRONMENT	**60%**	**100%**	24 999 999	1	Most projects contracted back in 2020 and 2021 and have been performing well. 4 Projects from last call in 2022 are more focused on research and capacity building and therefore likely to be on time.
RO-ENERGY	**64%**	**96%**	62 826 500	3	50% of projects have been contracted since June 2022, all involve international procurement and in many cases customised technical solution (biogas, geothermal) and are at high risk of global supply chain disruption and inflation. Some municipal project promoters have low capacity and negotiating power to obtain favorable supply terms from international contractors, they require support.
RO-ENVIRONMENT	**56%**	**43%**	20 000 000	3	Call 3 cancelled, its budget relocated to projects on reserve list under Call 2 but still not contracted (28.11.2022). PDP LAKI III may suspend activities for one region due to flight restrictions.
SK-CLIMATE	**57%**	**93%**	18 216 000	1	(Investment) projects on track, projects expected to be delivered on time with additional co-financing from project promoters due to price increases. One project cancelled due to price increase and lack of additional co-financing.
SI - CLIMATE	**55%**	**76%**	16 309 499	3	Projects contracted only this summer, investment projects at risk of not meeting deadline if public procurement (or technology supply) are delayed. Especially the case of the largest project (PV in Koper Port) of 2.1 mil EUR (of 13 mil EUR Programme)

Special concerns

Special concerns of donors related to the need to address strategic priorities and compliance gaps of the beneficiary countries, were translated either into pre-defined projects (PDPs) with the appropriate national agency in the lead, or in the design of the open calls. For the most part, these special concerns were adequately addressed in the design of the calls and PDPs, with a few exceptions. In a few cases the calls were launched too late and therefore are at high risk of not achieving the intended results. The calls in the **Bulgaria** Energy programme on Energy efficiency in industry are in the selection process, and the projects under Energy efficiency in buildings calls (57% of the programme budget) have only recently been signed. They are more likely to be affected by the external factors discussed earlier. Two pre-defined projects in Lithuania and one in Croatia are also at risk due to the negative impact of external factors.

Several calls addressing special concerns were under-subscribed. This is the case of the geothermal energy call **in Bulgaria** (50% of available funding was utilised) and the rural electrification calls in **Romania**, where less than 10% of the available resources were contracted. While the relevance of this call for national needs and priorities was and remains high, its design did not allow existing barriers and needs to be addressed. The design, informed by the pre-feasibility report, was based on rather simplified assumptions. The report analysed and recommended only technical aspects for the design of the rural electrification call (the technological solution and its costs), but it did not look at the organisational set-up and business model for the various stakeholders. It made quite unrealistic assumptions about local municipalities' ability to own, operate and manage such complex infrastructure, and also about the interest of the Romanian grid operator, a private company, to be involved in grid expansion into the areas where currently grid expansion is not viable (technologically, legally, economically).

All PA12 programmes have been designed to prioritise cost-effectiveness of GHG emission reductions and ensure alignment with the blue book benchmark for cost-effectiveness (150 Eur/tCO2e). While this alignment has been ensured in most cases, the focus on highly cost-effective climate change mitigation measures limits the potential of the green programmes to pursue other important objectives and bring added value in such areas as just transition, innovation and increased public acceptance of climate actions (Please refer to Annex VI - Case Study: Cost-effectiveness of GHG emission reductions in EEA & Norway green programmes for further details). The need to revisit the applicability of the cost-effectiveness threshold for all climate change mitigation and energy projects has been emphasised by several DPPs and POs.

The special concerns related to hydropower and geothermal energy were reflected in the programme design in programmes in Poland, Croatia, Bulgaria and Romania. However, the timeline allocated to implementation of these programmes did not match their complexity and the long preparatory time such projects normally require to be ready for financing. Hydropower and geothermal energy plants are unique compared to other power supply options; they are always custom-designed site-specific projects. There are substantial uncertainties and risks associated with hydrology and geothermal energy (which impacts power generation and revenues) and geology (which may substantially increase construction costs). Addressing these uncertainties requires time and additional investment in feasibility studies and resource assessment, such as drilling works to explore availability of geothermal energy. Site licences and permits also take a long time to obtain as many stakeholders are involved, often with conflicting rights and responsibilities. For hydropower projects, environmental and social risks can be complex to address and require an extensive Environmental Impact Assessment (EIA) process. Consequently, programmes focused on activities and results which were feasible to implement within the allocated timeframe. Support has been provided to modernisation and rehabilitation of existing hydropower plants. As regards geothermal energy, investment has been made in smaller building-level solutions and projects for which resource assessment has been conducted earlier, as well as on the preparatory works, feasibility studies, and resource assessment which lay the foundation for investment in the sector by other funders. Smaller geothermal energy projects with building-level solutions (geothermal heat pumps), as was the case of Bulgaria, are more feasible to implement, provided that supply chain disruptions do not affect project implementation.

RO-Environment is the only programme that included a special concern about the capacity of the Programme Operator: "The National Focal point and the Programme Operator shall at the latest by the

submission of the programme concept note, submit a plan to ensure adequate programme management capacity of the Programme Operator". The Concept Note indicated that such a plan was submitted. The Programme Operator team members interviewed during the evaluation process were not aware of this special concern. The low contracted rate of the programme indicates that the concern has not been properly resolved.

9. Which factors are particularly affecting the achievement or non-achievement of the planned results?

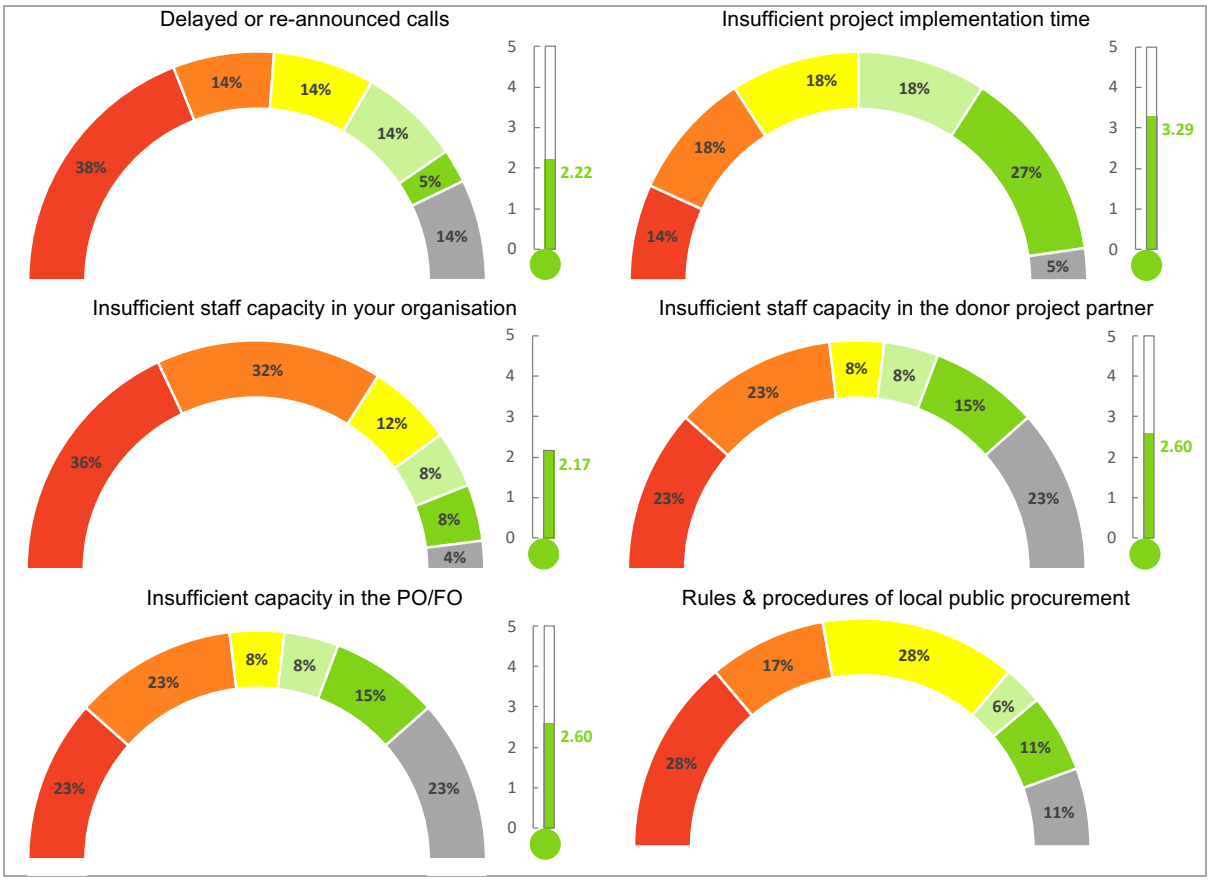
External factors, starting from COVID and the consequences of the war in Ukraine, inflation and supply chain disruption have a large negative impact on the programmes, in particular for large projects with complex input supply and procurement arrangements. Within the very short timeline allocated for programme implementation, many Programme Operators and project promoters cannot mitigate the negative impact of these external factors.

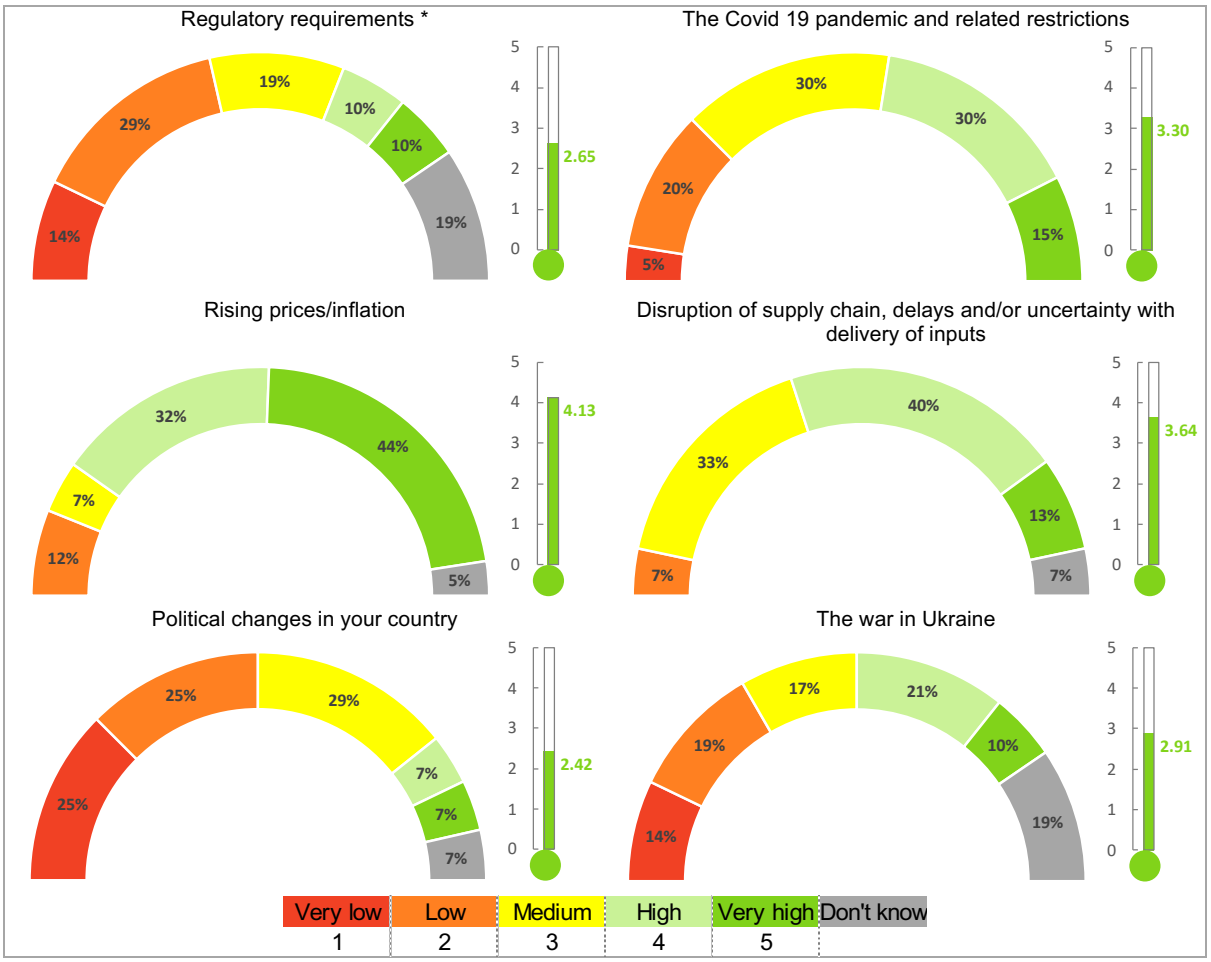
Delays and insufficient time for programme implementation, exacerbated by *force majeure* circumstances on the global and regional markets, are the main factors affecting the achievement of the planned results. These factors have been discussed in detail earlier in this report under Question #3 (pages 17-23).

According to the survey with project promoters, the most important factors negatively affecting programme implementation are external factors, such as inflation (75%) and supply chain disruption (53%), followed by an insufficient timeframe for implementation, COVID (each 45%) and the war in Ukraine (35%). Other negative factors include insufficient capacity of Programme Operators, regulatory requirements, public procurement, etc. (Figure 9).

Figure 9. Factors affecting project implementation

As a project promoter, please assess the impact of the following factors on your project rating it on a scale from 1 to 5, where 1 is very low and 5 is very high (N/A – the category is not relevant for the respondents).





Note: * - e.g. construction permits or environmental impact assessments related to the project

The Programme in Poland, the largest in the Grants' green programmes portfolio, is among the most affected by external factors. The Programme Operator notices an increasing number of withdrawals considered by project promoters. This has been confirmed via interviews with project promoters: several are considering withdrawal or at least substantially scaling-down their projects. Their decisions are caused mostly by increasing CAPEX/OPEX costs, including costs of energy, labour, equipment, durable goods, as well as raw materials (wood, concrete, water etc.). Increased input costs dictate the need to secure additional co-financing by project promoters. Despite support from tthe Programme Operator and the National Fund, in several projects this issue has not yet been resolved.

In Romania, likewise, several project promoters indicated inflation as a big negative factor. The cost of solar PV systems has increased by 100% since the application was made, and the municipality had to finance the funding gap from its own sources. Many recently contracted project promoters anticipate the same issue and have started the process of securing co-financing, which may pose additional delays. If PO/project promoters cannot address the funding gap emerging as a result of inflation, such projects will face the risk of cancellation. In Slovakia, financial resources allocated for the project that was cancelled due to price increases are to be made available for other projects through a special call, to cover increased costs.

Addressing the funding shortfall as a result of inflation is an urgent issue where several project promoters identified the need for support and guidance from their Programme Operator. For example, one of the respondents in the survey stated: "*We hope to have instructions from the PO regarding the high growth of inflation in recent months. The project was budgeted in 2020, approved at the end of 2021 and implemented in 2022 and 2023. Currently, the price growth for most of the activities that are related to travel and logistics has tripled. .. We would love to have more autonomy and flexibility in*

adapting the project implementation to the current reality in order to achieve the ambitious goals of the project, even if some of the activities and targets need to be changed".

10. Which, if any, safeguards have been put in place to ensure that the expected benefits of the programmes can be sustained in the five years following programme completion?

Formal safeguards include a mandatory sustainability clause in the project contract to maintain project results beyond project completion, including provisions for appropriate insurance and allocation of resources for maintenance of infrastructure projects for at least 5 years following project completion.

Several calls include project sustainability among the project assessment criteria, however its weighting has been rather low, and there is insufficient evidence to conclude that sustainability plays a decisive role in project selection. Sustainability of infrastructure projects hinges upon adequate provisions for their operations and maintenance (O&M) after commissioning. This aspect requires greater attention from Programme Operators/Fund Operator at both project screening and implementation, as well as *ex-post* monitoring after project completion.

Pursuant to the legal provisions of the Programme Agreements stipulating that they "shall remain in force until five years have elapsed after the date of the acceptance of the final programme report", relevant articles have been incorporated in the grant contract with project promoters. Due to the diversity of programmes and projects supported, the individual Programme Operato5rs/Fund Operator determine the sustainability conditions independently, at their own discretion. For example, in Poland Programme Operator incorporates the following sustainability requirements in the contract with project promoters:

- **Keep** any buildings purchased, constructed, renovated or reconstructed under the project in their **ownership** for a period of at least 5 years following the completion of the project, and continue to use such buildings for the benefit of the overall objectives of the project for the same period;
- **Keep** any buildings purchased, constructed, renovated or reconstructed under the project properly **insured against losses** such as fire, theft and other normally insurable incidents both during project implementation and for at least 5 years following the completion of the project; and
- **Set aside appropriate resources** for the maintenance of any buildings purchased, constructed, renovated or reconstructed under the project for at least 5 years following the completion of the project. The specific means for implementation of this obligation shall be specified in the project contract.

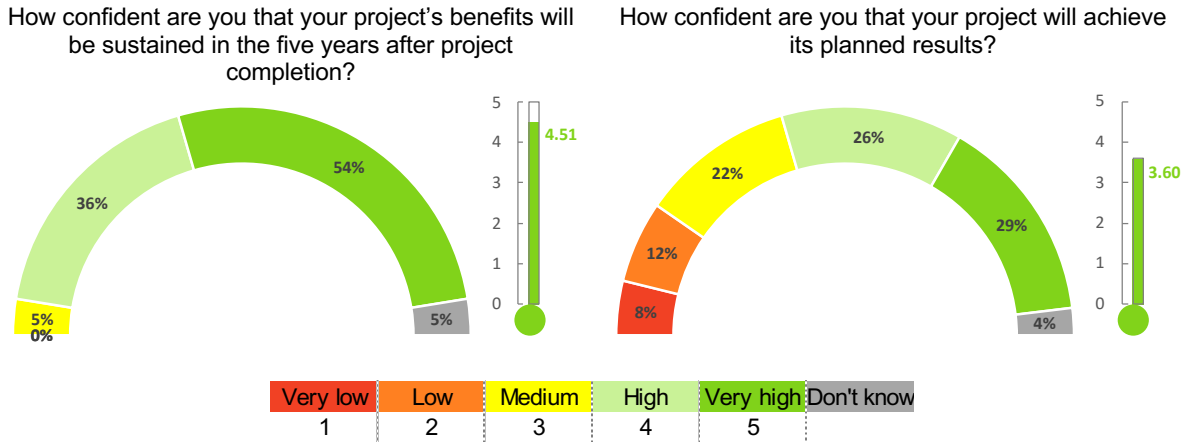
Some calls also include "sustainability" as a selection criterion during project asessment. For example, in Romania's Energy Programme, sustainability is scored on a scale from 0 to 6 and this score contributes up to 7% of the project's ranking. However, the Project assessment criteria and methodology[12] clarifies that if a criterion is not fulfilled at all, the project could still be considered for funding, which is contradictory to the programme agreement provision.

Good practice in ensuring sustainability in energy efficiency projects is the mandatory implementation of the energy management system (EMS) by promoters, as is the case in the Greece energy programme and NZEB project in Croatia. EMS enables these projects not only to monitor and report on energy savings achieved, but also to identify new opportunities for improvements. The sustainability of infrastructure projects hinges upon adequate provision for their operation and maintenance. This aspect requires greater attention from Programme Operators/Fund Operator at both project screening and implementation, as well as *ex-post* monitoring after project completion. Overall, the confidence level among project promoters in their ability to sustain the results is much higher than in their ability to achieve them, as illustrated in Figure .

[12] https://www.innovasjonnorge.no/globalassets/0-ryddemappe--arkiv/eea-grants/romania/ro-energy/3.1/er_2_project-assessment-criteria-and-methodology_v.2.4_energy-call3.1-otherres2021.pdf

Figure 10. Project proponents' confidence in project success

As a project promoter, please assess the level of your confidence in the projects rating it on a scale from 1 to 5, where 1 is very low and 5 is very high (N/A – the category is not relevant for the respondents).



Bilateral cooperation

11. To what extent is the overall bilateral objective of the EEA and Norway Grants considered in programme implementation?

All programmes considered bilateral objectives in their designs, but how these were implemented depended on the needs and capacities of programme operators and project promoters. As of November 2022, 43% of all contracted projects have donor project partners, representing 53% of the value of allocated grants. Insufficient programme and project implementation time, aggravated by COVID-related restrictions, limited partnership and collaboration opportunities. Factors that enhance the bilateral outcome are continuity of programme priorities, the proactive role of Programme Operators and Donor Programme Partners, and sufficient time to identify the right partner and operationalise the partnership. Trust-building requires time, which in many cases was not sufficient to allow for new partnerships to emerge and mature.

Bilateral objectives were considered in the design of the Programmes. All 15 green programmes incorporate bilateral cooperation outcomes and outputs in the results framework, including specific targets such as the number of projects with donor project partners. The table below illustrates planned and achieved targets for donor partnerships at project level.

Table 4 Targets and current status of bilateral cooperation: projects with donor project partner

Country	Programme	Target: N of projects with DPP	N of projects		Budget in euro	
			Total	With partners	All projects	With partners
Bulgaria	Energy	30	45	42	22 250 350	21 255 748
Bulgaria	Environment	10	29	21	13 741 555	11 839 526
Croatia	Energy	8	35	23	17 632 776	11 488 239
Czech R	Environment	10	121	22	20 651 752	5 476 683
Estonia	Climate	5	23	12	5 466 182	2 686 032
Greece	Energy	13	13	0	12 049 737	
Greece	Environment	2	7	4	4 173 043	3 206 950

Latvia	Climate	2	6	5	15 246 958	14 146 958
Lithuania	Environment	3	7	3	12 729 412	10 789 094
Poland	Climate	20	103	54	135 691 069	57 529 426
Portugal	Environment	4	60	29	27 024 102	16 928 499
Romania	Environment	7	14	8	9 507 479	8 406 022
Romania	Energy	16	120	19	56 073 670	11 009 580
Slovakia	Climate	36	48	22	18 422 718	15 220 882
Slovenia	Climate	tbd	13	12	13 394 956	12 662 372
Total			**644**	**276**	**384 055 759**	**202 736 011**

Source: Authors based on data in GrACE as of November 26th, 2022

Most of the programmes achieved, and many significantly over-achieved, the targets for the volume of bilateral partnerships. GR-Energy is the only programme with no projects involving donor project partners. Slovakia is also underperforming, albeit against a highly ambitious partnership target. Portugal outperforms by exceeding its target more than 7-fold. On a portfolio level, 276 projects, or 43% of all contracted projects as of end of November 2022, have donor project partners, 8 projects have several donor project partners, and 2 projects with bilateral partners have been terminated in the meantime in Slovakia and Poland. In terms of volume, projects with bilateral partners receive 203 million EUR, or 53% of the allocated grants. This confirms one of the evaluation findings that larger projects are more likely to need and have a bilateral partner, because they require more complex and costlier solutions, where donor partners' expertise adds value.

