



Study on climate mainstreaming in the programming of centrally managed EU funds

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Final report
10 September 2015

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TABLE OF CONTENTS

ABSTRACT.....	7
EXECUTIVE SUMMARY.....	8
Background.....	8
Purpose of this study.....	8
Methodological approach.....	8
Key findings.....	9
Recommendations.....	9
LIST OF ABBREVIATIONS AND ACRONYMS.....	11
1. INTRODUCTION.....	12
1.1. Objective and scope of the report.....	12
1.2. Climate mainstreaming: opportunities and challenges.....	13
1.3. Tracking climate-related action.....	14
1.4. Methodological approach and structure of the report.....	16
1.5. Working together in the longer term.....	19
2. CONNECTING EUROPE FACILITY.....	21
2.1. Climate change in the Connecting Europe Facility.....	22
2.2. Recommendations: Work programmes.....	24
2.3. Recommendations: Implementation process.....	26
2.3.1. Launching programmes and the preparation of funding applications.....	26
2.3.2. Evaluation and selection of applications for funding.....	28
2.3.3. Reporting, tracking, monitoring and evaluation.....	30
3. COSME.....	32
3.1. Climate change and SME competitiveness.....	33
3.2. COSME's programme cycle.....	35
3.2.1. Programming.....	35
3.2.2. Launching of programmes.....	36
3.2.3. Preparation of applications.....	36
3.2.4. Evaluation and selection.....	36
3.2.5. Project implementation.....	37
3.2.6. Monitoring and evaluation.....	37
3.3. Recommendations for climate mainstreaming in COSME.....	38
3.3.1. Climate mainstreaming in the financial instruments.....	38
3.3.2. Climate mainstreaming in the service contracts and grants.....	41
4. HORIZON 2020.....	47
4.1. Tracking of climate action in Horizon 2020.....	48
4.2. Horizon 2020 programme cycle.....	50
4.2.1. Programming.....	51
4.2.2. Launching programmes.....	52
4.2.3. Project preparation.....	52
4.2.4. Project evaluation and selection.....	52
4.2.5. Project implementation.....	53
4.2.6. Reporting, monitoring and evaluation.....	53
4.3. Integration of climate in the current multiannual work programme.....	53
4.3.1. Pillar 1: Excellent Science.....	53
4.3.2. Pillar 2: Industrial Leadership.....	55

4.3.3.	Pillar 3: Societal Challenges	56
4.4.	Recommendations for enhancing climate mainstreaming in Horizon 2020	59
4.4.1.	Strengthening the inclusion of climate change across the entire work programme.....	60
4.4.2.	Maximising the climate impact of Horizon 2020 projects	62
4.4.3.	Integrating climate into the financial instruments	64
4.4.4.	Improving tracking of climate action in Horizon 2020	66
	REFERENCE LIST	68
	ANNEX 1 - LIST OF INTERVIEWEES	70
	ANNEX 2 - LIST OF WORKSHOP PARTICIPANTS.....	71

ABSTRACT

The EU has adopted a 20% target for climate-related expenditure in the multiannual financial framework (MFF) for 2014-2020. Meeting this target requires the integration – or ‘mainstreaming’ – of climate action into all areas of the EU budget. This study reviews and assesses the mainstreaming of climate action within three centrally managed EU funding programmes – Horizon 2020, the Connecting Europe Facility (CEF) and the programme for Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME). This assessment is based on a review of the objectives of each fund, its work programme and the way in which the fund is implemented. Based on this review, opportunities and scope for further mainstreaming of climate within each fund have been identified. Concrete recommendations are provided on the actions that could be taken to enhance the mainstreaming of climate action in each fund.

EXECUTIVE SUMMARY

Background

In 2013, the EU adopted a climate action expenditure target for the multiannual financial framework (MFF) for 2014-2020, committing to dedicate at least 20% of the EU budget for this period to climate-related activities. Taking into account the cross-cutting nature of climate change, this target is to be implemented and tracked through a 'mainstreaming' approach, whereby climate change is to be integrated in all EU instruments. This requires the integration of climate into funds that do not specifically target climate change, energy, environment or other directly related topics.

The mainstreaming of climate change into across policies presents both challenges and opportunities. There is no easy approach or silver bullet to mainstreaming climate action into all areas of EU spending. Mainstreaming requires that actors – managers, external experts, and beneficiaries – are encouraged to take actions that contribute to climate objectives, even if their mandates are not directly linked to these objectives. To enable this, implementing rules and procedures must be in place that prompt these actors to take climate into account. These actors must also be aware of the relevance and importance of climate change within the context of their funding programme. Thus, awareness-raising and capacity-building among key actors are important mainstreaming tools. These tools can demand resources, both in terms of funding and staff effort, and the scarcity of these resources is often an obstacle to mainstreaming.

Purpose of this study

The purpose of this study is to assess three EU funding programmes – Horizon 2020, the Connecting Europe Facility (CEF) and the programme for Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) – and identify opportunities to enhance mainstreaming in each fund. In contrast with many other EU funding programmes, these three funds are centrally managed – that is, the European Commission is the main actor proposing the relevant areas of funding in line with relevant policy priorities and legal bases for the instruments. This study assesses the existing and potential opportunities for climate-relevant action within each of the three selected funding programmes. The study also provides concrete recommendations for actions to further mainstream climate within the funds.

Methodological approach

This assessment is based on an investigation of the legal and procedural documents that establish and govern the programme priorities and operations. Interviews with numerous officers in charge of managing the funds, stakeholders and experts have also been carried out. A wide literature review on the theoretical basis for mainstreaming as well as the practices of other relevant institutions has also been conducted. Two workshops were also held during the course of the study – a climate change expert workshop in May 2015, and a stakeholder workshop in June 2015 involving representatives of the European Commission, implementing agencies and civil society.

To fully understand and assess each of the three funds, the study has focused on how climate is – or could be – integrated into each step of programme cycle. Thus, the study reviews each programme cycle stage: Programming; Launching programmes; Preparation of applications; Evaluation and selection; Project implementation; and Monitoring and evaluation.

In developing the recommendations, the study aims to take a practical approach aimed at identifying concrete ways in which the funds can target more of their spending towards climate-relevant action, within the boundaries of current legal and policy frameworks. Most of the recommendations can be carried out by existing programme managers or their colleagues in implementation agencies within the course of on-going

programme implementation actions such as work programming. In some cases recommendations might need to be considered as part of changes that would be implemented after the 2017 mid-term reviews of the programmes. The majority of the recommendations are aimed at the actors directly involved with the funds. DG CLIMA's role is expected to be supportive and collaborative.

Key findings

The Commission tracks climate action to measure and evaluate climate action within the budget. Preliminary figures for 2015 and 2016 indicate that the EU may be on track to meet the overall 20% target for the MFF, if the planned expenditure included in the current draft budget for 2016 be agreed upon and implemented. However, progress is not consistent across the MFF, and there is a need for further efforts to enhance the mainstreaming and tracking of climate action across all funding areas.

Regarding CEF, climate is well integrated into the objectives and legal basis for the fund, suggesting that funding is likely to deliver climate-friendly outputs. According to the current ex-ante tracking methodology, it is estimated that 41.3% of the planned budget for CEF-Transport and CEF-Energy will be climate-relevant. However, at the implementation-level, climate objectives could be better integrated into working procedures and processes to ensure maximum uptake.

While the main objective of COSME – supporting growth and competitiveness of EU enterprises – is not directly focused on climate objectives, there are opportunities to pursue climate objectives while also furthering the fund's core objectives. In particular, there is a need to build awareness of the existence of such opportunities within COSME amongst all relevant actors – programme managers and potential beneficiaries – of the potential for 'win-win' actions that contribute to both SME growth and competitiveness and climate objectives. Ex-ante tracking indicates that climate action finance constitutes around 7-8% of the fund's budget in 2014, 2015 and 2016.

As Horizon 2020 has a higher climate action target than the overall EU budget, the challenge of mainstreaming climate action is particularly great. The implementing regulation for Horizon 2020 sets out an expectation that climate-related expenditure should exceed 35% of the overall Horizon 2020 budget; estimates based on the draft budget for 2014 indicate that climate action accounted for 25.5% of the total budget of that year. This figure indicates that if the Commission's target for climate action within Horizon 2020 is to be met, efforts will need to be made to enhance climate action across the fund.

Recommendations

Climate mainstreaming can be enhanced within CEF by encouraging applicants and beneficiaries to integrate climate action into transport and energy projects. The implementing procedures for CEF should be used implementing procedures to prompt applicants and beneficiaries to take climate considerations into account in the planning and implementation of CEF-funded projects.

There is also a need to better understand the actual impact of CEF-funded projects on EU climate policy objectives. This would require the development of a framework or methodology for the ex post evaluation of the impacts of individual CEF projects. This could be based on a detailed, quantitative assessment of the specific impacts of projects (for example, an assessment of their carbon footprint) or a more qualitative assessment (for example, based on questionnaires completed by project promoters).

Climate mainstreaming could be enhanced in COSME by building the climate awareness – on issues such as SMEs and adaptation, for example – among managers responsible for drafting work programmes. This would contribute to ensuring that 'win-win' opportunities are identified and included in the COSME work programme. Specific actions are also

possible to enhance climate mainstreaming within specific aspects of the COSME fund, such as the financial instruments and the European Enterprise Network.

Efforts to better track climate action within the COSME financial instruments would also assist the Commission in better evaluating its progress against the climate action expenditure target.

Strengthening the inclusion of climate change across the entire work programme for Horizon 2020 would assist in further mainstreaming climate within the fund. In particular, efforts should focus on those parts of Horizon 2020 that are potentially climate-relevant, but are not currently delivering significant climate action or where climate is under-represented given the climate-relevance of the topic (for example, the specific objective on health). Ensuring that the institutional arrangements for programming in Horizon 2020 are in line with the cross-cutting nature of the fund would be central to this.

There is a number of actions that could be taken within the current regulatory framework to maximise the climate action delivered by Horizon 2020-funded projects. In particular, applicants should be asked to describe the expected climate impacts of their projects when developing proposals for funding. This would enable other actions – including the monitoring of the impacts of Horizon 2020 on climate objectives – that would assist in the integration of climate policy objectives across the fund.

There are also opportunities to improve the mainstreaming of climate action within the Horizon 2020 financial instrument, for example, through the establishment of a dedicated climate change finance window and targeted dissemination of information about the funds to potential beneficiaries.

Finally, measures will also be needed to ensure the accurate and complete tracking of climate action within Horizon 2020. These measures include providing project officers with the necessary guidance and training to implement tracking accurately, and changes to the IT systems used to track climate action. In the absence of these measures, it may be necessary to fundamentally review the tracking methodology applied to certain parts of the fund (i.e. the so-called 'bottom-up actions') as part of the mid-term review of Horizon 2020.

LIST OF ABBREVIATIONS AND ACRONYMS

CEF	Connecting Europe Facility
COSME	Competitiveness of Enterprises and Small and Medium-sized Enterprises
DG	Directorate-General
DG AGRI	Directorate General for Agriculture and Rural Development
DG CLIMA	Directorate-General for Climate Action
DG CNECT	Directorate-General for Communications Networks, Content and Technology
DG EAC	Directorate-General for Education and Culture
DG ENER	Directorate-General for Energy
DG GROW	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
DG HOME	Directorate-General for Migration and Home Affairs
DG MOVE	Directorate-General for Mobility and Transport
DG RTD	Directorate-General for Research and Innovation
EASME	Executive Agency for Small and Medium-sized Enterprises
EEN	Enterprise Europe Network
EFG	Equity Facility for Growth
EIF	European Investment Fund
EIP	Entrepreneurship and Innovation Programme
ERC	European Research Council
FET	Future and Emerging Technologies
FP7	Seventh Framework Programme for Research and Technological Development
GAP	Green Action Plan
GHG	Greenhouse gas
ICT	Information and Communication Technology
INEA	Innovation and Networks Executive Agency
JRC	Joint Research Centre
KET	Key Enabling Technology
LEIT	Leadership in Enabling and Industrial Technologies
LGF	Loan Guarantee Facility
MFF	Multiannual financial framework
NCFF	Natural Capital Financing Facility
PCI	Project of Common Interest
PF4EE	Private Finance for Energy Efficiency
REA	Research Executive Agency
SMEs	Small and Medium-sized Enterprises
TENs	Trans-European Networks

1. INTRODUCTION

This chapter introduces the report and presents its objective, scope, methodology and structure. It also provides background for understanding the climate change mainstreaming target in the MFF and the challenges of implementing that target across different EU funded programmes that are not directly focused on climate change. The Commission's approach to tracking climate-related spending in the MFF and across the centrally managed funds is discussed. The concept of climate mainstreaming as a 'win-win' opportunity rather than a target to be implemented is presented as the basis for developing and describing the recommendations in the report. Finally a cross-cutting recommendation aimed at enabling on-going discussion and learning about climate change mainstreaming across the actors responsible for the centrally managed funds is presented.

1.1. Objective and scope of the report

The challenge of climate change – both the mitigation of greenhouse gas emissions and adapting to the inevitable impacts of a changing climate – has far-reaching implications for Europe's economy, society and environment. The Europe 2020 strategy, the 2030 climate and energy framework and the 2013 EU Strategy on adaptation to climate change propose moving towards a low-carbon and climate-resilient society. This requires efforts across all Member States, economic sectors, public and private institutions and other social groups to integrate thinking about climate change into their everyday activities. To meet the challenges and investment needs posed by climate change, the EU agreed to include a 20% target for climate-related expenditure into the multiannual financial framework (MFF) for 2014-2020. This target is to be implemented through a 'mainstreaming approach', which means that climate spending should be considered across all major EU policy areas over the seven-year period.

In this context, DG Climate Action requested the preparation of the 'Study on climate mainstreaming in the programming of centrally managed EU funds'. Its purpose is to review and recommend concrete opportunities for maximising the integration of climate action into three EU funding programmes managed by the European Commission – Horizon 2020, the Connecting Europe Facility (CEF) and the programme for Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME). For each of these funds, a European Commission Directorate-General (DG) is the main actor proposing the areas of funding in line with the relevant policy priorities and legal bases for the instruments¹. An overview of the three funds is provided in

Table 1; their funding amounts relative to other major MFF programmes are shown in Figure 1.

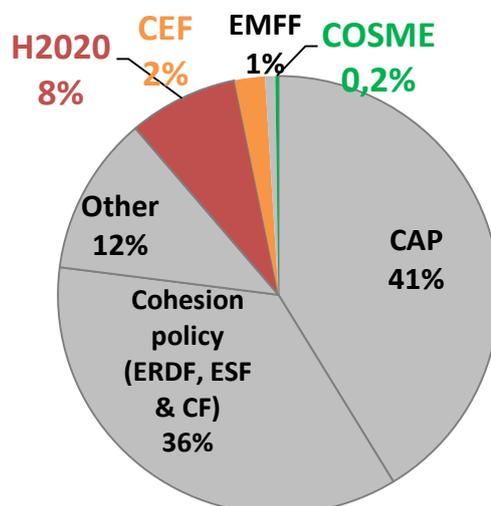
Table 1 Overview of the three centrally-managed EU funds

Fund	Objective	Management	Total funding available
Horizon 2020	Framework programme for research and innovation	DG RTD EASME	€78 billion
Connecting Europe Facility (CEF)	Development, construction and improvement of infrastructure projects in transport, energy and digital sectors	DGs ENER, MOVE, CNECT INEA	€27.4 billion
COSME	Programme for the competitiveness of	DG GROW	€2.3 billion

¹This is in contrast to funds such as the Cohesion Policy funds, the European Agricultural Fund for Rural Development, and the European Maritime and Fisheries Fund, which are managed directly by the Member States.

Fund	Objective	Management	Total funding available
	enterprises and small and medium-sized enterprises	EASME	

Figure 1 Relative shares of Horizon 2020, CEF and COSME in the MFF



From a policy perspective, the three funds covered by the study are very different. CEF is focused on network infrastructure – two of the three sectors it covers (energy and transport) are closely related to climate change, while the third CEF sector is focused on telecommunications infrastructure. COSME, by contrast, targets growth and competitiveness in the SME sector – an area where there is considerably less awareness and acceptance of the interaction with climate change. Horizon 2020, covering research and innovation, is a relatively large and cross-cutting programme and it has set an internal target of 35% for climate-related spending. While they address a range of different policy objectives, the funds are similar in the sense that they are all managed by DGs of the Commission.

From the perspective of mainstreaming climate change, this means that it is the relevant staff of the Commission DG and implementing agency who are essentially responsible for ensuring that climate change is integrated wherever feasible into all areas of spending and that such spending is accurately tracked and reported. This creates some synergies in terms of approaches that can be taken by both DG CLIMA and the managing DGs to maximise the mainstreaming of climate change. For example, the funding procedures tend to be launched via websites, information days and guidance materials all managed centrally by the Commission and its agencies across the three funds. Setting up working groups and regular communication across the Commission institutions (including DG CLIMA) to exchange approaches and good practices for mainstreaming climate change into the funding procedures emerged as a recommendation from the work.

1.2. Climate mainstreaming: opportunities and challenges

The adoption of the 20% MFF target has been welcomed by proponents of climate change action and sustainable development across the EU, including national governments and civil society. As stated in 2013 by then-Commissioner for Climate Action Connie Hedegaard, 'Rather than being parked in a corner of the EU budget,

climate action will now be integrated into all the main spending areas².’ The cross-cutting nature of climate change as a policy issue or spending priority clearly mandates such an approach. At the same time, the concept of ‘mainstreaming’ any issue or policy priority into other policy areas is a challenging one. In essence, climate mainstreaming means that actors whose mandates are not directly aimed at climate action should also work to attain these goals³. In some cases, this means convincing programme managers that the integration of climate action into their policies and programmes will actually contribute to more robust delivery of their objectives, rather than cause and unwanted disruption to their work.

For climate change experts, the interaction between climate change and other policy areas is often obvious. The SME sector can benefit immensely from cost savings due to energy efficiency; however most SMEs would be reluctant to carry out an energy audit on their own, without support from an external funding programme. Climate change can weaken infrastructure and shorten its useful lifetime; often infrastructure projects are not designed to take into account the long-term, location-specific risks posed by climate change. This is typically due to lack of awareness about the exact nature of the risks, leading to failure to conduct the necessary research and assessment procedures that would enable more resilient project design and planning. Research into topics such as public health or food supply needs to consider climate change as well, as it will have important impacts on the social and environmental determinants such as clean air, safe drinking water, sufficient food and secure shelter. Often the data, information and guidance needed to enable more climate change-related thinking into EU budget spending in these areas exists – but programme managers and applicants alike are unaware of its existence or do not know how to implement them.

There is no easy approach or quick solution to mainstreaming climate action into all areas of EU spending. Setting high-level objectives such as the 20% climate mainstreaming target or even policy objectives such as those for sustainable energy and transport does not necessarily guarantee that these issues will be adequately considered when the funds are spent. These depend upon implementing rules and procedures, such as those for the preparation and appraisal of applications for funding, or for monitoring and reporting on spending outcomes. Ultimately they depend on the awareness of key actors – managers, external experts, beneficiaries – of the relevance and importance of climate change within the context of the funding programme, and their willingness to work to achieve progress in this area. Very often managing institutions are staffed by non-climate change experts who fail to appreciate the relevance of climate mainstreaming for their objectives. Resources – both human and financial – are frequently an obstacle.

1.3. Tracking climate-related action

Preliminary results using the ‘Rio Markers’ approach

Targets must be measured and evaluated in order to have a chance of achieving the intended effects. Working towards a target that is tracking and evaluated also provides the actors involved with increased motivation to make progress towards the target. This is particularly important for a mainstreaming target, where actors are required to work towards a goal outside their main mandates.

²European Commission Press Release, ‘An EU budget for low-carbon growth’, Warsaw, 19 November 2013

³As stated on the website of DG Climate Action:

http://ec.europa.eu/clima/policies/brief/mainstreaming/index_en.htm, accessed 19 June 2015.

The European Commission has developed and put into practice an approach to tracking climate finance⁴, which uses the OECD’s Rio Markers approach as a statistical code for tracking those elements of funding programmes that can be considered to deliver climate action. For the purpose of using the Rio Markers to account for flows of climate finance, the Commission applies the Rio Markers as percentages, as outlined in the table below. This results in climate finance for a particular activity being calculated according to how central climate features in the objectives of the activity.

