EIB Group 2021 Climate Bank Roadmap Progress Report

European Investment Bank Group

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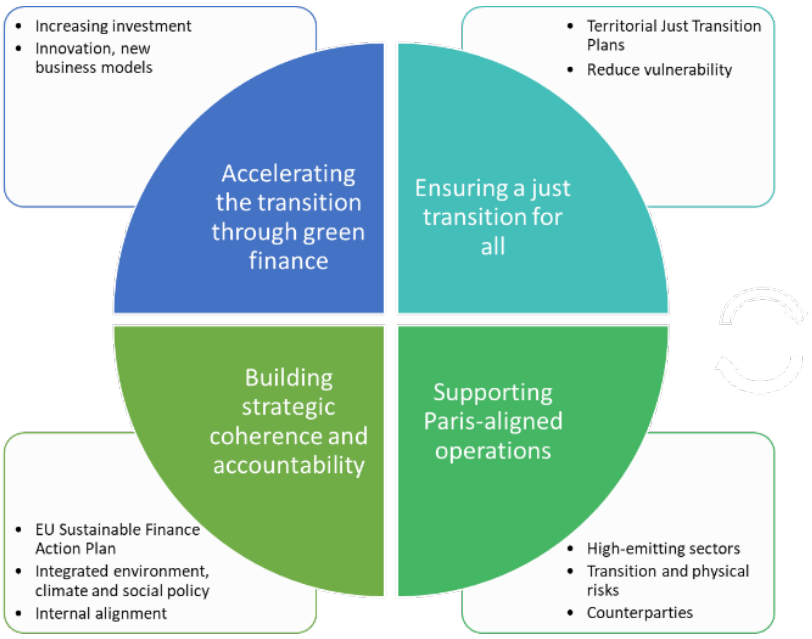
Executive summary

The EIB Group Climate Bank Roadmap 2021-2025 was approved in November 2020. It established an operational framework to meet the following commitments made by the European Investment Bank (EIB) in 2019:

- Increase the share of its annual green financing to exceed 50% by 2025
- Support €1 trillion of green investment in the critical decade from 2021 to 2030
- Align all new operations with the goals of the Paris Agreement by the end of 2020

The roadmap divides these commitments into four workstreams. In doing so, it considers how the EIB Group can (1) help accelerate the transition through green finance, (2) help support a just transition for all, (3) ensure that all financing activities are Paris-aligned and (4) anchor the roadmap in the European Union's sustainable finance framework more broadly.

Main workstreams of the Climate Bank Roadmap



Source: Climate Bank Roadmap (2020).

This report provides an update on progress across all four workstreams. It covers the first year of implementation — 2021 — in which the EIB financed €27.6 billion of green lending, representing just over half of its total lending, while the European Investment Fund (EIF) committed €432.4 million of financing to green operations.

This report also introduces a results framework and provides the baseline data from the first year of results. The framework is designed to trace the direct outputs of EIB Group roadmap activity, including green finance and advisory assignments, through to the outcomes of projects financed. It provides a substantive amount of information to monitor and assess the implementation of the roadmap. The climate-related impacts of the roadmap can be measured principally in terms of savings in greenhouse

gas emissions (climate change mitigation) and the reduction of risks from current and future climate change (climate change adaptation). The results framework also provides insight into the contributions of EIB Group finance across the various dimensions of the European Green Deal.

In terms of accelerating the green transition, this report highlights key activities of the EIB Group over the last year relating to climate mitigation, adaptation and wider environmental objectives. In volume terms, climate change mitigation activities dominate EIB Group financial support, often associated with broader environmental co-benefits. As highlighted in the report, innovation also plays a strong role in EIB Group support.

In October 2021, the EIB approved its first dedicated Climate Adaptation Plan. This sets a target of 15% for the share of EIB climate action finance supporting adaptation by 2025. With the 2021 share at just under 5%, concerted efforts will be required to achieve this target.

In 2021, the EIB Group developed its support for the just transition, which focuses on supporting and protecting communities, industries and workers in the transition to carbon neutrality and climate resilience. Within the European Union, the EIB approach centres on its role in supporting the implementation of the EU Just Transition Mechanism. Outside the European Union, the EIB applies the joint high-level principles agreed by multilateral development banks in 2021.

In terms of alignment with the Paris Agreement, the roadmap introduced a detailed approach to ensure that all EIB Group finance is consistent with a pathway to low-carbon and climate-resilient development. As highlighted by stakeholders, it was necessary to complement this with an approach for counterparties. In 2021, the EIB Group approved a framework for the alignment of counterparties — or PATH framework — with the name alluding to the pathway along which counterparties need to travel to ensure alignment.

This report also sets out how the EIB Group has adjusted the sector-based, low-carbon alignment framework in response to the commitment made in the Climate Bank Roadmap to respect the "do no significant harm" floor. Given that the Climate Bank Roadmap framework was shaped in large part by the preparatory work for the EU Taxonomy, the subsequent changes from the adoption of the first Climate Delegated Act are rather minor. This report details how this has been addressed.

This progress report also highlights work to monitor the shadow cost of carbon, though no change in the EIB values is proposed. The EIB will continue to review evidence, including the recently published Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

Much of 2021 was devoted to the revision of the EIB Group's Environmental and Social Sustainability Framework that embeds the roadmap into a coherent sustainability framework. This report also provides an update on the timing of different elements of the EIB Group transition towards the EU Taxonomy, notably in light of the revised timing at EU level.

1. Introduction

1.1. Development of the EIB Group Climate Bank Roadmap began with the decision by the EIB Board of Directors in November 2019 to increase the ambition of the EIB Group in three key ways. First, to increase the share of EIB lending to projects contributing to climate action and environmental sustainability (in other words, "green" projects) to exceed 50% by 2025 and beyond[1]. This increase in EIB finance, however, is only a means to an end — that of increasing overall investment in green projects. Hence the second target: to support €1 trillion of green investment over the critical decade from 2021 to 2030.