Throughout programme design and implementation, bilateral cooperation has been systematically addressed. Firstly, in the preparation of the programme, there is a separate section on bilateral work. In some countries, even during stakeholder consultation on programme design, DPPs were asked to identify potential donor project partners and collect their opinions on potential areas of cooperation. This can be considered a good practice for establishing the basis for long-term collaboration and partnerships between national and donor entities.

In the Cooperation Committe meetings, there is always an item regarding bilateral activities, for example with the background of the remaining budget (bilateral fund). According to several Donor Pgramme Partners and Programme Operators, this component has not yet received the same attention as programme and project implementation. Due to COVID-related restrictions and the longer timeline for implementation, bilateral cooperation activities have been often postponed towards the end of the programme period. Donor Pgramme Partners also sit on the Project Selection Committee as observers and, in Poland, the Donor Pgramme Partner is a member of the working teams related to the circular economy and pellets.

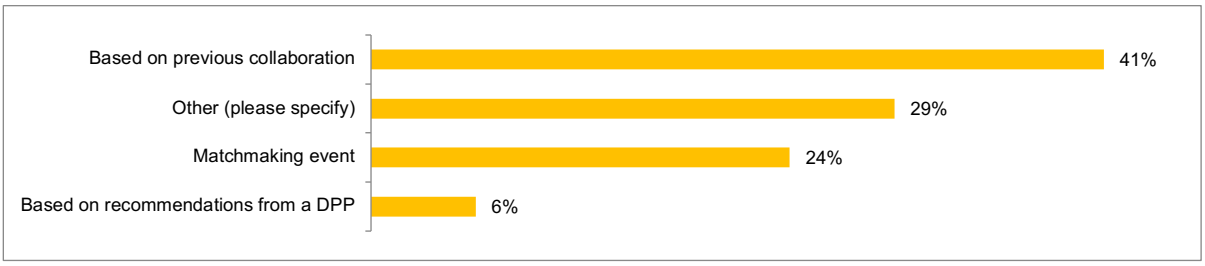
In the design of some calls, extra points for projects with donor project partners have been considered based on recommendations of the Donor Pgramme Partners, thus increasing their chances of being selected. In several cases, projects' bilateral aspects were assessed based on the level of donor project partner involvement, which is a more nuanced approach, but it is more an exception than established practice.

Programme Operators use different approaches to promote matchmaking. In Poland and Czechia, they have established lists on their own web page with possible Norwegian or donor partners in the various topics of the programme. In the other countries, POs are less active in promoting bilateral partnerships and project promoters must rely on their own network or approach the DPP directly for support. In RO-Energy and LT-Environment, for example, several project promoters indicated that they either were not aware about bilateral partnership opportunities or did not have sufficient time to both prepare the application and identify a suitable partner.

Bilateral cooperation tends to work better in countries with previous positive experience with EEA & Norway green grants. Programme Operators in Czechia, Poland, Bulgaria (environment), and Portugal already have good personal contacts with the active entities in the donor countries and, therefore, were more successful in finding new, and building on existing, partnerships. As illustrated in Figure 10, among

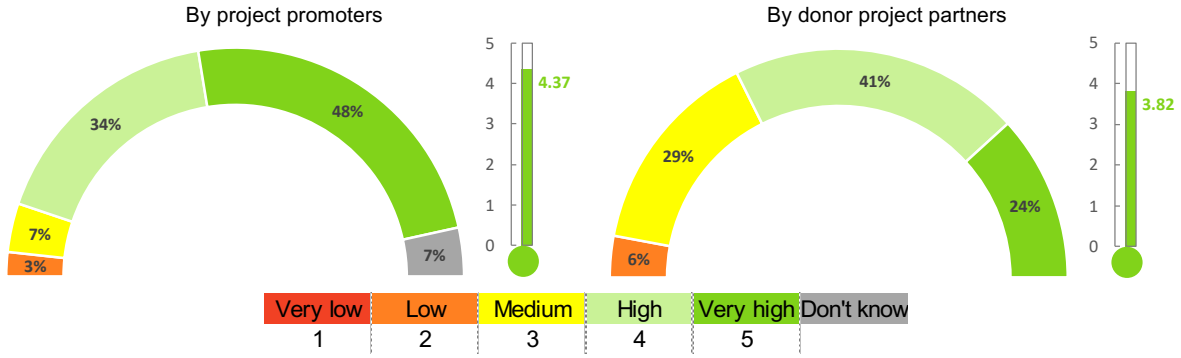
the donor project partners surveyed, the largest category are those with previous collaboration experience.

Figure 10. As a donor project partner, how did you get in contact with your project promoter?



Overall, effectiveness of bilateral cooperation has been assessed as high and very high by 82% of project promoters and 65% of donor project partners (Figure 11). The long period of contract negotiation was one area of particular concern for the donor project partners: 36% of respondents assessed its effectiveness as very low or low. Factors that enhance bilateral outcomes are continuity of programme priorities, proactive role of Programme Operator and Donor Programme Partner, and sufficient timeline to identify the right partner and operationalise the partnership.

Figure 11. Assessment of the value added from bilateral partnership by project promoters and donor project partners.



12. How and to what extent are bilateral partnerships (at programme and project level) adding value?

At project level, bilateral partnerships bring added value to project promoters via transfer of knowledge and know-how, design and implementation of innovative solutions, capacity building of the project partners and identification of new opportunities for collaboration beyond the project scope. In addition, for the donor project partners, the benefits of bilateral partnership comes from strengthening their organisation's strategic and operational capabilities and gaining new professional contacts and networks from the partner countries.

At programme level, bilateral cooperation is effective and beneficial for all POs with donor programme partners (DPPs). DPPs contribute meaningfully to all stages of programme design and implementation. Matchmaking and facilitating finding of the donor project partners is an area where DPPs' added value is particularly high.

Added value of bilateral partnerships at project level

Almost half of EEA & Norway grant projects (42%, or 250 projects) have a partner from the donor countries. This must have resulted in **tremendous bilateral contact**. Results of the survey among project promoters and donor project partners indicate that, though experience varies, **bilateral partnerships add value in several important ways**. 81% of surveyed project promoters assessed the overall contribution of their donor project partners as high or very high. Over 50% of the respondents identify the following areas where donor project partners bring high or very high added value: transfer of knowledge, know-how and design of innovative solutions, capacity building of local project partners, and identifying opportunities for new collaboration. The most relevant and impactful for bilateral cooperation thematic areas are those where the beneficiary countries lack knowledge and practical expertise, such as NZEB, blue and circular economy, geothermal energy, digital and smart solutions for climate actions.

In **Romania**, partnership with City AS Norway as donor project partner for Balkan Hydroenergy SRL led to the design of a new digital solution for automation and remote operation of the small hydro power plant (SHHP). The Norwegian company designed a system which transmits local climate information via satellite to the central dispatching unit, where it is analysed and enables Balkan Hydroenergy to better forecast, control and operate its SHHP. Now only a 15-minute period is required for accurate prediction of the useful electricity output of the plant. City AS brought security, surveillance and GSM communication equipment which enabled fully automated operation of this remote power plant. In the words of project promoter "*Our partnership with City AS is great, they understood exactly the path of our project, and fulfilled their commitments. Balkan Energy would like to continue collaboration with City AS to promote these solutions in Romania*".

In Latvia, the Norwegian Environmental Agency (NEA), as donor project partner, supported the Ministry of Environmental Protection and Development in the development of the Climate Change Law by sharing its climate policy-making experience from Norway. According to a representative of the Latvian PO: "*The Norwegian colleagues are very up-to-date, innovative, looking forward with their new ideas. They were ahead of us with the planning of climate policy, because they've had already researched how it changed the coastal line, how it can impact the territory, and support the economy. They started doing it faster. We are looking at and very much interested in their experience*".

In Poland, the cooperation between INTBAU Norway (NO), the donor project partner, and Czechowice-Dziedzice Commune (Project Promoter) under the 'Eagerly against climate changes – green-blue infrastructure in Czechowice-Dziedzice Commune' project provides a good illustration of the partnership's added value. The donor project partner provided best case examples during the project inauguration conference, hosted the delegation of project promoters in Iceland to showcase best investment practices, and advised the project promoter on the technical and functional scope of the project.

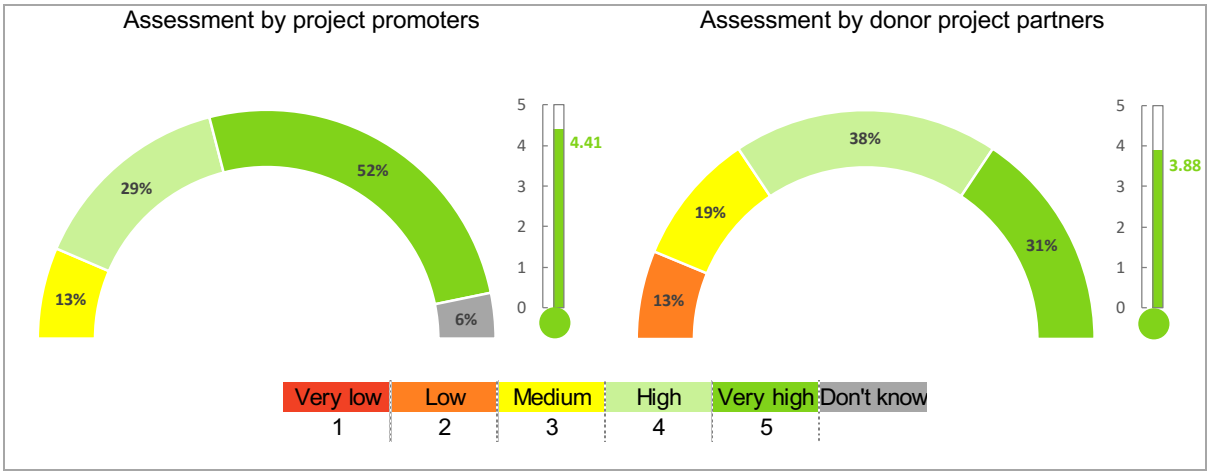
In **Slovenia**, the Norwegian company Greenstat was originally interested in investing in the Port of Koper plc equity and implementing a PV project there. Since the equity investment was not feasible, Greenstat instead initiated and supported the Port of Koper in applying for EEA grants, and serves as a donor project partner during project implementation. This is the single largest project in Slovenia with a grant of 2.1 mil €, ie. 11% of the total programme costs.

Bilateral partnerships at project level were not always considered beneficial. In a few cases identified based on interviews with NFPs, Programme Operators and project promoters, this was due to the lack of relevant expertise of the donor project partners, or because the partnership was "pre-defined" in the Programe Agreement, as was the case in Lithuania. According to a representative of **Lithuanian Programme Operator** "*Our donor project partner was foreseen in the memorandum, so we didn't choose the partner. It means our project promoter got the partner, whom they did not search for and did not have any previous contacts with. It's not easy for them because both sides are trying to find their place and how to communicate. In short, if you want my feedback, I think that the project promoter should search for a partner on its own, and not be appointed by governments or or by donors*".

Project promoters on average value bilateral cooperation more highly than donor project partners (Figure 12). For example, the contribution of donor project partners to innovation and knowledge transfer has been positively characterised by 81% of project promoters surveyed, while only

62% of donor project partners see their added value in this area as high or very high. Similarly, one third of donor project partners surveyed evaluated their role in facilitating field visits as low or very low, while only 10% of project promoters share the same perspective. For over 50% of the donor project partners the additional value of bilateral partnership lies in strengthening their organisation's strategic and operational capabilities and gaining new professional contacts and networks from the partner countries. Only 12% of donor project partners highlight the significance of new funding opportunities, while one third consider this aspect as not important. Another indication of the added value of bilateral cooperation is that 41% of donor project partners surveyed continued their partnership from the previous EEA & Norway grant programme. In the largest green programme in Poland, the impact of the three Donor Programme Partners on the implementation of the Programme is noticeable and positive, as reflected in the feedback from the Programme Operator and project promoters.

Figure 12. Assessment of the contribution of the donor project partner to the project



Added value of bilateral partnerships at programme level

According to POs and DPPs, **bilateral cooperation at programme level is beneficial.** All Programme Operators with Donor Programme Partners (13 out of 15) consider their partnerships effective or very effective. Donor Programme Partners contribute meaningfully to all stages of programme design and implementation. Matchmaking and facilitating identification of the donor project partners has been recognised as an area where Donor Programme Parters' value added is particularly high.

The **Norwegian Environmental Agency (NEA)** is one of the most engaged Donor Programme Partners, which contributed to eight green programmes. According to NEA, finding a suitable donor project partner is the area where they have received the greatest number of requests for assistance. To facilitate matchmaking, NEA regularly places information about open calls on their website, and their news subscribers receive a notice every time a new call is opened and have an opportunity to indicate their interest in being a partner in a specific call. NEA also collects information about preferred profile of donor project partners from POs and distributes it within their network of potential candidates.

Several Donor Programme Partners with a more specialised profile in the subject matter where their countries are strong, such as the Iceland National Energy Authority (OS IS) and the Norwegian Water Resources and Energy Directorate (NVE NO), bring added value by sharing their technical knowledge and networks. In **Croatia**, NVE NO as Donor Programme Partner actively participates and steers programme design and implementation. NVE NO helped PO to widen the thematic scope of the programme and focus on more innovative solutions, such as seawater technologies and geothermal. In **Romania**, NVE NO also helped broaden the horizons of the Energy programme by organising stakeholder consultations and organising a workshop on green hydrogen, with over 100 people attending. Also **in Romania**, OS IS's competence in geothermal matters proved critical for the design of geothermal calls, as it filled in gaps in PO technical expertise. OS IS was instrumental in raising the interest of geothermal sector stakeholders in bilateral cooperation and facilitating exchange of Icelandic expertise to Romania. According to **OS IS**, they have observed high interest among Icelandic partners in bilateral partnerships: "*When we had meetings here in Iceland, and also when we started trips to Romania, it was always popular, people have been really excited to participate*".

At both programme and project level, bilateral cooperation brings significant added value. Its utility lies primarily in nurturing and sustaining partnerships, in terms of assignments and competence building. These partnerships will provide new market access for private business, with the possible delivery of goods and services in the future. Increased cooperation between authorities will contribute to a higher level of common solutions in Europe. As regards added value of bilateral cooperation at a more strategic level, as concluded by one DPP, "*there is certainly potential for more strategic use of the EEA funds*". Realising this potential requires a dialogue between donor and beneficiary countries to jointly define their strategic vision and objectives for bilateral cooperation.

Conclusions and Recommendations

Conclusion		Recommendation
Recommendations for the current EEA&Norway Green Programmes		
1.	The programmes are at a critical stage: more than half of all projects have been contracted in the last 12 months and have to complete all activities within less than 17 months. They operate under a highly volatile and uncertain crisis that directly impacts supply chains, prices of inputs, and access to financing. This necessitates more pro-active rather than 'business-as-usual' engagement of Programme Operators/Fund Operator in risk management and solution finding.	**Improve risk and adaptive management**. Programme Operators/Fund Operator should proactively engage with project promoters to systematically identify, monitor, and manage risks. They should also provide quarterly updates to the FMO on the status of high-risk projects (largest and most recently contracted). In addition, Programme Operators/Fund Operator should communicate clearer guidance to all project promoters regarding programme timeline, deadlines, and implications of non-performance.
2.	Sustainability of infrastructure projects hinges upon adequate provisions for their operations and maintenance (O&M) after commissioning. Legal provisions for sustainability in general exist in the project contracts. However, there is a lack of evidence regarding their practical enforcement by project promoters and monitoring by Programme Operators/Fund Operator. The programmes have been designed to achieve the maximum amount of CO_2 reductions per grant amount. The data based on which these estimates were made are no longer reflective of the market situation and have to be adjusted via ex-post evaluation.	**Conduct an *ex-post* evaluation**. The FMO should undertake an *ex-post* evaluation of a sample of the largest projects to assess how mandatory sustainability clauses in project contracts have been complied with. An *ex-post* evaluation should also verify the amount of GHG emission reductions actually achieved by projects, and their cost-effectiveness. Findings should inform the design and cost-effectiveness benchmarks of the green programmes in the next Financial Mechanism.
Recommendations for the future EEA & Norway Green Programmes		
3.	A very complex programme design reduces their efficiency. The high number of calls and projects to contract, administer, and monitor, as well as the continuous need for adaptive management and re-allocation of funds, reduce administrative capacity to efficiently implement programmes on time, even for very experienced and well-resourced Programme Operators.	**Rules for programme design**. The Donors should introduce binding rules for programme design to limit the number of outcomes, outputs and actions (calls, predefined projects or small grant schemes) per programme relative to its size. This will increase programme efficiency and reduce the administrative burden on Programme Operators. The following ratios are suggested: • Small programmes (10 million EUR and less) – maximum one outcome, two outputs and two actions; • Medium-size programmes (10 million EUR - 30 million EUR) – maximum two outcomes, four outputs and four actions;

		• Large programmes (over 30 million EUR) – maximum three outcomes, six outputs and actions.
4.	**Lengthy programme development period** significantly shortened the time-period available for actual project implementation and is the main underlying factor for the delays.	**Programme development**. The Donors should introduce a binding timeline for programme development by National Focal Points and Programme Operators, and for their review by FMO. The total allowable timeframe for programme development and approval is suggested not exceed 12 months from the signature of the MoU. This is essential to ensure sufficient time for programme implementation, in view of green programmes' complexity.
5.	Green programmes bring highest added value when they **address countries' funding gaps** for strategic priorities, and demonstrate feasibility of **new and innovative** climate and environmental solutions, especially in areas where donor partners have greater knowledge and expertise.	**Programme relevance**. National Focal Points, Programme Operators, the FMO and Donor Programme Partners should continue the good practice of identifying synergies between national priorities, funding gaps and areas, where bilateral partners have advanced technical knowledge and expertise. National ownership and programme alignment with priorities of the beneficiary countries should prevail over the special interests and know-how of the Donors.
6.	Bilateral cooperation brings significant added value*, however, there is potential for more strategic use of the EEA funds.* Realising this potential requires a dialogue between donor and beneficiary countries to jointly define their strategic vision and objectives for bilateral cooperation.	**Bilateral cooperation objectives**. At the programme development stage, Programme Operators and Donor Programme Partners should jointly identify programme outcomes where bilateral cooperation can bring added value. Strategic objectives for bilateral cooperation should be included in the programme agreements, for example, "*enhanced cooperation between institutions from Beneficiary State and Donor States in the area of X*". Calls through which these strategic objectives will be realised should also be specified in the programme agreement.
7.	Green programmes operates in the very rapidly evolving sectoral context (technologies, policies and markets), as well as funding landscape.	**Lifetime coherence.** Throughout implementation, Programme Operators should seek to ensure their programmes' coherence with the evolving sectoral and climate finance landscape. They should regularly consult with relevant sector stakeholders, EU fund operators, and public and private financial institutions to identify opportunities for co-financing and scaling-up. Best practices in enhancing coherence and alignment should be shared with FMO as part of an annual programme report.
8.	Insufficient **capacity of project promoters** to design and implement project activities in line with the green programme requirements is a limiting factor for project promoters with limited capacities, NGOs, SMEs, smaller municipalities, to participate and benefit from the programme. Modern energy efficient and	**Enhanced cohesion**. The FMO and Programme Operators should consider establishing project development and implementation facilities to provide technical assistance (TA) to project promoters for the development of technical documentation and applications, as well as provision of project implementation support[13]. This TA should focus on countries with high regional inequalities and target project promoters from the least developed regions, to

[13] The practice of such TA facilities is common in EU. For, example EU-funded ELENA - European Local Energy Assistance provides technical assistance to municipalities across the EU for preparation of energy audits, technical design, procurement, and other implementation support for EE and RE projects in municipalities.

	renewable energy solutions can be complex and require specialised expertise. Larger municipalities and the private sector are much better positioned to attract such support with own funding.	enhance territorial cohesion and ensure more equal benefit sharing of the EEA & Norway green grants within the countries. TA can be provided via a roster of qualified experts/firms, which should be different from the members of the selection committees, to avoid conflict of interest.
9.	**Large and complex infrastructure programmes** in energy and climate areas require **more capacities from the Programme Operators**, including experience with complex project management, procurement and financing, risk management, technical expertise in subject matter and good knowledge of local context. The capacity of the Programme Operator should match the complexity of the programme.	**Programme efficiency**. For large and complex programmes, the National Focal Points and Programme Operators should consider delegating programme management services fully or partially to a qualified national agency or a sub-contractor. These service providers should have expertise in managing infrastructure investment programmes in the country and sector. Such a practice proved efficient in several green programmes, as it helped address gaps in grant absorption capacity among Programme Operators resulting from the increasing volume of green funds under their management.
10.	The programmes have been designed to achieve maximum amount of CO_2 reductions per grant amount. The data based on which these estimates were made are no longer reflective of the market situation and have to be adjusted via ex-post evaluation. There is a big difference among countries and solutions in their cost-effectiveness, prioritising funding by this criteria only carries the risk of over-looking other strategic needs (please refer to Annex VI - Case Study 1 for details about cost-effectiveness).	**Cost-effectiveness**. The Donors should be more flexible regarding benchmarks for the cost-effectiveness of GHG emission reductions. Prioritising highly cost-effective projects for grant provision may crowd out the private sector from financing climate actions and should be re-considered. Cost-effectiveness benchmarks should be waived for projects contributing to just transition, energy poverty alleviation and application of innovative climate solutions. Such projects bring high social and economic benefits and contribute to new market development but are less cost-effective and therefore not so attractive for private investors.
11.	The sustainability of infrastructure projects hinges upon adequate provisions for operation & maintenance (O&M).	**Programme sustainability.** Programme Operators should review and monitor the adequacy of sustainability provisions at project selection and throughout implementation. For all infrastructure projects, operation & maintenance (O&M) plans should be presented with the application, including the availability of a sufficient budget for O&M and dedicated personnel.
12.	Bilateral cooperation brings higher value added in the areas where door countries have know-how and expertise and when enough time is allocated for quality p[artnership to be formed.	**Strengthened bilateral cooperation: from quantity to quality**. For those actions/calls where bilateral cooperation is considered strategically important, Programme Operators should consider elevating the role of the Donor Programme Partners and engaging other Donor country entities in their design and implementation. In these calls, projects with bilateral partnerships should be assessed based on qualitative indicators, such as the scale and nature of bilateral project partner involvement and contribution. To enable quality partnerships to be formed, more time should be allowed in these calls for project promoters to apply.