Table 2 Outline of the Commission approach to applying the Rio Markers in climate action tracking

Commission percentage marker	Activity
0% of the finance for these activities is tracked as climate-related expenditure.	Climate is not an objective
40% of the finance for these activities is tracked as climate-related expenditure.	Climate is a significant, but not predominant, objective
100% of the finance for these activities is tracked as climate-related expenditure.	Climate is a primary objective

In general, the approach is applied consistently across the various programmes in the EU budget, including each of the three centrally managed funds included in this study. Each fund provides an ex ante assessment of climate expenditure, based on the Commission’s approach. There are some differences in the approach taken, where necessary according to the specificities of each fund. In particular, the level at which tracking is applied varies between the funds. For example, under CEF, tracking is applied at the level of transport mode (for CEF-Transport) or infrastructure type (for CEF-Energy). Whereas, for certain parts of Horizon 2020 where the types of activities being financed are not known ex ante (for example, in the European Research Council), tracking is applied at the project level after a project is selected for funding. Some key parts of the three funds have proven challenging to track. In particular, the financial instruments under Horizon 2020 and COSME present a challenge. The activities funded through these instruments are not known ex ante. Any tracking at the individual project level would rely on reporting through financial intermediaries. Further detail about the tracking approaches for each of the three funds is provided in the fund-specific chapters below.

Preliminary tracking results are available for the first years of the MFF; these results for 2015 and 2016 are outlined in the table below⁵. These figures are based on preliminary data, and will be further refined as more detailed data becomes available.

Table 3 Climate expenditure in the MFF, 2015 and 2016

Year	Budget	%
2015 ⁶	Draft budget	16.8
2016 ⁷	Draft budget	20.6

⁴The European Commission’s approach to tracking climate finance is set out in DG CLIMA’s ‘Guidelines on tracking climate-related expenditure in the context of the Draft Budget 2014’. Although this document was prepared in the context of the 2014 Draft Budget, it remains the latest version available.

⁵ The results for 2014 are also available in the Statement of estimates of the European Commission for the financial year 2014 (SEC(2013) 370, June 2013), which reported that 12.7% of the total EU budget was allocated to climate action. However, the methodology has since been refined and direct comparisons between 2014 and subsequent years are not currently possible. Therefore, the 2014 figure is not included in Table 3 above.

⁶ SEC(2015) 240, Statement of estimates of the European Commission for the financial year 2016 (Preparation of the 2016 Draft Budget), May 2015.

⁷Ibid.

With the large spike in climate expenditure expected in 2016, these figures show that the EU may be on track to meet the overall 20% target for the MFF, *if* the planned expenditure included in the current draft budget for 2016 is agreed upon and implemented. However, progress is not consistent across the MFF, and there is a need for further efforts to enhance the mainstreaming and tracking of climate action across all funding areas.

Tracking versus mainstreaming

The Commission's tracking approach has benefits, in that it is relatively straightforward to apply and understand, and can be adapted to apply to a wide range of activities across a wide range of programmes. Such an approach is useful, as it helps the Commission ensure a coherent approach to tracking across the entire MFF that can be accepted by a range of different fund managing authorities at the EU and Member State levels.

However, there are limitations to this approach. Most particularly, a Rio Markers-based approach provides limited information about the impact of spending in meeting climate objectives. Thus, tracking is no substitute for detailed programme monitoring and evaluation. Further monitoring and evaluation of spending is needed to develop a sound understanding of the impact of climate action expenditure.

In addition, a Rio Markers approach provides a rough estimate of climate expenditure and may not capture small climate-relevant components of large projects that are not primarily focused on climate change. Other funding institutions, including the EIB, take an approach that is less focused on the objectives of expenditure. Under this approach⁸, the full cost of a project (or component of a project) that is expected to have mitigation⁹ benefits can be counted as climate expenditure, regardless of whether that project (or project component) also contributes to other non-climate objectives. This approach may lead to more granular accounting of climate expenditure, as it allows for small climate-relevant components of large projects to be counted as climate expenditure. It may also potentially lead to a higher volume of expenditure being counted as climate expenditure, particularly in such areas as energy or transport, where investments are usually directed at other objectives in addition to climate objectives. Through the course of this study, there was some suggestion that this approach could be applied to CEF. However, applying a different approach for just one fund would undermine the consistency and coherence in the Commission's approach to tracking climate expenditure in the MFF. It would also require data collection approaches that are not currently applied within the funding programmes.

Tracking of climate-related expenditure is a critical component of the 20% climate change MFF target and must be applied in order for the target to be taken seriously by those tasked with implementing it. But tracking alone, especially through a rough method such as the Rio Markers approach, will not guarantee that climate action is truly mainstreamed in the EU budget. In some cases, tracking may even encourage an opportunity cost, if certain programmes are assumed to be meeting their target due to imprecise indicators, they may forego further climate mainstreaming opportunities.

This report therefore considers mainstreaming of climate action into the three funds as a good in itself, and seeks for 'win-win' opportunities through which climate action results can be achieved simultaneously with the main objectives of each fund. In most cases, integration of climate change enables the funds themselves to deliver stronger, most

⁸Outlined in the 2014 Joint Report on Multilateral Development Banks' Climate Finance.

⁹Under the EIB approach, for adaptation projects, the objectives of an activity must have a clear link to climate change vulnerability to be counted as climate expenditure.

robust and resilient outcomes than would have been possible without climate mainstreaming.

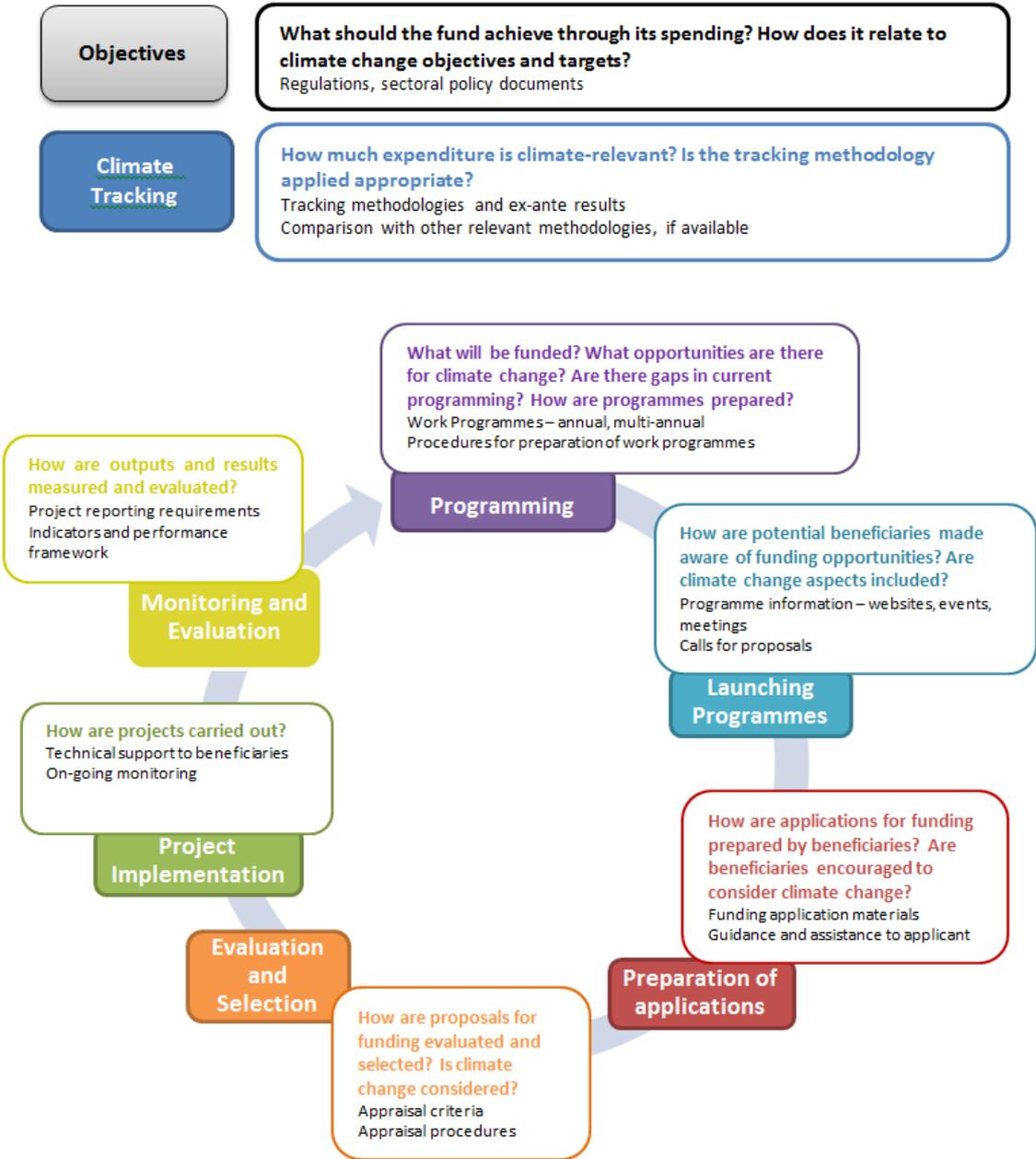
1.4. Methodological approach and structure of the report

From the start, this report has aimed to take a very practical approach to assessing the three EU funds. It is not a policy-level report aimed at addressing the sectoral policies or high-level objectives of the funding programmes, but rather a practical assessment aimed at identifying concrete ways in which the funds can target more of their spending towards climate-relevant action, within the boundaries of current legal and policy frameworks. Most of the recommendations can be carried out by existing programme managers or their colleagues in implementation agencies within the course of on-going programme implementation actions such as work programming. In some cases recommendations might need to be considered as part of changes that would be implemented after the 2017 mid-term reviews of the programmes. The majority of the recommendations are aimed at the actors directly involved with the funds. DG CLIMA's role is expected to be supportive and collaborative.

The approach to understanding and assessing each of the three funds has been based on a standard programme cycle. For each programme cycle stage, the team gathered relevant documentation and spoke to officials from the managing authorities to get a proper understanding of how each funding programme is carried out and how climate change is currently taken into account.

Figure 2 below shows the basic research questions considered by the teams at each stage of the cycle (in coloured, bold text) and the types of documents reviewed.

Figure 2 Programme cycle approach to assessing the funds



Preparation of the report has been based on the following activities:

Desk research. The desk research covered the regulations, programming documents, calls for proposals, guidance documents and other documentation covering the procedures and operational aspects of the three funds. Desk research also covered literature – reports and studies on the topic of policy mainstreaming or integration in

general; mainstreaming specifically of climate change and environmental issues; previous studies on climate mainstreaming in the MFF; documentation from other financial institutions; as well as academic literature and other policy reports. A full list of the documents consulted is available in the 'reference list' section of the report. Table 4 below gives an overview of the main research questions and sources of information served by the literature review.

Table 4 Overview of literature review questions and sources of information

Research question	Sources of information
What are the tools and instruments for mainstreaming policy objectives into programming cycles?	<ul style="list-style-type: none"> • Mainstreaming practices in other organisations outside the European Commission and the EU (e.g. multilateral development banks) • Experiences of mainstreaming other policy objectives (e.g. gender, biodiversity, sustainable development)
What opportunities have previously been identified for building climate action in the MFF?	<ul style="list-style-type: none"> • Previous reports on climate mainstreaming within the MFF across all funds
What are some specific opportunities for building climate action within the sectors, themes and topics covered by Horizon 2020, CEF and COSME?	<ul style="list-style-type: none"> • Policy reports on the opportunities for building climate action within the relevant sectors, themes and topic • Academic literature on opportunities for climate action in the specific sectors (e.g. energy, transport, research and innovation, SMEs)

Interviews. The desk research was complemented by a series of interviews with 19 experts, including officials from the Commission DGs and agencies implementing the funds, as well as external stakeholders. A full list of interviewees is provided in Annex 1. Interviews were carried out in two phases. First, scoping interviews enabled the team to develop an in-depth understanding of how procedures function and to identify the most important and feasible opportunities for further mainstreaming of climate action. Further in-depth interviews were then carried out with a broader group (including second interviews with key officials) to develop recommendations and clarify outstanding issues. This communication was a critical part of the process.

Climate change expert workshop. Towards the end of the research phase of the project in May 2015, the team held a workshop with climate change experts from across the Milieu in-house team. The group brought expertise in energy, water, transport and the financial and research sectors. The workshop focused on discussion of the interactions between climate change and the main sectors covered by the three study funds, taking a brainstorming approach to developing ideas on how the funds could better integrate climate change into their activities. While the results are not exhaustive, they have provided a list of options for climate-relevant actions that can be integrated into the on-going activities of each fund.

Stakeholder workshop. A final workshop was held with external stakeholders – mainly officials from the Commission DGs and agencies implementing the funds and civil society – a list of attendees is in Annex 2. Many of the workshop attendees had already participated in the interviews and were therefore familiar with the scope of the study. The workshop was held in June 2015 and presented the draft study recommendations for each fund. Valuable feedback was collected on the extent to which the recommendations could be practically implemented for each fund; the workshop also had the benefit of

raising further awareness about the results of the study and the purpose and value of climate mainstreaming.

Structure of the report

Following this introduction chapter, subsequent chapters of the report are dedicated to each of the three funds – CEF, COSME and Horizon 2020. Each specific fund chapter is structured differently, taking into account the specificities of the fund, but generally contains the following:

- The objectives of the fund and their inter-relations with climate change
- Examples of concrete types of climate-relevant activities that could be funded or supported within the scope and legal requirements of the fund
- Recommendations for further climate mainstreaming within the implementation cycle of the fund

For easy reading and reference, the concrete recommendations have been put into boxes and numbered with the name of the fund, e.g.: CEF-1, COSME-1, H2020-1.

1.5. Working together in the longer term

As mentioned above, the majority of the recommendations in the report are aimed at the managing DGs for each fund and the relevant implementing agencies. That said, many of the recommendations depend upon having the available expertise and knowledge about how climate change interacts with the objectives and priorities of the fund, and with the subject matter in general. It is difficult to mainstream climate change when one is not aware of the benefits of doing so – a 20% target is not enough. This study goes a long way to present an analysis of existing climate action in the funds and suggest ways in which the funds could further mainstream climate change in the content of what gets funded and also the practical aspects of how the programmes are implemented.

But this study is only a start. While the recommendations have been designed to minimise the impact on scarce resources within the Commission and its agencies, they will nevertheless require some effort, knowledge and most of all motivation to implement. There are many reasons to expand climate mainstreaming within EU funded programmes. Most relate to the 'win-win' aspects of mainstreaming climate change into research, SME support, infrastructure and other areas, because when climate change issues are taken into account the overall result becomes stronger. But this is not always well-recognised by institutions whose mandates do not directly concern climate change. Convincing managers and stakeholders of the benefits of climate mainstreaming and maintaining their enthusiasm for it is an essential and on-going part of any mainstreaming effort.

One way to keep the mainstreaming 'spirit' alive would be to organise an inter-service working group for the centrally managed funds. The basic agenda would be to discuss the benefits of climate mainstreaming and to showcase good examples, both of projects and procedures. Such a working group could be modelled on the workshop held at the end of this project in June 2015, where representatives of the managing authorities came together to discuss the intricate details of the climate mainstreaming recommendations proposed for this report.

Recommendation Cross-cutting-1: DG CLIMA should organise an inter-service working group on climate change mainstreaming for the centrally managed funds.

A working group including the Commission DGs that manage the funds, as well as the relevant agencies would meet at regular intervals (once or twice annually for a start) to discuss different approaches to climate change mainstreaming. The working group would ideally be initiated by DG CLIMA, as the lead DG on climate mainstreaming, but other members could suggest content for the meeting agenda or even lead sub-groups on particular issues. The working group would consume very limited resources as it would involve only collecting key issues and setting an agenda and meeting location – the discussion and future directions of the group would be the collective role of the members. Selected external experts or stakeholders could also form part of the working group or attend specific meetings to lead discussions.

2. CONNECTING EUROPE FACILITY

This chapter presents opportunities for climate mainstreaming in the Connecting Europe Facility (CEF) and provides recommendations for enhancing climate action in view of the objectives of the fund. The objectives and requirements set for CEF-Energy and CEF-Transport suggest that funding is likely to deliver climate-friendly outputs. However, these objectives need to be better integrated in each step of the programming cycle to ensure maximum uptake. Broadly, this means enhancing awareness and knowledge of the interactions between climate change and transport and energy policies. This also entails reviewing the materials and support provided for project proponents, and reconsidering project selection criteria to ensure that actions that simultaneously deliver climate change benefits along with transport/energy results are prioritised. Finally, the monitoring of projects should be enhanced to ensure an accurate understanding of the climate impact of projects financed by CEF.

The Connecting Europe Facility (CEF) finances the development, construction and improvement of infrastructure projects in the transport, energy and digital sectors as a part of the EU's Trans-European Networks (TENs) policy. The aim of CEF is to accelerate investment in the TENs by leveraging funding from public and private sectors to support projects with wider regional and European benefits that are unable to attract market-based financing. During 2014-2020 CEF is foreseen to provide €27.4 billion for three sectors: €21.6 billion for transport (79% of the total), €4.7 billion for energy (18%) and €1.1 billion for telecommunications (3%)¹⁰. This study focuses on funding for CEF-Transport and CEF-Energy; it does not cover telecommunications¹¹. CEF-Transport and CEF-Energy are managed by the Commission (DG MOVE and DG ENER respectively), supported by the Innovation and Network Executive Agency (INEA).

Within its mission to support the TENs, CEF supports the development and construction of infrastructure necessary to complete the core network corridors (transport) and priority corridors (energy) – both of which are considered integral to meeting EU transport and energy objectives and completing the internal market. To be eligible for CEF funding, projects must first be selected as 'Projects of Common Interest' (PCIs) by groups comprised of European Commission, Member State and national and European regulatory authorities. CEF funds can then be provided for studies¹² and works that support the implementation of the pre-selected PCIs. A number of more general 'programme support actions'¹³ can also be funded, aiming, inter alia, at improving the capacity of Member States and project promoters to identify and prepare projects. The CEF funds are awarded mainly in the form of grants through calls for proposals, but also through financial instruments¹⁴. Proposals for CEF grants can be submitted by one or more Member States, by international organisations (with the agreement of the Member States concerned), or by private or public entities and joint undertakings established in the Member State.

¹⁰These figures provided are subject to the final approval of the European Fund for Strategic Investment (EFSI).

¹¹The core of CEF telecommunications financing is expected to create digital platforms and services facilitating interactions between Member States' public administrations; this includes programmes such as Europeana, Safer Internet for Children, but also Open Data, eIdentifications, eAuthentications, eInvoicing, eDelivery (no physical infrastructure). Considering the type of projects eligible for CEF-Telecommunications and the relatively limited size of the fund, there is very limited scope for integrating climate action.

¹²'Studies' refers to activities needed to prepare project implementation, such as preparatory, mapping, feasibility, evaluation, testing and validation studies, including in the form of software, and any other technical support measure, including prior action to define and develop a project and decide on its financing, such as reconnaissance of the sites concerned and preparation of the financial package.

¹³This can include studies, meetings, infrastructure mapping, information, dissemination, communication and awareness raising actions, expenditure linked to IT tools and networks.

¹⁴This can include loan guarantees facilitated by risk-sharing instruments, including credit enhancement mechanism for project bonds, equity instruments.

2.1. Climate change in the Connecting Europe Facility

At the policy level, the interaction between CEF and the EU climate change goals is clearly recognised. Strictly speaking, the general objective of CEF, as set by the Regulation 1316/2013¹⁵ (CEF Regulation), is to prepare and implement the PCIs in the transport, energy and telecommunications sectors. Through this, the fund is expected to contribute to smart, sustainable and inclusive growth in line with the Europe 2020 strategy. The fund should enable the Union to achieve its sustainable development targets, including a minimum 20% reduction of GHG emissions and a 20% increase in energy efficiency and raising the share of renewable energy to 20% by 2020¹⁶. Infrastructure investments support by CEF should also help to promote the transition to a climate- and disaster-resilient economy and society¹⁷.