1.2. These two targets aim to increase green investment. However, this ambition would be undermined if, at the same time, the EIB Group continued to support projects that actively undermined the goals of the Paris Agreement. Therefore, the third element was to ensure that all EIB Group financing activities were aligned with the goals of the Paris Agreement by the end of 2020.

Turning ambition into reality

1.3. The roadmap converts this ambition into an operational framework for the period 2021 to 2025. Approved by the EIB and the EIF Boards of Directors in November 2020, the structure of the Climate Bank Roadmap document reflects the key components of the 2019 EIB Board decision. As shown in the figure in the executive summary, there are four main workstreams in this framework.

1.4. The first workstream — accelerating the transition through green finance —links volume targets for green finance to the policy objectives of the European Green Deal, emphasising the long-term investment challenges. Key focus areas are identified and can be broadly grouped as mitigating climate change through emissions reductions (energy efficiency, renewable energy, sustainable mobility, greening industry, farm to fork, etc.), adapting to current and future climate change, and preserving and enhancing natural capital associated with sequestration and other ecosystem services (protecting nature, biodiversity).

1.5. Meeting net-zero targets requires structural economic change. The concept of a just transition recognises the need to support vulnerable groups, including workers whose jobs and livelihoods may be affected negatively by such profound change. The second roadmap workstream focuses on how to address these impacts.

1.6. The third workstream addresses the alignment of EIB Group activities with the Paris Agreement's temperature and resilience goals. The roadmap sets out a detailed framework to implement such alignment. In the case of large projects, alignment with the temperature goal is addressed in part within the economic assessment of the investment. As part of the roadmap, the EIB adopted a shadow cost of carbon consistent with a pathway to the 1.5˚C temperature goal. This cost parameter penalises the economic case for projects emitting carbon and, conversely, strengthens the case for those saving carbon.

[1] The EU Taxonomy Regulation covers six environmental objectives: (i) climate change mitigation, (ii) climate change adaptation, (iii) sustainable use and protection of water and marine resources, (iv) transition to a circular economy, (v) pollution prevention and control, and (vi) protection and restoration of biodiversity and ecosystems. At the EIB Group, the first two objectives have been labelled climate action (CA) and the remaining four environmental sustainability (ES), therefore the full set of taxonomy-defined environmental objectives is often referred to as "climate action and environmental sustainability."

1.7. The EIB Group Paris alignment framework does not rely solely on an economic test. The roadmap introduces a comprehensive alignment framework based on specific sector criteria, which in large part replicate the likely outcome of economic decisions with a robust carbon price. Annex 2 of the Climate Bank Roadmap sets out this framework by sector, interpreted within the wide range of EIB Group financial products — from direct loans to support via other financial institutions for smaller companies. This workstream also covers the development of the EIB Group climate-related risk framework.

1.8. The roadmap also recognises the need to embed the core elements of the 2019 EIB Board decision within a wider approach for supporting sustainable finance. The fourth workstream of the roadmap does this, referring to the transition towards meeting the principles of the emerging EU Taxonomy framework and anchoring the roadmap within a wider and robust Environmental and Social Sustainability Framework.

A progress update

1.9. This report provides a progress update on the Climate Bank Roadmap workstreams in 2021. Section 3 of this report reviews the key areas of progress in implementing the roadmap during 2021.

1.10. Before turning to the main areas of progress, Section 2 sets out a general reporting framework for the roadmap, providing a coherent basis for reporting and evaluation in the future. Adopting a formal reporting framework is good practice and shows an extra commitment to following the roadmap.

1.11. This report needs to be read in the context of a number of other EIB Group reports. Climate features strongly in the EIB Group 2022 Sustainability Report. The EIB Group's Task Force on Climate-related Financial Disclosures Report also clearly focuses on climate issues, though with a strong focus on the management of climate-related risks in the EIB and EIF portfolios. Other EIB reports that contain a strong climate theme include the EIB Impact Report, which includes measurements of its contribution to the Sustainable Development Goals. The EIB also provides information for the multilateral development bank report on climate finance.

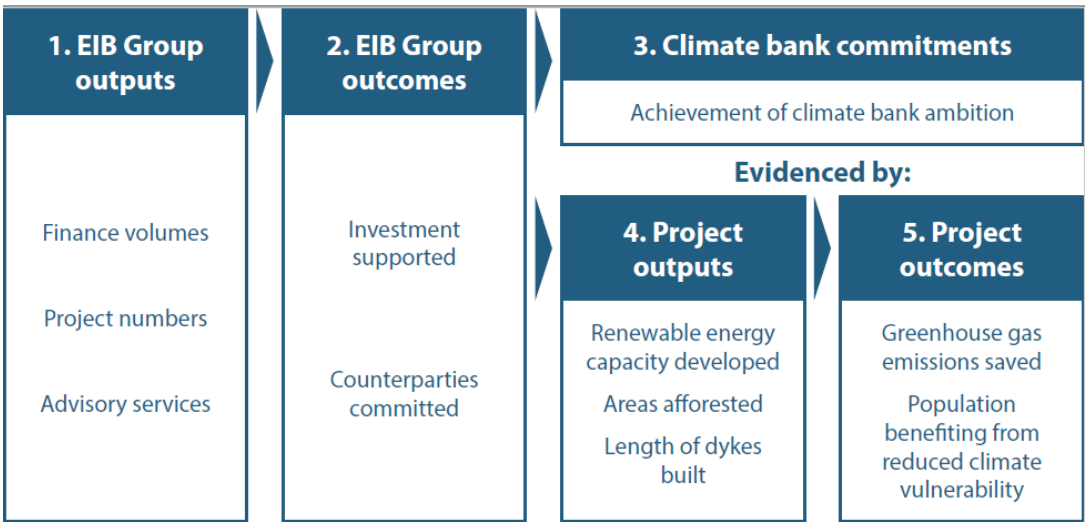
1.12. It should be noted that this report focuses on 2021. It therefore does not include information related to events unfolding in Ukraine.

2. Results measurement

2.1. The results framework allows us to monitor progress and assess the outcomes of roadmap activities. This helps the EIB Group improve its practices and policies.