Annexes

Annex I: Definitions of funding gaps in concept notes

Country Programme	Discussion on Funding Gaps
Bulgaria – Energy	○ EU Structural Funds Operational Programme Regions in Growth 2014-2020 only funds public buildings to achieve class "C" (not higher standards “A” and “B”) leaving a financial gap in the building energy efficiency sector. ○ Energy efficiency in the residential sector is covered by other programmes (e.g., KIDS Fund) and does not need additional EEA Grants financing. ○ Programme activities are based on eligible sectors, stakeholders, and beneficiaries not funded elsewhere i.e., exploration of untapped hydro and geothermal energy.
Bulgaria – Environment	○ No discussion on the funding gap in the concept note.
Czech Republic – Environment	○ Adaptation and mitigation strategies lack systematic support. ○ Operational Programme Environment 2014-2020 does not support activities concerning emerging pollutants. ○ Funding for this sector is only available for research programs (e.g., Czech-Norwegian Research Program by the Norwegian Financial Mechanism 2009-2014).
Slovakia – Climate	○ Climate mitigation and adaptation measures are supported by the ESIF (i.e., Operational Programme Quality of the Environment) and the Slovakian Government’s Environmental Fund. ○ However, the Bratislava Self-governing Region is not eligible for such activities (e.g., development of local mitigation and adaptation plans) funded by the ESIF. ○ Outcomes from previous funding ‘Adaptation to Climate Change – Flood and Drought Prevention Programme’ 2009-2014 (e. g. ‘Blue Schools’, ‘Healthy Cities’) were considered in the development of the concept note.
Croatia – Energy	○ Energy efficiency and renewable energy programmes are generally well-financed in Croatia. ESIF is a key financier of these programmes (e.g., energy efficiency and renewable energy in the service sector and public buildings, manufacturing, industries, and residential). ○ Financial gaps lie in smaller and innovative investments in targeted areas and support or capacity building (e.g., future investment studies). ○ The development of the concept note involved the screening of other funds.
Portugal – Environment	○ The EEA Grants addresses the funding gaps in areas namely on municipal adaptation plans to climate change, sustainable development plans for Biosphere Reserves and support of circular methodologies on the value-chain of the plastics and construction sector. ○ The current EEA Grant is complementary to Portugal 2020 Program and the Environmental Fund – ‘Fundo Ambiental’. ○ The current programme shall build on the plans developed under Programme Adapt and other previous funding mechanisms.
Latvia – Climate	○ An important source of funding in Latvia is the European Structural and Investment Funds for 2014- 2020, with approximately €25 million allocated for remediation of polluted site in Incukalns. ○ No other funding available for remediation measures.

Greece – Energy	○ Energy programmes are well funded in Greece. The programme will contribute to cover funding gaps on RES and EE projects in buildings and other relevant infrastructures in Greece. ○ National sources of funding in the sector include: EXOIKONOMO II programme funding for private households (energy retrofitting, energy class upgrade), Improving Energy Efficiency for SMEs Programme (small enterprises), and Development Law (green investments in the private sector).
Greece – Environment	○ There is a lack of funding on permanent water supply solutions on small islands. ○ The EEA Grant shall supplement ESIF for the 2014-2020 period because it focuses on water management needs of vulnerable areas and islands (e.g., water saving and desalination). ○ The programme builds on the 2009-2014 EEA Grants GR 02 programme "Integrated Marine and Inland Water Management" with the objective "Good environmental status in European marine and inland waters", which financed water saving and desalination units on Aegean islands.
Slovenia – Climate	○ The Ministry of Infrastructure provides Cohesion Funds for urban infrastructure measures e.g., cycling, and pedestrian infrastructures, park & ride systems, etc., but inter-municipal planning and regional mobility management remains significantly unfunded. ○ The programme considers the gaps in climate change related policies and complement existing ESI funds, and current results from the FM09-014 SI002 and FM09-014 SI005 programmes. ○ The development of the concept note involved a stakeholder consultation and screening of other funding sources within the similar Programme Areas.
Poland – Climate	○ Poland is the largest beneficiary of the European Union's cohesion policy for 2014-2020, but funds for the environmental sector amount to 7.9% only, below the EU average of 11.1%. ○ Support provided under the Programme will cover areas not covered by other funds e.g., ESIF (Operational Programme Infrastructure and Environment and Regional Operational Programmes) and serve as a continuation of financing activities for which the demand exceeds the available aid funds, including from previous EEA Grants FMs. ○ Funding will cover entities that are not permitted to implement adaptation and/or mitigation measures from EU funds (OPI&E 2014-2020 and regional operational programmes) and emphasize implementation of terrestrial green and blue infrastructure as the OPI&E covers e.g., flood underground infrastructure to mitigate flooding. The Programme will focus on cities not eligible under OPI&E 2014-2020. ○ Circular economy is relatively not financed yet on a wide scale in Poland, except financing provided for a resource-efficiency measures in the enterprises under the EU 2007-2013 funding. ○ There is a limited experience with national funding for pilot activities to be undertaken by selected local governments and enterprises.
Estonia - Climate	Concept note not available
Romania – Energy	○ the programme will complement ongoing/planned initiatives within other public funding programmes ○ the programme will “do more” of the same since the need is vast. Examples: Operational Programme for Large Infrastructure (e.g. energy efficiency in district heating), Regional Operational Programme (e.g. energy efficiency in public buildings), Swiss Contribution Office (e.g. equipment specific for energy savings).
Romania – Environment	○ The program shall cover funding gaps not covered by other financial instruments. The most important complementary funding for biodiversity is provided by the EU Operational Program for Large Infrastructure. ○ While current programme addresses Specific Objective 4.1 (Increase protection and conservation of the biodiversity and the restoration of degraded ecosystems, the other programme focuses on the other issues (e.g., Target 1 of the EU Biodiversity Strategy 2020). ○ No external funding for rehabilitation of contaminated sites has been identified.

Annex II: Coherence of green programmes with EU and EIB financing

Country	Programme Areas	Special MOU Concerns or Programme Outcomes	EEA & Norway Green Programme 2014 -2021	European Structural and Investment Funds 2014-2020	European Investment Bank 2014 - 2022	Assessment
Bulgaria	**BG – Energy** Renewable Energy; Energy Efficiency; Energy Security	Harnessing hydroelectric and geothermal energy; energy efficiency	€ 28,000,000	**Environment - BG- ERDF/CF €1,734,666,074.00** Environmental protection and resource efficiency Climate change adaptation and risk prevention **National Rural Development €3,795,262,017** Environmental protection and resource efficiency Climate change adaptation and risk prevention Low-carbon economy **Maritime and Fisheries €104 289 454** Environmental protection and resource efficiency Low-carbon economy **Transport and transport infrastructure - BG- ERDF/CF €1 789 123 639** Network Infrastructures in transport and energy Low-carbon economy	**Energy Projects: €94,520,270** Boni Meat Production Modernisation, and BEH IGB Interconnector **Solid Waste Projects: €101,000,000** Toplofikacia Combined Heat and Power, Bulgaria EU Funds Co-Financing **Transport Projects: €525,000,000** Sofia transport fleet renewal, Sofia Municipality Metro Line 3 Stage 1, Agria Grain Port Terminal, Sofia Roads, Sustainable Mobility, etc. **Urban Development Project: €25,000,000** FLAG DFI Complementary Urban Facility **Water, Sewerage Project: €136,000,000** Bulgaria EU FUNDS Co-Financing 2014-2020 (SPL)	EEA Grant is addressing a specific area/gap by deploying concrete geothermal and hydroelectric plants and municipal energy efficiency, which are not currently funded by both fund sources.
	BG – Environment Environment and Ecosystems; Renewable Energy; Energy Efficiency; Energy Security; Climate Change Mitigation and Adaptation	Potential for carbon capture and storage, focus on knowledge dissemination and bilateral partnerships; Promotion of circular economy	€ 13,000,000			There is a minimal overlap with ESIF financing of environmental projects (environmental protection and resource efficiency) with the EEA Grant. EEA Grant addresses unique projects in marine water management in the Black Sea, hence, responds to a specific financing need.

Croatia	**HR – Energy** Renewable Energy; Energy Efficiency; Energy Security; Climate Change Mitigation and Adaptation	Assessment of needs for policy guidance and regulatory support in areas of renewable energy and energy efficiency	€ 17,000,000.00	**National Rural Development €3,277,212,232.00** Climate change adaptation and risk prevention Environment protection and resource efficiency Low-carbon economy **Maritime and Fisheries €345,086,811.00** Environment protection and resource efficiency Low-carbon economy	**Energy Projects: €120,000,000** HEP Renewable Energy Croatia, EI to Zagreb – Combined Cycle Power Plant, and Zaba Energy Efficiency FL-PF4EE **Transport Project: €32,500,000** Dubrovnik Airport Development (III)	There is overlap between the EEA Grant (energy efficiency and renewable energy measures) and the EIB's portfolio (the latter focuses on large RE and EE projects).

Czech Republic	**CZ – Environment** Environment and Ecosystems; Climate Change Mitigation and Adaptation	Programme key focus on the programme area of "Environment and Ecosystems" Improved Environmental Status in Ecosystems; Adverse effects of human activities on air quality reduced; Adverse effects of human activities on water quality reduced; Enhanced resilience and emissions reduction in selected communities	€ 32,320,000	**National Rural Development €4, 846, 487, 721.00** Climate change adaptation and risk prevention Environment protection and resource efficiency Low-carbon economy **Environment - CZ - ERDF/CF €3, 281, 898, 284.00** Environment protection and resource efficiency Low-carbon economy Climate change adaptation and risk prevention **Integrated Regional Programme - CZ – ERDF €6, 723, 632, 609.00** Network infrastructures in transport and energy Low-carbon economy Environment protection and resource efficiency Climate change adaptation and risk prevention **Maritime and Fisheries €41,136,632.00** Environment protection and resource efficiency **Transport - CZ - ERDF/CF €5,364,435,295.00** Network infrastructures in transport and energy	**Energy Projects: €1,555,403,479** Lasselsberger Ceramics Modernization and Energy Efficiency, CEPS Transmission Network Upgrade – Green Loan, CEPS Transmission Grid III, etc. **Transport Projects: €819,666,753** Greenway EV Charging Network, CD Cargo Rolling Stock, South-Moravia Regional Rolling Stock, Central Bohemia Regional Infrastructure, etc. **Urban Development Projects: €7,740,870,639** Pardubice Regional Infrastructure IV, Ostrava Municipal Infrastructure II, Komercni Banka CZ Multi-Objective MBIL, etc. **Water, Sewerage Project: €299,748,960** Czech Agriculture – Water Management	There is an overlap with the EEA Grant and ESIF's support for environmental projects. EIB's support for the Czech Agriculture – Water Management slightly overlaps with the EEA Grant's activity on the reduction of the adverse effects of human activities on water quality. Further, there is potential overlap between the EEA Grant (enhanced resilience and emissions reductions in selected communities) and EIB's urban development projects.

Estonia	**EE – Climate** Environment and Ecosystems; Climate Change Mitigation and Adaptation	Ecosystem resilience increased; Increased ability at the local level to reduce emissions and adapt to a changing climate; Framework for Circular Economy strengthened	€ 6,000,000	**Cohesion Policy Funding – EE – ERDF/ESF/CF** **€4, 915, 347, 979.00** Low-carbon economy Network Infrastructures in transport and energy Environment protection and resource efficiency Climate change adaptation and risk prevention **Maritime and Fisheries** **€127, 943, 752.00** Environment protection and resource efficiency Low-carbon economy **National Rural Development** **€1, 301, 571, 469.00** Environment protection and resource efficiency Climate change adaptation and risk prevention Low-carbon economy	**Agriculture, fisheries, forestry Projects: €36,000,000** Estonia EU Funds Co-Financing 2014-2020 **Energy Projects: €279,000,000** High Efficiency Fuel Cell Stacks, EESTI Energia Distribution Network, Elering Emergency Reserve Power Plant, etc. **Transport Projects: €125,000,000** Estonian Railway, and Tallinn Airport Upgrade **Urban Development Projects: €201,600,000** Tallinn Sustainable Infrastructure, Tallinn Urban Infrastructure, Tartu Education and Urban Infrastructure, etc.	EEA Grant finance local climate change mitigation and adaptation measures which are outsie of the scope of the and the National Rural Development Fund (ESIF). No apparent overlap between EEA Grant and EIB projects.
Greece	**GR – Energy** Renewable Energy; Energy Efficiency; Energy Security	Innovative solutions to increase renewable energy production and energy efficiency, including in public social infrastructure	€ 10,000,000	**National Rural Development** **€7,109,199,696.00** Environment protection and resource efficiency Climate change adaptation and risk prevention Low-carbon economy **Maritime and Fisheries** **€514,195,340.00**	**Agriculture, fisheries, forestry Projects: €3,000,000** Piraeus Bank Energy Efficiency FL - PF4EE) **Energy Projects: €3,314,985,320** Energy efficiency in public venues, PPC high Voltage Substations & Smart Metering, Vermio Wind Projects, PPCR	There is no apparent overlap between the EEA Grant and ESIF. However, overlap lies between the EEA Grant and the EIB's energy projects (energy efficiency in public venues, etc.)

	GR – Environment Environment and Ecosystems	Water management needs of vulnerable areas and islands (e.g., water saving and desalination); renewable energy solutions	€ 5,200,000	Environment protection and resource efficiency Low-carbon economy **Transport infrastructure, environment, and sustainable development - EL - ERDF/CF €4,652,099,899.00** Environment protection and resource efficiency Network infrastructures in transport and energy Low-carbon economy Climate change adaptation and risk prevention	Framework Loan for Renewable Investments, etc. **Solid Waste Projects: €114,718,558** W Macedonia SWM PPP, Co-financing Projects, etc. **Transport Projects: €2,658,404,133** Greek regional airports, EU-Funds Co-financing, Greece Road Rehabilitation & Safety Project, etc. **Urban Development Projects: €717,480,000** Sustainable Urban Development in Greece, Athens Resilient City and Natural Capital, etc. **Water, Sewerage Projects: €258,500,000** Flood Protection Measures, Several EU-Funds Con-financing	There can be potential overlap between the EEA Grant (water management needs of islands) and ESIF's support for maritime and fisheries. The EEA Grant's work on the integration of renewable energy solutions in specified desalination plants and water saving instruments has very limited overlap with the EIB's energy projects (energy efficiency in public venues).

Latvia	**LV – Climate** Climate Change Mitigation and Adaptation	Remediation of polluted sites Improved climate change policy developed and implemented at all levels; National soil data for climate change policy; reduced risk of pollution from pollution sites	€ 14,000,000	**Growth and Employment - LV - ERDF/ESF/CF/YEI €5, 415, 246, 753.00** Network infrastructures in transport and energy Low-carbon economy Environment protection and resource efficiency Climate change adaptation & risk prevention **National Rural Development €2, 024, 986, 273.00** Environment protection and resource efficiency Climate change adaptation & risk prevention Low-carbon economy **Maritime and Fisheries €183, 533, 692.00** Environment protection and resource efficiency	**Agriculture, fisheries, forestry Projects: €20,000,000** EU Funds Co-Financing 2014-2020 **Energy Projects: €160,820,000** Altum Energy Efficiency PF4EE CA, LATVENERGO Power Distribution Networks, EU Funds Co-Financing, etc. **Transport Projects: €136,132,716** E67 A7 Kekava By-Pass PPP Ten-T, and Riga Transport Company **Water, Sewerage Project: €60,000,000** Riga Water and Sanitation	While ESIF's National Rural Development Programme is supporting environmental projects, there is no significant overlap between the EEA Grant and both ESIF and EIB projects. The EEA Grant in Latvia is clearly addressing specific sectoral needs not funded by other funding sources.
Poland	**PL – Climate** Environment and Ecosystems; Renewable Energy, Energy Efficiency, Energy Security; Climate Change Mitigation and Adaptation	Hydroelectric power and geothermal energy as sources of renewable energy	€ 146,042,000	**Infrastructure and Environment - PL - ERDF/CF €33 037 331 613** Network infrastructures in transport and energy Low-carbon economy Environment protection and resource efficiency Climate change adaptation and risk prevention **Maritime and Fisheries €710 509 513** Environment protection and resource efficiency Low-carbon economy **National Rural Development €18 175 554 935**	**Agriculture, fisheries, forestry Projects: €1,400,000,000** Poland Rural Development Co-Financing **Energy Projects: €3,027,486,822** BNP Paribas Bank Polska Energy EFF PF4EE CA, EDPR Poland Green Energy Loan, PKN Orlen Biorefinery and RDI, Energa Electricity Distribution, Wielkopolskie Onshore Wind, Megatem Heating Capex Programme, Lords LB 66 MW Solar PV Portfolio, Opole Heating and Energy Efficiency Upgrade **Solid Waste Projects: €49,725,826**	The EEA Grant has minimal similarity with ESIF on infrastructure and environment activities (e.g., environmentally friendly infrastructure and technologies that reduce GHG emissions and increase climate resilience in large cities). The grant has significant overlap with EIB's energy portfolio. Nonetheless, the EEA Grant is particular with hydroelectric power and geothermal energy.

				Environment protection and resource efficiency Climate change adaptation and risk prevention	Olsztyn Waste-to-Energy Plant, and Lublin Municipal Infrastructure **Transport Projects: €14,540,243,256** **Urban Development Projects: €2,574,134,559** Zielona Gora Municipal Infrastructure III, Upper Silesia Urban Framework Programme, Bielsko Biala Urban Infrastructure, Warsaw Sustainable Development, etc. **Water, Sewerage Projects: €192,899,807** Krakow Water and Sanitation, Wroclaw Water and Wastewater Project II, etc.	

Portugal	**PT – Environment** Environment and Ecosystems; Climate Change Mitigation and Adaptation	Circular Economy with relation to the building sector; Portugal Living Labs for low carbon cities in Lisbon and Oporto; National Network of Biosphere Reserves; ensure synergies with the programme 'Blue Growth Innovation and SMEs' (PT-Innovation), local adaptation measures and territorial climate change vulnerability assessments	€ 25,000,000	**Maritime and Fisheries €503, 913, 685.00** Environment protection and resource efficiency Low-carbon economy **Sustainability and Resource Use Efficiency - PT – CF €2, 591, 461, 371.00** Environment protection and resource efficiency Low-carbon economy Climate change adaptation & risk prevention	**Energy Projects: €1,185,935,000** REN Electricity System upgrade III, Energy and Environmental Sustainability Project, Windfloat Innovfin FDP, Wave Energy Device (FDP), BPI Energy Efficiency FLPF4EE, Tamega Iberdrola Hydropower and Storage Portugal, etc. **Solid Waste Projects: €85,546,475** Portugal Solid Waste Investment Plan, EU Funds Co-Financing 2014-2020, etc. **Transport Projects: €164,850,000** GALP EV Sustainable Charging Network, Portuguese Ports Private Investment Plan 2017-2019, EU Funds Co-Financing, etc. **Urban Development Projects: €665,525,000** Lisbon Urban Renewable Housing Climate FL, UCI Green Energy Mortgages MBIL SFSB, EU Funds Co-Financing, etc. **Water, Sewerage Projects: €731,449,925** Portugal Water Supply and Sanitation, Portugal Irrigation Plan, EU Funds Co-Financing, etc.	There is potential overlap with the EEA Grant's outcome in circular economy vis-à-vis marine management (ocean plastic pollution measures) and the ESIF's Maritime and Fisheries sectoral funding, and EIB's solid waste project (Portugal Solid Waste Investent Plan).
Romania	**RO – Energy** Renewable Energy; Energy Efficiency; Energy Research,	Training and awareness raising; Energy solutions for off-grid households	€ 62,826,500	**National Rural Development €12, 902, 160, 521.00** Climate change adaptation and risk prevention Environment protection and resource efficiency	**Agriculture, fisheries, forestry Projects: €658,000,000** Romania Rural Development EU Co-Financing, Romania EU Co-Financing for Growth, etc.	There may be limited overlap between EEA Grant and ESIF's Integrated Regional Programme as both

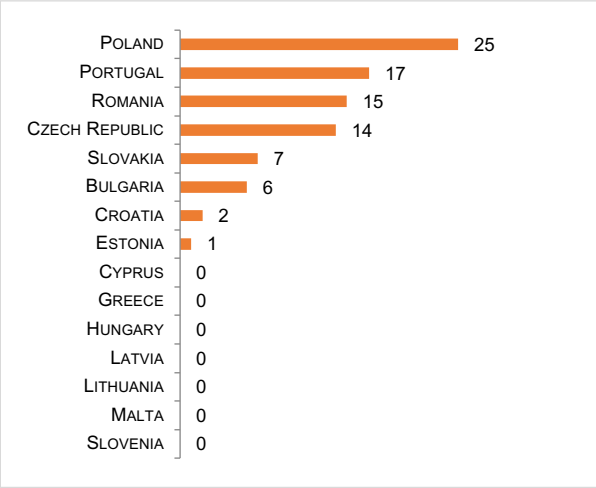
	Development, and Innovation			Low-carbon economy **Maritime and Fisheries €223, 826, 463.00** Environment protection and resource efficiency **Integrated Regional Programme - RO - ERDF €8, 391, 068, 718.00** Low-carbon economy Network infrastructures in transport and energy Environment protection and resource efficiency	**Energy Projects: €6,657,787,113** Electrica Distribution Network Upgrade, Transgaz Brua Gas Interconnection Project, etc. **Solid Waste Projects: €28,500,000** Romania Recycling and Circular Economy; Romania EU Co-Financing for Environment, etc. **Transport Project: €1,000,000,000** Romania EU Co-Financing for Transport 2014-2020 **Transport Projects: €171,029,000** Oradea Sustainable Infrastructure III, Bucharest S6 Energy Efficiency, etc. **Water, Sewerage Projects: €393,000,000** CLUJ-SALAJ Regional Water, Bucharest Glina II, etc.	focus on promoting low-crbon economy
	RO – Environment Environment and Ecosystems; Climate Change Mitigation and Adaptation	Environmental strategies, management plans, Management of hazardous substances, climate change-related extreme weather preparedness and risk management	€ 20,000,000			There is potential overlap between the EEA Grant's management of extreme weather and environmental strategies, and climate change adaptation and risk prevention through the ESIF's National Rural Development. No strong overlap with EIB, except potentially with Romania Rural Development EU Co-Financing for Growth. EEA Grant is addressing a financial gap for the rehabilitation of contaminated sites.