Currently the transport sector amounts for around one-quarter of all EU GHG emissions¹⁸. EU transport objectives, as set out in the 2011 roadmap for the sector, foresee increased mobility, removal of barriers in key areas, and reduction of Europe's dependence on imported oil and cutting carbon emissions in transport by 60% by 2050¹⁹. On the energy side, electricity and heat production is currently the largest GHG emitting sector in the EU. The EU 2030 framework for climate and energy sets out a binding target on the EU level to increase the share of renewables to at least 27% and reduce GHG emissions by 40% compared to the 1990 levels. Accordingly, the specific priorities for both CEF-T and CEF-E take into account relevant sustainability and climate change mitigation-related goals – specific climate-related aspects are shown in bold in Table 5 below.

Table 5 Specific priorities for CEF-Transport and CEF-Energy

Specific priorities for CEF-Transport* ²⁰
Removing bottlenecks, enhancing rail interoperability, bridging missing links and, in particular, improving cross-border sections.
Ensuring sustainable and efficient transport systems in the long run, with a view to preparing for expected future transport flows, as well as enabling all modes of transport to be decarbonised through transition to innovative low-carbon and energy-efficient transport technologies , while optimising safety.
Optimising the integration and interconnection of transport modes and enhancing the interoperability of transport services, while ensuring the accessibility of transport infrastructures.
Specific priorities for CEF-Energy ²¹
Increasing competitiveness by promoting the further integration of the internal energy market and the interoperability of electricity and gas networks across borders
Enhancing Union security of energy supply
Contributing to sustainable development and protection of the environment, inter alia by the integration of energy from renewable sources into the transmission network, and by the development of smart energy networks and carbon dioxide networks.

*CEF-T grants furthermore prioritise support for more sustainable transport modes – mainly rail and waterborne transport – over roads and other more emission-heavy options²².

¹⁵Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010.

¹⁶Article 3, CEF Regulation.

¹⁷Recital 8, CEF Regulation.

¹⁸Furthermore, it is noteworthy that transport demand, fuel consumption, and transport-related GHG emissions have all increased since 1990. EEA (2015) 'The European Environment. State and Outlook 2015' Transport, 2015.

¹⁹European Commission (2011) 'Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system', The European Commission is currently performing the mid-term review of the strategy.

²⁰The allocation of finances between the three specific priorities is 80%, 5% and 15% respectively. Part IV Indicative Percentages for Specific Transport Objectives in the CEF Regulation.

²¹The allocation of finances between the three specific objectives is expected to be equal. Multi-Annual Work Programme for Energy, March 2014.

²²Art. 4.2 (a);b) CEF-Regulation.

From this high-level perspective, climate change objectives and targets are effectively already mainstreamed into the CEF instrument. This does not, however, guarantee that the potential for the outputs of CEF to deliver climate change benefits will be maximised or even realised at all. CEF grants typically support project preparation studies (e.g. feasibility studies, technical designs) or direct investment in works (when justified by market conditions), and the grant projects tend to focus on the significant challenges posed by getting the infrastructure projects off the ground. CEF grants only support PCIs, which under both the TEN-E and TEN-T regulations will have gone through rigorous assessment and selection procedures that include assessment of GHG emissions and vulnerability to climate change impacts. As a result, contribution to climate change goals within the CEF grants themselves is often assumed to take place due to the very nature of the projects themselves (this is also reflected in the approach to ex-ante tracking of climate-relevant expenditure discussed in Section 4.3.3 below). Nevertheless, there are very real opportunities to use the CEF funding for further climate mainstreaming goals in such a way that it would also improve the robust delivery of the infrastructure projects that are the central goal of CEF and the TENs policies.

Energy efficiency is a key aspect here, particularly for TEN-E. Although energy efficiency is not a specific objective of CEF-E or TEN-E, it is nonetheless a critical design component for energy transmission systems. A study for the European Parliament found that there has been limited focus on energy efficient design in transmission systems – for oil and gas pipelines around 5% of energy can be lost during transportation²³. CEF grants would have the possibility to enable PCIs that fail to optimise energy use to further investigate ways in which this can be improved, at the pre-feasibility, feasibility or technical design stages of project development.

CEF objectives are clearly aligned with climate change mitigation goals, but the critical issue of infrastructure resilience to climate change impacts is mentioned only briefly in the recital to the Regulation. If transport and energy infrastructure are not effectively aligned with projected changes in climatic conditions the infrastructure cannot be expected to deliver the required outcomes throughout its long lifetime²⁴. Building resilience to climate change into infrastructure, or ‘climate proofing’ is a key challenge for the EU, and one of the three key objectives of the EU Adaptation Strategy. Climate change resilience is mentioned in the CEF, TEN-T and TEN-E regulations²⁵ and is referenced as well is the risk assessment for TEN-T PCIs and the cost-benefit assessment for TEN-E PCIs. However, there are no specific requirements or criteria determining how the climate change vulnerability assessment should be carried out, and it is well-known that carrying out detailed risk assessments can pose considerable challenges for project developers due mainly to data and methodological complexities. Here there is an opportunity for CEF grants funding studies to enable more robust climate proofing of these critical infrastructure projects, and to raise awareness and build expertise about such assessment.

Recommendations first consider the content of the CEF work programmes for the transport and energy sectors, and then address the cycle for implementation of the fund. This includes how the applications for funding are developed and reviewed, and making sure that opportunities to focus more specifically on climate change aspects – in particular those related to adaptation to climate change – are not lost.

²³European Parliament, Committee for Industry, Research and Energy (2009) ‘An Assessment of the Gas and Oil Pipelines in Europe’, p.14.

²⁴European Commission, ‘Adapting infrastructure to climate change’, SWD(2013) 137 final.

²⁵CEF Regulation, recital 8; TEN-T Regulation Art 35; TEN-E Regulation recital 9 plus various references to climate resilience for specific infrastructure categories.

2.2. Recommendations: Work programmes

The allocation of both CEF-T and CEF-E funds is based on multi-annual and annual work programmes that detail the priorities and total amount of financial support to be committed for each priority in a given time. Work programmes are adopted by the Commission in the form of implementing acts in cooperation with the CEF Coordination Committee²⁶. Approximately 80-85% of the total budget will be allocated to the 2014-2020 Multi-Annual Work Programmes, and the remaining 15-20% will be allocated through Annual Work Programmes.

There is an important opportunity to incorporate into subsequent CEF work programmes explicit references to climate change actions that can be included in applications for CEF grants. This would motivate perspective beneficiaries to consider these in their funding applications and would also better enable inclusion of climate action in the project implementation cycle, based on the recommendations in section 4.3 below.

CEF grants can be utilised to carry out studies on climate change impacts on a PCI, and to improve their design in order to build resilience into the infrastructure. In addition, funding available under Programme Support Actions could be directly dedicated to raising awareness and building capacity to enhance climate considerations in implementing the PCIs.

²⁶The CEF Coordination Committee is comprised of representatives of Member States and chaired by the Commission. Revision of Multi-Annual Work Programmes is foreseen at least at mid-term in 2017, but can be initiated earlier.

Table 6 and Table 7 below provide an overview of selected funding objectives and specific opportunities to introduce and maximise benefits in terms of climate action for CEF-T and CEF-E.

Recommendation CEF-1: Climate action mainstreaming could be enhanced in the programming documents (Multi-Annual and Annual Work Programmes) for CEF-T and CEF-E by highlighting opportunities to explicitly integrate climate considerations in the programmed actions.

Annual and Multi-Annual Work Programmes should highlight climate-relevant opportunities to motivate and help prospective beneficiaries to include these options in their funding applications. DG MOVE and DG ENER should consider including these references into the work programmes at the earliest possible time – at the latest during the 2017 mid-term review of CEF. Suggestions for such content are shown in

Table 6 and Table 7 below.

Table 6 Opportunities for strengthening climate action mainstreaming in CEF-T Annual and Multi-Annual Work Programmes²⁷

Description of the relevant action	Opportunities for strengthening climate mainstreaming
Priorities for the objective of bridging missing links, removing bottlenecks, enhancing rail interoperability, and, in particular, improving cross-border sections.	
<p>Cross border projects (studies and works) for implementing the core network corridors: railways, inland waterways and roads; removal of bottlenecks for railway, inland waterway, such as locks, road networks in the case of Member States with no railway network other infrastructure projects for railway, inland waterway (also water-side infrastructure development in inland ports), road networks in the case of Member States with no railway network.</p>	<ul style="list-style-type: none"> • CEF grants can be utilised to carry out studies on climate change impacts on a PCI, and to improve their design in order to build resilience into the infrastructure. • Specific options for improving the sustainability of transport, and reducing CO² emissions can also be investigated through CEF grants.
Programme support actions – grants	
<p>Technical Assistance services for the development and implementation of projects implementing the TEN-T core network in MS eligible to the Cohesion Fund. Aim is to increase efficiency in the preparation and implementation of transport infrastructure projects and the acceleration of the development of the TEN-T core network in these Member States. Support can be provided via Jaspers²⁸ and/or by means of grants on the basis of a proposal indicating the type of services necessary.</p>	<ul style="list-style-type: none"> • Technical assistance could directly target climate change issues in project preparation, in particular the challenges of understanding and assessing climate change risk and how to incorporate adaptation options in project development and implementation. • The Jaspers programme has a dedicated climate change element, and is preparing climate change capacity programmes which could feed into and support the beneficiaries of CEF funding in this area.
Programme support actions – procurement	
<p>Studies and support for the work of the European Coordinators includes analysis of the progress made on the corridors, evolution of traffic flows, on the reporting, for the organisation of the Corridor Forum meetings.</p>	<ul style="list-style-type: none"> • Actions could work directly with the European coordinators to enhance their understanding of the need to consider climate change in infrastructure planning analysis and explain benefits of climate resilience. • To support the work of European Coordinators it could also be considered to propose financing specifically for studies that investigate the need for infrastructure resilience in specific areas of the core network areas. • Studies could also target climate considerations by investigating further options for traffic management, intelligent transport systems in the road sector and technological innovation in projects of urban areas.
<p>TEN-T Days to exchange on the progress of the TEN-T, to present projects funding opportunities, to take stock of the development of the corridor approach and to present various aspects of innovation and new technologies to transport infrastructure.</p>	<ul style="list-style-type: none"> • TEN-T days present an opportunity to showcase the advantages of low-carbon transport in terms of climate change objectives. • Dedicating specific parts of TEN-T Days to climate resilience and the potential and benefits of low-carbon transport would raise awareness and political will among different actors participating in the project development process.

²⁷The majority of funding - €6 billion - under the Multi-Annual Work Programme published in March 2014 addresses implementation of PCIs on the core network corridors. Ensuring sustainable and efficient transport receives a total of €250 million and the objective of optimising the integration and interconnection of transport modes is foreseen a budget of €750 million. A share of €4 billion is directed from CEF to the Cohesion Fund and an additional €83 million is foreseen for the Programme Support Actions under all the above-mentioned priorities.

²⁸Joint Agreement for Supporting Projects in European Regions.

Table 7 Opportunities for strengthening climate action mainstreaming in CEF-E Annual and Multi-Annual Work Programme²⁹

Description of the relevant action	Opportunities for strengthening the climate action mainstreaming
Increasing competitiveness by promoting further integration of the internal energy market and the interoperability of electricity and gas networks across borders	
Financial assistance for the implementation of projects of common interests in the form of grants for studies and grants for works	<ul style="list-style-type: none"> • CEF grants could enable studies for PCIs that are vulnerable to losses in energy efficiency to further investigate ways in which this can be improved, at the pre-feasibility, feasibility or technical design stages of project development. • CEF-grants should finance studies that investigate energy infrastructure resilience to projected short and long term impacts of climate change.
Programme Support Actions	
Under Programme Support Actions the Commission foresees studies to develop a support tool for project-specific cost-benefit analyses, modelling in the field of electricity and gas, studies relating to the energy infrastructure priority corridors and areas, technical assistance and studies to develop cost effective financing structures for PCIs and communication activities related to the trans-European energy infrastructure policy.	<ul style="list-style-type: none"> • Financing under Programme Support Actions could be explicitly targeted to awareness raising and capacity building among different levels of decision-makers on how to best integrate climate considerations in the design phase of infrastructure plans and on the benefits of enhanced climate resilience of energy infrastructure.

2.3. Recommendations: Implementation process

The programme implementation process – the way in which applications for grants for supporting transport and energy PCIs are advertised, prepared and reviewed – is of particular importance for CEF. This is the point in the programme where the climate-related aspects of the programme’s higher-level objectives and priorities need to be translated into practice. Generally, there is a need to reinforce the importance given to climate change within the actions and materials used to carry out the grant awarding process, and to introduce concepts such as energy efficiency and climate change resilience that are not already mainstreamed into the regulations.

Reporting, tracking, monitoring and evaluation of CEF are also important. The external requirement to report on climate mainstreaming for the 20% MFF target leads to an opportunity for more climate-focused reporting on CEF grants. This can highlight the benefits or ‘win-win’ aspects of integrating climate change into CEF grants, and reinforce their inclusions into future work programming and grant application processes.

2.3.1. *Launching programmes and the preparation of funding applications*

Climate change issues are addressed in the CEF-Regulation and the TENs regulations, but there could be much stronger reinforcement of these legal and policy objectives and requirements within the materials that applicants for funding actually see. These include informational materials, guidance, application forms and direct contact with officials of the managing institutions.

²⁹Under the Multi-Annual Work Programme published in March 2014, the grants available for studies and works implementing the PCIs amounted to €750 million, Programme Support Actions were allocated €1.25 million.

Following the publication of the multi-annual and annual work programmes, the Commission launches specific calls for applications. The process is supported by INEA and external experts. In general, information about CEF, its annual work programmes and the opportunities for funding is made available on the websites of DG MOVE, DG ENER and INEA.

A 'Guide for Applicants' is published separately for CEF-T and CEF-E. The document explains the administrative, legal and financial requirements and deadlines related to the call³⁰. DG MOVE and DG ENER also organise Information Days and make visits to Member States to explain the application procedures to potential project proponents.

There is also guidance directly associated with the application forms, published by INEA. In the application form, projects need to demonstrate their contribution to EU's environmental policy, including climate change policy. According to the guidance given, the reduction of GHG emissions, resilience to climate change impacts, resource efficiency and ecosystem services are to be considered³¹.

Recommendation CEF-2: The websites, events, meetings and other initiatives used to inform potential applicants about CEF should encourage and guide them to consider climate change aspects.

All guidance provided to applicants should contain dedicated sections explaining climate mitigation and climate resilience and the interactions with transport and energy projects, encouraging applicants to consider including these aspects in proposals for studies. Links should be made available on the website of INEA to direct project proponents to the available guidelines for climate resilience in infrastructure (to be included under Beneficiaries Info Point).

Recommendation CEF-3: The forms, guidance documents and other assistance provided to applicants during the application process should support them to consider how to include climate change aspects in the grant proposals.

CEF grants take on a variety of formats, as seen in the previous section. The greatest potential for further climate mainstreaming will likely be within the grants for studies, which can improve the climate change aspects of the PCIs before they are implemented. Here there is the opportunity to consider issues such as energy efficiency or climate resilience into the project designs.

If the guidelines and other materials coming from the management authorities within the European Commission provide encouragement and concrete guidance on how CEF grants could be used to include study of and incorporation of climate-related issues into infrastructure projects, applicants would be more likely to consider them. This would have multiple benefits: better climate mainstreaming; better compliance with the provisions of Regulations; and last but not least more robust infrastructure projects.

There are many existing resources to which these materials and guidelines could refer

³⁰Proposals submitted under the CEF-Transport and Energy calls for proposals must describe planned activities, information on who will carry them out, their deliverables and related milestones, costs, and why they should be supported financially by the EU. Compliance with EU law in the field of environmental protection has to be shown (including among others contribution to sustainability, compliance with EIA, SEA, assessment of the effect of projects on Natura 2000 sites).

³¹Based on the application for CEF-Energy and CEF-Transport.

in order to make these links. For example, DG CLIMA has issued guidelines to support making infrastructure climate resilient³² - these are sector-specific and aimed at technical project managers and developers. The Climate-ADAPT web portal also contains a wealth of information on climate change impacts, including case studies and sector-specific information that can be used to guide applicants. Training or informational sessions could also be organised on issues related to energy efficiency, climate change resilience, sustainable transport or other issues as specific needs arise. Links with Programme Support Actions, including the EIB's JASPERS programme supporting the preparation of large infrastructure projects, should also be explored as discussed in Section 4.2 above.

This guidance could be incorporated into existing guidance documents for CEF applicants, for example, the Guide for Applicants and FAQ documents published with each CEF call on the INEA webpage³³. Alternatively, a specific short guidance document on addressing climate action in CEF grant applications could be developed and published with CEF calls.

2.3.2. Evaluation and selection of applications for funding

The evaluation and selection of projects ultimately determine what gets funded. The award criteria upon which selection is based send a strong message to applicants about what will be funded, and therefore play a role in the design of funding applications. The award criteria for both CEF-T and CEF-E in the current work programmes do not reinforce climate objectives – adding a reference to various aspects of climate change within these criteria would have an important impact on spending outcomes.

Technically, projects that receive support from CEF go through a two-stage selection procedure, which is important for understanding how climate change requirements are considered in CEF funding. As mentioned earlier, CEF only supports 'projects of common interest' (PCIs) for trans-European transport and energy networks and the PCIs themselves are selected through specific criteria and processes involving a range of stakeholders and external experts as well as the Commission. For both transport and energy, potential PCIs go through rigorous assessment that includes climate change factors. This means that applications for CEF funding should support infrastructure projects whose climate impacts have already been assessed to some degree. There is no guarantee, of course, that climate change issues – mainly GHG emissions balances and consideration of vulnerability to climate change impacts – have been assessed thoroughly or that options to maximise climate action have been strongly considered.

For grants from CEF, the general award criteria are provided in the CEF Regulation; they relate to the maturity of the action; soundness of the implementation plan; the grant's contribution to overcoming financial obstacles; and when applicable the economic, social, climate and environmental impact and cross-border dimension³⁴. Specific award criteria for CEF-T and CEF-E are set in the relevant Multi-Annual Work Programmes and must take into account the general orientations set in the CEF Regulation. The specific award criteria for CEF-T and CEF-E from the current work programmes are shown in

³²EEA Report No 8/2014, "Adaptation of transport to climate change in Europe. Challenges and options across transport modes and stakeholders" and Acclimatise, COWI (September 2012) "Guidelines for Project Managers: Making vulnerable investments climate resilient", Report for the European Commission.

³³ <http://ec.europa.eu/inea/en/connecting-europe-facility>

³⁴CEF Regulation. Part V. List of general orientations to be taken into account when setting award criteria.

Table 8 below³⁵. None refer to climate change or even sustainability aspects of the CEF grants.

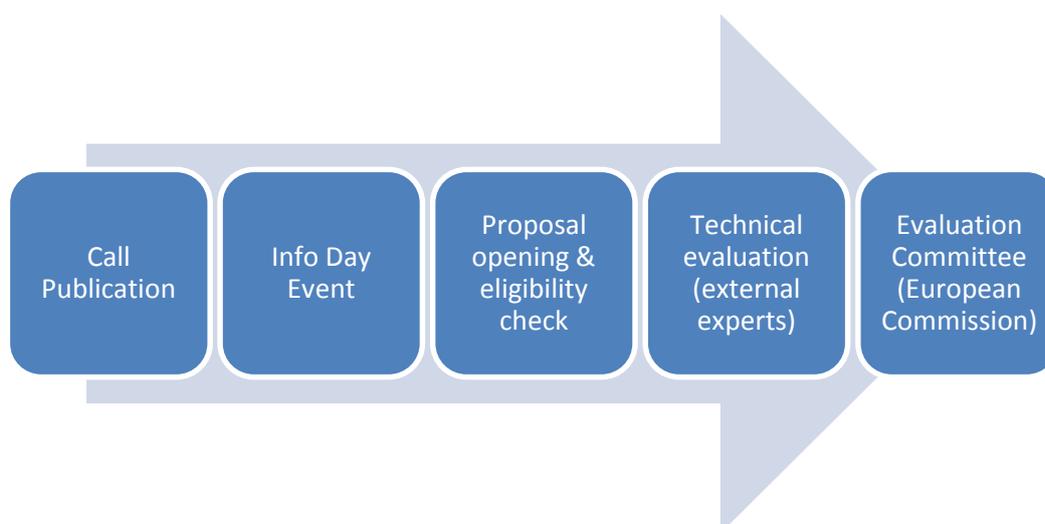
³⁵Innovation and Networks Executive Agency, CEF Energy - first Call for Proposals 2015.