2.2. The logic for the results framework is presented in Figure 1. This model describes how EIB Group outputs contribute to the achievement of its commitments as well as broader outcomes and socioeconomic benefits through the projects it finances.

Figure 1: **Results framework overview**



2.3. Sets of indicators are defined at each stage of the model. The indicators are primarily quantitative and are combined with qualitative indicators associated with interventions at procedural or policy levels. Further details are presented in the Annex, and illustrated below.

2.4. The indicators build on those established by the EIB and EIF monitoring and reporting systems, including the project climate action, carbon footprint, and Climate Awareness and Sustainability Awareness Bond reporting systems, as well as the EIB Additionality and Impact Measurement framework.

2.5. Additional indicators have been identified to reflect new activities included in the roadmap, for example on green investment supported and wider counterparty engagement by the EIB Group. Furthermore, the results framework, including indicators, may expand over time in line with new policies and the regulatory environment.

High-level results in 2021

2.6. Table 1 below presents the high-level results of the roadmap in 2021. The first line demonstrates the progress towards the 50% target for the share of EIB green finance by 2025. In 2021, the EIB financed approximately €27.6 billion of climate action and environmentally

sustainable investment, an increase on the €26 billion estimated[2] for 2020. Measured in terms of total EIB own financing, this represents a share of 51%.

2.7. Some care is required in the interpretation of this result. 2021 was an exceptional year for the EIB. In response to the COVID-19 crisis, it implemented a large-scale European Guarantee Fund to boost liquidity for the small and medium-sized enterprise (SME) sector. This was financed by EU Member States and not from EIB own resources. Measured as a share of all resources, rather than just the EIB's resources, the share of EIB green finance was 43%.

2.8.

Table 1: High-level commitments[3]

Commitment indicators		2021 results	Target
1	Share of EIB finance dedicated to climate action and environmental sustainability	51%	More than 50% by 2025
2	Share of climate adaptation in EIB climate action finance	4.9%	15% by 2025
3	Volume of climate action and environmental sustainability investment supported by the EIB Group	€75 billion	€1 trillion by 2030
4	Carbon footprint of EIB finance:		
	Absolute emissions in $mtCO_2e$/year	2.34	Associated with Paris alignment
	Relative emissions in $mtCO_2e$/year	-2.32	

2.9. The second line of Table 1 focuses on climate change adaptation. Under the EIB Climate Adaptation Plan, described further below, the EIB Board raised the level of ambition for adaptation finance to 15% of overall climate action finance by 2025. In 2021, this was just below 5%, or €1.3 billion of the €26.4 billion climate action total. This is broadly in line with the average share in recent years, but demonstrates the need to reinforce EIB support for adaptation through to 2025.

2.10. As indicated in the third line of Table 1, the total level of green investment supported in 2021 reached €75 billion. This will need to grow over time to meet the €1 trillion target for 2030 and underlines the importance of attracting additional private sector investment.

2.11. The roadmap defines a framework to align with the Paris goals by the end of 2020. One associated metric is the EIB Group's absolute carbon footprint of projects. Although some caution is required — the EIB Group does not finance a sample of the entire economy — the trend in absolute emissions is an important reference point and thus included under high-level EIB outputs. In 2021, the total absolute greenhouse gas emissions[4] of EIB-financed

[2] Formal tracking of environmental sustainability only commenced in 2021. The 2020 figure therefore remains an estimate.

[3] Target determined in the roadmap and subsequent EIB Climate Adaptation Plan.

[4] Greenhouse gas emissions figures are reported according to the EIB methodologies for the assessment of project greenhouse gas emissions and emission variations.

projects[5] are estimated at 2.34 million tonnes of carbon dioxide equivalent. This compares to an average of 3.8 million tonnes of carbon dioxide equivalent per year over the last five years[6], equivalent in turn to around 0.1% of EU greenhouse gas emissions. This trend in EIB-financed emissions will be monitored carefully through the Climate Bank Roadmap period, though it is important to stress that the value is likely to fluctuate strongly year to year depending on the mix of projects financed.

2.12. Such results need to be understood in context. Expanding a seaport may stimulate increased shipping activity and hence, with today's technology, increase greenhouse gas emissions from the shipping sector. However, overall emissions may fall if the investment helps to /shift cargo that would otherwise be transported by air. The overall greenhouse gas impact is measured through a net, or "relative" concept. The relative emissions of EIB finance in 2021 are estimated at -2.32 million tonnes of carbon dioxide equivalent, meaning a saving of 2.32 million tonnes. This is slightly below the average annual savings of 3.1 million tonnes of carbon dioxide equivalent over the last five years, which is equivalent to the removal of around 1.7 million internal combustion engine cars per year from the road.

2.13. Further details on the results, climate bank commitments, projects financed, carbon footprint, etc. can be found in the Annex.

[5] Projects with a signed finance contract or large allocations approved in the year. Large allocations under signed framework loans include individual investment projects that have undergone a full appraisal. Absolute and relative emissions are prorated to the EIB lending volume. Intermediated lending is not currently included in the carbon footprint, except for large allocations of framework loans.

[6] Note that absolute emissions thresholds for inclusion of projects in the carbon footprint analysis changed in 2019 from 100 000 tCO_2e to 20 000 tCO_2e, having some bearing on annual results.