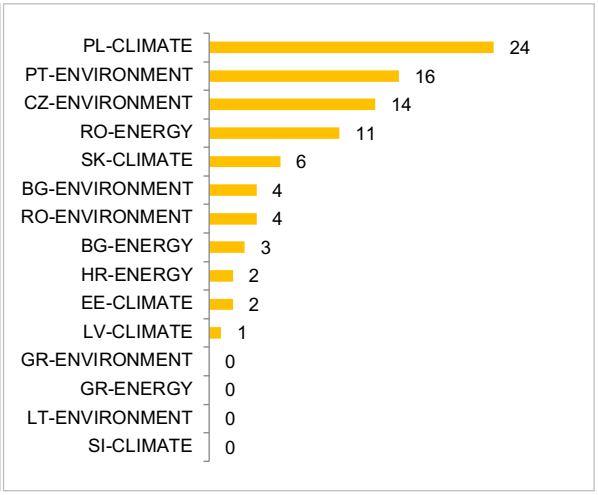
Slovakia	**SK – Climate** Climate Change Mitigation and Adaptation	A possible pre-defined project in the modernisation of spatial data infrastructure Increased climate change resilience and responsiveness within targeted areas; Enhanced ability of targeted ecosystems to adapt to climate change; Improved tools for decision-making process for natural risks prevention and civil protection	€ 18,216,000	**Quality of Environment - SK - ERDF/CF** **€3, 472, 748, 537.00** Environment protection and resource efficiency Low-carbon economy Climate change adaptation & risk prevention **National Rural Development** **€3, 042, 028, 314.00** Climate change adaptation & risk prevention Environment protection and resource efficiency Low-carbon economy **Maritime and Fisheries – Slovakia** **€12, 781, 258.00** Environment protection and resource efficiency **Integrated Regional Programme - SK – ERDF** **€2, 335, 934, 979.00** Network Infrastructures in transport and energy Low-carbon economy Environment protection and resource efficiency	**Agriculture, fisheries, forestry Projects: €370,000,000** Slovakia Forestry and Environment, and Slovakia Rural Development Co-Financing **Energy Projects: €415,000,000** Gas Network Upgrade in Slovakia II, EP Energy Distribution Network SK, etc. **Transport Projects: €1,185,022,001** Bratislava Sustainable Urban Mobility, Greenway EV Charging Network, Slovakia Transport Framework Facility 2014-2020, etc. **Urban Development Projects: €36,350,960** Presov Urban Development, Kosice Regional Infrastructure II, etc.	Potential overlap between the EEA Grant and ESIF's Quality of Environment Funding, and National Rural Development, and EIB's agriculture, fisheries, forestry projects (Slovakia Forestry and Environment). There is no clear other funding the modernisation of spatial data infrastructure, which the EEA Grant is supporting.

Slovenia	**SI – Climate** Renewable Energy; Energy Efficiency; Energy Security; Climate Change Mitigation and Adaptation; Good governance, Accountable Institutions, Transparency	Increased public awareness of climate change processes and impacts; improved planning and management competencies;	€16,309,499	**National Rural Development €1 505 746 437** Environment protection and resource efficiency Climate change adaptation and risk prevention Low-carbon economy **Maritime and Fisheries €28 658 980** Environment protection and resource efficiency **EU Cohesion Policy - SI - ERDF/ESF/CF/YEI €4 130 720 466** Environment protection and resource efficiency Network infrastructures in transport and energy Low-carbon economy Climate change adaptation and risk prevention	**Energy Projects: €330,000,000** Electricity Distribution Network II, Resalta (EGFF), and Resalta (EGFF) **Transport Projects: €322,000,000** Karavanke Tunnel Safety Upgrade, Port of Koper Infrastructure II, Karavanke Tunnel Safety Upgrade, etc.	Given the nature of the EIB-funded projects) power distribution), its interaction with the EEA Grant regarding energy is limited. The EEA Grant's component on climate planning and management does not overlap with neither of the two funding sources. The current programme fills in a funding gap in inter-municipal planning and regional mobility management, which is unaddressed by EU Cohesion Funds.

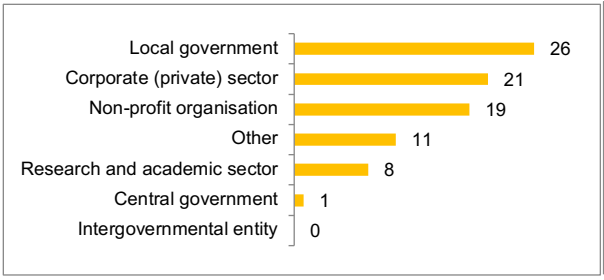
Annex III: Results of online survey among project promoters

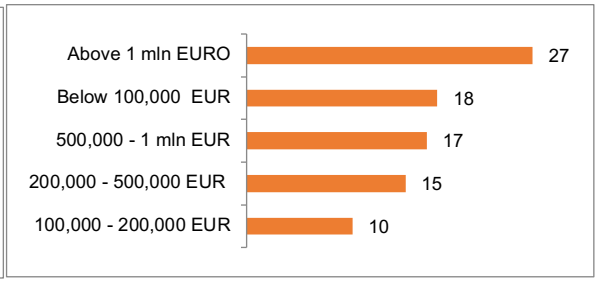
The number of project promoters responded to the survey, by country and by programme



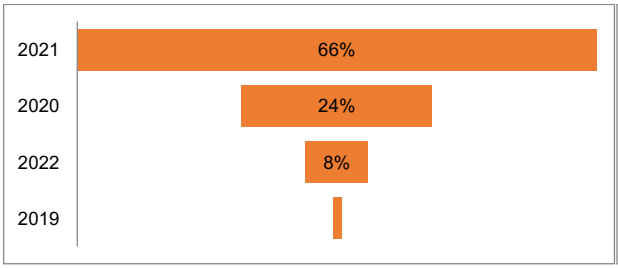


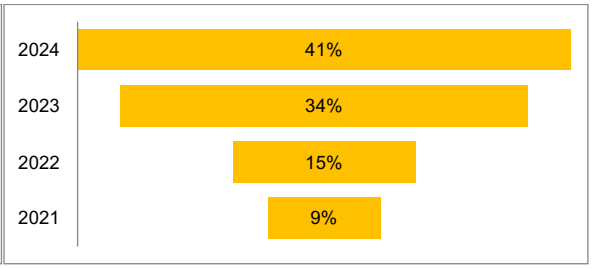
The number of project promoters responded to the survey, by type of institution and project budget



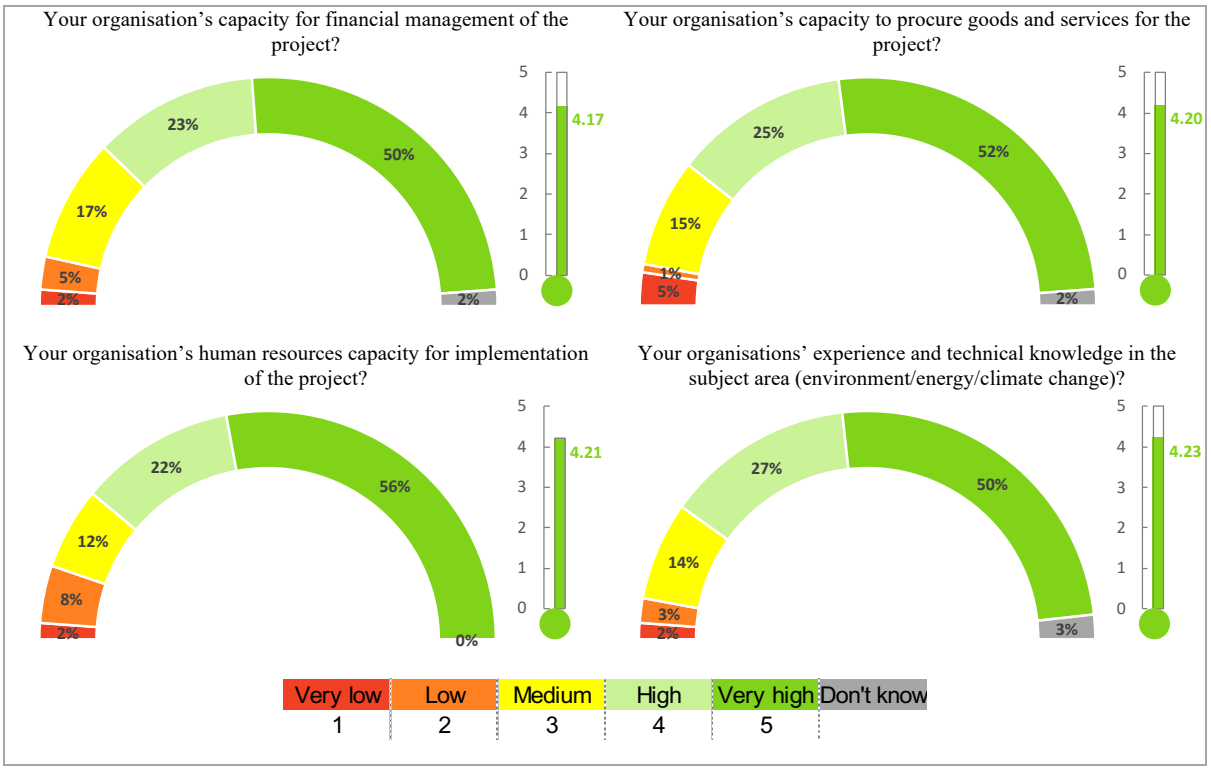


The breakdown of project promoters responded to the survey on the year of project start (contract signature) and the year of project end , by year

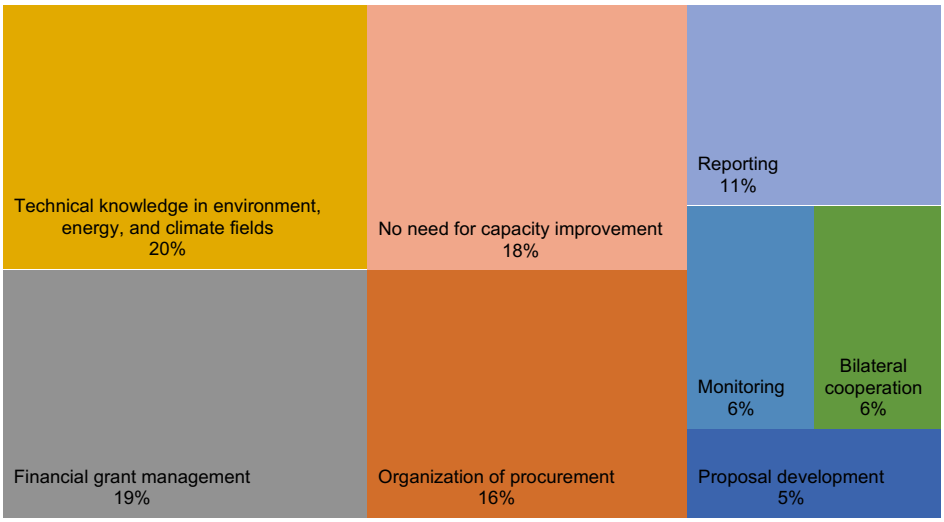




As a project promoter, please assess your organisation's capacities rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong (N/A – the category is not relevant for the respondents).

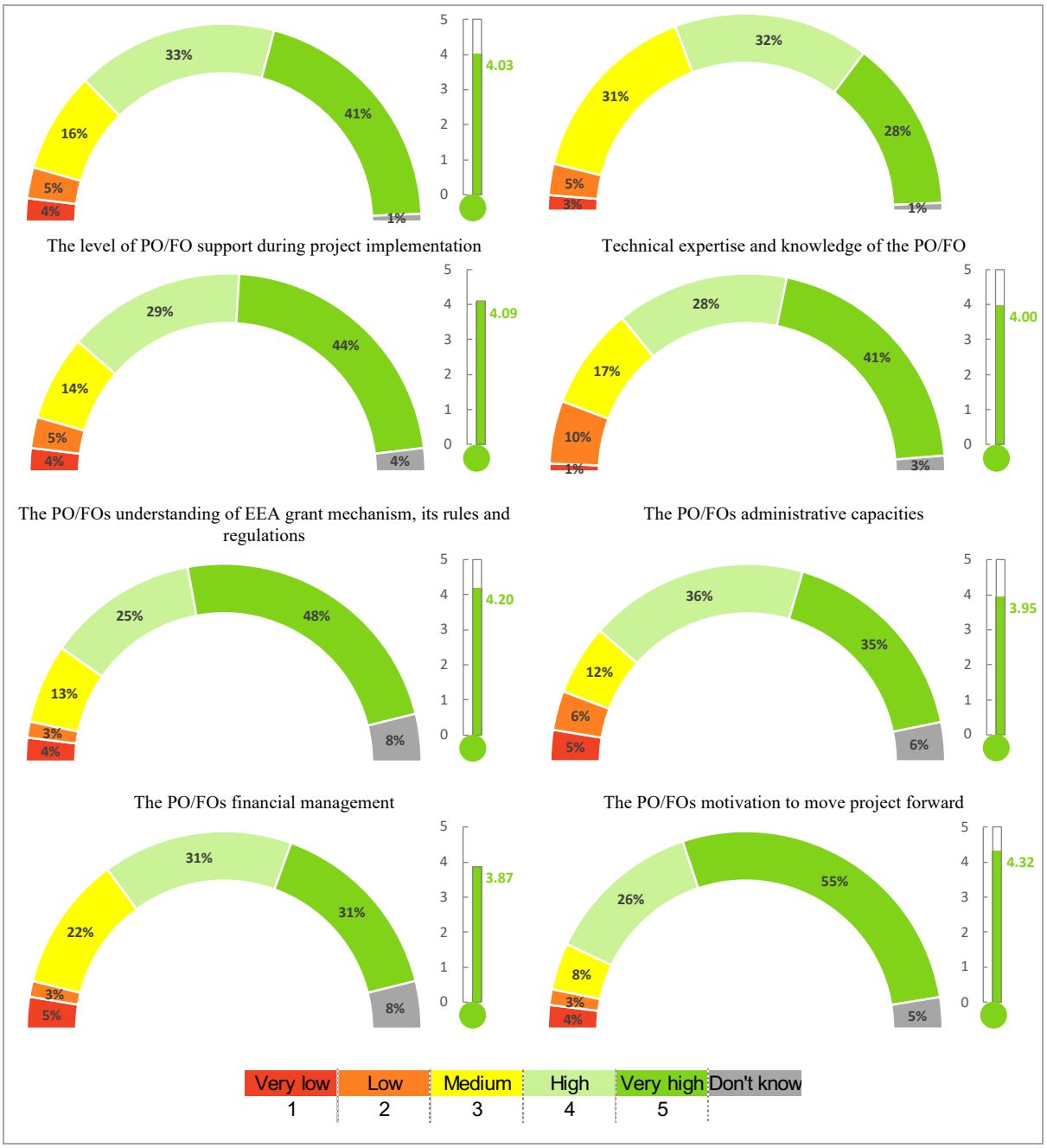


In which areas do you, as a project promoter, consider that your organisation's capacities need most improvement to ensure effective and efficient implementation of the current project (up to 3 most relevant characteristics per project promoter)

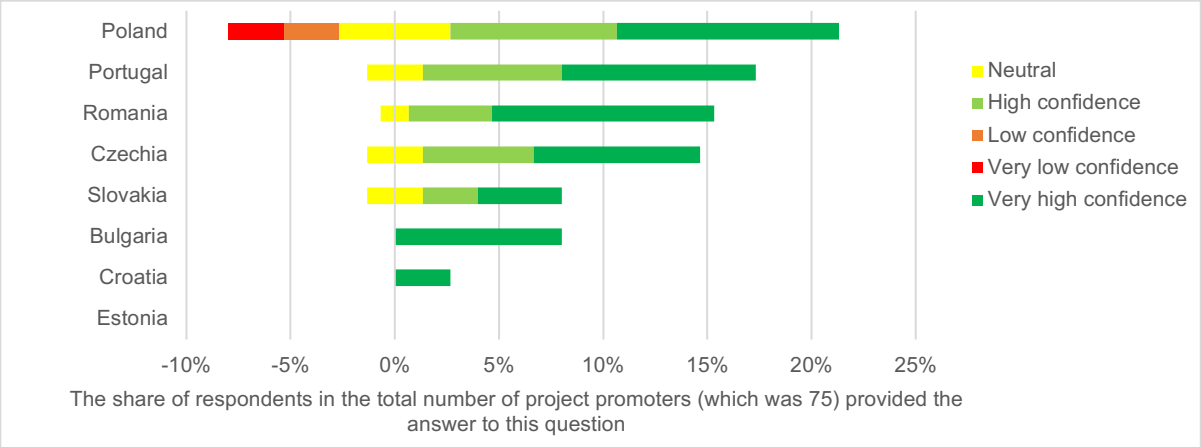


As a project promoter, please assess your Programme Operator/Fund OperatorPlease rate on a scale from 1 to 5, where 1 is very weak and 5 is very strong (N/A – the category is not relevant for the respondents).

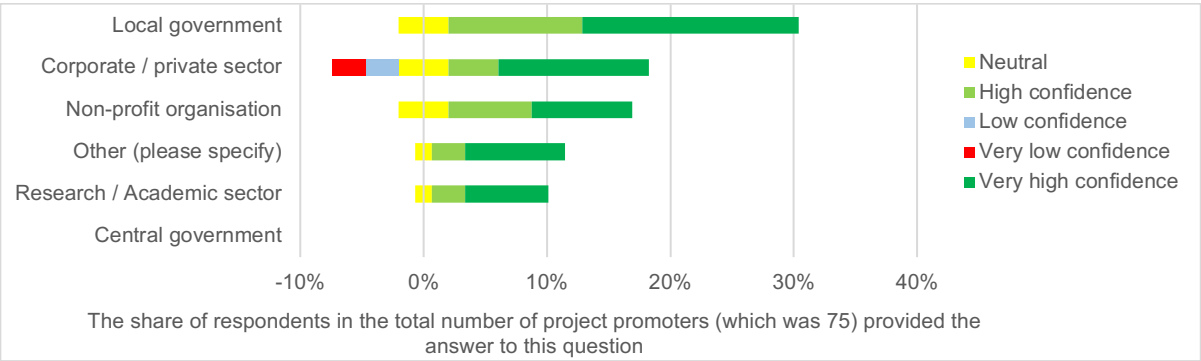
The clarity of call texts (objectives, indicators, timeline, eligibility / administrative criteria, assessment criteria etc.)	The clarity of the reporting requirements by the PO/FO


33%
41%
16%
5%
4%
1%
4.03
The level of PO/FO support during project implementation
32%
31%
28%
5%
3%
1%
Technical expertise and knowledge of the PO/FO
29%
44%
14%
5%
4%
4%
4.09
The PO/FOs understanding of EEA grant mechanism, its rules and regulations
28%
41%
17%
10%
1%
3%
4.00
The PO/FOs administrative capacities
25%
48%
13%
3%
4%
8%
4.20
The PO/FOs financial management
36%
35%
12%
6%
5%
6%
3.95
The PO/FOs motivation to move project forward
31%
31%
22%
3%
5%
8%
3.87
26%
55%
8%
3%
4%
5%
4.32
Very low
Low
Medium
High
Very high
Don't know
1
2
3
4
5

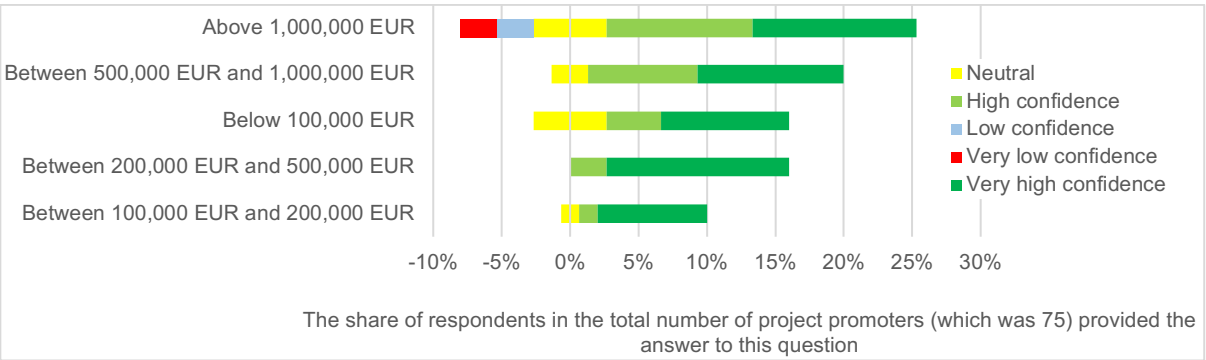
The confidence of project promoters that their project will complete all its planned activities on-time, rating it on a scale from 1 to 5, where 1 is very low confidence and 5 is very strong confidence, results by country



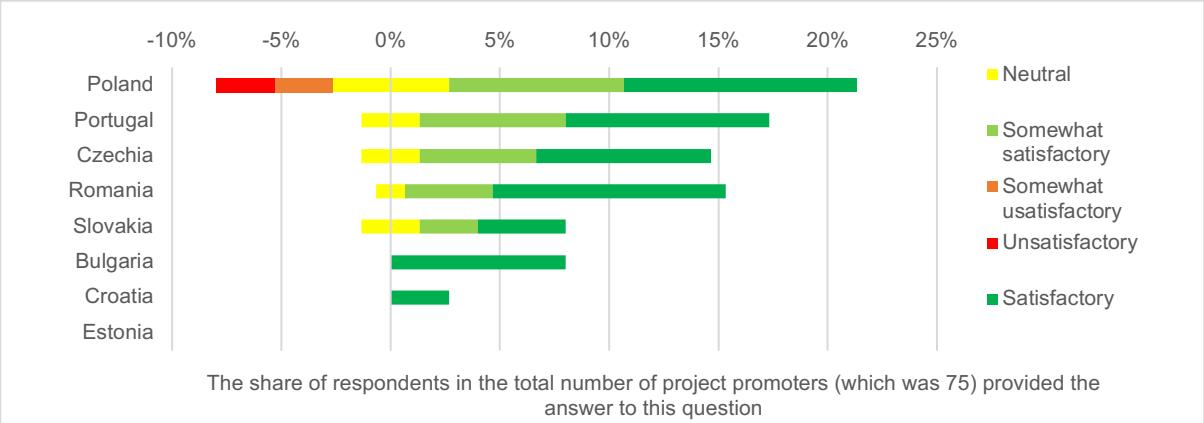
The confidence of project promoters that their project will complete all its planned activities on-time, rating it on a scale from 1 to 5, where 1 is very low confidence and 5 is very strong confidence, results by type of project promoter institution