Table 8 Award criteria for CEF-E and CEF-T

Award criteria for CEF-E	Award criteria for CEF-T
Maturity of the action with regards to the developmental stage of the project	Maturity of the action with regards to the developmental stage of the project
Cross-border dimension of the action, area of impact and number of Member States involved in the action	The European added value as defined in Art 3(d) of the TEN-T Guidelines; cross-border dimension, when applicable
The extent of the positive externality (such as security of supply and solidarity among Member States) provided by the action involving works	Removal of bottlenecks, enhancing rail interoperability, bridging missing links and improving cross-border sections as stipulated in the CEF Regulation
Complementarity between actions of common interest	
Priority and urgency of the action, will the project remove bottlenecks, end energy isolation and contribute to the implementation of the internal energy market	When applicable, the economic, social, climate and environmental impact, and accessibility
The need to overcome financial obstacles, the impact on solidarity	The need to overcome financial obstacles, such as the lack of market finance;
Stimulating effect of the CEF financial assistance on the completion of the action	Stimulating effect of the Union support on public and private investment, when applicable
Quality of the application, the clarity and the completeness of the proposal	Soundness of the implementation plan proposed

The process for selecting the projects is depicted in Figure 3 below. Technical evaluation is carried out by external experts based on the award criteria, while the evaluation committee is comprised of representatives of DG MOVE and DG ENER for the transport and energy calls respectively.

Figure 3 The Call process for projects for CEF-T and CEF-E



Recommendation CEF-4: Add award criteria reflecting the need to consider climate change issues in the next multi-annual work programme

The next multi-annual work programme should contain award criteria that would give emphasis to climate change considerations in the CEF grants. Possible criteria could cover:

- Sustainability issues related specific to transport and energy projects. This would reflect the extent to which the projects maximise the potential to reduce CO² emissions through energy efficiency measures, modal shift or other factors.
- The extent to which vulnerability to climate change impacts are considered in the project. This will be more relevant for some CEF grants than others (e.g. in particular for feasibility or project preparation grants for vulnerable infrastructure projects) but the criterion would require that applicants and evaluators consider with climate change resilience is an issue in order to avoid opportunity cost.

Adoption of this recommendation may require changes to the legal basis for CEF, and as such, may not be able to be implemented until after the 2017 review and consultation with Member States have taken place.

Recommendation CEF-5: Ensure that the individuals tasked with carrying out the technical evaluation and the final evaluation have knowledge of and awareness of climate change issues and their interaction with the relevant transport or energy issues.

The inclusion of a climate change related award criterion and requirements to consider climate change within the application process overall will require that applications for funding are effectively reviewed to consider the extent to which they address these factors. Doing so will require that those who carry out the review have sufficient knowledge and understanding of the specific relevance of climate change for the sectors in question. Given the inherent links between the transport and energy sectors with climate change, it may not be necessary to seek out dedicated 'climate change' experts to participate in the evaluation of CEF applications for funding – but rather to ensure that those do carry out the evaluation are fully aware of the links with climate change.

2.3.3. *Reporting, tracking, monitoring and evaluation*

All EU funded programmes are required to report on their climate action financing in relation to the 20% MFF target through the process known as climate tracking. Beyond this, monitoring and evaluation is a key aspect of the programme implementation project cycle, as it enables learning from the project results and adjusting future programming accordingly.

To date, climate-related expenditure under CEF has been tracked using ex-ante markers as an estimate. For CEF-T projects the ex-ante marker is applied based on transport modes. For 2014 and 2015, a 40% marker was applied ex-ante to all infrastructure projects, except for road projects, projects on the reduction of rail freight noise and projects on secure parking on the road core network, which received a 0% marker³⁶. It is foreseen that a sampling of actual projects supported will later take place to test the relevance of the overall marker applied to the transport mode.

For CEF-E in 2014 and 2015, the Rio Marker was applied ex-ante by energy infrastructure category. Electricity and gas projects (the largest share) receive a 40% marker; oil infrastructure projects a 0% marker and CO₂ transport projects receive a 100 per cent marker. Table 9 below provides an overview of ex-ante climate action expenditure in CEF based on the draft budgets of the EU for 2014, 2015 and 2016.

³⁶COM(2014) 300 – June 2014: Draft General Budget of the European Commission for the financial year 2015, Working Document Part I: Programme Statements of operational expenditure, (Draft Budget 2015, p.119.

Table 9 Overview of climate action expenditure in CEF

Year	Total yearly budget (incl. contribution from the Cohesion Fund)	Climate expenditure (% total budget)		
2014 ³⁷	Draft budget	€2 949.2	€1 216.7	41%
2014 ³⁸	Actual commitment	€2 959.2	€1 332.2	45%
2015 ³⁹	Draft budget	€3 442	€1 331.6	39%
2015 ⁴⁰	Actual commitment	€2 434	€857.6	35%
2016 ⁴¹	Draft budget	€4 438.1	€1 619.1	36%

The use of Rio Markers has proven to be a workable solution for CEF in an ex-ante context, when information about the specific projects funded is lacking. However, given the relevance of climate change for the transport and energy sectors, and the potential for PCIs and the CEF grants that support them to contribute to climate change objectives, it is possible that a more detailed tracking methodology to be applied after projects are completed could be useful and could enable attribution of more than a 40% tracking marker in many cases. For example, a more granular approach might allow the Commission to give greater recognition to activities that are largely, if not solely, dedicated to climate action. This could be particularly relevant to CEF projects, as these projects are often targeting other objectives, in addition to climate change objectives. In some cases, it might be appropriate to track the climate contribution of such projects at a rate somewhere between 40 and 100%.

Recommendation CEF-6: DG MOVE and DG ENER should consider developing and applying a methodology for evaluation of the impacts of CEF on EU climate policy objectives at the project level, to complement climate action tracking.

A robust framework for understanding the contribution of individual projects to climate change mitigation and adaptation objectives and targets would enable the Commission to obtain a more accurate overview and understanding of the climate impact of projects financed under CEF. Monitoring and tracking the climate action contribution of specific projects in a more detailed manner would require more focused data collection than what is currently included in the indicators and reporting provisions. There are a range of methods available for doing this, from more complex carbon footprinting methods - such as that carried out by the EIB for projects in the transport and energy sectors - to less time-intensive evaluation methods such as questionnaires to be completed by project promoters.

In addition, an improved focus on climate change within project reporting and monitoring procedures could lead to better overall recognition of the value of climate change action within the CEF grants. This would be in line with the high-level objectives of CEF and the TEN-T and TEN-E Regulations and relevant EU sectoral policies, and could also demonstrate real added-value to the projects themselves, such as improved resilience to climate change. The mid-term review of the TENs and CEF regulations in 2017 could be an opportune time to implement this, provided the details are worked out in advance.

³⁷COM(2013) 450 – June 2013: Draft General Budget of the European Commission for the financial year 2014, Working Document Part I: Programme Statements of operational expenditure, (Draft Budget 2014), p. 98.

³⁸Draft Budget 2015, p.118.

³⁹Draft Budget 2015, p. 118.

⁴⁰SEC(2015)240 – May 2015: Statement of estimates of the European Commission for the financial year 2016 (Preparation of the 2016 Draft Budget), (Draft Budget 2016), p. 93, pp. 184-185.

⁴¹Draft Budget 2016, p.93, pp.184-185.

3. COSME

This chapter presents opportunities for further climate mainstreaming in COSME, showing how enhancing climate-related actions can result in benefits in line with the objectives of the fund. The chapter starts with an overview of COSME, followed by a presentation of its goals and programme cycle. The chapter goes on to present specific recommendations for strengthening the level of climate mainstreaming in the funding instruments of COSME divided in two groups: financial instruments and other funding instruments (service contracts and grants).

Overall, energy efficiency, emerging business opportunities and coping with climate impacts are the key areas offering mainstreaming opportunities in COSME. Ultimately, the improving contribution to climate goals depends upon targeting of the right beneficiaries and improved awareness of the desk officers carrying out the programming process.

COSME, the EU Programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises is established for the period 2014-2020 by Regulation 1287/2013⁴² (COSME Regulation). The overarching objective of COSME is to strengthen the competitiveness and sustainability of the EU's enterprises, particularly small and medium sized enterprises (SMEs), by encouraging an entrepreneurial culture and promoting the creation and growth of SMEs. COSME builds on the lessons from the 2007-2013 Entrepreneurship and Innovation Programme (EIP) and continues some of its successful features. While support to SMEs for innovation is covered by Horizon 2020, COSME aims to support SMEs according to the following four specific objectives:

- A. **Improving access to finance for SMEs in the form of equity and debt** - through the Equity Facility for Growth (EFG) and the Loan Guarantee Facility (LGF);
- B. **Improving access to markets** - mainly through the Enterprise Europe Network (EEN);
- C. **Improving framework conditions for the competitiveness and sustainability of Union enterprises** - through various actions e.g. Clusters of Excellence Programme, Key Enabling Technologies (KETs), actions in the tourism sector;
- D. **Promoting entrepreneurship and entrepreneurial culture** - mainly through the Erasmus for Young Entrepreneurs programme.

The overall indicative budget for the seven-year period of COSME (2014-2020) is €2.3 billion; annual allocations will rise progressively each year to reach over €400 million in 2020. The largest share of the budget (around 60 percent) will be allocated through the two financial instruments under Objective A. Through the LGF the European Investment Fund (EIF) offers debt guarantees to selected financial intermediaries (e.g. guarantee institutions, banks, leasing companies, etc.) to ensure they provide loans and leases to SMEs not able to secure loans otherwise. Through the EFG the EIF invests in selected funds which act as its financial intermediaries and provide start-ups and expansion stage SMEs with venture capital and mezzanine finance⁴³.

The remaining part of the COSME budget is disbursed in the form of service contracts and grants (Objectives B, C and D) – the largest share of this goes to the EEN under

⁴²Regulation (EU) No 1287/2013 of the European Parliament and of the Council of 11 December 2013 establishing a Programme for the Competitiveness of Enterprises and Small and Medium-Sized Enterprises (COSME) (2014 - 2020) and repealing Decision No 1639/2006/EC.

⁴³Venture capital refers to money provided by investors to start-ups and small businesses that do not have access to capital markets. Mezzanine financing is a hybrid of debt and equity financing that is typically used to finance the expansion of existing companies. Source: www.investopedia.com

Objective B. Overall, the targeted final beneficiaries of COSME are SMEs, entrepreneurs, business support organisations, regional and national administrations.

Even though COSME partly contributes to climate objectives, there is potential to increase the share of climate action in the fund through better integration of climate change into its work programmes and implementation procedures, such that the actual climate change relevance of the fund could be closer to the 20% MFF target. While the main objective of COSME is clearly to support growth and competitiveness of EU enterprises, there are many ways in which this can simultaneously contribute to climate change objectives. Contributing to climate change mitigation through actions such as energy efficiency improvements, and enhancing resilience to climate change can be critical components of improvements in the overall performance of enterprises. With demand for climate-related technologies and services on the rise, there are opportunities for enterprises to gain early mover advantages in these markets.

Often what is needed is greater awareness of the existence of such opportunities within COSME amongst all relevant actors – programme managers and potential beneficiaries – and greater understanding of the potential that such ‘win-win’ opportunities have to strengthen the overall performance of the COSME programme. The following sections present in more detail the relevance of these opportunities to COSME and the possibilities for their integration in the fund’s programme cycle.

3.1. Climate change and SME competitiveness

The overall purpose of COSME is to improve the competitiveness of SMEs and stimulate entrepreneurship – there is no particular focus on climate action. More specifically, the two general objectives of COSME are:

- Strengthening the competitiveness and sustainability of the Union’s enterprises and growth of SMEs;
- Encouraging entrepreneurial culture and promoting the creation and growth of SMEs.

However, supporting climate activities does not contradict any of COSME’s general objectives. Actions such as energy efficiency or innovative Information and Communication Technology (ICT) solutions for climate services can improve the competitiveness of European SMEs’. Moreover, Art. 4(2) of the COSME Regulation emphasizes that the need of enterprises to adapt to a low-emission, climate-resilient, resource- and energy-efficient economy should be promoted in the implementation of the fund. The COSME Regulation, therefore, supports the integration of climate change directly through this provision and provides a clear basis for climate action within COSME.

The four specific objectives of the fund do not specifically aim to mainstream climate action but offer possibilities for supporting ‘win-win’ activities. The following table examines opportunities to mainstream EU climate goals under each of COSME’s specific objectives.

Table 10 Opportunities for strengthening the climate action mainstreaming in COSME’s programmable actions

Description of the relevant action	Opportunities for strengthening the climate action mainstreaming
Specific objective A: Improve access to finance for SMEs in the form of equity and debt	
EFG – implemented through financial intermediaries to provide venture capital and mezzanine finance to start-ups and SMEs in their expansion	Both financial instruments can support: <ul style="list-style-type: none"> • SMEs in climate-related services and technologies (e.g. renewables, smart grids, heating and cooling, water management, etc.); • SMEs undertaking climate-related investments (e.g. energy

Description of the relevant action	Opportunities for strengthening the climate action mainstreaming
phase <i>LGF</i> – implemented through financial intermediaries to provide loans and debt finance to SMEs which are not able to secure financing otherwise	and water efficiency improvements of industrial processes and buildings, fuel efficiency improvements for vehicles, application of Information and Communication Technologies (ICT) to climate services, etc.).
Specific objective B: Improve access to markets, particularly inside the Union but also at global level	
<i>EEN</i> - provides business support services including information, innovation, technology and knowledge transfer services. It also informs about access to finance and EU funding opportunities for SMEs.	Existing EEN information portals and trainings for experts and consultants can be strengthened by offering more targeted information on climate action and its benefits for SMEs such as: <ul style="list-style-type: none"> • How to get energy audits both individually and within clusters; • How to access European and local initiatives and funds that finance the energy efficiency improvements; • How to benefit from using energy efficient products and appliances; • How to undertake fuel efficiency measures in the transport sector; • How to evaluate the climate risks to their business; • How to undertake resilience and adaptation measures; • How to benefit from using more water efficient products, appliances and practices; • How to benefit from synergies in the same sector e.g. logistics • How to organise in clusters along the same climate benefits or threats.
Other possible actions	Similar information dissemination and awareness raising actions can also be undertaken outside the EEN.
Specific objective C: Improve framework conditions for the competitiveness and sustainability of Union enterprises, particularly SMEs, including in the tourism sector	
<i>Clusters of Excellence Programme</i> – provides cluster organisations and business networks with assistance and training on how to best support their members in fields such as internalisations, exploitation of KETs ⁴⁴ , intellectual property rights and resource efficiency (also an action of the GAP).	Apart from supporting clusters of industries specialised in climate-friendly products, technologies and services the Clusters of Excellence action can also support: <ul style="list-style-type: none"> • Clusters of SMEs that benefit from synergies with each other in a circular economy e.g. by sharing excess/ waste heat from production processes, by exploiting “waste as a resource” opportunities; • Clusters of local and regional SMEs that would be facing similar regional climate change impacts and encourage them to undertake a joint climate risk assessment; • Clusters of SMEs from the same highly climate vulnerable business sectors (e.g. logistics, cloud services, tourism) and encourage them to undertake joint climate risk assessments.
<i>KETs</i> - encompasses specific ongoing initiatives such as the KETs Observatory (which provides information about trends and market developments in the KETs industries), promotion of KETs multidisciplinary skills in SMEs and information support regarding the access to and uptake of KETs by SMEs.	COSME's involvement in the KETs action can provide concrete examples of win-win solutions and best practices of how climate action measures can modernise industrial processes and contribute to the digital single market objective of the EU. (e.g. 3D printing, smart transport systems, smart grid applications etc.)
Tourism sector	Further actions promoting adaption to climate change in the sector can be encouraged such as encouraging climate risk assessments. Actions promoting mitigation of climate change impacts in the sector can also be undertaken e.g. making energy audits or energy efficiency improvement plans a precondition for COSME assistance.
Other possible target sectors	COSME can target the transport sector – a highly carbon intensive sector in which many SMEs operate. Activities promoting carbon emission savings (by setting emission saving targets for instance) can be

⁴⁴The Commission has identified six technologies as being key for creating advanced and sustainable economies in EU countries and regions. The six KETs are micro and nanoelectronics; nanotechnology; industrial biotechnology; advanced materials; photonics; and advanced manufacturing technologies.

Description of the relevant action	Opportunities for strengthening the climate action mainstreaming
	supported: <ul style="list-style-type: none"> • Undertaking fuel efficiency improvements and reducing fuel consumption; • Establishing low carbon emission zones in urban areas; • Providing logistics-sharing and cooperation services at local level (neighbourhoods, cities) in order to pool transport services together; • Providing logistics services with climate-friendly modes of transport such as bikes and wind-borne transport; • Providing IT services that support the identification and mapping of carbon emissions, inform about routes and improvements of transport inefficiencies;
Other possible actions	Experience from the resource efficiency actions can be built upon to develop, for example, a Self-Assessment Tool and an Excellence Centre on greenhouse gas emissions accounting and options for carbon footprint reduction. The action to support the development of bio-based products can be extended to other sectors beyond the chemistry industry.
Specific objective D: Promote entrepreneurship and entrepreneurial culture	
<i>Erasmus for Young Entrepreneurs</i> - this programme allows new or aspiring established entrepreneurs to collaborate with more experienced colleagues.	The Erasmus for Young Entrepreneurs programme can foster an entrepreneurial spirit by: <ul style="list-style-type: none"> • Promoting exchanges between new and experienced entrepreneurs working together on the same climate-related subject (e.g. energy efficiency, renewable energy, adaptation services); • Promoting exchanges between new entrepreneurs with innovative ideas on how to apply existing products and services to climate action and experienced entrepreneurs (e.g. climate applications of ICT services).
Other possible actions	Furthermore, similarly to the digital entrepreneurship programme a green entrepreneurship initiative can be set up and promoted in order to facilitate the sharing of experience on climate-relevant opportunities such as smart meters, smart transport solutions, services to climate vulnerable social groups, energy efficiency measures, innovative technologies for more resource efficient manufacturing etc.

3.2. COSME’s programme cycle

This section presents an overview of COSME’s programme cycle by briefly presenting the steps, processes and actors involved, as the basis for the specific recommendations in the following sections.

3.2.1. Programming

COSME is implemented through annual work programmes developed by DG GROW. The process starts at unit level after interactions and discussions with other Commission DGs interested in providing input. Once a draft work programme is agreed upon it is made available for inter-service consultation before final approval. Two COSME annual work programmes have been launched so far – for 2014⁴⁵ and 2015⁴⁶, describing the actions which will be pursued under each of the four specific objectives of the fund. Most of the actions, award criteria, reporting requirements and performance indicators under objectives B, C and D are concretised at this stage. Even though some of the actions

⁴⁵C(2014) 4993 final, Annex 1: Annex to the Commission Implementing Decision concerning the adoption of the work programme for 2014 and the financing for the implementation of Programme for the Competitiveness of Enterprises and small and medium-sized enterprises (Work Programme 2014).

⁴⁶C(2014) 8044 final, Annex 1: Annex to the Commission Implementing Decision concerning the adoption of the work programme for 2015 and the financing for the implementation of Programme for the Competitiveness of Enterprises and small and medium-sized enterprises (Work Programme 2015).

financed under these objectives are prolonged each consequent year, the details of the concrete yearly activities are elaborated during the work programme preparation.

The financial instruments under COSME (Objective A), however, are not subject to annual programming in terms of targets and award criteria according to the legal base (i.e. the COSME Regulation). The LGF and EFG are viewed to be independent of targets and to focus solely on the financial eligibility of the beneficiaries. Therefore, the annual work programmes published by DG GROW define the annual budget amounts and general objectives of the two instruments (as set out in the COSME Regulation) but do not include award criteria or any targets.