3. Progress in 2021

3.1. This section on progress is structured around the four workstreams of the roadmap.

Accelerating the transition through green finance

General summary

3.2. In 2021, the EIB financed €27.6 billion of investment in green projects, while the EIF financed €432.4 million of investment in operations targeting green projects and enterprises. The Annex provides a more detailed description of the impact of this finance, breaking it down into the key policy priorities of the European Green Deal and linking the output of EIB activities to overall project impacts. In summary:

- EIB lending of €1.3 billion in support of **climate change adaptation**, including the prevention and management of climate hazards such as wildfires in Greece; water infrastructure improvements to prevent flooding in Belgium; increasing water efficiency in Jordan; and improving drainage systems in Benin. Such projects contributed to an overall reduction in vulnerability to drought and floods for over 900 000 people, through the construction of 230 kilometres of flood protection and increased river water retention capacity.
- EIB lending of just over €25 billion in support of **climate change mitigation**, including €5.7 billion for renewable energy investments, €4.7 billion for energy efficiency investments and €9.1 billion for lower carbon transport. Notable examples include support for innovation in floating offshore wind, with potential scale-up in areas unsuitable for fixed-bottom installations; scalable products promoting energy efficiency in buildings, such as specialised mortgages, supporting national rehabilitation programmes that prioritise support for low-income households; and the construction of metro rail lines in the Indian city of Agra to carry over 78 million passengers annually.
- EIB lending of just over €1 billion for the other **four environmental objectives** of the EU Taxonomy[7] without co-benefits for climate action objectives[8], including approximately €437 million for wastewater collection and treatment resulting in reduced water pollution equivalent to the organic waste produced by over 2 million people; and €40 million in support of projects to protect, conserve and restore biodiversity and ecosystems.

Climate Adaptation Plan

3.3. In October 2021, the EIB Board approved its first dedicated plan to support adaptation to current and future climate change, as specified in the Climate Bank Roadmap. The timing was designed to respond to the EU Adaptation Strategy, which was duly adopted by the European Commission in February 2021.

[7] These comprise sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems.

[8] Many projects contribute to both climate action objectives (mitigation/adaptation) and one or more of the other environmental objectives (e.g. a reforestation project may help sequester carbon and protect biodiversity). Hence in total €12.3 billion of EIB lending in 2021 contributed to the other four environmental objectives of the EU Taxonomy, although €11.1 billion of this also supported climate action. A residual €1.1 billion contributed solely to the other four environmental objectives without co-benefits for climate.

3.4. The EIB Climate Adaptation Plan builds on the new EU Adaptation Strategy and has three aims: supporting smarter and more systemic adaptation, including establishing a new advisory platform and "one-stop shop" called ADAPT; financing faster adaptation, including the new aim to increase the share of adaptation finance in EIB climate action to 15% by 2025; and accelerating international action on adaptation and resilience, including new partnerships to increase investment in the least developed countries and small island developing states.

3.5. The EIB is working hard to implement this plan, notably through upstream engagement, advisory platforms, internal training and tools such as the climate risk assessment system, and business development.

Ensuring a just transition for all

3.6. The EIB Group's approach to just transition established in the Climate Bank Roadmap aims to ensure that no people or places are left behind in the transition to low-carbon and climate-resilient societies. The roadmap committed to the development of a comprehensive proposal in support of the EU Just Transition Mechanism during 2021. This proposal, approved by the EIB Board in December 2021, confirms that within the European Union, the EIB approach centres on its role in supporting the implementation of the Just Transition Mechanism, a key element of the Sustainable Europe Investment Plan (SEIP) that aims to support the EU regions most affected by the transition challenge. This approach builds on continuing EIB Group support for the cohesion regions of the European Union.

3.7. The EIB intensified its work with other multilateral development banks on the just transition outside the European Union, and during 2021 contributed to the development of high-level principles for multilateral development bank support for a just transition. These principles frame an operational approach to just transition project definition outside the European Union, which aims to achieve climate objectives while moving towards diversified economic development pathways that support sustainable, inclusive and resilient development, and to address the socioeconomic challenges and opportunities resulting from the transition. Work will continue during 2022 to develop and apply the concept of support for a just transition to the context of operating outside the European Union.

3.8. During 2021, the EIB Group worked on the interaction of climate action and key social development themes such as gender equality, women's economic empowerment, conflict and fragility, as well as migration and forced displacement. The EIB has worked closely with the European Bank for Reconstruction and Development and British International Investment to develop operational tools in the context of the 2X Gender and Climate Finance Taskforce. Indicators reflecting contributions to gender equality in green finance have been included in the results framework to help monitor progress in this area.

Supporting Paris-aligned operations

3.9. This section presents progress under the third roadmap workstream. It focuses on a new EIB Group framework to support the Paris alignment of counterparties (rather than sectors), some minor adjustments to the EIB Paris alignment framework and an update on the shadow cost of carbon.

Paris alignment of counterparties (PATH) framework

3.10. The roadmap sets out clear criteria to ensure alignment of EIB projects with the Paris goals. However, as flagged at the time, it was also necessary to complement this sector-based approach with a consistent framework for counterparties. This point had been regularly raised by stakeholders in the context of the engagement processes on the energy lending policy and the Climate Bank Roadmap. A key question to address was how to handle a project that is Paris-aligned — such as a solar power plant — but where finance is being sought by a corporate that is otherwise engaged in activities that are incompatible with the goals of the Paris Agreement (for example, building new coal-fired power plants).

3.11. In 2021, the EIB Group developed a framework for the alignment of counterparties — or PATH framework — with the name alluding to the pathway along which counterparties need to travel to ensure alignment. This was approved by the EIB and EIF Boards of Directors in October 2021. The framework is for corporates and large financial institutions.

3.12. In the case of direct finance for corporates, the PATH framework focuses on counterparties engaged in high-emitting or highly vulnerable activities. It is clearly for the corporate in question to make its own decisions about its Paris alignment strategy. As a potential financier, the core EIB Group requirement is that the corporate should develop a Paris alignment plan and report on this transparently. This is in line with forthcoming EU regulatory requirements, and is widely regarded as good practice. Moreover, the PATH framework places some requirements on the alignment plan: to include a mid-term carbon emissions reduction target; to justify this under certain circumstances; and to address longer-term options to achieve carbon neutrality. Where potential borrowers do not have such a plan, the EIB is committed to working with them to develop one.

3.13. Decarbonisation plans may not be credible. This is the case if the corporate continues to invest in activities that are very difficult to reconcile with the temperature goals of the Paris Agreement. Examples of such incompatible activities include the construction of new coal-fired power plants, drilling for oil in the Arctic or the destruction of major carbon sinks through direct land use change. The PATH framework therefore requires corporate counterparties in scope to undertake not to engage in such incompatible activities in order to gain access to EIB Group support, subject to paragraph 3.14 below.