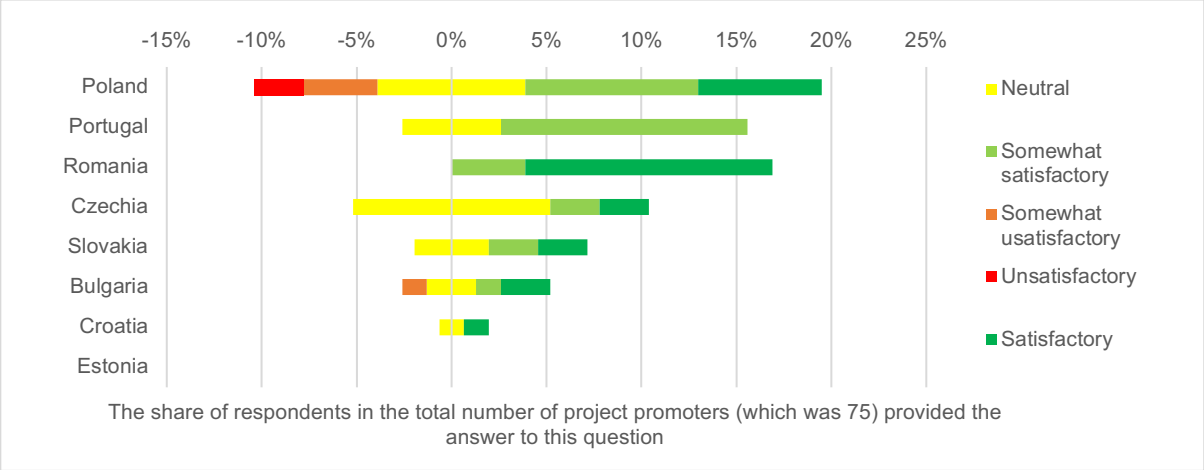
The confidence of project promoters that their project will complete all its planned activities on-time, rating it on a scale from 1 to 5, where 1 is very low confidence and 5 is very strong confidence, results by project budget size



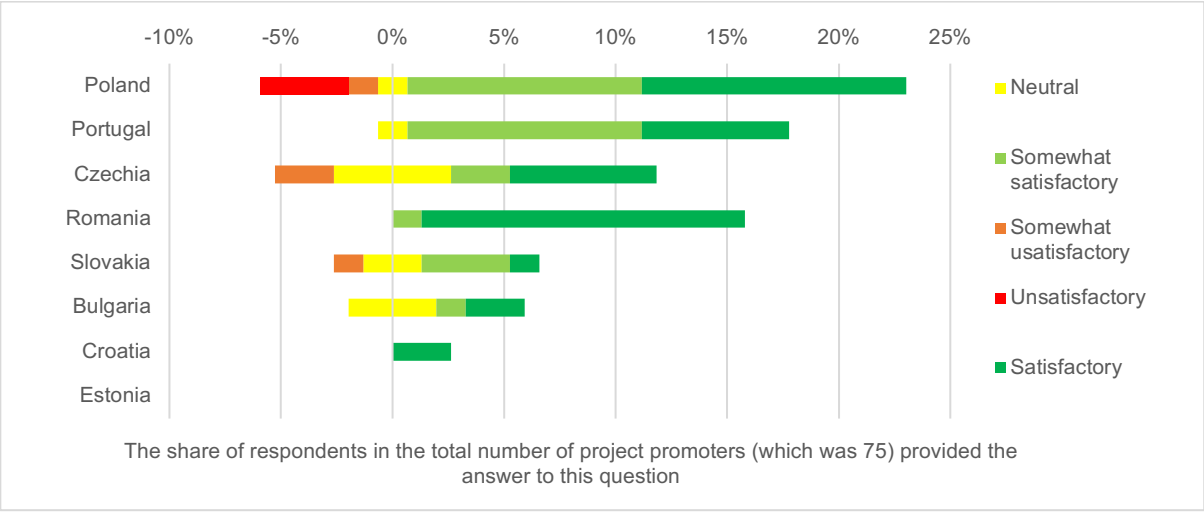
The assessment of POs/FOs by project promoters: the clarity of the call texts (objectives, indicators, timeline, eligibility and administrative criteria, assessment criteria etc.), rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



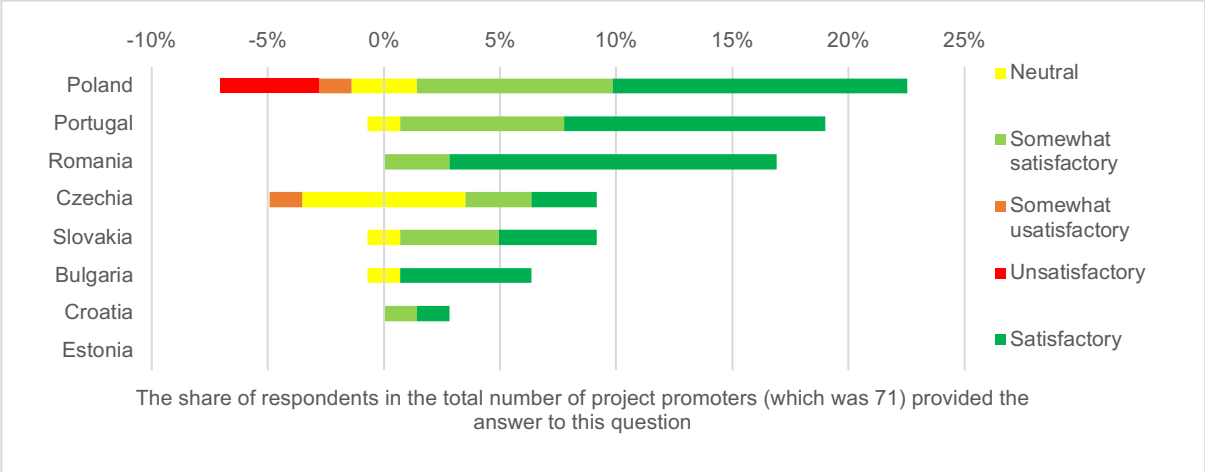
The assessment of POs/FOs by project promoters: the clarity of reporting requirements by the PO/FO, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



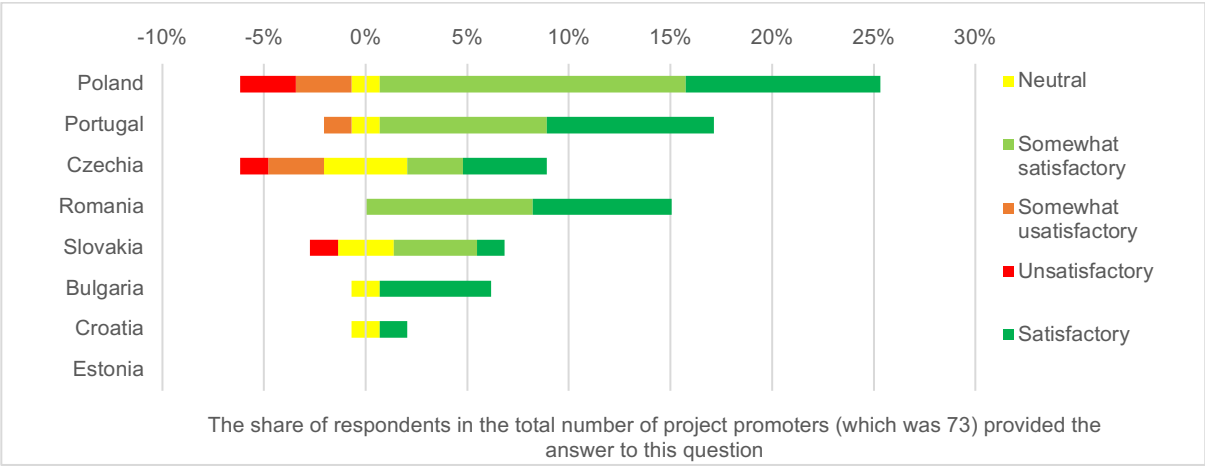
The assessment of POs/FOs by project promoters: the level of support from the PO/FO during the project implementation, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



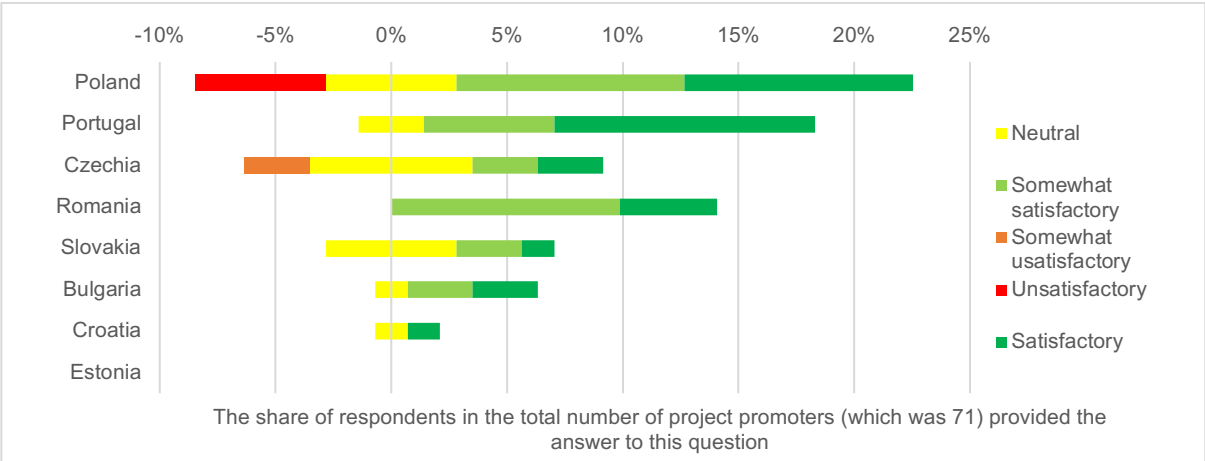
The assessment of POs/FOs by project promoters: The PO/FOs understanding of EEA grant mechanism, its rules and regulations, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



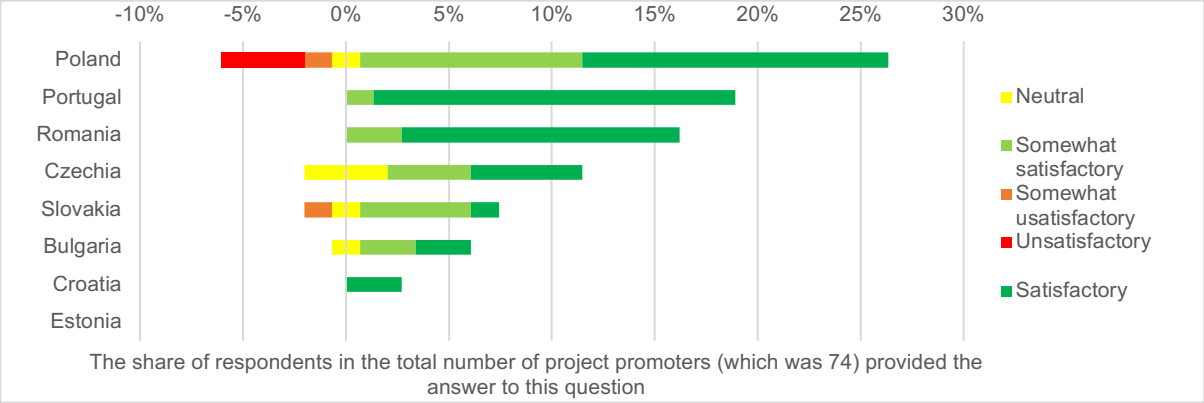
The assessment of POs/FOs by project promoters: The PO/FOs administrative capacities, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



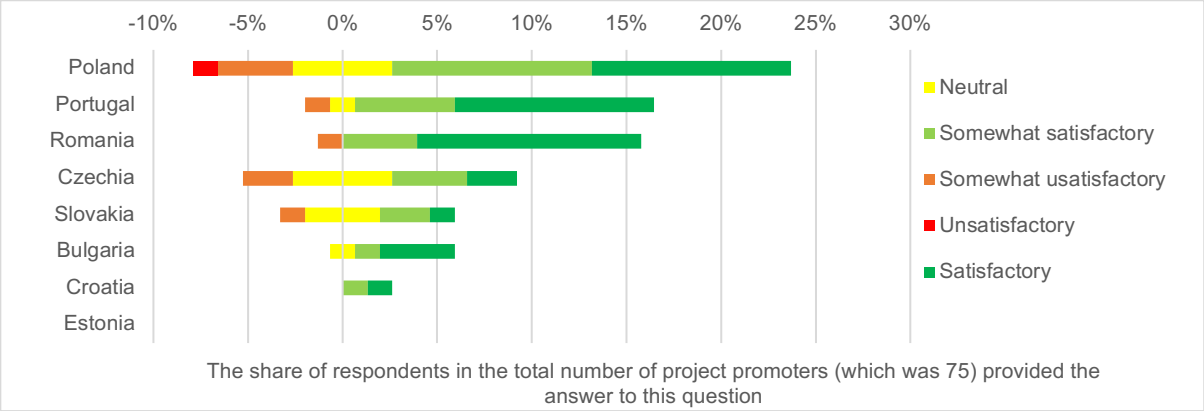
The assessment of POs/FOs by project promoters: The PO/FOs financial management, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



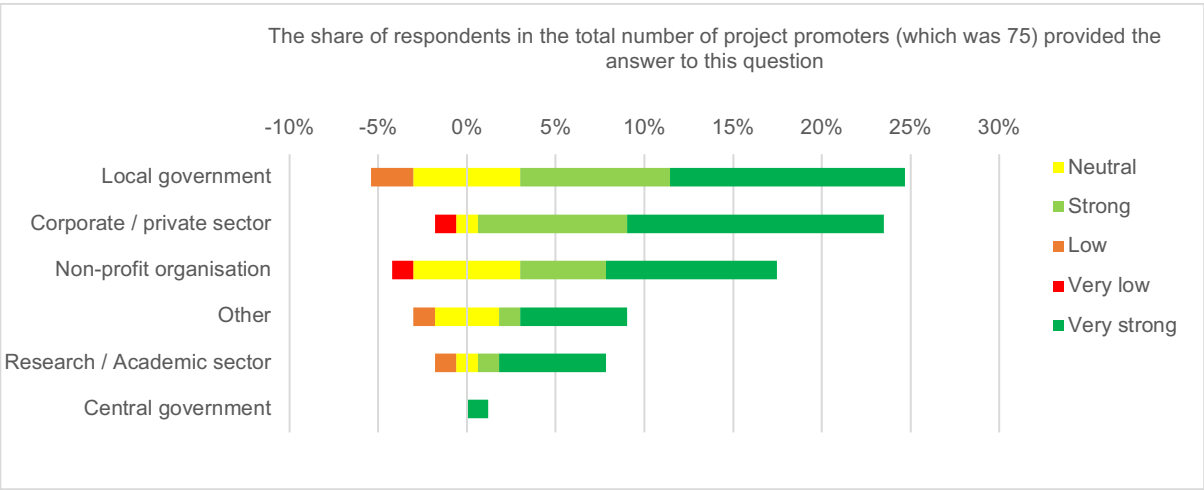
The assessment of POs/FOs by project promoters: The PO/FOs motivation to move project forward, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



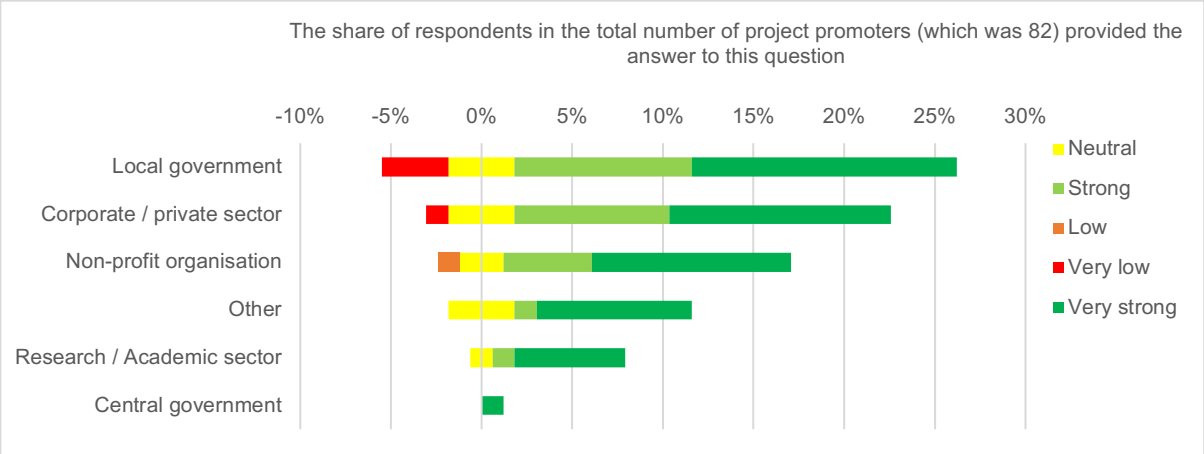
The assessment of POs/FOs by project promoters: the level of support during the project implementation, rating on a scale from 1 to 5, where 1 is unsatisfactory and 5 is satisfactory



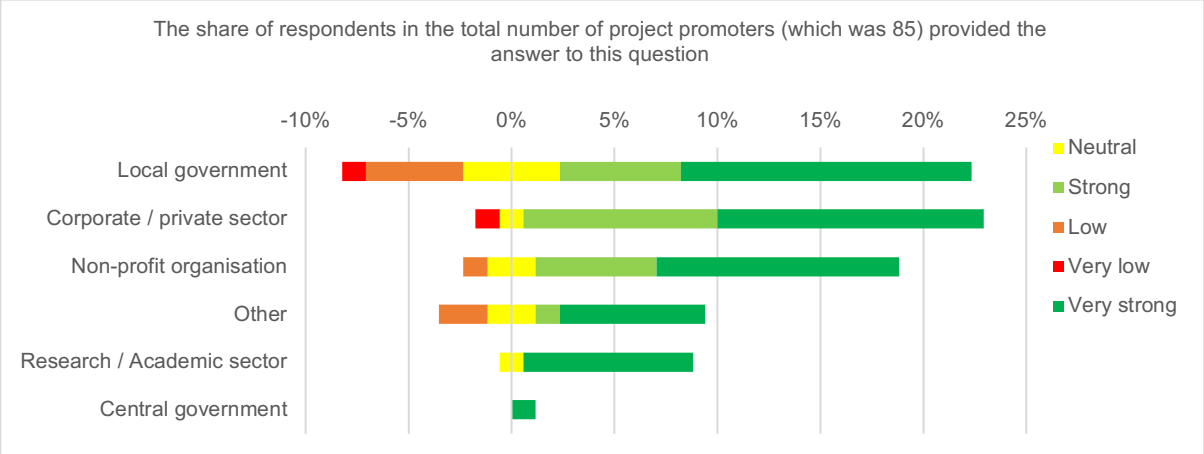
Your organisation's capacity for financial management of the project, rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong, results by type of project promoter institution



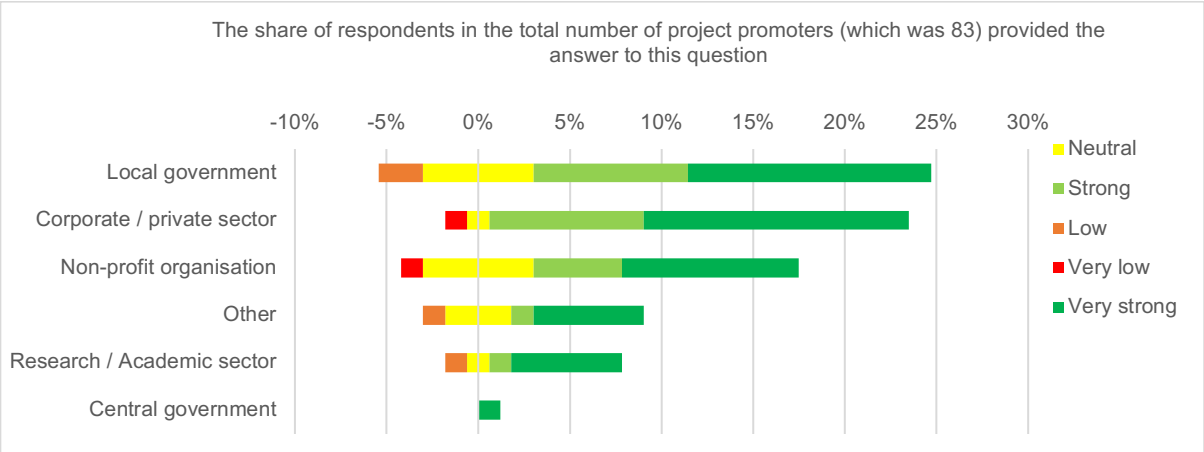
Your organisation's capacity to procure goods and services for the project, rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong, results by type of project promoter institution



Your organisation's human resource capacity for the project implimentation, rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong, results by type of project promoter institution

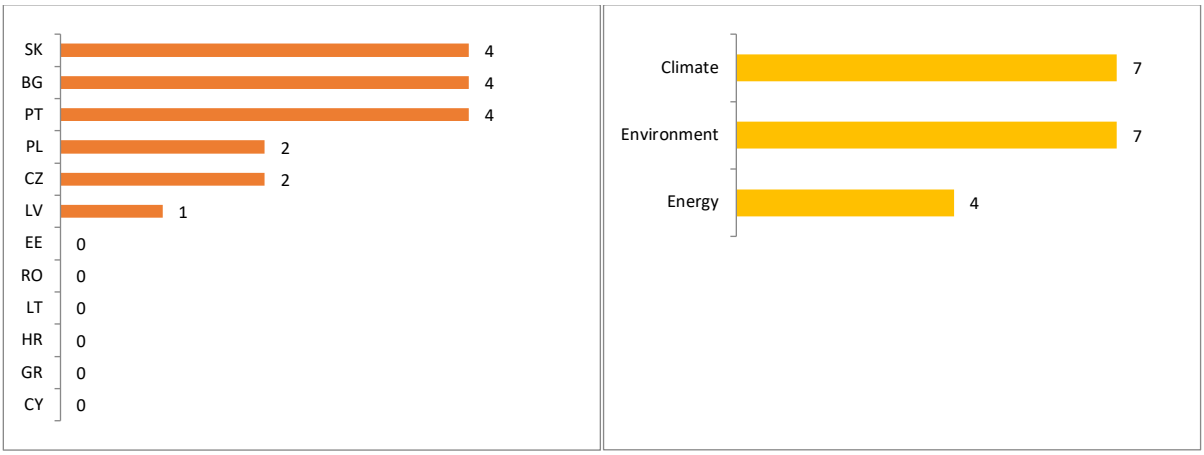


Your organisation's experience and technical knowledge in the subject area (environment, energy, and/or climate change), rating it on a scale from 1 to 5, where 1 is very low and 5 is very strong, results by type of project promoter institution