3.2.2. Launching of programmes

Following the publication of the annual work programmes, specific calls are launched under each action. The calls under Objective A 'Access to finance' are managed by the EIF and are open to financial institutions (e.g. guarantee institutions, banks, leasing companies, venture capital funds etc.). These institutions may submit expressions of interest and if selected, sign a Fund Agreement with the EIF for participating in COSME. SMEs can in turn get funding (i.e. loans, venture capital etc.) from the selected financial intermediaries in their respective countries.

The calls for expression of interest, contracts and grants under the remaining specific objectives are announced and managed by the Executive Agency for Small and Medium-sized Enterprises (EASME). The majority of these calls cover activities such as information sharing and are often directed to national, local or sectoral organisations such as chambers of commerce and tourism offices who are in turn the local contact points for interested SMEs.

Generally, information about COSME, its annual work programmes and the opportunities for funding under the different actions is available on the websites of DG GROW, EASME and the EIF. A list of the financial institutions participating in the COSME financial instruments in each country can be found on the websites of both the EIF and the Commission. Information about access to finance for SMEs and links to the aforementioned COSME websites can also be found on the websites of the European Investment Bank, the EEN and the business portal of the 'Your Europe' website.

3.2.3. Preparation of applications

Information about the application process for the different calls is available to interested applicants. For example, the EIF informs interested financial intermediaries about COSME, the EFG and the LGF through a targeted leaflet and 'frequently asked questions' documents. Meanwhile, EASME publishes practical and clarifying information about the calls it manages in the form of 'common questions' documents and guides for the applicant. Further information can also be obtained by contacting EASME.

3.2.4. Evaluation and selection

The expressions of interest for the LGF and EFG submitted by financial institutions are assessed by the EIF primarily based on economic and financial criteria. The submitted proposals under the other specific objectives are examined and assessed by an evaluation committee also predominantly based on economic soundness and cost effectiveness criteria. The evaluation committees are composed of experts who are pooled together through calls for expression of interest published on the EASME website. Nevertheless, some proposals are evaluated by internal Commission experts.

3.2.5. Project implementation

Technical support is offered to the beneficiaries during the implementation of the COSME actions by the executive agencies for the different funding instruments. For example, EASME offers support to the EEN and contributes to its Intranet.

3.2.6. Monitoring and evaluation

Reporting and tracking climate action

Most of the COSME reporting requirements relate to the programme's main objectives, and primarily track progress towards the creation and growth of EU SMEs. However, in light of the 20% climate change mainstreaming target DG GROW is also tracking climate finance in COSME.

Generally, the approach for tracking climate expenditure in COSME concerns three stages– Annual programme statement; Annual work programme and Project level. The methodology for tracking climate expenditure⁴⁷ in COSME's programme statement and work programme is specific to each of the different actions financed. The climate contribution of the loan guarantees (the LGF part of Objective A), is assumed ex-ante to be zero due to challenges with the tracking of climate-related finance provided by intermediary financial institutions to final recipient SMEs. For venture capital (the EFG part of Objective A), it is assumed that the climate-relevant percentage of the budget for the following years is the same as it was in 2013 (i.e. as estimated for the previous programme – the EIP). This approach will be monitored on the basis of data on the allocation of funding under the EFG, with a delay of two years. In the case of the EEN (Objective B) the same approach is used. Monitoring of the EEN under the EIP was performed by examining the database of the existing EEN 'profiles' and identifying those related to climate action using the OECD classification of climate technologies and sectors. The remaining 'miscellaneous actions' of COSME supporting competitiveness (under Objectives C and D) are assumed to not contribute to climate targets and therefore also receive a marker of zero.

Ex-ante assessments indicate that climate action finance constitutes around 7-8% of the fund's budget in 2014, 2015 and 2016. These estimates are based on the approach presented above and therefore cover the EFG (Objective A) and the EEN (Objective B), which together constitute around half of the annual COSME budget. The following table gives an overview of the climate expenditure in COSME both in absolute amounts and as a share of the overall fund budget.

Table 11 Overview of the climate action expenditure in COSME (in € million)

Year	Total yearly budget		Climate action expenditure (EFG and EEN)	
2014 ⁴⁸	Draft budget	€243.6	€18.4	7.6%
2014 ⁴⁹	Actual commitment	€254.1	€21.2	8.3%
2015 ⁵⁰	Draft budget	€281.3	€20.3	7.2%
2015 ⁵¹	Actual commitment	€295.3	€21.6	7.3%
2016 ⁵²	Draft budget	€281	€20.7	7.4%

⁴⁷Draft Budget 2014, p.67.

⁴⁸Draft Budget 2014, p. 67.

⁴⁹Draft Budget 2015, p.77.

⁵⁰Draft Budget 2015, p. 77.

⁵¹Draft Budget 2016, p.96.

⁵²Draft Budget 2016, p.93.

Nonetheless, tracking will be performed also at project level during the implementation phase for all objectives. It is possible that then individual actions may be identified as climate-relevant. For instance, the delegation agreement signed between DG GROW and the EIF stipulates that information should be provided about the number of final recipients of the EFG whose activities are related to climate action and resource efficiency. However, such information has not been provided yet and the ex-ante estimates about the climate action share of the EFG have not been verified.

Programme monitoring and evaluation

Monitoring and evaluation takes place also at the aggregate programme level – the COSME programme is monitored and evaluated on an annual basis by DG GROW. The performance of each action is evaluated based on indicators defined in the COSME regulation and more detailed indicators defined in each work programme. Several of the indicators are aimed at measuring the effect on sustainability. The implementation report for 2014, which is expected soon, will cover all projects and provide information about the performance of the projects including on sustainability and resource efficiency⁵³. Furthermore, DG GROW is expected to produce an overall interim evaluation report on the achievement of the COSME objectives by 2018.

3.3. Recommendations for climate mainstreaming in COSME

Given the differences in the programming, implementation and reporting of the financial instruments (Objective A) and the service contracts and grants (Objectives B, C and D), opportunities for further climate mainstreaming in the COSME are grouped along these two types of funding instruments in the following sections.

A first recommendation addresses all the COSME objectives and funding instruments and relates to the general level of knowledge and awareness about climate change and its important interactions with the objectives of COSME.

Recommendation COSME-1: Improve the understanding of climate change and its interactions with COSME across all officials working on the management of COSME.

The policy officers and officials from DG GROW, EASME and EIF working on COSME should have a better overall understanding of climate change and its relevance for their work. This can be achieved through specialised training and guidance documents, which could be developed through a collaboration between DG CLIMA and DG GROW, or commissioned from external climate change experts. The focus of this training and information should be on the synergies between EU climate objectives and those of COSME, leading to more concrete definitions what constitutes 'climate action' within COSME. Collaboration between DG CLIMA, DG GROW, EASME and/or the EIF on specific climate-related projects under COSME would also assist in building the understanding of climate issues among officials involved in the management of COSME. This would lead to more specific focus on climate change within the COSME work programmes and also enable better recognition of climate-relevance within funded actions. It will also greatly facilitate the update of many of the recommendations within specific stages of the programme cycle for both the financial instruments and the other objectives described below.

3.3.1. Climate mainstreaming in the financial instruments

This section highlights the opportunities for strengthening the climate mainstreaming in the two financial instruments of COSME (Objective A). The first section is devoted to

⁵³Impact indicators A1, F4 and H2 as defined in the Annex of the COSME regulation.

recommendations addressing the preparation and review of applications for financing; the second deals with reporting, tracking and evaluation of the results. Work programming is not addressed here, as the annual work programmes published by DG GROW do not include any thematic criteria or targets; the use of the financial instruments in this sense is to be determined by the eligible beneficiaries.

Implementation cycle

The COSME financial instruments are implemented through selected financial intermediaries from across the Member States – typically banks, leasing companies, venture capital funds etc. It is these intermediaries who then manage the provision of financial support to SMEs, and their level of awareness about the ways in which the support can be used (e.g. for climate-relevant activities) will have an impact on the results of the programme.

Recommendation COSME-2: Provide climate-related information to the intermediaries selected under the two financial instruments.

DG GROW and the EIF should provide financial intermediaries with targeted information how COSME can support climate action. For example, information can be provided on which types of investments constitute climate action – renewable energy, energy efficiency improvements, adaptation services, etc. The information can be provided on the websites of DG GROW and the EIF or in the form of targeted guidance documents for each type of intermediary (e.g. bank, investment fund, venture capital fund).

The scope of support provided through the COSME financial instruments is to a large extent determined by the characteristics of the enterprises that apply for and receive funding. To do so, potential beneficiaries need to learn about COSME and what it offers. How COSME is publicised – who it targets and with what information – therefore can have an important impact on the extent to which climate-relevant actions receive funding. If EU enterprises with potential to request support for climate-relevant initiatives (e.g. producers of climate change related technologies and services; high energy consumers; or those vulnerable to climate change risks) can be specifically targeted as potential beneficiaries of COSME, this would increase the number of climate-relevant funding applications.

Recommendation COSME-3: Provide targeted information to both SMEs working in climate-relevant sectors and SMEs in other sectors about the possibilities to finance climate actions with COSME.

To help ensure that the potential of COSME to finance climate action is fully exploited, DG GROW and the EIF should provide SMEs involved in, or potentially interested in, climate-relevant activities targeted information about the two financial instruments of the fund. SMEs already active in climate-related sectors could be particularly targeted, allowing SMEs that are often considered as high risk by investors to benefit from the opportunities of COSME and to contribute to the achievement of both the fund's objectives and the EU climate goals. In addition, this information could assist in making SMEs in other sectors aware of the opportunities to finance beneficial mitigation (e.g. energy efficiency) and adaptation actions through COSME. The information can be provided in the form of a dedicated 'Climate finance' webpage on DG GROW's and the EIF's websites and might be divided in two parts: for SMEs in climate-related technologies and services and all other SMEs. In addition, and linked with recommendation H2020-13 below, this information could be added to the existing DG CLIMA webpage on financial instruments⁵⁴.

⁵⁴ http://ec.europa.eu/clima/policies/budget/life/instruments/index_en.htm

While the legal basis for COSME does appear to prevent the inclusion of any specific references to climate action in the work programme, this does not prevent the financial intermediaries from positively reinforcing climate change awareness within the procedures used to assess loan applications funded by COSME. In many cases, climate-friendly provisions would reinforce the financial viability of loan applications.

Recommendation COSME-4: Request applicant SMEs to state whether and how their proposals for financing are 'climate-proofed'.

DG GROW and the EIF should explore the possibilities to include special voluntary climate-related clauses in the agreements signed with intermediaries. These clauses can, for instance, stipulate that the financial intermediaries would require applicants to consider energy efficiency or energy savings in their applications, or demonstrate that the proposed activities are not threatened by climate risk. The EIF could consider a clause in the agreements it signs with financial intermediaries to request that SMEs are asked to consider climate proofing against current and future climate impacts in their proposals and that a positive answer is taken into account in the appraisal performed by the intermediaries. This may even be standard procedure in many such financial institutions, and formalising it would enable COSME to report positively on climate action. This action would be implemented on a voluntary basis only, among financial intermediaries interested in taking climate considerations into greater account. In the initial stages, this approach could be piloted with one or two financial intermediaries, and subsequently reviewed to identify potential benefits and impacts on intermediaries and beneficiaries.

Reporting, tracking, monitoring and evaluation

The main challenge with climate tracking in COSME is posed by the financial instruments, especially the LGF, as the actual investments and financed projects are not known ex-ante⁵⁵. As a result climate spending in these actions is not tracked or is assumed to be 0% which leads to incomplete information or an underestimation of COSME's total contribution to climate action. Therefore, an opportunity for improvement of the climate finance tracking methodology at COSME is to include a fourth stage of ex-post tracking based on data of the types of sectors, companies or activities financed through venture capital funds and loan guarantees⁵⁶.

Recommendation COSME-5: Apply a definition of what constitutes climate action in order to track ex-post the contribution of the EFG to the climate finance target and facilitate the evaluation of the work programmes.

DG GROW and the EIF should promote more accurate tracking of the EFG finance by applying a clear definition of what activities or sectors constitute climate action (with the support of DG CLIMA as required). This would enable the identification of the final recipients of EFG funds who fall in any of these categories. This can in turn facilitate the regular evaluations of the fund by informing more accurately about the share of SME start-ups in climate-related activities and the fund's contribution to the cross-cutting objective of climate action. This would require the agreement among relevant DGs on a common definition of climate action or list of actions considered climate relevant, for the purposes of climate tracking within the EFG. The list would have to be open-ended and with the flexibility to regularly update if needed.

Recommendation COSME-6: Explore opportunities to track climate change in the LGF in order to provide more accurate information about the contribution to the

⁵⁵Withana, S., Baldock, D., Illés, A., Rayment, M. and Medarova-Bergstrom, K. (2014) 'Tracking system for climate expenditure in the post-2013 EU budget: Making it operational', Final summary report for DG CLIMA. London/Brussels, IEEP', p.39.

⁵⁶Ibid.

climate change target.

By working with the EIF and financial intermediaries, DG GROW can explore opportunities for improving the transparency of climate action in the loans provided to SMEs without imposing an excessive burden on intermediaries or beneficiaries. For example, voluntary surveys can be sent out to intermediaries in order to gather information about the purposes of the provided loans to SMEs. Such surveys can be combined with other surveys regularly carried out among participating institutions in order to avoid additional reporting burdens. Having a better overview of the final purposes of the loans received through the LGF can uncover existing climate action in the instrument and facilitate the overall evaluation of the fund.

3.3.2. Climate mainstreaming in the service contracts and grants

This section highlights the opportunities for strengthening climate mainstreaming in the service contracts and grants covered by the remaining COSME actions (Objectives B, C and D). Recommendations are grouped along the following steps of the programme cycle:

- Work programmes and programming;
- Implementation cycle;
- Reporting, tracking, monitoring and evaluation.

Work programmes and programming

Unlike the financial instruments, the funding opportunities available under COSME via service contracts and grants are subject to detailed annual programming. The annual work programmes of COSME are flexible enough to offer an opportunity to include both more climate-related actions from which SMEs can benefit and more climate-related performance indicators. A key to achieving this is building the awareness and capacity of the DG GROW policy officers responsible for the preparation of the annual work programmes as highlighted in Recommendation COSME-1. Additionally, early inter-service collaboration through informal networks can also contribute to the improved climate mainstreaming in the annual work programmes. Experience in other DGs⁵⁷ shows that informal information sharing channels and small networks that make the interactions more personal and clear are more effective for policy mainstreaming as they aid the understanding of the topics, concepts and support needs of the 'receiving end'.

Table 10 above summarises concrete ideas for the types of climate-relevant actions that could be included in future COSME annual work programmes.

Currently, climate action in COSME is undertaken predominantly within the Green Action Plan (GAP) for SMEs⁵⁸. Several GAP actions on resource efficiency and awareness raising are implemented by the EEN (part of Objective B) and the Clusters of Excellence Programme (part of Objective C). For example, the Resource Efficiency Self-Assessment Tool (2014) and the following Resource Efficiency Excellence Centre (2015) have been financed as part of the GAP implementation. However, the climate mainstreaming in the fund can be further enhanced primarily through energy efficiency, transport sector and adaptation actions.

Introducing more climate-related actions in the annual work programmes of COSME is important for ensuring that SMEs can exploit the benefits such actions offer. For example, while improved efficiency of energy and fuel use reduces carbon emissions and

⁵⁷Interview with DG DEVCO.

⁵⁸COM(2014) 440 final: Green Action Plan for SMEs, Enabling SMEs to turn environmental challenges into business opportunities; and SWD(2014) 213 final: List of EU actions supporting SMEs in a green economy, Accompanying document to the Green Action Plan.

contributes to mitigation goals, it also entails significant cost savings, which can in turn enhance the competitiveness of SMEs. For instance, SMEs in manufacturing – one of the top five sectors in which European SMEs operate⁵⁹, have the highest energy consumption and costs compared to other SMEs⁶⁰. Similarly, fuel efficiency improvements also offer cost savings which can be experienced relatively quickly. The payback period for a more efficient light commercial vehicle is around 3.5 years even with the lowest potential oil price, while the average first user drives his vehicles for approximately 5 years⁶¹. Highlighting the cost saving benefits of energy and fuel efficiency measures is likely to be well received by SMEs as different surveys indicate that costs saving is the main driver for companies to undertake resource and energy efficiency investments^{62,63}. Besides, energy and fuel efficiency investments can reduce the vulnerability of European SMEs' competitiveness and running costs to uncertainties and shocks in international energy prices⁶⁴.

Additionally, addressing the business threats that climate change poses offers various opportunities for SMEs to improve their competitiveness. For instance, climate change impacts can create new markets for existing goods and services, increase the demand for maintenance works, offer financial benefits for better risk management, become a competitive advantage for enterprises with flexible supply changes and stimulate the innovation of products and services.

The following recommendations propose how such climate-related business opportunities can be included in the annual work programmes of COSME.

Recommendation COSME-7: Introduce more climate-related events in the programming of the EEN in order to inform SMEs about the business opportunities of climate action.

There is an opportunity to utilise the network of stakeholders and events organised by the EEN to propose information campaigns, events and training on climate action opportunities and benefits for SMEs. These information campaigns and events can be targeted to certain sectors or types of SMEs (e.g. energy-intensive enterprises or technology developers), and can cover areas such as:

- Cost savings from energy and fuel efficiency;
- Opportunities to provide and export climate-related technologies and services, incl. adaptation services;
- Benefits from adopting measures to improve climate resilience;
- Opportunities to organise SMEs into clusters and business networks around climate threats and benefits.

Such information campaigns and events in the EEN should be introduced in the annual work programmes of COSME by DG GROW. Nevertheless, there are several options to complement this:

- DG GROW could also include more details on the above mentioned climate-related actions in the "Annual Guidance Note" for the EEN, which defines the annual topic priorities of the network. Currently, climate-related business topics are not

⁵⁹European Commission, DG GROW (2014) 'A partial and fragile recovery: Annual report on European SMEs 2013/2014', p.7.

⁶⁰[3E website: Energy efficiency policy measures for manufacturing SMEs in Europe: a comparative analysis](#)

⁶¹TNO (2012) 'Assessment of alternative targets and modalities for the CO2 regulation for light commercial vehicles', pp.24-25.

⁶²European Commission Memo (Brussels, 17 December 2013): Eurobarometer survey: How green are European SMEs?

⁶³Energy Efficiency Financial Institutions Group (EEFIG) (2015) 'Energy Efficiency – the first fuel for the EU economy, Final Report covering Buildings, Industry and SMEs', p.41.

⁶⁴Energy Efficiency Financial Institutions Group (EEFIG) (2015) 'Energy Efficiency – the first fuel for the EU economy, Final Report covering Buildings, Industry and SMEs', p.6.

included in the guidance note and their addition would encourage the EEN partners to organise related events. DG CLIMA could offer support in the identification of these climate-related options (within EEN's budget).

- DG CLIMA can directly request the EEN to organise events and information campaigns on its behalf.
- DG CLIMA can directly request the EEN to implement specific actions outside the work programme of COSME.

Recommendation COSME-8: Introduce climate-related actions in the work programme under the 'Framework conditions' objective in order to help SMEs realise the co-benefits of climate-related business opportunities.

The following constitute some of the options for inclusion of climate action in the COSME work programme:

- Utilise the Clusters of Excellence programme to assist cluster organisations in providing quality services to SMEs on climate-related issues (e.g. climate risks and resilience improvement opportunities);
- Provide concrete examples of win-win solutions between climate actions and Key Enabling Technologies (KETs) (e.g. cost savings, innovative products);
- Promote further climate actions in the tourism sector (e.g. energy audits);
- Promote the development of self-assessment tools related to climate action (e.g. carbon footprint assessment, climate risk assessment);
- Promote climate actions in the transport sectors that can benefit SMEs (e.g. fuel efficiency improvements that result in cost savings).

DG GROW can elaborate specific actions on the above-mentioned climate opportunities for inclusion in COSME's annual work programmes.

Recommendation COSME-9: Enhance the promotion of an 'entrepreneurial spirit' for climate action by utilising the potential of climate-related business opportunities.

The Erasmus for Young Entrepreneurs programme can be used to foster an entrepreneurial culture by:

- Promoting exchanges between new and experienced entrepreneurs working on the same climate-related subject (e.g. energy efficiency, renewable energy, adaptation services);
- Promoting work exchanges between new entrepreneurs with innovative ideas on how to apply existing products and services to climate action and experienced entrepreneurs (e.g. climate applications of ICT services).