3.14. It is widely recognised that a number of currently underdeveloped technologies have a central role to play in long-term decarbonisation, such as green hydrogen, floating offshore wind turbines, and carbon capture and storage. In recognition of the specialised skills in the oil and gas industry, the PATH framework specifies that innovative projects such as these could be proposed to the EIB Board of Directors, even in the event that the corporate continues to engage in incompatible activities.

3.15. The PATH framework takes a slightly different approach in the case of intermediated financing. Unlike corporates, financial intermediaries do not directly emit greenhouse gases, although the perception of the responsibilities of banks on climate change is changing, as is the EU regulatory framework.

3.16. The PATH framework focuses on large and significant financial intermediaries, with thresholds defined in terms of either total assets or market position in a country, as well as, in the case of fund managers, total assets under management. In line with existing and forthcoming legislation, under the PATH framework the EIB Group requires that such

counterparties disclose information in line with the recommendations from the Task Force on Climate-related Financial Disclosures. This disclosure includes information on transition and physical climate risks. The EIB Group is committed to working with partners to implement these requirements.

3.17. The PATH framework covers lending and equity operations. For treasury operations, which by their nature do not lend themselves to counterparty engagement, a dedicated methodology has been developed based on the principles of the PATH framework.

Low-carbon alignment framework

3.18. The roadmap sets out in detail the EIB Group Paris alignment framework. This puts into practice the 2019 commitment from the EIB to "ensure that all financing activities are aligned with the goals and principles of the Paris Agreement by the end of 2020."

3.19. At the time the roadmap was written, the Climate Delegated Act of the EU Taxonomy was not available. However, the "do no significant harm" principles and minimum safeguards were defined in the Taxonomy Regulation, and detailed recommendations had also been made by a technical expert group. This information was used to shape the EIB approach. In light of the evolving regulatory landscape at that time, the roadmap recognised the importance of the taxonomy's "do no significant harm" criteria to the **climate change mitigation and adaptation objectives** as a floor to the EIB framework.

3.20. The European Union adopted the first Climate Delegated Act in late 2021. The EIB Group has refined its Paris alignment framework in light of the two relevant sets of "do no significant harm" criteria referring to climate change mitigation and adaptation, subject to paragraph 3.22 below[9]. Examples of adjustments include clarification of the test cycle used to measure greenhouse gas emissions from vehicles and requirements for the monitoring and reporting of certain technologies.

3.21. Some further explanation is required for transport infrastructure. The newly introduced "do no significant harm" criteria for climate change mitigation requires, among others, that new infrastructure or major renovation projects do not lead to additional relative greenhouse gas emissions. Most transport infrastructure projects supported by the EIB lead to a reduction in emissions, for example through modal shift and better traffic flow through reduced congestion. Nevertheless, some transport infrastructure projects may lead to additional relative emissions, for instance the construction of a new port in a small island developing state that facilitates new and additional transport demand, or a road bypass that reduces air pollution in a city centre but may increase distance driven and hence greenhouse gas emissions.

3.22. This need to trade off costs and benefits was recognised in the roadmap. The Paris alignment of roads is ensured in part through an adapted economic test. This is applied to appraise large capacity expansion road transport infrastructure projects in which emissions are valued at the EIB shadow cost of carbon. A similar approach is used for all other types of transport infrastructure. In light of these robust safeguards, and as a sole exception to the general approach set out in 3.20, the Climate Bank Roadmap Paris alignment framework for transport

[9] In the context of mobile assets, the substantial contribution criteria established in the EU Taxonomy first delegated act have not been implemented as criteria to define the EIB Paris alignment framework at this stage.

infrastructure projects will continue to be used. The EIB will, however, continue to report transparently on the assessment of greenhouse gas emissions for all relevant projects.

3.23. The Climate Bank Roadmap Annex 2 tables will be updated as appropriate to reflect these and any other necessary adjustments at the time of the roadmap's mid-term review.

Shadow cost of carbon

3.24. The roadmap anchored the EIB's approach to economic analysis of projects in the shadow cost of carbon — the cost of driving the economy to meet the 1.5˚C global temperature target. Annex 5 of the roadmap presented a review of the relevant scenarios[10] of leading global integrated climate and economy models, also used in part within the 2018 IPCC special report on 1.5ºC. The median cost of such models is approximately €250/tCO_2 in 2030, rising to €800/tCO_2 in 2050. The roadmap highlighted the need to monitor best practice in this area closely and review emerging evidence on an annual basis.

3.25. The EIB continues to monitor the relevant literature in this field. Some technical papers have been published in the course of the year on different aspects, including the conceptual approach underpinning the shadow cost approach[11], as well as new empirical results under a variety of differing technical assumptions or regional focus. In addition, several publications have considered how to apply the cost of carbon within cost-benefit analysis taking place in a specific regulatory context (for example emissions trading scheme, carbon taxes, wider regulations).

3.26. For the EIB's shadow cost of carbon, there is no strong evidence to suggest an adjustment of the values. However, it is prudent to assess the findings of the Intergovernmental Panel on Climate Change's Sixth Assessment Report on climate mitigation. This assessment will be included in the next edition of this report.

Climate change-related risk management

3.27. The roadmap reported on work to integrate climate, environmental and social risks into the EIB Group's risk management framework and processes. This work continued in 2021. Expectations for the banking sector are rapidly evolving, with the publication of European Central Bank guidance, a European Banking Authority report on the management of environmental, social and governance risks, as well as a proposal to revise the EU banking package, including information on the disclosure and management of climate-related risks.

3.28. In 2021, the EIB Group updated its climate risk screening tool, which provides an assessment at the counterparty level of physical and transition risks. The EIB Group's loan and equity

[10] Relevance is determined by two key assumptions. First, scenarios need to be consistent with the 1.5˚C target by the end of the century with low or no overshoot. Second, given concerns about implications for food security, scenarios should not rely heavily on the development of one particularly negative emissions technology — bioenergy with carbon capture and storage.