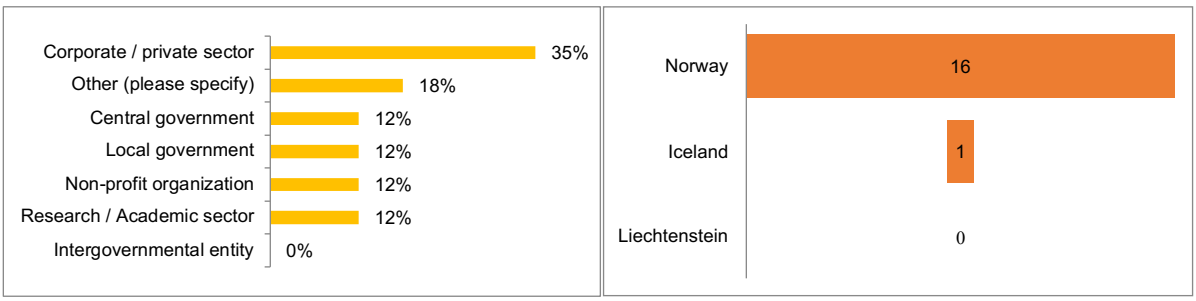


Annex IV: Results of online survey among donor project partners

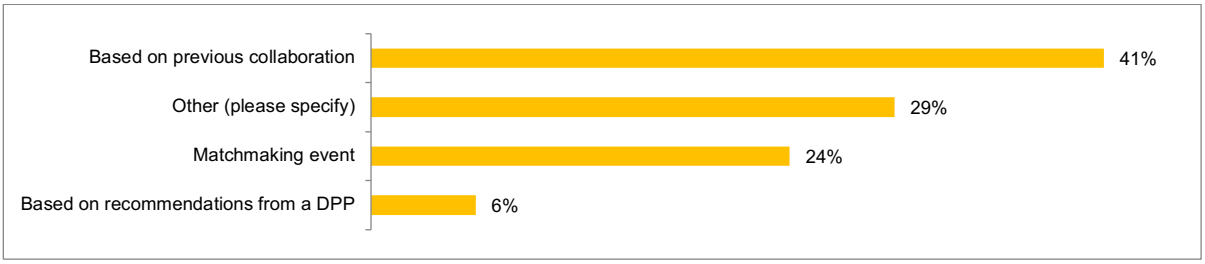
The number of donor project partners responded to the survey, by country and by programme



The number of donor project partners responded to the survey, by type of institution and donor country

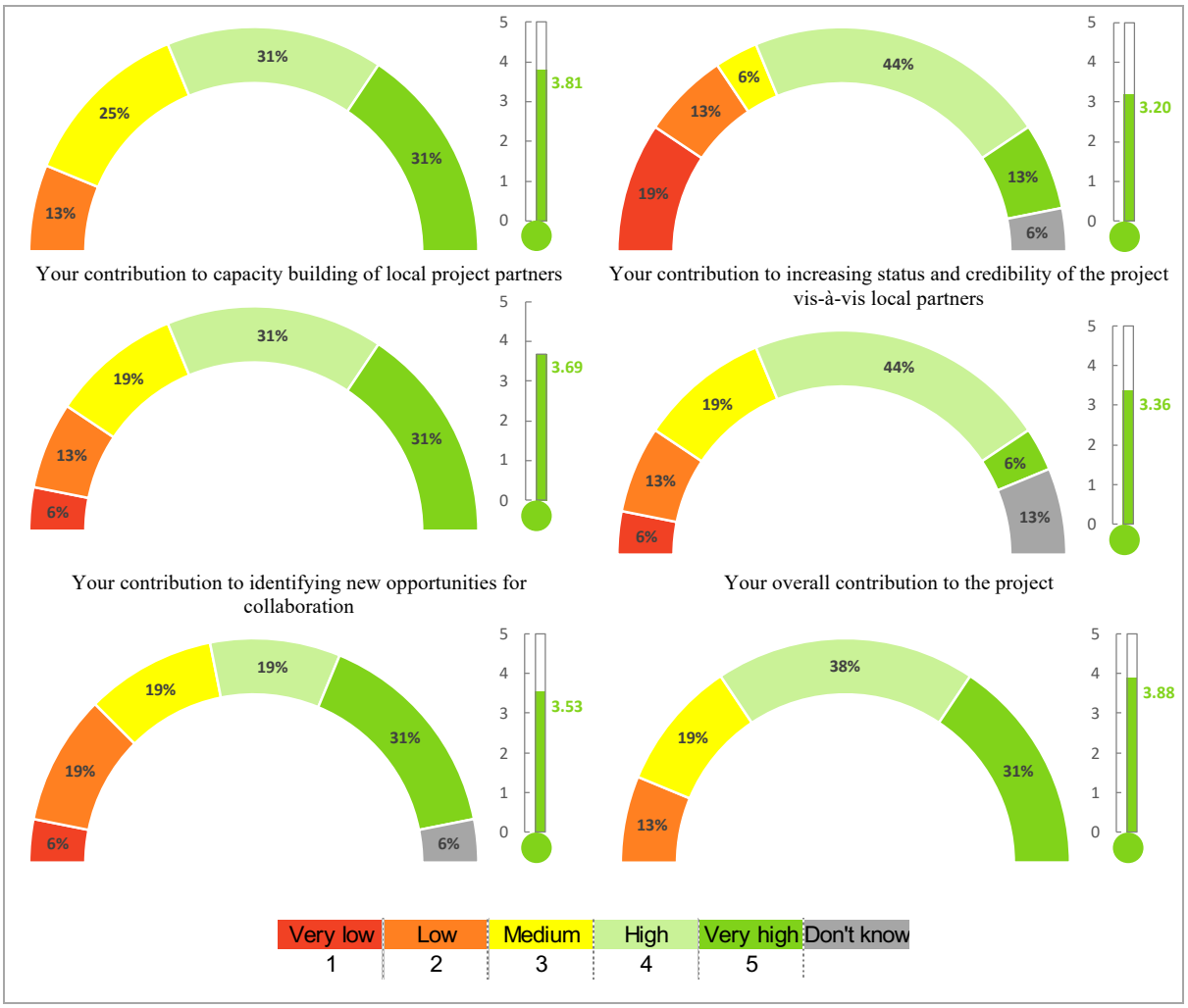


As a donor project partner, how did you get in contact with your project promoter?

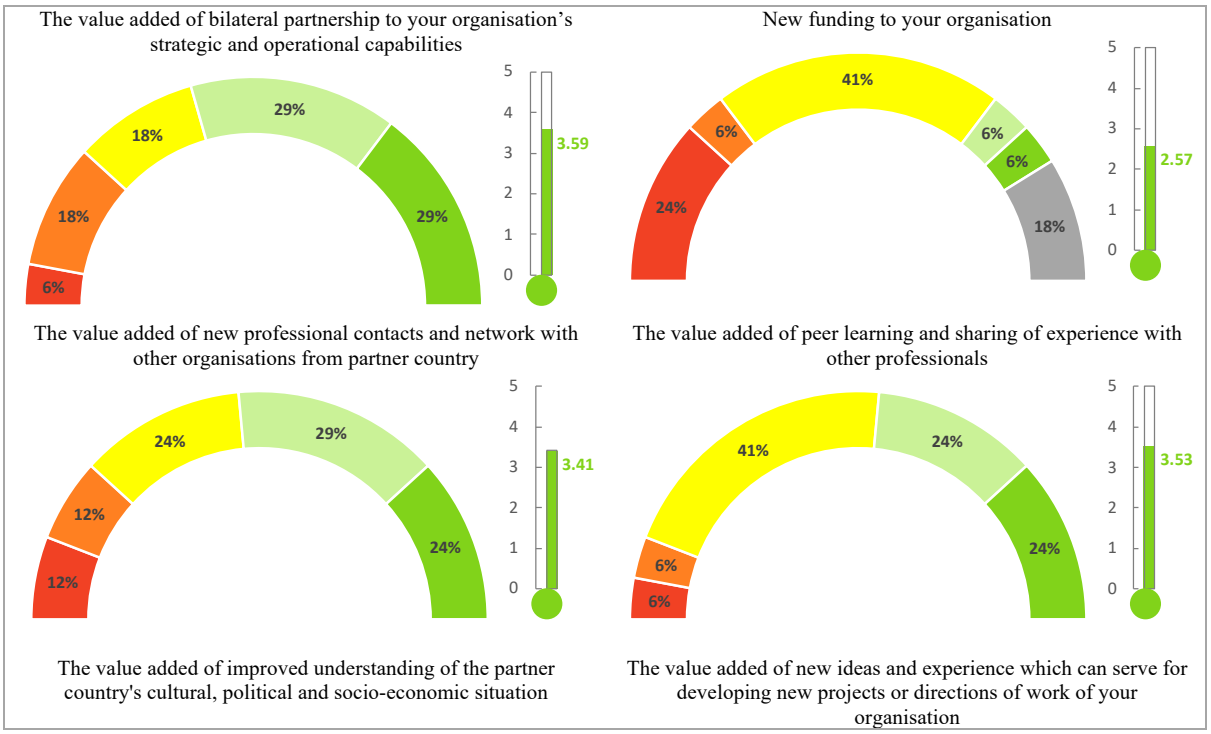


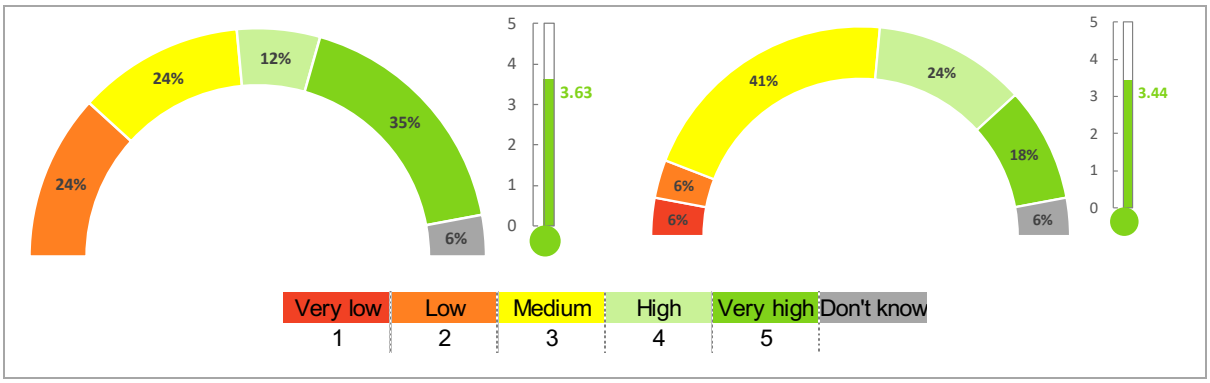
As a donor project partner, Please assess the value added of your involvement to the project, rating it on a scale from 1 to 5, where 1 is very weak and 5 is very strong (N/A – the category is not relevant for the respondents).

Your contribution to transfer of knowledge, know-how and design of innovative solutions	Your contribution to facilitating exchange and field visits of local stakeholders

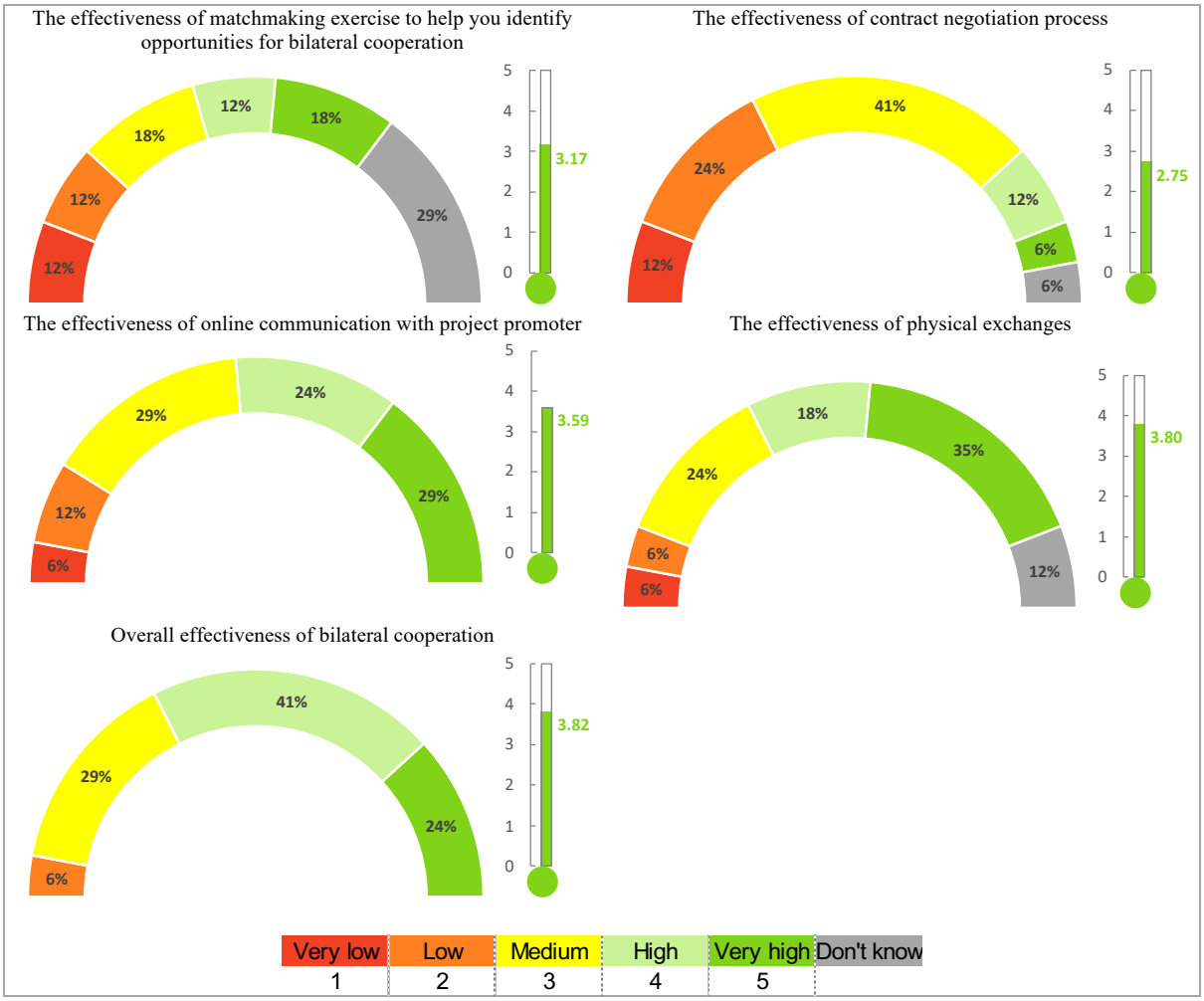


As a donor project partner, please assess the value added of this project's bilateral partnership to your organisation, rating it on a scale from 1 to 5, where 1 is very low and 5 is very high (N/A – the category is not relevant for the respondents).





As a donor project partner, please assess the effectiveness of bilateral cooperation, rating it on a scale from 1 to 5, where 1 is very low and 5 is very high (N/A – the category is not relevant for the respondents).



Annex V: List of interviewed stakeholders

Country	Stakeholder	Organisation	Interviewee
Bulgaria	National Focal point	Central Coordination Unit Directorate, Administrative unit within the Council of Ministers	Daniela Tzoneva
Bulgaria	Programme Operator	Ministry of Energy	Hristina Stoichkova, Veneta Tsvetkova
Bulgaria	Programme Operator	Ministry of Environment and Water	Margarita Stoykova, Elina Pavlova
Bulgaria	Project promoter	Ministry of Environment and Water	Kalin Iliev
Bulgaria	Project promoter	National Trust Ecofund	Kamelia Georgieva, Irena Pencheva
Bulgaria	Project promoter	Black Sea Basin Directorate	Mira Robinson
Bulgaria	Project promoter	Smolyan Municipality	Eftima Petkova, Hamdi Mollov, Rozeta Buykova, Maria Bogotlieva
Bulgaria	Project promoter	Secondary school "Tsvetan Radoslavov", Svishtov	Kliment Mindjov, Mariana Bancheva
Croatia	National Focal point	Ministry of Regional Development and EU Funds - Croatia	Natalija Laštro
Croatia	Programme Operator	Ministry of Regional Development and EU Funds of the Republic of Croatia	Lovre Karamarko, Ines Plašć, Mislav Kovac
Croatia	Project promoter	Hrvoje Pazar	Vesna Bukarica
Croatia	Project promoter	Medulin municipality	Suzana Racan Stern
Croatia	Project promoter	Special Hospital for Orthopedics and Rehabilitation "Martin Horvat" Rovinj	Danijela Križman Puhar
Czechia	National Focal point	Ministry of Finance	Šárka Sovová
Czechia	Programme Operator	State Environmental Fund	Marcin Tesař
Czechia	Project promoter	Ekowatt	Karel Srdečný
Czechia	Project promoter	Ekowatt	Jitka Klinkerová
Czechia	Project promoter	Bumblebee - Society of Friends of Nature z.s.	Jana Cimbálová Kurfurst
Czechia	Project promoter	Opava city municipality	Hana Heinzová
Czechia	Project promoter	Strategická rada regionu Broumovsko	Kristýna Dyntarová
Czechia	Project promoter	Czech University of Life Sciences	Patrik Toula
Estonia	National Focal point	Estonian State Shared Service Center	Laura Pikkoja, Marek Kübarsepp
Estonia	National Focal point	Ministry of Finance of Estonia on behalf of Estonian State Shared Service Center (SSSC EE)	Miryam Vahtra

Estonia	Programme Operator	Ministry of Environment - Estonia	Krista Tõnnison
Estonia	Programme Operator	Estonian Environmental Investment Centre on behalf of Ministry of Environment - Estonia (EE)	Aivi Allikmets
Estonia	Project promoter	Tartu city government (EE)	Murel Truu, Eva Lääne
Greece	National Focal point	Special Service EEA, General Secretariat for Public Investments & the NSRF Ministry of Development & Investments	Heracles Alexopoulos
Greece	Programme Operator	Centre for Renewable Energy Source and Saving	Vasiliki Polyzoi, Kostas Patlitzianas
Greece	Programme Operator	Ministry of Environment and Energy, Executive Authority of the Partnership Agreem	Eftychia Papachatzopoulou
Greece	Project promoter	University of Patras Special Account for Research Grants	Nikolaos Depoundis
Iceland	Donor Programme Partner	National Energy Authority	María Guðmundsdóttir
Iceland	Donor Programme Partner	National Energy Authority	Baldur Pétursson
Latvia	National Focal point	Ministry of Finance	Aija Pereja
Latvia	Programme Operator	Ministry of Environmental Protection and Regional Development - Latvia	Iruma Kravale, Solvita Ciganska, Jānis Gorbunovs, Ilze Krieva, Aija Kesmina
Latvia	Project promoter	Ministry of Agriculture of the Republic of Latvia (LV)	Kristīne Sirmā
Latvia	Project promoter	The State Plant Protection Service (SPPS) on behalf of Ministry of Agriculture of the Republic of Latvia (LV)	Lauris Leitāns
Lithuania	National Focal point	Investment Department, Ministry of Finance	Agne Navikiene
Lithuania	Programme Operator	Central Project Management Agency	Marius Navadunskis
Lithuania	Project promoter	Environmental Protection Agency of Lithuania	Laura Lauciute
Lithuania	Project promoter	Environmental Protection Agency of Lithuania	Mindaugas Gudas
Norway	Donor Programme Partner	Innovation Norway	Magnar Ødelien, Rannveig Solumsmoen Gimse
Norway	Donor Programme Partner	Norwegian Directorate for Civil Protection	Dag Hogvold
Norway	Donor Programme Partner	Norwegian Environment Agency	Anne Marie Mo Ravik, Svein Terje Båtvik

Norway	Donor Programme Partner	Norwegian Water Resources and Energy Directorate	Bjørn Aulie
Norway	Fund Operator	Innovation Norway	Inger Elisabeth, Strand Karni
Poland	National Focal point	Department of Assistance Programmes (PL), Ministry of Development Funds and Regional Policy	Malgorzata Zalewska
Poland	Programme Operator	Ministry of Climate and Environment	Wojciech Łysik, Magdalena Zaras
Poland	Programme Operator	National Fund of Environmental Protection and Water Management	Witold Retke, Izabela Puczylowska
Poland	Project promoter	Grupa AWW Sp. z o. o., Sp.k.	Anna Jaworska
Poland	Project promoter	Zespół Elektrociepłowni Wrocławskich KOGENERACJA S.A.	Anna Dmitruk-Wawrzynowska
Poland	Project promoter	Przedsiębiorstwo Gospodarki Komunalnej i Mieszkaniowej Spółka z ograniczoną odpowiedzialnością with its seat in Turek	Aleksandra Stankiewicz
Poland	Project promoter	Chochołowskie Termy sp. z o.o.	Izabela Strzelecka
Poland	Project promoter	Przedsiębiorstwo Energetyki Cieplnej w Ełku Sp. z o.o., Ostrowski Zakład Ciepłowniczy S.A	Beata Kieljan
Poland	Project promoter	Commune Mikołów	Michał Bocheński
Poland	Project promoter	Czechwowice-Dziedzice Commune	Dawid Jurczyk, Tomasz Kudzia
Poland	Project promoter	Associaton of the Wisłoka River Basin Communes	Angelika Halibozek, Maria Lignar
Portugal	National Focal point	National Management Unit	Susana Ramos
Portugal	Programme Operator	General Secretariat of the Ministry for Environment and Energy Transition	Susana Escaria, Pedro Gomes
Portugal	Project promoter	Quaternaire Portugal SA (PT)	António Domingos Abreu
Portugal	Project promoter	CIMAC (PT)	João Sardinha, Teresa Batista, Andrea Gonçalves
Romania	National Focal point	General Directorate for European Non-reimbursable Financial Mechanisms and Instruments (GDENFMI RO), Ministry of European Funds	Diana Duma
Romania	Progrmme Operator	Ministry of Environment	Alexandra Popa, Silvia Neamtu, Daniela Covalinschi, Ilinca Lapovita (Ionescu)
Romania	Project promoter	Transgex	Eduard Sarbu Abramiuc
Romania	Project promoter	Balkan Energy	Lucian Perescu

Romania	Project promoter	Aquaserve s.a.	Törzsök Hunor
Romania	Project promoter	TMK Hydrology Power	Cristian Fleser
Romania	Project promoter	Harsova municipality	Marinela Comescu, Rodica Claudia Ioana, Carmen Mihaela Cheran
Romania	Project promoter	Oradea municipality	Hanza Ana Cristina
Romania	Project promoter	Apaserv Satu Mare S.A.	Oana Rusu
Romania	Project promoter	IPEC S.A	Cristian Covaciu
Romania	Project promoter	Budila Commune	Moise Dan Catalin
Romania	Project promoter	S.C.Hidroelectrica	Manuela Horvath, Alexandru Soiculescu
Romania	Project promoter	Institute of Biology - Bucharest	Sorin Stefanut
Romania	Project promoter	National Agency for Cadastre and Land Registration	Adriana Poggi, Victor Grigorescu, Marina Stoica
Romania	Project promoter	Ministry of Environment	George Ionas
Romania	Project promoter	Ministry of Environment	Emil Militaru
Slovakia	National Focal point	Ministry of Investment, Regional Development and Information	Martina Szabóová
Slovakia	Programme Operator	Ministry of Environment	Denis Knotka, Ms. Nedbalová, Ms. Somogyi
Slovakia	Project promoter	City district of Bratislava – Karlova Ves	Lenka Nemcová
Slovakia	Project promoter	City of Brezno	Milada Medvedová
Slovakia	Project promoter	Bratislava Municipality	Petra Romaniaková
Slovakia	Project promoter	Climate change and environment education centre (Living Lab) in Dropie	Sylvia Baslarová
Slovenia	National Focal point	Government Office for Development and European Cohesion Policy	Natasa Babuder-Rumpret, Tanja Rener
Slovenia	Programme Operator	Government Office for Development and European Cohesion Policy	Silvija Jakopovic
Slovenia	Project promoter	Port of Koper	Tina Bizjak
Slovenia	Project promoter	Škocjan Caves Public Service Agency	Renata Rozman

Annex VI. Case Study 1: Cost-effectiveness of GHG emissions reduction in EEA & Norway green programmes

Objective

The aim of this case study is to analyse and compare the costs of greenhouse gases (GHG) emission reductions (expressed in EUR/tCO_2-equivalent) in EEA & Norway green programmes. The target against which the cost-effectiveness of possible GHG emission reductions has to be compared is the threshold established in the 2014-2021 blue book, a maximum of 150 EUR grant per tonne of CO_2 equivalent per year reduced/ avoided.