Furthermore, a separate action for 'green entrepreneurship' can be included in the annual work programmes of COSME. DG GROW can implement these options by elaborating the actions in the work programme which include examples of what can be climate-related entrepreneurship. Additionally, a minimum yearly target for these exchanges can be set. Together with the participating intermediary educational institutions DG GROW should also explore the possibilities for prioritisation of climate-related exchange applications without limiting the access of other entrepreneurs to the programmes.

COSME annual work programmes also contain the criteria used to evaluate and select proposals, and monitoring and evaluation requirements. The inclusion of more climate-relevant actions in work programming will be reinforced by corresponding references to climate change in these parts of the programme.

Recommendation COSME-10: Include climate-related award criteria, reporting requirements and performance indicators in the fund's annual work

programmes in order to encourage the successful uptake of these initiatives and assess their contribution to both COSME and climate objectives.

DG GROW should include specific climate-related award criteria, reporting requirements and performance indicators when more climate-related actions are introduced in the annual work programmes based on the following examples:

- *Award criteria*: experience with organising climate-related events; experience with setting up climate-related self-assessment tools; experience with energy audits;
- *Reporting requirements*: the number of participants in climate-related EEN events; the sectors in which member SMEs of new climate-related clusters operate;
- *Indicators*: number of SMEs taking up climate-related business opportunities following EEN events; the number of newly formed climate-related clusters.

Implementation cycle

The following recommendations present the opportunities to strengthen the climate action mainstreaming throughout the implementation of the COSME work programmes.

European SMEs – the target group for COSME funding – are a very dispersed group. To better target them, many of the service contracts and grants available under COSME are dedicated to the provision of information and training to existing networks and cluster organisations, which in turn offer support to their member SMEs. To maximise the climate potential of COSME and to ensure that SMEs are aware of the advantages offered by climate action business opportunities, information about these benefits should be provided both directly to SMEs and to cluster organisations and business networks. This will enable the transfer of such information to large numbers of SMEs who would not actively seek information about climate-related opportunities.

Furthermore, the extent to which service contract and grant applicants are able to include a focus on climate-relevant aspects within their applications, as well as develop applications directly aimed at climate objectives can be enhanced through targeted support to them during the project preparation process.

Recommendation COSME-11: Provide information about the potential of COSME to finance climate action to participant cluster organisations and SMEs networks.

DG GROW and EASME can provide on their COSME webpages information and concrete tips about:

- How applicant cluster organisations and networks can integrate climate and resource efficiency in their project proposals and business activities in order to meet the climate related award criteria.
- How cluster organisations and networks can inform their SME members about the benefits of 'win-win' opportunities from following business, climate and resource efficiency objectives.
- How SMEs can benefit from climate-related activities and can use COSME to finance these i.e. make a link to the financial instruments under Objective A.

This information can be presented in the form of reports, guidance documents or information pages on the COSME webpages of the two institutions and the business portal of the 'Your Europe' business portal. All this information should also make reference to the work programme actions and concrete calls which cover the climate-related business opportunities for SMEs. The climate-related information can further be presented in topics targeting certain types of SMEs such as producers of climate change related technologies and services; high energy consumers; or those vulnerable to climate

change risks.

Recommendation COSME-12: Offer more climate-related information and guidance documents on the EEN Intranet in order to facilitate the uptake of climate-related events and activities within the network.

EASME should include documents, instructions, manuals and thematic information about 'win-win' solutions for business and climate on the EEN Intranet. This will facilitate the organisation of related events and perhaps motivate EEN partners to organise additional events on local level.

Recommendation COSME-13: Create an EEN climate action internal working group to facilitate the network's contribution to climate action.

DG GROW with the support of DG CLIMA should propose the creation of a climate action internal working group which will be responsible for steering the EEN's work in identifying, informing about and organising events about climate-related opportunities for businesses. Additionally, the working group could work on the climate documents which will be published on the EEN's Intranet. This would be distinct from the EEN Sector Groups⁶⁵, which support members of the EEN in connecting with other members in the same sector. This working group would be an internal working group, focused on identifying the EEN services relevant to members seeking support on climate-related issues, and identifying climate knowledge needs among EEN members.

Recommendation COSME-14: Expand the EEN network to link with local climate networks (e.g. Mayors Adapt and Covenant of Mayors) to facilitate the network's contribution to climate action and exploit local synergies.

EASME should promote the inclusion of local adaptation networks in the EEN in order to exploit the potential synergies. Local adaptation networks can benefit from the large outreach of the EEN and its links to local business. Meanwhile, the EEN could inform its members about local business opportunities arising from the climate networks' events. Furthermore, the EEN could benefit from the experience of the Mayors Adapts and Covenant of Mayors initiatives with implementing climate-related actions at the local level.

DG CLIMA should offer support and build links with Mayors Adapt, while DG ENER should facilitate the links with Covenant of Mayors.

The evaluation of applications for funding, particularly for actions where climate change has been mainstreamed into the work programme and calls, should involve the participation of reviewers with knowledge of climate change and its interactions with competitiveness and growth objectives.

Recommendation COSME-15: Include climate experts in the evaluation committees for COSME calls and provide relevant guidance to the other experts in order to ensure that the climate-related criteria of the calls are being met by the applicants.

DG GROW can recruit a minimum number of climate experts when applications are evaluated both internally and externally. Including at least one expert experienced in a climate-related technology or service in the evaluation committees will ensure that the

⁶⁵ <http://een.ec.europa.eu/about/sector-groups>

award criteria are being sufficiently met by applicants and that the selected beneficiaries can ensure the meeting of both COSME and climate objectives. Alternatively, once the climate change knowledge base is built up within DG GROW and/or EASME, this may suffice. Additionally, climate-related information and evaluation tips can be provided to all experts in the evaluation committees when they are provided with guidelines upon selection.

Reporting, tracking, monitoring and evaluation

More accurate climate finance tracking results could be achieved in the actions financed under Objectives B, C and D through integration of climate change within existing reporting requirements. Moreover, a better overview of the on-going climate action in COSME would facilitate improvement of the fund's programming, particularly as initiatives tend to be repeated each year. Improved tracking leads to better understanding of the role of climate change in the fund and improved programming in future years. This in turn can facilitate the 2017-2018 interim evaluation of COSME and its overall contribution to climate objectives.

Recommendation COSME-16: Explore the opportunities to improve climate finance tracking in Objectives B, C and D in order to provide a more accurate overview of the climate action in the network.

DG GROW and EASME can promote a more accurate climate finance tracking of the actions funded under objectives B, C and D. For example, the climate-related EEN activities can be tracked through voluntary annual surveys among its members. This should be aimed at gathering quantitative information beyond the sectors in which participating SMEs operate: e.g. number of attendees at climate related events; number of SMEs undertaking climate action following EEN events, etc. This could be combined with other surveys regularly carried out among EEN members to avoid additional burden on members. Additionally, tracking of climate action should be integrated in the existing reporting mechanisms for Objectives C and D.

Recommendation COSME-17: Update the climate-related actions in the annual working programmes based on tracking and ex-post data.

DG GROW is going to review ex-post project data for the past work programmes. This opportunity should be used to identify any existing climate-related actions among the beneficiaries and the EEN, which in turn can facilitate the formulation and further build-up of such actions into a specific call in future annual work programmes. Consequently, climate related award criteria, and especially, reporting requirements and performance indicators can be identified based on the available ex-post data and introduced in the work programmes.

4. HORIZON 2020

This chapter presents the opportunities for enhancing the mainstreaming of climate action in Horizon 2020, in light of the need to drive further climate action under the programme to meet the Horizon 2020's 35% target. The chapter provides a brief overview of Horizon 2020. This is followed by an outline of the programme cycle for Horizon 2020, with a description of how climate is currently integrated throughout the cycle. The chapter goes on to review and assess how climate action is addressed in the current 2014-2015 work programme, and identifies opportunities to maximise climate action within the work programme going forward. Finally, the chapter sets out specific recommendations for strengthening climate mainstreaming in Horizon 2020.

As outlined in this chapter, climate mainstreaming must go beyond areas directly relevant to climate change if the 35% climate action target for Horizon 2020 is to be met. To achieve this, appropriate institutional arrangements need to be put in place to reflect the priority given to climate change as a cross-cutting objective of the programme. In addition, there are opportunities to use existing tools and processes to help drive climate action within the projects funded through Horizon 2020.

Horizon 2020 is the European Union's framework programme for research and will make more than €78 billion (current prices) available for research, innovation and technology development between 2014 and 2020. The programme is structured around three pillars, based on the three priorities of the Horizon 2020: Excellent science; Industrial leadership and Societal challenges. These three pillars shape the overall functioning of Horizon 2020, with the 18 specific objectives of the programme grouped around these pillars. The objectives of the three main pillars are as follows:

- **Excellent science:** To strengthen the Union's world-class scientific excellence and make the Union research and innovation system more competitive, creation of the European Research Area.
- **Industrial leadership:** To speed up the development of technologies that will support businesses and innovation, including for small companies.
- **Tackling societal challenges:** To respond to the priorities identified in the Europe 2020 strategy.

Horizon 2020 is centrally managed by the European Commission, with the support of a number of EU executive agencies and institutions. DG RTD is the lead DG for Horizon 2020, responsible for overall coordination of the programme and for implementing specific areas of Horizon 2020 that are funded through DG RTD. Other DGs contribute to the development and management of the parts of the programme they directly fund. These DGs are DG AGRI, DG CNECT, DG EAC, DG ENER, DG GROW, DG HOME, DG MOVE, and JRC. The implementation of Horizon 2020 is supported by a number of executive agencies, including REA, EASME and INEA.

The Commission adopts annual work programmes that provide descriptions of the actions to be financed, an indication of the budget allocated to each action and possibly the number of projects, indicative implementation timetables for key objectives, as well as an indication of the main evaluation criteria.

In terms of budget, Horizon 2020 is the largest EU research programme to date. In the current financial framework, more than €78 billion (current prices) was committed for the 2014-2020 period⁶⁶. Compared to the previous research programme, the Seventh

⁶⁶Part of this budget (approximately €2.4 - €2.7 billion) will be reallocated to support the European Fund for Strategic Investments (EFSI) in the 2015-2017 period. Figures stated in this report reflect the commitment

Framework Programme for Research and Technological Development (FP7), the total budget represents an increase of 30%⁶⁷ in real terms.

While primarily a grants-based programme, Horizon 2020 combines a range of financial tools, although the vast majority of funding is disbursed through the grant system. The main financing mechanisms through Horizon 2020 are:

- **Grants** are a direct financial contribution to finance a project. In Horizon 2020, participants may be entitled to a reimbursement of up to 100% of their direct cost and a lump-sum of 25% of indirect costs.
- **Procurement** under which a contractor provides to the Commission goods or services (e.g. studies).
- **Prizes** through which financial contribution is given as reward following a contest in a specific area.
- **Financial instruments**, which consist of equity or quasi-equity investments, loans, guarantees or other risk-sharing instruments.
- **Public-private and public-public partnerships**, where partnerships are formed with companies and/or other public authorities to support research and innovation activities.

In Horizon 2020, there is a distinction between 'programmable actions' and 'bottom-up actions'. This distinction is based on how the topic of the research carried out under each action is defined. Programmable actions account for the largest share of funding in the programme – around 70% for the period of the MFF. For these actions, the broad topics are defined by the Commission, in consultation with stakeholders. To secure funding under a programmable action, an application must specify how the proposed research activity addresses the topics defined in the work programme. For bottom-up actions – the European Research Council, the Marie-Sklodowska Curie Action, the Access to Risk Finance instrument and the SME instrument – the topic is determined by the researchers seeking funding. These actions account for the remaining 30% of the funding in the programme.

Horizon 2020 has a higher climate action target than the overall EU budget. The implementing regulation for Horizon 2020⁶⁸ sets out an expectation that climate-related expenditure should exceed 35% of the overall Horizon 2020 budget. This higher target reflects the need to drive investment in research and innovation that will enable the low-carbon technologies and adaptation actions essential for meeting the EU's climate policy objectives.

4.1. Tracking of climate action in Horizon 2020

In general, the programme is tracked according to the common Commission methodology of tracking climate expenditure ex ante, using the Rio Markers. However, the way tracking is applied varies across Horizon 2020 according to the specific management arrangements for each part of the programme. The level at which tracking is applied – at topic-level or at specific project-level – and the point in the programming cycle tracking occurs, depend on the nature of the action and the implementing arrangements for the specific action.

of funds prior to this reallocation to the EFSI, as detailed information was not available at the time of writing.

⁶⁷Factsheet: Horizon 2020 Budget,

http://ec.europa.eu/research/horizon2020/pdf/press/fact_sheet_on_horizon2020_budget.pdf

⁶⁸REGULATION (EU) No 1291/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)

Programmable actions

In the case of programmable actions, the climate-relevance is reasonably clear from the language of the specific objective and expected impacts in the call. Thus, these actions are tracked at the level of the specific objective or societal challenge. Therefore, tracking is relatively straightforward. Tracking can be applied as soon as the work programme is available. In these cases, tracking is applied by the services that coordinate the work programmes.

Bottom-up actions

So-called bottom-up actions, such as the Marie Skłodowska-Curie action, provide support to researchers across all disciplines and topics. The specific research focus of these actions is determined by the applicants. Thus, these actions can only be tracked at the project-level. Therefore, the tracking markers cannot be applied until after the grants are awarded. Tracking of bottom-up actions is applied by the project officers responsible for managing the projects.

Because tracking is applied at the project level to a vast number of individual projects⁶⁹, and is implemented by many individual project officers, tracking of climate action in bottom-up Horizon 2020 actions has been a challenge. For these actions, tracking numbers are not available until the funding is allocated to applicants. Tracking relies on many individual project officers reviewing the grant, assessing its climate-relevance and entering an assessment of the climate action within the grant into the grant management system. Initial indications are that, in many cases, this information is not being reported by project officers. In addition, the assessment of climate action is not being made consistently, as project officers apply different approaches to assessing climate action.

Other approaches

Customised approaches are needed for tracking other actions where non-European Commission actors are involved and may hold the data needed for tracking, such as Article 185 actions (joint research partnerships with Member States) and Article 187 actions (public-private partnerships), and for the financial instruments which are managed by financial intermediaries.

Training and guidance

DG RTD staff are available to provide training and guidance material to relevant Commission staff; however, the staff resources are limited. A detailed guidance document on tracking of climate action expenditure in Horizon 2020⁷⁰ is maintained by DG RTD and disseminated among relevant staff. When issues on tracking arise, DG RTD and DG CLIMA may lead inter-service discussions, particularly through the inter-service Horizon 2020 Cross-Cutting Issues Group. The methods, processes and outcomes of tracking of climate change expenditure have already been discussed by this inter-service group on several occasions.

Tracking results

Given the challenges of tracking in the bottom-up actions in Horizon 2020, complete tracking results are not yet available for the first year of the programme 2014. Only initial estimates for each year of the programme to date are available, based on draft budgets and applying the Rio markers at a very aggregate level. More complete figures relating to the contribution of the 2014 budget to climate action, based on the results of the calls for proposals, are expected to be available after summer 2015.

⁶⁹In the Draft Budget for 2015, it is estimated that there will be over 1000 grants under the European Research Council and 1200 grants under the Marie Skłodowska-Curie action in 2015.

⁷⁰DG RTD, Climate Action, Sustainable Development and Biodiversity Expenditure in Horizon 2020: Guidance, Version 02/02/2015

Table 12 Overview of the climate action expenditure in Horizon 2020 (in € million)

Year	Total annual budget		Climate expenditure (% of total budget)	
2014 ⁷¹	Draft budget	€8 826.5	€2 251.8	25.5
2014 ⁷²	Actual commitment	€9 022.4	€2 246.8	24.9
2015 ⁷³	Draft budget	€9 560.0	€2 012.5	21.1
2015 ⁷⁴	Actual commitment	€9 841.5	€1 944.9	19.8
2016 ⁷⁵	Draft budget	€9 366.0	€1 888.4	20.1

The estimated climate expenditure in Horizon 2020, as stated in the draft budget papers, is summarised in Table 12 above. These figures show the programme falling well short of the 35% target. However, they do not include any estimated climate expenditure for the bottom-up actions, thus, these figures are likely to understate the total climate expenditure in Horizon 2020. Nonetheless, it is unrealistic to expect that the bottom-up actions will meet the shortfall, given that activities under these actions are under no specific mandate to address climate action.

4.2. Horizon 2020 programme cycle

This section provides a brief overview of the programme cycle for Horizon 2020, outlining how the programme is developed and implemented. The section also describes how climate change is addressed throughout the programme cycle.

A simplified overview of the overall process from work programme to the completion of a Horizon 2020 project is presented in Figure 4 below. This process is described below in more detail, with a brief discussion of how climate is currently addressed in each step. A more comprehensive assessment of how climate is integrated in the current multiannual work programme is provided in Section 4.3 below.

Figure 4 Simplified overview Horizon 2020 proposal and project management process



⁷¹COM(2013) 450: Draft General Budget of the European Commission for the financial year 2014, Working Document Part I: Programme Statements of operational expenditure

⁷²COM(2014) 300: Draft General Budget of the European Commission for the financial year 2015, Working Document Part I: Programme Statements of operational expenditure

⁷³Ibid.

⁷⁴SEC(2015) 240, Statement of estimates of the European Commission for the financial year 2016 (Preparation of the 2016 Draft Budget), May 2015.

⁷⁵Ibid.

4.2.1. Programming

The work programme is central to decision-making on the activities that are to be funded by Horizon 2020. The main topics for which projects shall be financed are set in multi-annual work programmes, which are prepared by the European Commission, based on input and guidance from a number of sources, including the Strategic Programme, Advisory Groups, consultation with Member States through the Horizon 2020 Programme Committees, other DGs (through Inter-service Horizon Groups) and external stakeholders.

Strategic programme

The Strategic Programme sets out the focus areas providing the main direction of the programming over overlapping three-year periods. The strategic programme is developed by the research family of DGs. The 2014-2016 Strategic Programme identifies exiting the economic crisis as the foremost priority for the first years of Horizon 2020. Nonetheless, climate is recognised as both a challenge and an opportunity, and is expected to be an important priority of the programme. The Strategic Programme sets out 12 focus areas expected to have high growth and innovation potential. Some of these focus areas (such as 'Competitive low-carbon energy' and 'Energy efficiency') are directly relevant to climate change. As individual work programmes are informed by the Strategic Programme, the level of mainstreaming of climate in this programme and its 12 focus areas is important. Any improvements could only be applied for the 2016-2018 Strategic Programme.

Advisory groups

Experts in the 18 advisory groups provide strategic guidance and input to the drafting of the work programme. Therefore their awareness and knowledge of possibilities to incorporate climate change adaptation and mitigation is extremely important. Outside of the advisory groups directly relevant to climate change, there is no requirement that these groups include climate change expertise mentioned in the Missions and Selection Procedures for these groups⁷⁶.

Horizon 2020 Programme Committees

National Member State representatives contribute to the programming through Horizon 2020 Programme Committees, which provide input on the strategic planning of the programming and on the individual work programmes and links with national funding. The Committees ultimately provide their opinion on the work programme parts under the comitology procedure.

Inter-service Horizon Groups

Inter-service Horizon 2020 Groups co-ordinate the development of the work programmes within the Commission. There are 12 Horizon Groups, composed of representatives of relevant directorates.

The Horizon 2020 Cross-Cutting Issues group discusses issues relevant to all Horizon 2020 themes, including climate mainstreaming. This group meets twice monthly, feeds into the preparation of the work programme and reports to the research family of DGs.

Other Inter-service Horizon 2020 groups have an impact on the content of the work programmes and the participation of members and services with an understanding of how climate may be relevant to a particular area has the potential to contribute to better mainstreaming of climate change into the programmes.

⁷⁶Register of Commission Expert Groups and Other Similar Entities

4.2.2. Launching programmes

Potential beneficiaries are invited to submit an application through a call for proposals. Calls for proposals are developed on the basis of work programmes. In general, once a call for proposal is published, applicants are required to submit proposals within the deadline through the electronic submission system of the Participant Portal.