[11] See Stern, Stiglitz and Taylor (2021) for a strong critique of using large-scale economic and climate models ("integrated assessment models") as a basis for policy advice on the level of temperature targets and hence the social cost of carbon. The EIB approach is based on models which take the 1.5˚C target as fixed — or rather the shadow cost of carbon.

portfolio can now be assessed though the aggregation of climate risks across sectors, geographies, credit segments or internal ratings.

3.29. A full description of this screening tool, as well as a presentation of the key results, can be found in the EIB Group 2021 Task Force on Climate-related Financial Disclosures report. It is therefore not included in this report.

Building strategic coherence and accountability

3.30. This section focuses on the fourth workstream, developed to ensure that the roadmap remains coherent with the wider field of sustainable finance. Two key elements include progression towards alignment with the EU Taxonomy Regulation and development of a new EIB Group Environmental and Social Sustainability Framework, which was approved by the EIB and EIF Boards in February 2022.

Alignment with the EU Taxonomy

3.31. The roadmap sets out how the EU Taxonomy would be used as one of the main reference points for EIB Group climate action and environmental sustainability definitions. The use of the EU Taxonomy has already been addressed above with respect to the EIB Group Paris alignment framework. This section provides an update on wider aspects.

3.32. The delegated act for the first two objectives, climate change mitigation and adaptation, was expected to be adopted by the European Union before the end of 2020. In the end, it was formally adopted in June 2021 and, following a period of scrutiny by co-legislators, only entered into force in December 2021. This delay in the legislative process has inevitably resulted in pushing back the process of implementation by the EIB Group.

3.33. The EIB Group **climate action** definitions were updated in early 2022 to incorporate the EU Taxonomy substantial contribution criteria set out in the EU Climate Delegated Act as appropriate. Prior to this update, definitions were based on the technical expert group's recommendations in 2021, as presented in the roadmap.

3.34. Interim **environmental sustainability** definitions in line with the EU Taxonomy logic and principles will continue to be used during 2022, and will be reviewed in due course once a delegated act is adopted and enters into force. The EIB climate action and environmental sustainability criteria for 2022 are available here. The EIF climate action and environmental sustainability criteria for intermediated small and medium firms' finance are available here.

3.35. With regard to the "do no significant harm" criteria and minimum safeguards, due to regulatory developments, including the delay in the adoption of the first delegated act, the timelines for implementation, initially envisaged for June 2022 (Table 5.3 of the roadmap), need to be extended. The next edition of the report will update this point. As mentioned in paragraph 3.20 above, the EIB Group has already refined its Paris alignment framework where relevant to reflect the "do no significant harm" criteria for the first two objectives (climate change mitigation and adaptation) agreed under the Climate Delegated Act.

Environmental and Social Sustainability Framework

3.36. In response to new policy developments, new environmental and social issues and the changing needs of clients and promoters, the EIB Group undertook in the roadmap to revise its Environmental and Social Sustainability Framework

3.37. The new framework, approved in early 2022, includes a new Environmental and Social Policy and revised Environmental and Social Standards. This includes a new Standard 11 on intermediated finance. Standard 5 on climate change reflects the key elements of the roadmap. These documents underwent public consultations during the summer of 2021 and attracted numerous suggestions and comments. This new framework also includes revised EIF Environmental, Social and Governance Principles.

4. Outlook

4.1. The roadmap, and the transformation into the EU climate bank, is a work in progress. The roadmap sets out a pathway for the EIB Group to 2025, the halfway point through the critical decade. We will conduct a mid-term review in 2023 and consider adjustments. This will also be informed by a mid-term review of our energy lending policy in 2022.

4.2. The next edition of this report will focus on progress in 2022. At least five elements are likely to be included next time, in addition to the continuation of wider business development initiatives:

4.3. First, the two most recent elements of the overall roadmap — the PATH framework and the Adaptation Plan — only came into effect in 2022. This year will be dominated by the implementation of both frameworks, and adding new indicators to the roadmap results framework.

4.4. Second, in terms of sustainable finance, the EIB Group's progressive application of the EU Taxonomy will continue in 2022, notably to determine "do no significant harm" approaches across the different types of EIB Group products. This will take place within the wider context of implementing the new Environmental and Social Sustainability Framework.

4.5. Third, there will be a review of the EIB's shadow cost of carbon, taking stock of the Intergovernmental Panel on Climate Change's Sixth Assessment Report on climate mitigation.

4.6. Fourth, the EIB tool to assess the vulnerability of projects to current and future climate change will be revised and improved during 2022. This will reinforce the EIB's ability to ensure the alignment of direct operations with the "do no significant harm" criteria for climate change adaptation goals.

4.7. Finally, the 27th Conference of the Parties will take place in Egypt in 2022. The EIB Group will prepare contributions, including the concept of support for a just transition outside the European Union, increasing resilience to future climate change in Africa and developing a biodiversity and environmental framework. Work will also continue on biodiversity risk management and the development of a social sustainability framework.

Annex: Results framework

Introduction

1. In November 2020, the EIB and EIF Boards of Directors approved the EIB Group Climate Bank Roadmap. The roadmap sets out how the EIB Group intends to deliver on the increased level of climate and environment commitment determined by the EIB Board of Directors in November 2019. This commitment effectively transformed the EIB Group from an EU institution supporting climate action into "the EU climate bank."

2. The roadmap specified the establishment of a results framework to assess, manage and monitor progress, and to evaluate and transparently report on the outcomes of its activities related to the roadmap, to its shareholders and other stakeholders. The framework helps the EIB Group to continuously improve its practices and policies over time, adapting activities to take account of lessons learned, changing political and legal requirements, best banking and market practices, and scientific knowledge[12].

3. The framework is therefore intended, through ongoing monitoring and annual progress reports, to inform (i) the mid-term review in 2023, which will consider adjustments for the remainder of the implementation period; and (ii) the assessment report in 2024, which will provide recommendations for the next iteration of the roadmap.