Methodology

Six programmes linked to PA 12 "Renewable energy, energy efficiency and energy security" were the focus of this case study. As of November 2022, GrACE contained information about 274 contracted projects in PA12 with a total grant amount of 211 million EUR (
Table 5).

Table 5 Green programmes linked to PA 12

Programme	N of projects	Grant amount, EUR
BG-Energy	45	€ 22 250 350
HR-Energy	35	€ 17 632 776
GR-Energy	13	€ 12 049 737
PL-Climate	53	€ 98 160 600
RO-Energy	125	€ 57 267 032
SI-Climate	2	€ 2 861 197
TOTAL	274	€ 211 216 381

Source: GRaCE as of November 2022

These projects support a range of GHG emission mitigation actions under the two broad themes: energy efficiency and renewable energy. For this analysis, all actions were broken down into 5 categories: energy efficient lighting, energy efficiency in buildings and industry, near-zero energy buildings **(**NZEB), geothermal energy and other types of renewable energy. For each category a sample of representative projects has been selected to ensure equal distribution of countries and categories in the analysis of their cost-effectiveness. In total 112 projects have been assessed, or 412% of the total. Project selection per category and per country is presented in Table 6.

Table 6 Project sample for cost-effectiveness analysis

	Street Lighting	EE Building & Industry	NZEB	Geothermal	Other RES	Total
BG-Energy	22		9	6		37
HR-Energy				3	12	15
GR-Energy			10			10
PL-Climate		12		2	4	18
RO-Energy		8		8	14	30
SI-Climate				1	1	2
TOTAL	22	20	19	20	31	112

For the selected projects the following data have been collected from GrACE: total project cost, grant amount, and estimated annual GHG emission reduction in tCO2e.

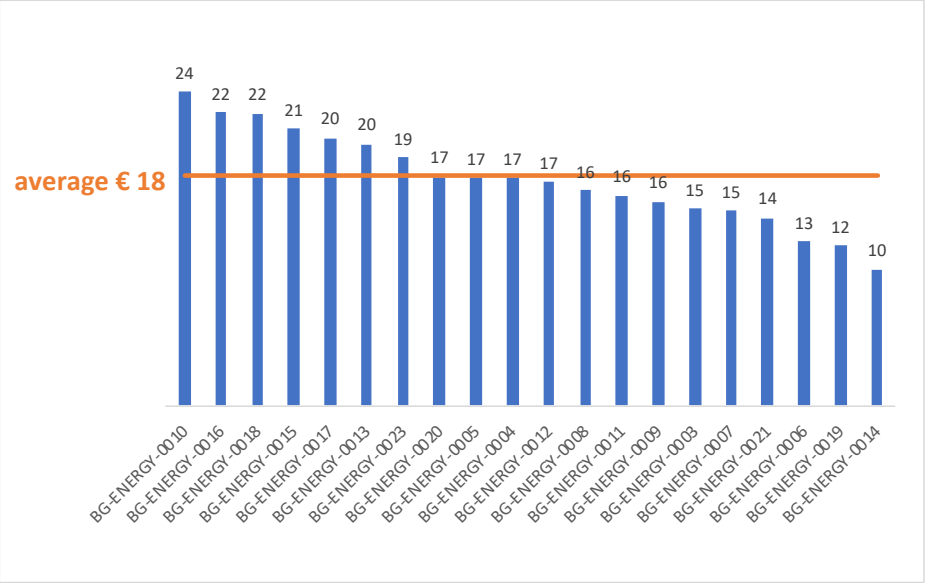
The cost-effectiveness of the projects has been determined by dividing the annualised amount of grant by the annual emission reductions that will be achieved by the project. To calculate annualised grant amount, the total grant amount has been divided by average lifetime values of Energy Efficiency (EE) and Renewable Energy (RE) measures in line with EU guidelines[14], as presented in the Formula below. Annualisation of the grant amount is required to account for the fact that each climate change mitigation project will generate emission reductions over its entire lifetime.

$$\textit{Cost-effectiveness} = \frac{Total\ grant\ (EUR)}{Investment\ lifetime\ (years)\ X\ Annual\ GHG\ emission\ reduction\ (\ tCO2e)}$$

Findings

Grants for **energy efficient improvements in street lighting** demonstrate the highest level of cost-effectiveness in the portfolio. As illustrated in Figure 13, their average cost-effectiveness stands at 18 EUR/tCO2e and the values fall within quite a narrow range of between 10 EUR/tCO2e and 24 EUR/tCO2e. The total grant allocation for the street lighting retrofits under BG-Energy amount to 8.2 million EUR and will result in GHG emission reduction of 535 ktCO2e over the 25 years of this investment lifetime.

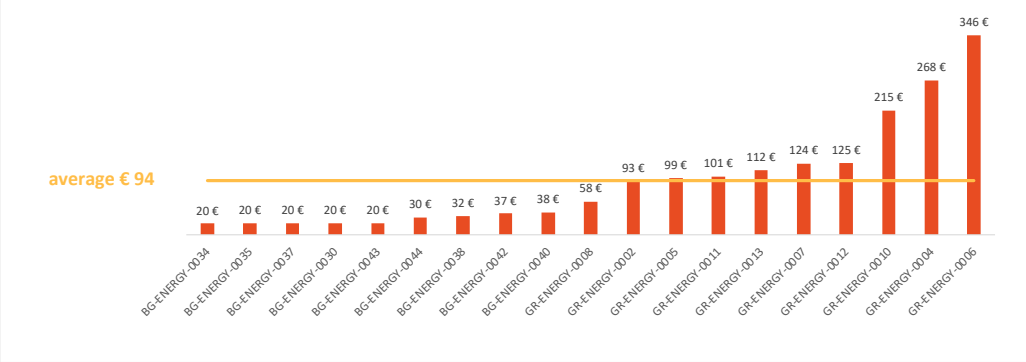
Figure 13. Cost-effectiveness of grants provided for selected projects related to rehabilitation of street lighting, EUR/tCO2 (assumed lifetime is 25 years)



More advanced climate change mitigation solutions, such as **near-zero energy buildings (NZEB) show a lower and more diverse spectrum of cost-effectiveness**: between 20 EUR/tCO2e and 346 EUR/tCO2 (See Figure 14). This is because NZEBs involve a range of highly energy efficient solutions in combination with renewables (PV, solar thermal, wind power, heat pumps). Greater variation is also due to the fact that each building requires different types of solution and a combination of EE and RE measures to achieve the national NZEB standard. The difference between lower values in Bulgaria compared to a higher and more diverse range in Greece (27 EUR/tCO2e versus 154 EUR/tCO2e on average in each country) can be explained by the fact that BG-Energy supports construction of new buildings, while GR-Energy targets NZEB retrofits and focuses on historical and heritage buildings, which require more complex and costlier solutions than newly constructed NZEBs. Lastly, apart from investment in building retrofits which result in GHG emission reductions, projects in GR-Energy also finance education and awareness raising activities within their community, as well as installation of a digital energy management system. While not resulting directly in GHG emission reduction, these activities are important for sustaining the results and bringing wider benefits to the local communities.

[14] https://joint-research-centre.ec.europa.eu/energy-efficiency

Figure 14. Cost-effectiveness of grants provided to NZEBs, EUR/tCO2 (assumed lifetime 25 years)

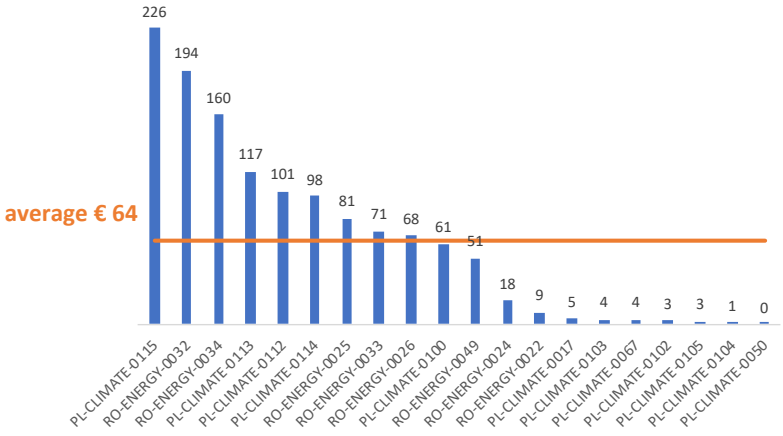


Analysis of cost-effectiveness in the category of **energy efficiency of buildings and industry** reveal even more diverse levels of mitigation costs between the projects (Figure 15), which can be explained by several factors.

Firstly, very high levels of cost-effectiveness (18 EUR/tCO2e and below) have been observed in the projects with a relatively low share of grant in total project cost: between 6% in PL-Climate-0050 and 40% in RO-Energy-0024. For example, the project PL-Climate-0050 “Construction of the New Combined Heat and Power Plant Czechnica” has a total budget of 116 million EUR and an estimated annual emission reduction of 622 ktCO2e. By attributing 6% of the total cost of this project to this amount of emission reduction, a highly cost-effective ratio can be obtained.

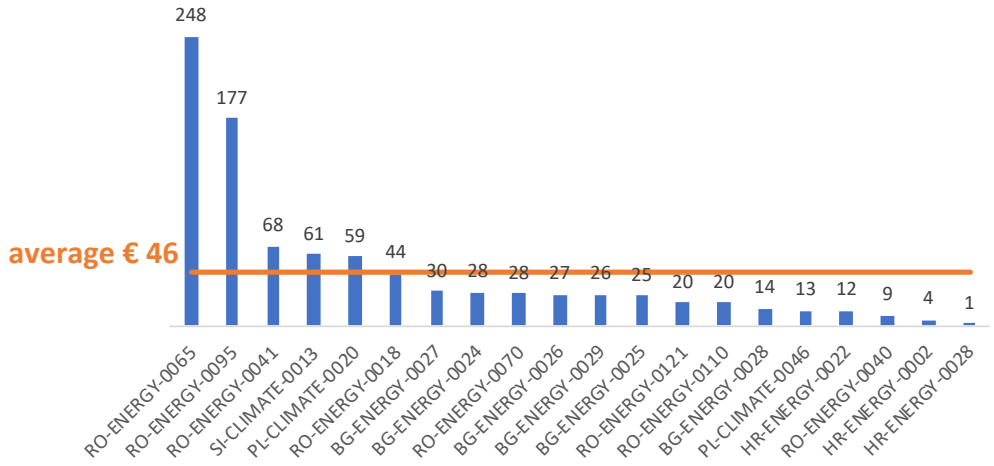
Secondly, the difference between more and less cost-effective emission reduction reflects the difference in the project types and solutions they involve. The most cost-efficient projects fall under the category of industrial energy efficiency, where due to economies of scale, large gains in energy saving and GHG emission reduction can be obtained. The less cost-effective projects (60 EUR/tCO2e and above) are those involving energy efficiency retrofit of public buildings and social infrastructure, schools, hospitals and kindergartens. The average level of cost-effectiveness for this category of projects stands at 112 EUR/tCO2e, much higher than for industrial EE or street lighting. At the same time, these projects bring high social and community benefits, contribute to awareness raising and wider social acceptance of the climate actions.

Figure 15. Cost-effectiveness of grants provided for energy efficiency projects in buildings and industry, EUR/tCO2 (assumed lifetime is 30 years)



Geothermal energy was one of the largest and most important areas of support under EEA & Norway green programmes in 2014 – 2021: 26.3 million EUR has been invested in geothermal projects in five beneficiary states. As illustrated in Figure 16, cost-effectiveness of this investment has also been uneven.

Figure 16. Cost-effectiveness of grants provided for selected projects related to geothermal energy, EUR/tCO2 (assumed lifetime is 30 years)



The lowest volume of GHG emissions has been in HR-Energy, which supported preparatory activities, technical documentation, drilling and other important steps in the development of geothermal resources. While extremely critical to unlock this potential, these grants constitute only a small share of the total investment needs, hence the high level of grant cost-effectiveness. Projects supported by BG-Energy have also been very cost-effective. They involve installation of heat pumps in buildings and do not require any extensive preparatory activities, such as exploratory drilling which makes geothermal projects more expensive.

More complex and innovative projects featuring geothermal solutions are much less cost-effective. For example, RO-Energy-0065 aims at modernising energy supply systems in the homes of elderly people in Alba Iulia Municipality by developing an innovative technical solution based on a microgrid approach that produces thermal energy from geothermal sources. The project includes installing geothermal pumps to replace the thermal distribution system and monitoring the performance obtained, through an intelligent Building Energy Management System (BEMS).

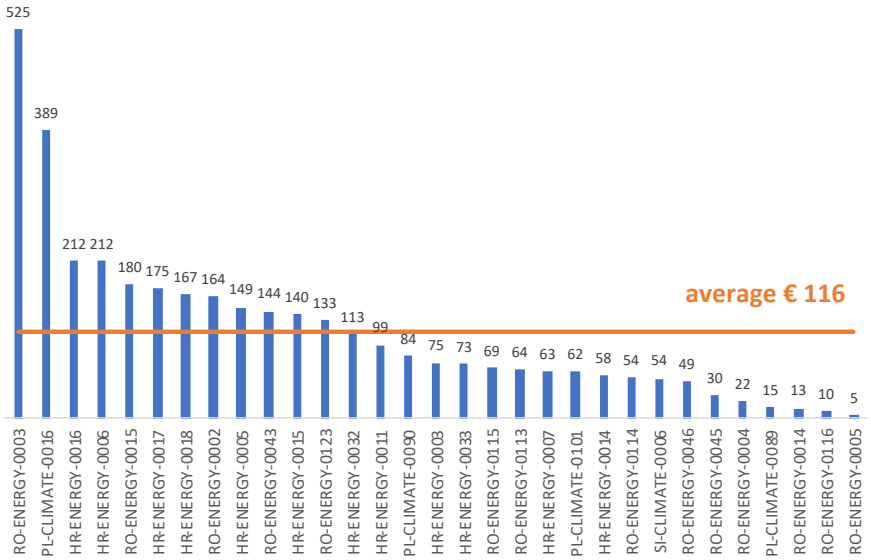
Lastly, analysis covered several **renewable energy technologies** (solar PV, sea, bioenergy, hydropower) and their applications by the public and private sectors in Croatia, Poland, Romania, and Slovenia. Cost-effectiveness varies significantly in this portfolio of projects, with the average being at 114 EUR/tCO2 (Figure 17), the highest among the five categories analysed.

The most cost-effective projects in this category involve installation of RE systems for self-consumption by industrial enterprises in Romania, such as a waste-to-energy facility for heat production by the manufacturer of wooden houses (RO-Energy-0005), solar PV systems for cement, porcelain and furniture factories (RO-Energy-0116, RO-Energy-0014, RO-Energy-0004) and utilisation of biogas for heat and electricity generation by a waste water company (RO-Energy-0046). These projects have a cost-effectiveness ratio of 60 EUR/tCO2e and below.

The least cost-effective projects, as a rule, feature more complex and innovative solutions and technologies. For example, HR-Energy-0006 project will install a sea water heat pump (SWHP) system in one of Croatia's coastal areas to provide RE-based central heating solutions to its inhabitants. In coastal zones, seawater application is very promising since the temperature trend of the seawater appears to be more favorable than the alternative use of outdoor air. However, the technology is relatively new and not widely tested yet in Croatia, hence the importance of this project lies not only in direct GHG emissions, but in demonstrating and proving the feasibility of new low-carbon solutions to the market. Another less cost-effective project in Romania (RO-Energy-0003) involves the construction of a solar PV-based mini-grid to supply energy to eight public buildings in Ghiroda Town. While less cost-effective, the project carries additional important social-economic benefits for the local community.

Small-hydropower (SHP) rehabilitation projects in Poland and Romania demonstrate varying degrees of cost-effectiveness from very high, such as the upgrade of SHP in Rogów (PL-Climate-0089) and CHP Breazova 2 (RO-Climate-0046), to very low, i.e. 389 EUR/tCO2e (PL-Climate-0016).

Figure 17. Cost-effectiveness of grants provided for selected projects related to other renewable energy, EUR/tCO2 (assumed lifetime is 30 years)



Conclusion

Analysis of the cost-effectiveness of GHG emission reduction in the green programmes allows several important conclusions to be drawn.

- First, on average the level of cost-effectiveness across the portfolio of projects under PA12 is well within the threshold of 150 EUR/tCO2e established by the blue book. The most cost-effective opportunities for GHG emission reduction have been identified in street lighting modernisation projects, followed by construction of new near-zero energy buildings and industrial energy efficiency projects. All these categories promise to deliver highly cost-effective GHG emission reduction at 30-35 EUR/tCO2e or less.
- The next category of measures involves various RE installations by public and private sector companies, whereby energy is produced for the consumption of the beneficiary, thus enhancing energy security and reducing consumption of energy from central systems. Their cost-effectiveness is for the most part within 50 – 150 EUR/tCO2e.
- More innovative projects featuring new technologies and customised solutions, such as sea water in Croatia or NZEB retrofits in Greece, tend to be more expensive in EUR/tCO2e. However, these are the areas where green programmmes' contribution in creating and promoting new solutions may outweigh the direct climate benefits of the projects.
- Energy-efficient measures in public sector buildings also fall among the least cost-effective solutions and often exceed the blue book threshold. The importance of these investments also lies in wider social and environmental impact they make in their communities, beyond GHG emission reduction.

Annex VII. Case Study 2: Innovation in EEA & Norway Green Programmes

Objective

The purpose of this case study is to undertake a simple mapping and categorisation of initiatives under EEA & Norway green programmes which supported innovation. The focus on new and innovative projects has been identified as one of the strengths and areas where the green programmes bring **high added value,** according to numerous stakeholders interviewed by the evaluation team. At the same time, this is the area which has not been explicitly included in the design of the programmes and therefore not covered by their results framework. In this context, the case study is meant to provide evidence in answering the question of how the green programmes supported implementation of innovative climate and environmental solutions in the beneficiary states.

Methodology

One of the issues hampering deliberate promotion of innovation is its conceptual ambiguity. While recognising limitations in precise categorisation of distinct innovation approaches, to analyse the innovation in green programmes the evaluation team has used the following categorisation of innovation approaches as proposed and defined by the UN Conference on Trade and Development[15]:

1) **Mission-oriented innovation**: Organising networked programmes at national or international levels, as well as incentive structures that can direct innovation towards the achievement of specific technological, environmental or social goals.

2) **Pro-poor and inclusive innovation**: Extending the beneficiaries of innovation and building on ideas of innovation for the bottom of the pyramid. This focuses on pro-poor innovation. It also includes innovations by marginalised groups, introduced under conditions of resource constraints.

3) **Grassroots innovation**: Broadening the range of actors in the innovation process to include grassroots innovation movements. The approach aims to practise innovation of both technology and service provision in socially inclusive ways.

4) **Social innovation**: Shifting beyond technological to social innovation. This approach focuses on organisational innovations and new social practices designed to improve human wellbeing (for example, in business models, production practices and finance, as well as public service delivery).

5) **Digitally enabled open and collaborative innovation**: Fostering open, digital collaborations. Such innovation approaches draw on and recombine multiple sources and forms of knowledge, especially through digitally enabled open collaboration.

Findings

1) Mission-oriented innovation

OECD defines mission-oriented innovation as "**any new or improved technological, social and organisational solution** (product, process or service) that aims to respond to grand societal challenges, such as climate change"[16]. Achieving carbon neutrality by 2030 is an example of a mission-

[15] UNCTAD (2017), New Innovation approaches to support the implementation of Sustainable Development Goals. Available at https://unctad.org/webflyer/new-innovation-approaches-support-implementation-sustainable-development-goals

[16] https://oecd-opsi.org/work-areas

oriented innovation approach to formulating climate goals. There are plentiful examples of mission-oriented innovation in the EEA and Norway Grants green programmes.