The dissemination actions that can be used to promote Horizon 2020 to applicants provide an opportunity to highlight to applicants the bottom-up actions that could be used to support climate action. For example, the Horizon 2020 homepage on Environment and Climate Action⁷⁷ currently highlights Societal Challenge 5, which is specifically focused on climate change. This could be broadened to highlight other actions under Horizon 2020 that could be used to support climate action. In particular, this page could be used to direct potential beneficiaries to the financial instruments under Horizon 2020.

4.2.3. Project preparation

Alongside the information provided on the participant portal, applicants may receive support from national organisations and authorities. In particular, the network of National Contact Points (NCPs) is the most significant structure providing guidance on the Horizon 2020 application process. NCPs are financed and managed by national governments, either at the local, regional and national level. Their level of involvement may vary greatly, from giving general support and guidance to training (on financing issues, proposal preparation) and personalised support for proposal preparation and consortium building.

Not all project proponents would know how to weave climate change mitigation and adaptation into a proposal especially when non-climate calls are concerned. Therefore, all possible strategies should be explored for strengthening the capacities of project proponents to competently consider climate change measures in their proposals. Possible approaches should include raising the capacities of National Focal Points but also incorporating climate change into the standard proposal forms and the standard form for self-evaluation.

4.2.4. Project evaluation and selection

Proposals are evaluated against the following broad criteria: Excellence; Impact; and Quality and efficiency of the implementation. Proposals are ranked according to evaluation results. Project proposals are not specifically evaluated on the basis of their impact on climate change objectives unless these objectives are directly identified in the topic and call for proposal.

Proposals are evaluated by independent experts, identified from the Commission's database of independent experts for research and innovation. Evaluators are often deeply highly specialised in the subject area of the project proposal they evaluate. There is no specific requirement that these experts have expertise on climate change and they are not provided with any guidance on how to take climate change into account during the evaluation of proposals⁷⁸.

⁷⁷ <http://ec.europa.eu/programmes/horizon2020/en/area/environment-climate-action>

⁷⁸For example, the Guidance for Evaluators of Horizon 2020 Proposals (Version 1.1 of 26 September 2014 provides no specific guidance on how climate change should be taken into account.

4.2.5. Project implementation

The European Commission, or an executive agency, is responsible for overseeing the implementation of projects. Project officers assess progress and monitor issues through regular periodic reports. The coordinator is also required to fill in a 'questionnaire', covering issues related to the action implementation and the economic and societal impact⁷⁹.

Beneficiaries are not required to follow strictly the work plan of the original proposal as long as the final objectives are achieved. There is no opportunity for the Commission to propose changes to a project once it is awarded.

4.2.6. Reporting, monitoring and evaluation

The Horizon 2020 regulation foresees monitoring based on quantitative and qualitative evidence on cross-cutting issues including sustainability and climate change. Projects are required to report against Key Performance Indicators (KPIs). Unless specified in the work programme or the call for proposal, project participants are not required to report on the activities related to climate change, unless these are indicated at the topic level and are therefore key elements of the project itself.

4.3. Integration of climate in the current multiannual work programme

This section provides an assessment of how climate is integrated into the three main pillars of Horizon 2020 in the current multiannual work programme. It reviews the 2014-2015 work programme for each specific objective under the three pillars of Horizon 2020, and provides a brief summary of the fund, an overview of how climate is addressed in the 2014-2015 work programme, and identifies opportunities for building relevant climate change topics into future work programmes. These opportunities focus on opportunities for the Commission to promote more climate-related research under the specific work programmes through changes in the way the programme is managed. When particular climate-relevant themes or topics are not currently covered by a work programme, opportunities to integrate such themes or topics are also identified.

4.3.1. Pillar 1: Excellent Science

Specific objective 1: European Research Council (ERC)	
Percentage of Horizon 2020 budget (2014-2020) ⁸⁰	17%
Budget in 2015 (EUR million) ⁸¹	1 631.7
Percentage of which is climate-related expenditure	0%
Approach to tracking	Bottom-up action

The main goal of ERC funding is to support 'excellent investigators and their research teams to pursue ground-breaking, high-gain/high-risk research'. Scientific excellence is the main criteria for award, therefore the topic of the research is not specified and hence there is a limited possibility to increase climate-related research. As applications are accepted in any field of research, the topic of the work funded through the ERC is very much based on the applications submitted by researchers. Because of the bottom-up approach and set-up of the programme very little or no mainstreaming of climate is possible through programming alone.

⁷⁹Article 20.3(a)(iv), Reporting - Payment Requests, Annotated Model Grant Agreement

⁸⁰Based on 2013 budget figures. Source : Factsheet: Horizon 2020 Budget
http://ec.europa.eu/research/horizon2020/pdf/press/fact_sheet_on_horizon2020_budget.pdf

⁸¹COM(2014) 300, Draft General Budget of the European Commission for the financial year 2015, Working Document Part I, Programme Statements of operational expenditure, June 2014

However, there may be opportunities to enhance climate mainstreaming through measures that directly address potential applicants to encourage them to take climate change into account in their work. For example, there is an opportunity to prompt applicants to consider the climate links of their proposed work through changes to the standard template form for ERC proposal. In addition, as the programme is guided by a Scientific Council it would be possible to raise the knowledge and competence of the members of the council as to opportunities for mainstreaming climate change.

Specific objective 2: Future and Emerging Technologies (FET)	
Percentage of Horizon 2020 budget (2014-2020)	3.5%
Budget in 2015 (EUR million)	232.2
Percentage of which is climate-related expenditure	0%
Approach to tracking	Programmable action

The mission of FET is to turn science into new innovative technologies in cutting edge disciplines. FET calls are non-topical, with emphasis placed on the interdisciplinary character of the research. Climate change (through its horizontal character) is particularly suitable for this purpose. In the work programme, climate is named as one of the scientific areas that could benefit from FET.

The key opportunity for enhancing climate mainstreaming in FET is in dissemination. Influential players in climate-related fields of innovation should be made aware of the existence of the programme and the possibilities for interdisciplinary research. In addition, the FET prizes could be used to build incentives for new technologies with mitigation benefits.

Specific objective 3: Marie Skłodowska-Curie Action	
Percentage of Horizon 2020 budget (2014-2020)	8%
Budget in 2015 (EUR million)	734.7
Percentage of which is climate-related expenditure	0%
Approach to tracking	Bottom-up action

The programme strengthens the knowledge and skills of researchers and innovators. The programme is non-topical and is open to all areas of research including cross-sectoral.

As a bottom-up action, networks of climate scientists could be informed of the modalities of the programme and the opportunities it offers so that climate-related scientists are well-represented among applicants and, eventually, among beneficiaries.

Specific objective 4: Research Infrastructures	
Percentage of Horizon 2020 budget (2014-2020)	3.23%
Budget in 2015 (EUR million)	293.4
Percentage of which is climate-related expenditure	25.6%
Approach to tracking	Programmable action

Under the Research Infrastructures part of the Work Programme, Horizon 2020 funds 'facilities, resources and services that are used by the research communities'. This specific objective will mainly support actions for the implementation of the Open Research Data Pilot.

To date, this part of the programme has provided relatively significant funding for research infrastructures supporting climate research (€171.6 million in 2014 and €75.2 million in 2015). The call 'Integrating and opening research infrastructures of European

interest' specifically invites applicants to address the Horizon 2020 societal challenges, including the societal challenge 'Climate action, environment, resource efficiency and raw materials'. The opportunities for further integrating climate into this work programme are relatively limited.

4.3.2. Pillar 2: Industrial Leadership

Specific objective 5: Leadership in Enabling and Industrial Technologies (LEIT)	
Percentage of Horizon 2020 budget (2014-2020)	3.23%
Budget in 2015 (EUR million)	293.4
Percentage of which is climate-related expenditure	25.6%
Approach to tracking	Programmable action

LEIT focuses on opportunities for industrial leadership in Key Enabling Technologies (KETs). The KETs covered include some with a link to climate change, such as the topics on advanced materials, biotechnology, advanced manufacturing and processing (covered under Work Programme 5ii).

Climate is already significantly mainstreamed into LEIT, due to efforts within DG RTD to build climate within this area of Horizon 2020. There are a number of KETs with strong climate change links, such as embedded energy and industrial processes using renewable resources. Some of the contractual PPPs and a number of calls within these PPPs are relevant to the topic of climate change and opportunities for climate mainstreaming should be sought mainly within these calls. The PPPs with strongest climate links are Factories of the Future, Energy-efficient Buildings and Sustainable Process Industries (SPIRE).

One further opportunity for enhancing climate within this work programme may be in disseminating the Fast Track to Innovation (FTI) pilot. This pilot provides funding for close-to-market, business-driven projects. The objective of this measure is to encourage companies to participate in Horizon 2020, especially those that have never participated before. This fund may be of interest to companies working on green technologies who may not otherwise consider seeking Horizon 2020 funding.

Specific objective 6: Access to Risk Finance	
Percentage of Horizon 2020 budget (2014-2020)	3.69%
Budget in 2015 (EUR million)	337.5
Percentage of which is climate-related expenditure	0%
Approach to tracking	Bottom-up action

The Horizon 2020 risk finance initiative – known as InnovFin – seeks to make it easier for companies engaged in research and innovation to gain access to finance through intermediary banks. The programme is not linked to a specific thematic area. Under the current legal base for Horizon 2020, the possibilities for streamlining climate change through changes to the work programme are limited. The mechanism is a demand-driven approach, with no ear-marking for specific policy themes or actions.

The European Investment Bank (EIB), through the European Investment Fund (EIF), implements the financial instrument on behalf of the European Commission. As the WP is managed by EIB and EIF there are no standard proposal templates, proposal evaluation forms and therefore all possibilities for mainstreaming depend on EIB and EIF action, as well as action among the intermediary banks participating in the programme. The Commission could engage in a dialogue with EIB and EIF to adopt a common approach in strengthening climate in the Access to Risk Finance Work Programme. Tracking of climate

action in this work programme is likely to be challenging, due to the need to work with intermediaries on reporting of climate action.

Given that the demand-driven approach of the financial instrument is embedded in the legal base of the instrument, if the Commission wishes to develop a climate-specific finance instrument through InnovFin, it would need to seek to change the legal framework or to allocate funding from other parts of the MFF to create a climate-specific 'window' of funding.

Specific objective 7: Innovation in SMEs	
Percentage of Horizon 2020 budget (2014-2020)	0.80%
Budget in 2015 (EUR million)	72.5
Percentage of which is climate-related expenditure	0%
Approach to tracking	Bottom-up action

Through the SME Instrument, Horizon 2020 will provide funding and coaching to innovation in SMEs carrying out research and innovation projects. The Instrument links with other calls Horizon 2020 that are climate-relevant: Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing (5ii); Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy (9); Energy Challenge (10); Smart, green and integrated transport (11); Climate action, environment, resource efficiency and raw materials (12).

The key opportunity for enhancing climate mainstreaming in the SME Instrument is in dissemination. SMEs engaged in climate-relevant research and innovation activities could be targeted to encourage them to participate in the instrument. In addition, DG RTD and DG GROW could work with EASME to ensure that the coaching supported by this instrument is delivering information to potential beneficiaries on topics such as energy and resource efficiency, climate change adaptation and funding opportunities for SMEs that deliver climate-related products and services.

4.3.3. Pillar 3: Societal Challenges

Specific objective 8: Health, demographic change and well-being	
Percentage of Horizon 2020 budget (2014-2020)	9.7%
Budget in 2015 (EUR million)	886.1
Percentage of which is climate-related expenditure	0%
Approach to tracking	Programmable

The work programme on societal challenge on health, demographic change and well-being makes some reference to climate change. For example, one topic aims to integrate the environment and health sectors⁸², with an expected impact being the linking of environment, climate and health. There are some areas of the work programme that, while not directly linked to climate change, could be expected to deliver climate benefits by contributing to more resilient health systems. For example, one topic⁸³ addresses the need for integrated, sustainable and citizen-centred care. This could be expected to boost the resilience of health systems to climate-related pressures.

However, considering the expected climate impacts on health outcomes, the climate links in this work programme are relatively weak and could be strengthened. The limited

⁸²PHC 4 – 2015: Health promotion and disease prevention: improved inter-sector cooperation for environment and health based interventions
⁸³PHC 23 – 2014: Developing and comparing new models for safe and efficient, prevention oriented health and care systems"

integration of climate considerations is reflected in the fact that no expenditure in the current work programme has been identified as climate expenditure. There are significant opportunities to build climate expenditure under this work programme by including climate-specific topics and calls focused on issues such as: the health impacts of climate-related changes to air quality; extreme heat impacts on health; and the link between health inequality and climate vulnerability.

Specific objective 9: Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bio-economy	
Percentage of Horizon 2020 budget (2014-2020)	5%
Budget in 2015 (EUR million)	170.4
Percentage of which is climate-related expenditure	40%
Approach to tracking	Programmable

Climate change is currently well integrated into this call, both from an adaptation and mitigation perspective, reflecting the strong links between climate change and the agriculture and forestry sectors. Mitigating or adaptation to climate change features as a primary or significant objective of a large number of topics within the work programme. For example, under one topic, a joint programming initiative on agriculture, food security and climate change will be implemented. In addition to the topics focused directly on climate change, climate objectives are also integrated into many topics that are not primarily focused on climate change. For example, topics on soil quality mention reductions in greenhouse gas emissions as an expected impact. In many other topics, focused on agriculture or fisheries issues, projects developed under each topic are expected to take into account changing climate conditions and reduce the impact of agriculture activities on the climate.

Given that climate is already well integrated into this call, the key opportunities for enhancing mainstreaming are on using monitoring and reporting to ensure that projects deliver climate impacts.

Specific objective 10: Secure, clean and efficient energy	
Percentage of Horizon 2020 budget (2014-2020)	7.7%
Budget in 2015 (EUR million)	721.7
Percentage of which is climate-related expenditure	100%
Approach to tracking	Programmable

The links between energy and climate change are clearly made within this work programme. Climate is integrated into all the calls, with a strong focus on energy efficiency and transitioning to competitive low-carbon energy. Energy efficiency projects under this work programme are expected to deliver impacts in terms of total energy consumption. The work programme targets key technologies needed for the transition to low-carbon energy, such as energy storage, carbon capture and storage, and smart grids.

While climate change mitigation is well integrated into this work programme, one opportunity for strengthening the integration is through greater consideration of the resilience of energy systems to climate change. There is some, limited, mention of the resilience of energy systems to natural disasters⁸⁴. Given the potential impacts of extreme climate events on critical energy infrastructure, and the nexus between some types of energy infrastructure on water resources that are vulnerable to climate change, the need for new energy infrastructure to be resilient to climate change should be strengthened.

⁸⁴LCE 6 – 2015: Transmission grid and wholesale market

Specific objective 11: Smart, green and integrated transport	
Percentage of Horizon 2020 budget (2014-2020)	8.23%
Budget in 2015 (EUR million)	774.7
Percentage of which is climate-related expenditure	40%
Approach to tracking	Programmable

With a key focus on contributing to a transport system that is 'efficient, climate and environmentally friendly, safe and seamless for the benefit of all citizens, the economy and society', climate is reasonably well integrated within this work programme. For example, under the call 'Mobility for growth', the impact of transport systems on climate and the environment is to be minimised. The 'Green Vehicles' will support the application of new types of energies to road transport and the improvement of the energy efficiency of road vehicles.

Climate adaptation considerations are taken into account in some parts of this work programme. For example, one topic⁸⁵ seeks to build the resilience of transport networks to a range of impacts, including climate change. Climate impacts on specific types of transport modes are also taken into account, for example, the work programme notes the impacts on inland waterways transport through potential changes in water levels.

Given that climate is already well integrated into this call, the key opportunities for enhancing climate action are in using monitoring and reporting to ensure that projects deliver climate impacts.

Specific objective 12: Climate action, environment, resource efficiency and raw materials	
Percentage of Horizon 2020 budget (2014-2020)	4%
Budget in 2015 (EUR million)	369.3
Percentage of which is climate-related expenditure	78%
Approach to tracking	Programmable

As would be expected, given that climate is a central focus of this part of Horizon 2020, climate is well integrated into this societal challenge.

To further enhance climate action within Horizon 2020, one option may be to expand funding in this work programme, given that it takes up a small share of the budget relative to other societal challenges. In addition, monitoring and reporting can be used to ensure that projects deliver the expected climate impacts.

Specific objective 13: Europe in a changing world	
Percentage of Horizon 2020 budget (2014-2020)	1.7%
Budget in 2015 (EUR million)	155.9
Percentage of which is climate-related expenditure	0%
Approach to tracking	Programmable

Currently, no climate expenditure has been identified under this part of Horizon 2020. While the work programme for this societal challenge makes some links with climate change, there are opportunities to build the integration of climate significantly.

⁸⁵MG.8.4-2015. Smart governance, network resilience and streamlined delivery of infrastructure innovation

The links between the broader topic of inclusive, innovative and reflective societies and climate change could be made significantly stronger. For example, the work programme's focus on 'inclusive societies' provides an opportunity to consider the role of social inclusion as a factor in vulnerability to the impacts of climate change, and the potential to explore reducing inequalities and overall social vulnerability as a means of building adaptive capacity and resilience to climate change. The work programme's focus on 'Europe as a global actor' provides an opportunity to consider the role of Europe in contributing to an international agreement on climate change.

Specific objective 14: Secure European societies	
Percentage of Horizon 2020 budget (2014-2020)	2.2%
Budget in 2015 (EUR million)	198.9
Percentage of which is climate-related expenditure	30%
Approach to tracking	Programmable

Climate is partially integrated into this work programme, but could be strengthened. The link between a secure European society and climate adaptation is covered as part of the calls on disaster resilience and crisis management. Also the call focused on the ethical/societal dimension of security includes a topic on the impact of climate change in third countries on Europe's security.

Given that the climate-relevant actions were timed for 2014, and no further climate expenditure has been identified in 2015, it will be important to ensure that the link between security and adaptation is maintained in future work programmes. To further avoid the risk of this part of the work programming delivering little towards climate policy objectives, efforts should be taken to ensure climate is well integrated across the entire work programme.

4.4. Recommendations for enhancing climate mainstreaming in Horizon 2020

Given the potential links between climate change and the range of research topics covered by Horizon 2020, the mainstreaming approach to delivering climate action through the EU budget is especially important for Horizon 2020. The need for Horizon 2020 to deliver the research and innovation required to meet the EU's climate policy objectives is reflected in the 35% target for climate-related expenditure adopted by the programme.

However, achieving this target will not be possible only through funding for activities in fields directly linked to climate change (that is, in the areas covered by Societal Challenges 2 to 5). To truly mainstream climate change into the EU's funding for research and innovation – and make real progress on the 35% target – the Commission, led by DG RTD, must intensify efforts to mainstreaming climate change across all areas of Horizon 2020. This will require action in four key objectives:

1. Strengthening the inclusion of climate change across the entire Horizon 2020 work programme
2. Maximising the impact of Horizon 2020 projects on climate policy objectives
3. Integrating climate in the Horizon 2020 financial instruments
4. Improving tracking of climate action in Horizon 2020.

Each of these four objectives is discussed in more detail below. Practical recommendations on how these objectives could be met are provided to assist the Commission in enhancing the mainstreaming of climate change in Horizon 2020. In general, these recommendations are targeted at DG RTD, as the service responsible for overall coordination of Horizon 2020. However, some recommendations could be implemented by other services, such as DG CLIMA.

4.4.1. Strengthening the inclusion of climate change across the entire work programme

Given the central role of the work programme in the evaluation of proposals under Horizon 2020, strengthening the inclusion of climate change in the work programme is critical to improving the amount of climate action funded by Horizon 2020. Currently, staff in the relevant Commission DGs draft the work programmes for the parts of Horizon 2020 funded by their DG. Given that climate change is already well covered in the work programme in areas with an obvious climate link (e.g. transport, energy, agriculture), efforts should be focused on those areas where there is a climate change link that is less obvious and currently not recognised (or not addressed meaningfully) in the programming. This will help to ensure broad integration of climate across sectors and research domains, which reflects the need for economy- and society-wide transformation to a low-carbon and climate resilient future. As the tracking of climate expenditure in Horizon 2020 is generally based on an ex-ante assessment of the work programmes, including climate change expressly in the work programme will also assist the Commission in meeting its 35% target for the fund.