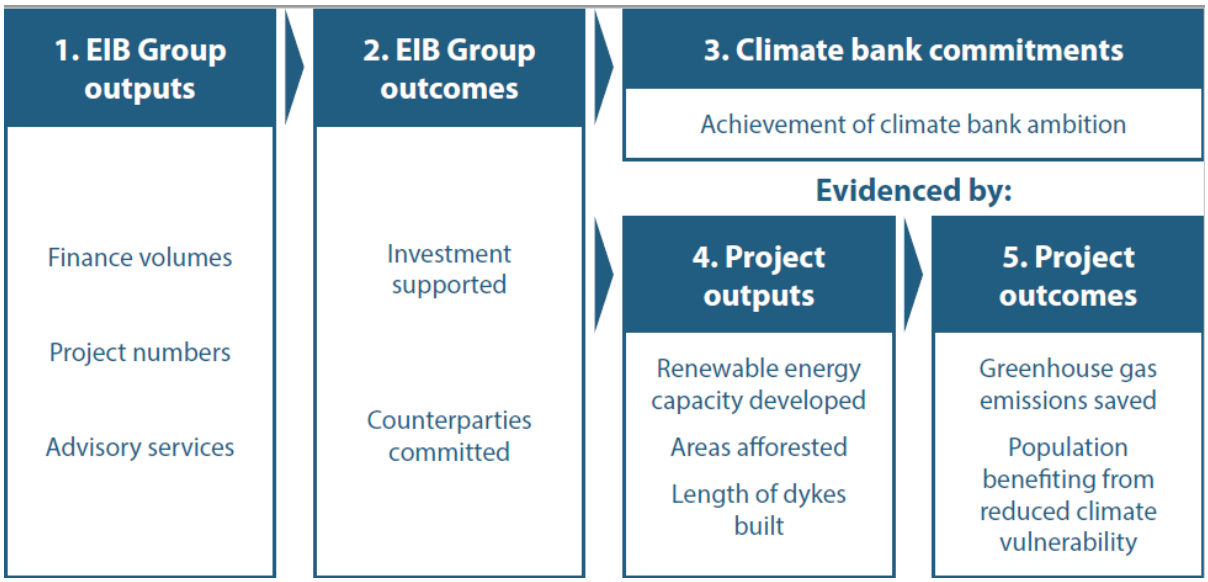
Approach and structure

4. The monitoring and assessment tools used for the results framework build on existing EIB Group tools. Additional indicators, studies and analyses will be included later to provide a comprehensive portrayal of progress.

5. The logic of the results framework is set out in the figure below. This illustrates that through financial support and advisory services (level 1), the EIB Group supports additional green investment and influences the broader corporate activities of counterparties (level 2), thus supporting achievement of the EIB Group's climate bank commitments (level 3).

[12] EIB Group Climate Bank Roadmap 2021-2025, Chapter 5, paragraphs 5.35–5.39: Climate Bank Roadmap monitoring and assessment.