The most common type of mission-oriented innovation is **technological,** when new or improved climate and environmental technologies have been deployed to solve a particular local or global problem. Technological innovation has been supported by all green programmes, albeit at different scales. A few examples stand out:

- The HR-Energy call "**Energy production from the sea**" supported several pilot projects and pre-investment studies for installing seawater heat pumps for heating and cooling. Croatia has considerable potential for the deployment of seawater technologies, such as sea heat pump systems (SWHP), due to its long coastline and SWHP systems' ability to provide a steady source of heating and cooling throughout the year. The call under the HR-Energy programme was the first scheme in Croatia to promote deployment of this technological solution, which is rather innovative not only for Croatia, but for other countries as well.

- The focus of GR-Energy, BR-Energy and HR-Energy on **demonstrating NZEB** in new or renovated buildings, especially in heritage buildings, is another example of technological innovation at national and global scale. While regulatory mandated in the EU since 2018, the practical application of NZEB, especially for building retrofits, remains limited, so the added value of the green programmes is very high.

- Several RE technologies supported by the programmes are no longer considered as new or innovative, such as solar PV or hydro power, but there is still room for innovation. For example, in Romania, the programme supports implementation of the **first floating solar PV plant** on the reservoir of the existing hydro power plant, a very interesting example of innovative solutions which combine solar and hydro energy.

- Under green programmes, a very diverse range of innovative technologies have been supported, aiming at solving a wide range of local environmental problems, such as air and water pollution and waste management. For example, a project "CarbonCLEAN®" under CZ-Environment constructed a pilot plant to demonstrate a new technological solution for the **removal of pharmaceuticals from wastewater.** Another project in Czechia led by the Technical University of Ostrava introduced innovative carbon-based sorbents as an efficient way to treat wastewater from selected micropollutants.

- Geothermal energy is another area where technological advances and innovation have been demonstrated. For example, SI-Climate piloted a **new geothermal power generation technology** based on a geothermal gravity heat pipe (Slovenian patent) and closed refrigerant circuit with only one well.

Mission-oriented innovation goes beyond technologies and also includes new **social and organisational solutions** to societal challenges. The EEA and Norway Grants' green programmes provide several examples of deploying such innovation.

- In Lithuania, the LT-Environment supported the development of a new **early warning system on nuclear emergency** in response to increased risk of nuclear radiation in the region. The system is a new and essential social service aimed at protecting the Lithuanian population in the event of catastrophic disaster.

- Addressing the challenge of deteriorating water quality, several environment programmes supported new approaches **to environmental monitoring** by integrating monitoring and assessment of water quality and quantity with climate change effects (GR-Environment) or **creating a remote data processing system** for improved mapping and monitoring of the ecological status of marine and inland water (LT-Environment).

2) **Inclusive innovation**

Supporting inclusive innovation entails boosting the capacity and opportunities of disadvantaged individuals, communities, and economic entities to engage in innovation activities, including research and entrepreneurship.

The EEA and Norway Grants' green programmes provide a few examples of such support:

- **PL-Climate** focuses on building the resilience of particularly vulnerable urban communities by supporting their engagement in co-design of innovative blue and green infrastructure solutions. One of the projects, "Eagerly against climate changes – green-blue infrastructure in Czechowice-Dziedzice commune" envisages realisation of a number of investments such as construction of water retention reservoirs, planting of green areas, assembly of green bus-stop sheds and growing rain gardens. Another project "Green and blue infrastructure in the Union of the Wisłoka River Basin Communes" involves 17 municipalities in the Wisłoka River Basin in identification of over 40 adaptation and mitigation measures. Citizens and individuals are at the very centre of the project, as many educational and awareness-raising campaigns are included within its scope.

- In the framework of the PT-Environment programme, the call **on climate change-related extreme weather preparedness and risk management** projects focuses on financing initiatives in specific depressed, interior and forest territories in Portugal, considered highly vulnerable to climate change. One of the projects in the Guadiana Valley Natural Park (PNVG), SOIL + LIFE, pilots the development of a territorial climate action plan with a participatory approach, and is aimed at empowering local actors, especially farmers, to adopt good silvopastoral practices.

- In several climate programmes (EE-Estonia, BG-Environment, SK-Climate), support to local communities has been centered on the development and implementation of local climate action plans with a big focus on community engagement and awareness raising.

3) **Grassroots innovation**

Broadening the range of actors in the innovation process to include grassroots innovation movements is aimed at practising innovation, in both technology and service provision, in socially inclusive ways.

PT-Environment is exemplary in this respect and can serve as a model for promoting green grassroots innovation. The programme supported the implementation of **seven pilot projects of living labs for decarbonisation and climate change mitigation actions**. These living labs are user-centred, enhancing user involvement, co-creation and experimentation, while also allowing the evaluation of concepts and services, as well as their tracking and monitoring. In the living labs, defined as areas with a local identity recognisable by citizens, **multiple stakeholders** collaborate in the development, prototyping, validation and testing of new technologies, services and their real-world application.

Some examples include:

- **Cascais Smart Pole** is one of the living labs to be implemented in a multifunctional way that integrates housing, commerce, equipment and public spaces, acquiring local identity through sociocultural interaction between residents, students and visitors/tourists. It covers an area of 4.2ha of green spaces. The Cascais Smart Pole has an ambition to create a generation of change makers who could drive the innovation towards achieving carbon neutrality. The concept is based on providing people with a physical and a virtual space for experimentation that aims to be a reference for the whole municipality and for other cities. The ambition to **achieve carbon neutrality with the contribution of all stakeholders** is the driver of this living lab.

- The **Hub Criativo do Beato** (HCB) is the former industrial area of the Portuguese Army, formerly known as the Manutenção Militar (Military Maintenance), where flours, pasta, bread, biscuits and other cereal products were manufactured. Now it is getting ready to host over three

thousand people from around the world who want to produce innovation. HCB Living Lab (HCB LL) project under the PT-Environment programme is based on HCB's ambitious context and intrinsic culture of experimentation, aiming at providing this complex with means for the development, prototyping, validation and testing of new technologies, services and innovative ways of life. The proposed activities aim to leverage HCB's current strategy, while fulfilling its ambition to establish itself as a **smart campus and a permanent living laboratory**. HCB LL will be implemented by 13 partners, 12 of which are private entities, collectively committed to carrying out 5 activities that contribute to the advancement of actions to mitigate and adapt to climate change.

- The purpose of the **Parque Adão Barata (PAB) Living Lab** is on de-carbonising the local community and promoting the concept of active citizenship.

- The **Afurada territory is a Living Lab**, an innovative area for the development of technological solutions in a real context, based on a collaborative model and on the strong engagement of the local community. Through the formalisation of a strategic partnership, a diverse range of public and private entities cooperate with each other, in the search for and development of technologies that enhance the involvement and participation of the local community in solving urban challenges identified in Afurada. It is intended that this work will allow a reduction of carbon emissions and optimises the capacity to respond to climate change. The **focus on co-creation, experimentation and validation of results through citizens' engagement i**s a distinguishing feature of the lab's grassroot innovation model.

4) Social innovation

According to OECD[17], social innovation refers "to the design and implementation of **new solutions that imply conceptual, process, product or organisational change**, which ultimately aims to improve the welfare and wellbeing of individuals and communities." Many initiatives undertaken by the social economy and by civil society have proven to be innovative in dealing with socio-economic and environmental problems, while contributing to economic development.

In the EEA and Norway Grants green programmes supporting circular economy a high level of social innovation has been observed. Some examples include:

- PT-Environment: The call on **"Circular Economy in the Construction Sector"** is focused on the development and implementation of construction projects which are demonstrating economic and environmental benefits, promoting the performance and environmental profile of materials, components and products developed in Portugal (including buildings), through the application and promotion of methodologies and innovative technologies. The call is also supporting projects promoting cooperation between companies to reduce construction and demolition waste and promote materials and products incorporating materials recovered from waste.

- Under the EE-Climate's "**circular economy**" call two projects have been supported. The project in Rae municipality will map the circular economy potential among the 30 largest enterprises in Rae. It will also support the measurement of the carbon footprint and creation of an action plan for reducing it for public sector buildings and public transportation. Another project in Tartu will pilot methods to prove construction materials' circularity usage. A business model pilot for 'construction materials circular usage centre' and a digital database prototype for the City of Tartu will be developed, and a demonstration of circular usage construction materials in public bicycle pavilions > 4 will be implemented.

5) Digital innovation

Digitalisation and ICT solutions play an increasingly important role in climate solutions. Though not explicitly targeted, numerous projects under the EEA and Norway Grants' green programmes

[17] https://www.oecd.org/regional/leed/social-innovation.htm

supported the development and applications of smart digital solutions in the area of climate, sustainable energy and environmental protection:

- Under LV-Climate the project "**Digital transformation of the contaminated site management model**" establishes an improved system for the management of contaminated sites, replacing the current contaminated site register and paper information flow with comprehensive digitisation of the information and data submission, verification and acceptance process.

- In Portugal, a PAB lab: **Smart Parking** will be implemented – where electromagnetic sensors will be installed that will detect the presence of a vehicle per parking space, as well as bike accounting and sensing infrastructure to optimise mobility and parking patterns in the community.

- Under GR-Energy and HR-Energy programmes **digital building energy management system** (BEMS) applications have been supported to help building managers in ensuring real-time monitoring and optimisation of buildings' energy use. RO-Energy supported digitalisation and automation of the operations of the remote small hydro power plant with a customised GPS-based solution.

Conclusions

EEA & Norway green programmes supported a wide range of innovative climate and environmental solutions. Innovation is an area where green grants' added value has been acknowledged by many POs and where bilateral partnerships have also contributed the most.

- Technology-based **mission-oriented innovations** have been featured widely: hundreds of new clean energy and environmental technologies have been implemented for the first time in the beneficiary states to demonstrate new solutions to environmental, climate and energy security challenges. Mission-oriented innovations also included non-technological actions, such as the introduction of new public services, eary warning and environmental monitoring systems.

- Green programmes in the area of climate change adaptation have good potential to support **inclusive innovation** due to their explicit focus on identifying and supporting innovative solutions to build climate resilience of the most vulnerable communities and areas.

- **Grassroot innovation**, made most explicit in the design of the environmental programme in Portugal, demonstrates practical ways and approaches to involve local stakeholders and the population at large in co-creation of climate and environmental solutions.

- Support to a circular economy in the green programmes illustrates well how the programmes can contribute to **social innovation** by designing new solutions that imply more resource-efficient processes and products, while improving the welfare and wellbeing of individuals and communities.

- **Digital innovation** played an important role in many environment and climate projects. Digital solutions is also an area where the contribution of bilateral parterships was perceived as strongest due to donor countries' proven knowledge and expertise.

Annex VIII: Evaluation questions matrix

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
Evaluation criterion: A. Coherence				
1. To what extent are programme objectives and activities relevant to the beneficiary states' national context?	1.1. To what extent programmes are aligned with national strategies? Which areas of support proved particularly relevant/demanded and why? Which priority areas received less interest and why? 1.2. To what extent chosen priorities and implementation modalities respond to existing needs and gaps at national and local levels? Is the high interest (large number of applications) an evidence for high relevance to local needs and good design of the Calls? 1.3. Have the national priorities and needs changed since CN design and Programme Agreements signature? Did this make certain areas in climate, energy and environment more relevant and demanded than initially envisaged (e.g. circular economy in Poland)? 1.4. Why some areas identified as priorities in the PAs have not received sufficient interest, in particular projects addressing energy access/energy poverty (Poland, Romania)? Is it due to lack of capacities, lack of clarity in the calls or lack of locally recognised needs for such initiatives? 1.5. What were the main driving factors in defining of priority areas: the interest/expertise of donor countries, the needs of the recipient countries or both (in particular for hydro and geothermal)?	Desk research Interviews	MoU, Concept notes, PAs, National strategies, NFPs; POs/FO	Context analysis
2. To what extent do programmes complement or have synergies with other funding sources, such as	2.1. Are there synergies between the current Green programmes and other funding sources (e.g. EU Structural and Investment Funds (ESIFs), IFIs like EBRD and EIB, national budgets). Were such synergies specifically planned in the design? Have new emerging synergy opportunities been considered?	Desk research Interviews	Green funding programmes in the countries; team expert knowledge NFPs; POs/FO	Stakeholder analysis; Funding landscape analysis

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
the EU and the World Bank?	2.2. Do the current Grants' Green Programmes support specific niche areas or they are adding more funding to already supported areas by other sources? 2.3. Do the Grants 'crowd in' or 'crowd out' additional sources of climate/environmental financing, in particular by the private sector? 2.4. How synergies could be enhanced in a future mechanism, while avoiding duplication? How future Grants' design can increase leverage of additional resources, including from non-grants?			Context analysis Contribution analysis
	2.5. What will increase the added value of the Grants in the future: should they identify and work in more niche areas, or rather contribute to an overall increase in Green funding? 2.6. Do the current Green programmes utilize sufficiently the expertise of donor countries in the field of environment, energy and climate? What are good practices and challenges at programme and project levels? How using this expertise can be optimised in the future?[18]	Interviews	NFPs POs/FOs PPs FMO DPPs POs/FO	
Evaluation criterion: B. Efficiency				
3. To what extent are the programmes fit for the current institutional and administrative capacities of the Programme Operators, Fund Operator (IN) and	3.1. Do the POs/FO have needed institutional and administrative capacities for effective use of available funding? • Which of the POs/FO' strengths are critical for programmes success? What are the most critical POs/FO limitations and capacity gaps that are reducing programme efficiency? • Is there a correlation between complexity of the Programmes and the required capacity for its efficient implementation? • Specifically for Bulgaria and Romania: how adequate are the capacities of POs/FO in these countries? Are there more feasible	Desk research, GrACE analytics Interviews	GrACE database FMO risk assessments Project calls criteria for PPs capacities	Intervention logic analysis Capacity mapping/

[18] This question overlaps with the bilateral questions, but we believe it is important to evaluate effectiveness of bilateral cooperation in conjunction with its coherence with national priorities.

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
project promoters?	alternatives for Programme set-up in these countries? 3.2. Has the selection and contracting of the projects ensured sufficient institutional and administrative capacities for effective use of funding at project level? Do the POs/FO provide effective assistance to the PPs to overcome capacity gaps or bottlenecks? 3.3. What are potential bottlenecks for effective absorption of project funding? How such challenges will be mitigated? 3.4. What are the best practices in implementation arrangements/Programme set-up which can be recommended to follow in the future? What are the most critical areas of institutional and administrative capacities of POs/FO and PPs for efficient delivery of the Programmes?			SWOT analysis Context analysis
4. To what extent are Donor Programme Partners (DPPs) able to support and positively influence programme development and implementation?	4.1. How effective are the DPPs in implementing their role as technical sectorial entities and decision makers in Cooperation Committee (CC)? 4.2. How well do the DPPs understand the country contexts? How are they informed about it? Do potential limitations of DPPs' contextual understanding hamper them play effectively their role? 4.3. Were there cases/attempts for political influence affecting the implementation of the programmes? To what extent DPPs can safeguard the programmes focus and implementation as planned? 4.4. What are the best practices of DPPs positively influencing programme development and implementation?	Interviews	DPPs POs/FOs FMO	Intervention logic analysis Context analysis Stakeholder analysis
5. To what extent are programme activities feasible to implement in each of the beneficiary states?	5.1. Was the initial timeline for organizing the Calls and providing support to projects adequately planned and followed through? Was it realistic? Were there delays and why (reasons)? What best practices in preparing and organizing the Calls can be followed/recommended for the future? 5.2. What is the current state of disbursement of funds at programme	Interviews GrACE analytics surveys	NFPs POs/FOs PPs GrACE database	Intervention logic analysis Context analysis Risk analysis

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
	level? Is there underspending and what are the reasons for that? 5.3. Which of the activities are at risk of not being implemented or not implemented in an effective way in the remaining timeframe of the programme? 5.4. What external factors that can hamper implementation? 5.5. What is the market absorption capacity and availability of qualified domestic service providers, especially as regards services/suppliers in the area of energy efficiency and renewable energy technologies? 5.6. Was the level of funding allocated for Programmes adequate for the programme to attain its intended results?			
6. To what extent does the choice of Programme Operator affect progress in implementation and the likely achievement of results?	6.1. Which characteristics of PO institutions tend to be most influential for meaningful financial disbursement and achieving the results (institutional positioning, capacities and resources, level of cooperation with others, etc.)? 6.2. How efficient, effective and sustainable are the institutional arrangements with the Fund Operator of RO-Energy? 6.3. What from the support of the FMO and Donor Programme Partners was most helpful to the POs to manage for success and what support was missing or insufficient? How this support can be more effective and efficient?	Interviews, Survey	NFPs; POs/FO FMO; DPPs PPs	Stakeholder analysis Capacity mapping
7. To what extent are the delays hampering programme implementation	7.1. Which are the main factors causing delays in programmes implementation and are there potential risks for achieving the results? 7.2. What are the mechanisms put in place to mitigate these risks in	Desk research GrACE analytics, surveys	Programme documents; FMO risk assessments GrACE database	Intervention logic analysis Risk analysis

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
and what are the potential consequences of this?	the current financial mechanism and how effective are they? 7.3. What mitigation approach and strategy to avoid potential delays and risks should be in place in any future mechanism.	interviews	NFPs; POs/FO; DPPs; FMO	
Evaluation criterion: C. Effectiveness				
8. Given the current status of implementation and the time remaining, how likely are the programmes to achieve the planned results, including taking into account the special concerns of each programme?	8.1. To what extent and how do the Grants contribute to **Just Transition:** • Do they sufficiently target regions and communities most vulnerable to transition and is this category of beneficiaries sufficiently represented? • What are the best practices in targeting, incentivizing and supporting projects in such areas/communities? • How do they contribute to addressing the needs of the regions and citizens most vulnerable to transition? 8.2. To what extent and how do the Grants contribute to **enhancing public acceptance of climate measures, in particular those communities most affected by the effect of transition**? 8.3. To what extent and how do the Grants contribute to reducing **Energy Poverty?** (focus on Poland, Romania and Bulgaria with the largest Energy Programmes) 8.4. To what extent do the Grants contribute to bringing **new low-carbon solutions to market?** 8.5. **To what extent do the Grants contribute to improvement of eco-systems' health and their protection and restoration?** 8.6. What is the **cost-effectiveness** of the resulting GHG emission reductions in Energy and Climate Change Mitigation areas? • how does it compare with established threshold 150 EUR/tCO2e; what other benefits and value will the implementation of supported projects add beyond GHG emission reductions?	Interviews Surveys	NFPs; POs/FO; DPPs; FMO PPs, donor project partners	Contribution analysis Context analysis Intervention logic analysis

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
	• Is there a Monitoring, Reporting and Verification (MRV) framework put in place at project/programme level to estimate project/programme's GHG emission reduction results adequate and is the data collection/management sufficient to monitor the results • For projects at an early stage of implementation: review the adequacy of MRV and validate ex-ante estimates of GHG emission reduction potential, as well as other intended targets and indicators			
9. Which factors are particularly affecting the achievement or non-achievement of the planned results?	9.1. What developments in the local and national contexts are (or will) be affecting achievements or non-achievements of results at programme or project levels? Including specifically: - Disruption of global supply chain; - Inflation/increase in prices; - War in Ukraine - COVID-19 - Changes in political situation - Changes/complexity of national regulatory environment 9.2. What internal factors (capacities of local stakeholders) are or will be affecting the achievement or non-achievement of results at programme or project levels? 9.3. How does the design of the Programme, the choice of modalities, the scope and sequence of Calls affect the feasibility to achieve planned results and their effectiveness? 9.4. How does the diverse design and scope of the Programmes affect their effectiveness? 9.5. Has the prolonged period of developing a CN and negotiating Programme Agreements (PA) been a factor which affected achievement of planned results?	Interviews Survey PPs	POs/FO; sample of PPs All PPs	

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
10. Which, if any, safeguards have been put in place to ensure that the expected benefits of the programmes can be sustained in the five years following programme completion?	10.1 How is sustainability defined by the programmes? 10.2 What safeguards are put in place to ensure sustainability in the five years after programme completion? What is missing? 10.3 Is there a need to further define sustainability and include better safeguards in next financing mechanisms? 10.4 What are the best practices in safeguarding projects results and ensuring their sustainability at Programme and Project levels?	Desk research Interviews surveys	Programme /project documents POs/FO; PPs; FMO PPs	
Evaluation criterion: D. Bilateral Cooperation				
11. To what extent is the overall bilateral objective of the EEA and Norway Grants considered in programme implementation ?	11.1 How is the bilateral objective of the Grants integrated in the design of the Programmes? What are the strengths or gaps of envisaged approach and activities? 11.2 What is the current status of achieving the bilateral objective? 11.3 What are the key factors contributing to achievement or non-achievement of the bilateral objective? 11.4 In what ways bilateral cooperation could be strengthened in programme design in the future?	Interviews, survey	Interviews and survey with DPPs Interviews and survey with PPs Interviews with POs/FO	Intervention logic analysis Contribution analysis
12. How and to what extent are bilateral partnerships (at programme and project level) adding value?	**At programme level:** 12.1 What value did the input of DPPs bring to the design of the programmes? 12.2 Which aspects of the role of the DPPs was particularly effective in adding value to the capacities of POs/FOs and to programme implementation? 12.3 Which aspects from their contribution in the process of implementation add value to achievement of results towards programmes objectives? Does participation in the programmes add value to the work of the DPPs? 12.4 In which areas Programme countries require more support from			

Evaluation questions	Areas of enquiry	Methods data gathering	Sources of information (documents, stakeholders)	Methods of analysis
	DPPs? 12.5 How effective has bilateral cooperation been in the specific areas: - hydropower - geothermal - nuclear (Lithuania) 12.6 In which areas bilateral cooperation has been the weakest and why? 12.7 What are the areas where bilateral collaboration was successful and brought high value added? What were the key factors for that?			
	At project level: 12.8 How the projects have been effective in bringing Norway/EEA technologies and building partnerships? 12.9 What is the added value of bilateral partnerships at project level? What from the contribution of donor project partners is most instrumental for achievement of results? 12.10 How effective are the established project bilateral partnerships towards achieving the bilateral objective? What are the main benefits for participating PPs and donor project partners? 12.11 What are the main challenges faced? In what ways bilateral cooperation could be further enhanced? 12.12 What are the knowledge gaps where the PPs were not able to receive adequate support from donor project partners?	GrACE analytics Surveys Interviews	POs/FO DPPs PPs Donor project partners	Contribution analysis