The recommendations below focus on building climate change in the work programme, and provide examples of actions that could be taken to this end. In particular, efforts should focus on those parts of Horizon 2020 that are potentially climate-relevant, but are not currently delivering significant climate action or where climate is under-represented given the climate-relevance of the topic. Primary among these areas are: Specific Objective 2 (Future and Emerging Technologies), Specific Objective 8 (Health), Specific Objective 13 (Inclusive, Innovative and Reflective European Societies), Specific Objective 15 (Spreading Excellence and Widening Participation) and Specific Objective 16 (Science with and for Society).

The first two recommendations are focused on ensuring that the necessary institutional arrangements are in place to support the development of work programmes that take climate change into account as a cross-cutting priority of Horizon 2020.

Recommendation H2020-1: Ensure that the cross-cutting nature of the climate mainstreaming target is reflected in the institutional arrangements for programming Horizon 2020.

The administrative arrangements for programming Horizon 2020 should be adjusted to reflect the horizontal nature of climate action as a policy objective. Currently, the responsibility for coordinating climate mainstreaming within Horizon 2020 rests with the unit in DG RTD responsible for coordinating Societal Challenge 5. However, mainstreaming climate change as a cross-cutting priority across all areas of Horizon 2020 is not the core activity of this unit, and the unit does not have a horizontal role across the DG. Ensuring that climate action is mainstreamed in work programmes across Horizon 2020 requires a unit in DG RTD with a true horizontal mandate, working closely with DG CLIMA and other DGs responsible for developing a wider range of work programmes. As a cross-cutting objective of Horizon 2020, climate change should be put on equal footing with other cross-cutting objectives of Horizon 2020 such as SME support and gender in terms of the institutional arrangements within DG RTD.

Recommendation H2020-2: Increase support for staff in the research and innovation family of DGs⁸⁶ during the drafting of work programmes and reviewing draft work programmes to identify and take advantage of opportunities for building climate action within the programming for Horizon 2020.

⁸⁶DG RTD, DG EAC, DG CNECT, DG GROW, DG MOVE, DG ENER, DG JRC, DG AGRI

Maximising the capability of Commission staff to intervene during the work programming process to promote the inclusion of climate action should be made a priority. There are currently limited resources within the Commission dedicated to this. This creates the risk of missed opportunities for including climate change in areas of Horizon 2020 that have potential links to climate change (for example, the Societal Challenges on Health and Inclusive, Innovating and Reflective European Societies). Linked with recommendation H2020-1 above, building the internal resources of the Commission, particularly within DG RTD, will be critical in ensuring that climate action is maximised across the entire Horizon 2020 work programme.

The action requires resources for building expertise and supporting actions, and could be implemented in the short-term in preparation for the next programming period.

DG RTD has prepared a reasonably comprehensive document providing guidance on how the Commission's climate tracking approach is to be applied within the context of Horizon 2020. This document helps to demonstrate the links between climate action and the topics covered by Horizon 2020. This document could be built on to provide guidance on how climate might be included in the work programming.

Recommendation H2020-3: Dissemination of written guidance to Commission staff responsible for programming on the relevance of climate issues to Horizon 2020.

Building on the recommendation above, staff responsible for drafting work programmes could be provided with training and written guidance on considering whether climate action may be relevant to their call. This guidance could set out how climate may be relevant to the specific objectives of Horizon 2020 and provide examples of topics that could be of relevance. This would help to ensure continuity during staff changes.

Currently staff members are provided with guidelines on tracking⁸⁷; these include illustrative examples of potential climate links to work programme topics. This guidance could be strengthened to emphasise the role of climate change in the drafting of work programmes.

Should staff resources be sufficient (see recommendation H2020-2 above), dissemination actions could be taken with the relevant units of DG RTD and other services to build awareness of the potential links between climate action and the work programmes for the specific objectives of Horizon 2020. These dissemination actions could take place through the existing Inter-service Horizon Groups, or simply meetings with the relevant unit responsible for leading the drafting of a work programme. These dissemination actions could also provide the staff members responsible for drafting work programmes with the opportunity to provide feedback on the guidelines, so that they could be progressively improved and updated.

The recommendation below reflects the fact that the work programme for Horizon 2020 is developed in consultation with a wide range of experts and stakeholders. Achieving integration of climate across the programme will require engagement with these groups.

Recommendation H2020-4: Undertake horizontal action (among Advisory Groups, the European Research Area and Innovation Committee, the Enterprise Policy Group, EIT, the European Technology Platforms and the European Innovation Partnerships) for strengthening the capacities of experts to mainstream climate change into the Work Programmes.

⁸⁷DG RTD, 'Climate Action, Sustainable Development and Biodiversity Expenditure in Horizon 2020; Guidance', Version 02/02/2015

Working across the various players involved in the development of work programmes, DG RTD and DG CLIMA should work to reinforce the evidence base and support the mainstreaming of climate change in Horizon 2020. The goal of these actions should be to actively communicate with all (or some) of the above-mentioned groups regarding all the possible inter-linkages between their particular research area or discipline and climate change mitigation and adaptation. This work will help to promote the consideration of climate action among those involved in work programme development and assist them in identifying links with their particular research area or discipline.

4.4.2. *Maximising the climate impact of Horizon 2020 projects*

The recommendations below present actions that could be taken to help ensure that the projects developed under Horizon 2020 deliver climate action.

Recommendations H2020-5 and H2020-6 focus on how the templates for Horizon 2020 projects can be used to encourage potential beneficiaries to integrate climate considerations into their applications for funding. The standard templates for application development present an excellent opportunity for including climate change into the process behind the preparation of Horizon 2020 project applications. This recommendation is central and, should it be implemented, it would enable and maximise the impact of subsequent recommendations.

These recommendations can be implemented within the current legal framework for Horizon 2020. They would require agreement between the Inter-service Horizon Groups and adoption of a common template.

Recommendation H2020-5: Explicitly request all applicants for research and innovation actions to describe the climate implications of their projects when preparing their research proposal.

Under the Research Proposal template for Horizon 2020 funding, the section on 'Impact' asks applicants to describe how their project will contribute to the expected impacts under the relevant topic of the work programme (section 2.1). In addition, applicants are asked to describe how the project will contribute to 'any other environmental and socially impacts'. This section could be used to ask applicants to specifically consider how their project contributes to EU climate change mitigation and adaptation objectives. Including specific consideration of climate change here encourages the researchers involved in preparing the proposal to consider the climate links of their project at an early stage. It also provides a basis for evaluators to consider how climate change is addressed by a proposal, even in an area where climate change is not expressly mentioned in the work programme. It could also provide a basis for future monitoring and reporting on the implementation of a project.

This action would not result in additional costs but would require adjustments to the supporting documentation for Horizon 2020, as well as fine-tuning the system for proposal writing support and evaluation.

Recommendation H2020-6: Strengthen the link between general research under the bottom-up areas of the Horizon 2020 and its impact on and relationship with climate change.

Similarly for recommendation H2020-4, the templates for the bottom-up actions could be amended to include specific questions for applicants on how their proposed research relates to climate change.

For example, the standard template for European Research Council (ERC) proposals could be amended to include questions on the impact of the research on climate change objectives. This would prompt applicants to consider the potential climate relevance of their work and encourage them to establish links between the field they are working on and climate change. Given the large share that the ERC makes up of the overall Horizon 2020 budget (17%), this could help to significantly enhance the inclusion of climate action within Horizon 2020.

This recommendation would be particularly important for the bottom-up areas of Horizon 2020, as to date it has proven to be difficult to drive further climate mainstreaming in these areas due to the requirement that the topics in these areas are determined by applicants. It would also assist DG RTD in collecting data on climate action funded under these parts of Horizon 2020, which has proven to be difficult through tracking alone.

Recommendations H2020-7 and H2020-8 below focus on how the existing actions undertaken to disseminate information about Horizon 2020 to potential beneficiaries can be used to promote further climate action. These recommendations are closely linked with recommendations H2020-5 and H2020-6 above – if applicants are required to establish links between their research and climate change, then they will require support and information on how to best do this.

Recommendation H2020-7: Build the capacity of Horizon 2020 National Contact Points to support applicants on taking climate action into consideration in preparing their proposal for funding.

National Contact Points provide direct support and guidance to applicants for funding under Horizon 2020. DG RTD currently offers training to all National Contact Points at least annually. However, climate action is not specifically addressed in this training. As National Contact Points are the main contact point providing guidance to project proponents, their knowledge of climate adaptation and mitigation issues and possibilities for mainstreaming within key funding priorities and topics is crucial. Including specific training on mainstreaming climate action at their annual training session would build the capacity of National Contact Points to support funding applicants in considering the climate implications of their project proposals. If combined with changes to the proposal template (see recommendation above), this training would be expected to have an even greater impact.

Recommendation H2020-8: Build the capacity of project applicants to consider climate action as part of their application.

There are a number of opportunities for building the awareness of project applicants of the need to consider climate aspects in their project proposals. Currently, outside of Societal Challenge 5, project applicants are not being provided with specific information and guidance on how climate action could be considered as part of their project proposal. This could be improved by including specific sessions on climate action at Horizon 2020 Info Days for project applicants. A general guidance on integrating climate change into Horizon 2020 projects could be provided in the Grants Manual on the Participant Portal (under the Horizontal Issues section, where climate change is currently not addressed).

For this recommendation, tailored approaches may be needed for topics related to energy, transport and agriculture, where the climate link is already strong, and applicants may be sufficiently aware of the links between their research topic and climate change. In these cases, the focus could be on strengthening the impact of climate-relevant research, rather than just establishing the relevance of research to climate action.

Recommendation H2020-9 below is focused on building the consideration of how well a proposal addresses climate considerations into the evaluation of projects through using climate as a deciding factor for otherwise equally scored proposals (often referred to as an *ex aequo* criterion). This recommendation is best suited to the bottom-up areas of Horizon 2020 (for example, the ERC and the Marie Skłodowska-Curie Action) as there are typically a large number of proposals for funding in these areas, and it can therefore be expected that there would be a large number of equally scored proposals.

Recommendation H2020-9: Make impact in terms of climate action a decisive evaluation criterion in the case of equally scored proposals in the bottom-up areas.

In cases where climate action is not expressly mentioned in a call, there is limited, if any, scope for evaluators to consider a proposal's contribution to climate action during the evaluation. However, the climate change could be made a decisive factor in the case of equally scored proposals (i.e. *ex aequo* proposals). Currently, participation of SMEs and gender balance are decisive factors considered in equally scored proposals. Expected contribution to climate action could be added here to provide greater priority to the issue of climate change as a cross-cutting issue in Horizon 2020.

This recommendation would be expected to influence applicants in how they consider climate in preparing their proposals, and it would also be expected to lead to a greater selection of climate-relevant proposals in the bottom-up areas. This would also provide an opportunity to brief evaluators on the consideration of climate action during proposal evaluation and to include climate action in the Guidance for evaluators of Horizon 2020 proposals (where climate action is currently missing).

Recommendation H2020-10 is focused on improving the reporting on the climate impacts of projects through the periodic reporting process. Linked to recommendation H2020-5, if project applicants are asked to describe the climate-relevance of their work in the project proposal, it is appropriate to ask them to report on this in the periodic reporting for projects.

Recommendation H2020-10: Seek information from applicants on the impact of their project on climate objectives.

Horizon 2020 beneficiaries are required to provide periodic reports on the progress of their projects. The Model Grant Agreement (article 20.3(a)(iv)) specifies that the beneficiaries are to include the answers to a questionnaire in their periodic reports. Under the Grant Agreement, the Commission can use the information from this questionnaire 'to monitor the implementation of Horizon 2020 on "cross-cutting issues" ... and assess the progress of Horizon 2020 against the objectives defined for the "societal challenges'. Given that climate change is both a cross-cutting issue and a societal challenge in Horizon 2020, this questionnaire would be an opportunity to seek information from beneficiaries about the impact of their project on climate objectives. This information would encourage beneficiaries to consider the climate impacts of their project throughout its implementation. It could also complement the tracking of climate expenditure in Horizon 2020 by providing information about the impacts of projects, and, if implemented in the short-term, may provide information that could be used in the mid-term review of Horizon 2020 in 2017.

4.4.3. Integrating climate into the financial instruments

Horizon 2020 includes a financial instrument for research and innovation under Specific Objective 6 on Access to Risk Finance. Known by the brand-name InnovFin, this

instrument provides loan guarantees and equity funding to companies for research and innovation actions. InnovFin is implemented by the EIF via intermediary banks. This instrument is complemented by the SME Instrument (Specific Objective 7) which provides small grants and coaching to SMEs carrying out research and innovation activities. Under the legal base for Horizon 2020, the budget for this instrument must follow a 'demand-driven, bottom-up' logic. This means that it is not currently possible to directly include climate action within the programming of these funds.

Recommendation H2020-11: Consider establishing a dedicated climate change window within the Horizon 2020 InnovFin instruments

Consideration could be given to creating a dedicated window for financing for companies carrying out research and innovation relating to climate action. This would help to reduce the risk profile of companies carrying out these activities and leverage greater private sector funding. This window could be modelled on the Climate Change Windows within the EU Regional Investment Facilities. This would allow for some climate finance to be tracked within the Horizon 2020 financial instrument. This would require a review of the legal base for the financial instrument to determine how this could best be implemented. Alternatively, it may be possible to establish a dedicated window for climate finance within the existing legal framework if the funding comes from outside the Horizon 2020 budget.

Recommendation H2020-12: Support climate action within the Horizon 2020 InnovFin and SME instruments through targeted dissemination.

Dissemination actions should be used to attract attention to the debt and equity financing products available among companies working in relevant areas, such as energy technologies, energy efficiency, renewable energy, and climate services. Given the regulatory framework for Horizon 2020, there is currently limited scope to directly integrate climate change into the allocation of funding under the instrument. However, companies working in areas relevant to climate change should be aware of the possibility for obtaining funding for research and innovation. Success stories of companies and projects in climate-relevant fields should be highlighted on the Innovfin website. The 'Maximising the take-up of financial instruments' action under Specific objective 6 could be used to determine how to best engage with companies working on research and innovation in climate-relevant fields.

Recommendation H2020-13: Provide an online guide on opportunities to support and deliver climate action within financial instruments.

Financial instruments are very different from grant opportunities, and there has been relatively limited experience in including climate action in them. Guidance for companies on how to use the financial instruments available through the EU budget for climate action could help to stimulate climate action within the InnovFin and the SME Instrument under Horizon 2020, and could also be extended to cover other opportunities within the MFF, such as COSME. This guidance could build on the experience of the two new financial instruments under the LIFE programme (Private Finance for Energy Efficiency (PF4EE) and the Natural Capital Financing Facility (NCFF)). If this broader approach is taken, it may be appropriate for DG CLIMA to lead this action, rather than DG RTD. The DG CLIMA webpage on financial instruments⁸⁸ currently includes information on the PF4EE and NCFF. This could in addition be an appropriate platform for providing further information about financial instruments that could be used by companies for investments in climate action.

⁸⁸ http://ec.europa.eu/clima/policies/budget/life/instruments/index_en.htm

4.4.4. Improving tracking of climate action in Horizon 2020

Tracking the programme's performance against the 35% climate action expenditure target has been a key challenge in the so-called 'bottom-up' actions. Actions funded in these areas (the European Research Council, the Marie Skłodowska-Curie Actions, the Access to Risk Finance action, and the SME Instrument) are demand-driven, with the topics determined according to the applications received and retained for funding. Thus, the climate action contribution of these funds cannot be predicted at the call level and must be assessed once grant agreements are signed.

Tracking of these actions also requires the input of many individual project officers, which means that inconsistent approaches to tracking may be taken. Interviews conducted as part of this study indicated that project officers find tracking challenging. Project officers may not have particular expertise on climate change and may find it difficult to identify actions that have climate benefits. In particular, identifying adaptation action was reported as challenging.

Recommendations H2020-14 and H2020-15 seek to address the challenges in tracking in the bottom-up actions by ensuring the guidance, support and IT structures are in place to enable tracking in these areas. Should these actions prove to be unsuccessful in improving the information about climate action in these parts of Horizon 2020, recommendation H2020-16 recommends a dedicated evaluation of the tracking methodology as part of the mid-term review of Horizon 2020.

Recommendation H2020-14: Ensure that project officers have sufficient guidance and training on tracking.

Currently, DG RTD provides a comprehensive guidance document to the project officers in DGs and agencies responsible for tracking. Training is also provided by DG RTD. However, this training and guidance document would be more effective if resources were available to disseminate the tracking methodology more broadly, to ensure that training reaches *all* project officers responsible for tracking. Training for project officers on the topic of tracking is also likely to have the additional benefit of building the climate awareness of staff involved in the implementation of the programme.

Recommendation H2020-15: Enable the tracking of bottom-up instruments through changes to Horizon 2020 IT reporting systems.

Tracking of the bottom-up actions is dependent on input from many individual project officers. Currently, the climate action tracking field in the grant management system database is not a mandatory field, and often this field is not completed by project officers. Making this field a mandatory field would help to improve tracking of bottom-up actions.

Recommendation H2020-16: Should tracking of climate action in the bottom-up Horizon 2020 continue to be a challenge, consideration should be given to a dedicated evaluation of the tracking methodology as part of the mid-term review in 2017.

Given the ongoing challenges in tracking climate action in the bottom-up actions of Horizon 2020, and the limitations of tracking as an indicator of the impact of a programme, it may be appropriate to consider the inclusion of climate action tracking as a specific issue to be examined in the mid-term review of Horizon 2020. This could include a review of the approaches to collecting and analysing data from each of the different funding instruments.

Tracking of climate action in financial instruments implemented via intermediaries is a particular challenge for any funding organisation. Intermediaries are often reluctant to take on additional reporting requirements, and climate action is often not tracked outside of financial instruments that are specifically dedicated to climate action (for example, funds for renewable energy or energy efficiency). Identifying and tracking climate expenditure requires working collaboratively with intermediaries to determine the possibilities for improving information about climate action funded through financial instruments. Recommendation H2020-17 below recommends working with the intermediaries participating in InnovFin to identify a way forward, potentially through a voluntary survey.

Recommendation H2020-17: Explore the opportunities to track climate change in InnovFin to provide more accurate information about the contribution to the climate change target.

By working with the EIF and financial intermediaries, DG RTD can explore opportunities for improving the transparency of climate action in the loans provided to companies without imposing an excessive burden on intermediaries or beneficiaries. For example, voluntary surveys can be sent out to intermediaries in order to gather information about the purposes of the provided loans to companies. Such surveys can be combined with other surveys regularly carried out among participating institutions in order to avoid additional reporting burdens. Having a better overview of the final purposes of the loans received through InnovFin can uncover existing climate action in the instrument and facilitate the overall evaluation of the fund.

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ANNEX 1 – LIST OF INTERVIEWEES

Organisation	Name	Date
DG Climate Action	Mette Quinn Karsten Krause Adriana Galunic	20 March 2015
DG Climate Action	Antongiulio Marin	26 March 2015
DG Mobility and Transport	Joao Paulo Ferreira	23 March 2015
DG Energy	Janis Folkmanis	28 May 2015
DG Energy	Beatrice Coda	8 April 2015
DG Internal Market , Industry, Entrepreneurship and SMEs	Patrick Klein Clement Williamson	14 April 2015
DG Internal Market , Industry, Entrepreneurship and SMEs	Astrid Bartels	4 June 2015
DG Research and Innovation	Alison Imrie Andrea Petrowski Jesus Maria Alquezar Sabadie	20 March 2015 1 June 2015
DG Communications Networks, Content and Technology	Jean-Francois Junger	13 May 2015
DG International Cooperation and Development	Pablo Leunda	8 May 2015
EASME	Marco Malacarne	24 March 2015
EASME	Daniel Gassman	28 May 2015
National contact point for Horizon 2020 (Belgium)	Tania van Loon	4 June 2015
2 Degrees Investing Initiative	Hugues Chenet	13 April 2015
E3G	Louise Casson	29 May 2015
Climate Action Network	Wendel Trio	10 April 2015
Green Budget Europe	James Nix Constanze Adolf	9 April 2015
University of East Anglia	Tim Rayner	23 April 2015
ODI, Expert	Neil Bird	14 April 2015

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