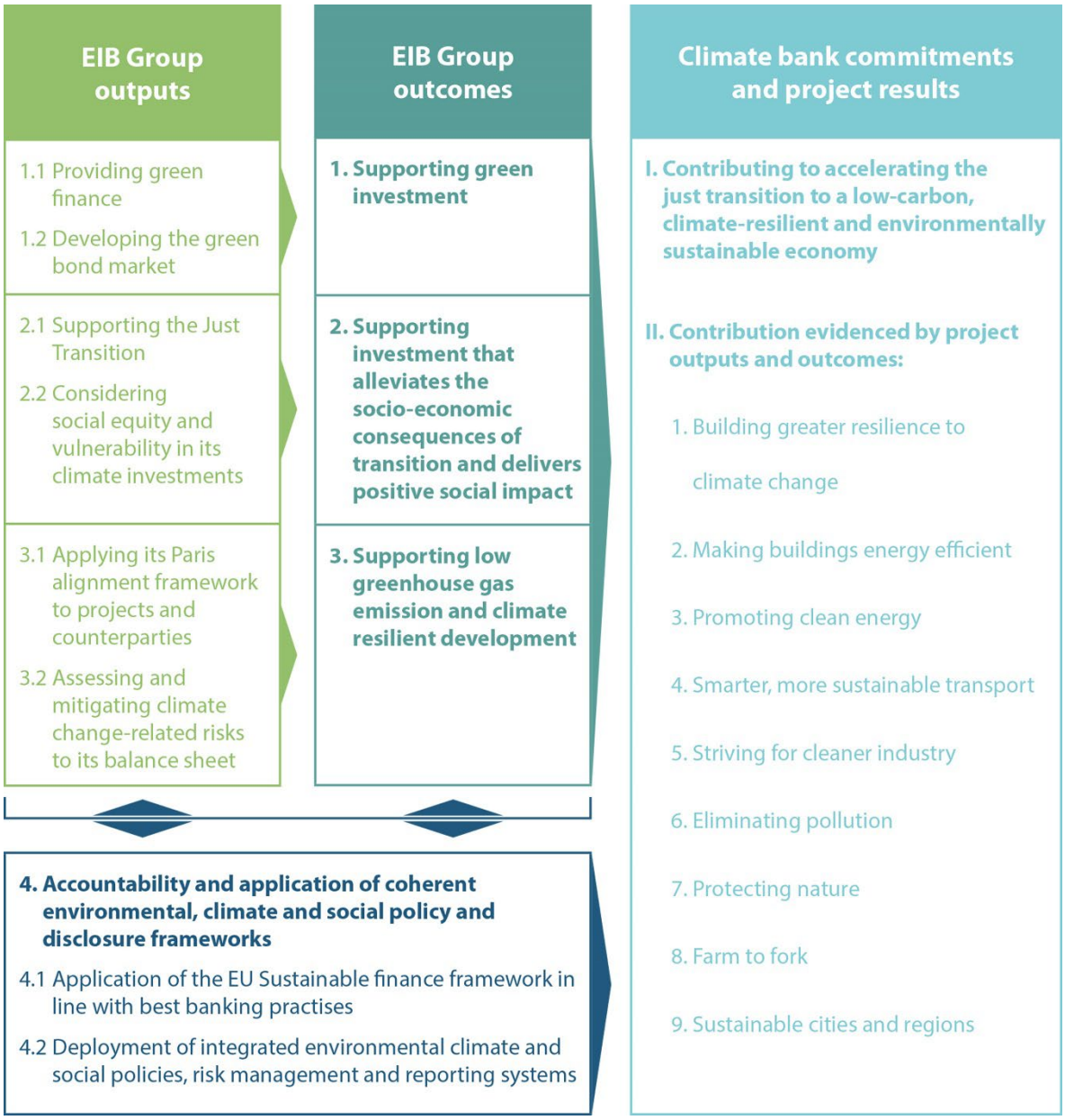
6. Results framework overview



7. The EIB Group's green finance and advisory activity and the additional investment it supports (at levels 1 and 2) also result at the project level in outputs, such as renewable energy capacity and flood protection infrastructure (level 4). These will in turn generate broader project outcomes, such as lower greenhouse gas emissions and reduced climate vulnerability (level 5).

8. The results framework logic model is presented in more detail on the following page.

Results framework logic model



9. The results framework defines indicators at each stage of the logic model. For the first three roadmap workstreams, EIB Group outputs and outcomes are distinct and progress can be measured largely through quantitative indicators.

10. However, the fourth workstream, covering EIB Group application of the EU sustainable finance framework and harmonised multilateral development bank approaches, is broader and reflects the policy and disclosure aspects of the preceding three workstreams. It is also distinguished by more qualitative indicators, such as the establishment and application of policies and frameworks, from which broader market outcomes are less quantifiable.

11. Project-level outputs and outcomes (levels 4 and 5) are structured around the sectoral focus areas of the roadmap, reflecting the thematic areas of the European Green Deal.

Indicator rationale

12. The results framework indicators will be regularly monitored and will support annual progress reporting. The thematic and product-specific indicators selected build on those established in existing EIB Group monitoring and evaluation systems, including its project climate action, carbon footprint and Climate Awareness and Sustainability Awareness Bond reporting systems, as well as the EIB Additionality and Impact Measurement framework[13].

13. The framework also includes the possibility for additional indicators, studies and analyses in order to provide a comprehensive portrayal of progress. In addition, as the policy and regulatory environment relating to sustainable finance evolves through to 2025, the results framework and its indicators are subject to refinement.

EIB Group outputs: level 1 indicators (Table 1 below)

14. EIB Group output indicators reflect the direct results of EIB Group activities supporting the roadmap. They are structured according to the four roadmap workstreams. EIB Group output indicators provide an indicative view of EIB Group activities covering the following areas:

    - EIB Group green finance and sustainability funding (green bonds) (workstream 1)

    - Finance and advisory services that support a just transition in the European Union and social impact in climate action globally, through new flags established in EIB project appraisal systems (workstream 2)

    - The Paris alignment of EIB Group operations and the broader analysis of physical and transition climate risk (workstream 3)

    - Application of the EU sustainable finance framework in EIB activities, as well as reporting and disclosure activities, including those relating to the annual Task Force on Climate-related Financial Disclosures and internal carbon footprint and sustainability reports, as well as the annual roadmap implementation report (workstream 4)

15. Indicators for 2021 are listed in Table 1 below. EIB Group output indicators for volumes financed reflect levels of finance signed by the EIB and committed by the EIF in the reporting year. As

[13] Additionality and Impact Measurement (eib.org).

reporting on certain indicators, such as those related to gender equality, began during 2021, such indicators do not reflect the full EIB contributions for the year.

16. Annual reporting on a number of additional EIB Group output indicators is under consideration in 2022. EIB Group support systems for a number of these activities were only established in 2021, such as the PATH framework. In some cases, EIB Group finance will only start in 2022, such as the support for the EU Just Transition Mechanism.

EIB Group outcomes: level 2 indicators (Table 2)

17. EIB Group outcome indicators reflect the wider market outcomes resulting from direct EIB Group outputs. Structured by roadmap workstream, these include levels of investment supported through EIB finance, typically including equity investments and other sources of debt (workstream 1), as well as support for a just transition in the European Union and global green and social impact objectives (workstream 2).

18. In terms of Paris alignment, a significant outcome of the EIB Group commitment is the absence of EIB Group finance for non-aligned activities. Outcome indicators are therefore planned to reflect levels of support — beyond the scope of individual projects financed — provided to counterparties who commit to improving existing alignment plans or creating new ones, in order to align more closely with the temperature and resilience goals of the Paris Agreement under the new Group PATH framework (roadmap workstream 3).

19. Since the just transition plans for affected territories within the European Union had not been finalised by the end of 2021, and the PATH framework was approved in October 2021 and initiated in 2022, this year will be the first year of reporting on related indicators.

Climate bank commitments: level 3 indicators (Table 3)

20. The climate bank commitment indicators reflect progress on delivery of the three 2019 commitments in the roadmap, as well as the quantitative commitment made in the 2020 EIB Adaptation Plan:

    - Increase the share of annual EIB financing dedicated to climate action and environmental sustainability to exceed 50% by 2025 and beyond;
    - Support €1 trillion of EIB Group green investment from 2021 to 2030;
    - Align EIB Group financing with the Paris Agreement by the end of 2020;
    - Increase the share of climate adaptation in EIB climate action finance to 15% by 2025.

21. While the EIB approach to monitoring and reporting its climate action (mitigation and adaptation finance) has already been established — subject to further refinement in response to ongoing EU Taxonomy development — it was expanded in 2021 to enable the reporting of contributions to the EU Taxonomy's environmental sustainability objectives. It was also expanded to cover intermediated finance provided by the EIF. In addition, the commitment to Paris alignment was implemented at the start of 2021, but the EIB Group's absolute carbon footprint of direct finance is an associated indicator that continues to be monitored annually.

22. Reducing greenhouse gas emissions is a core part of the roadmap. The EIB has been estimating the carbon footprint of financed projects for over ten years. The carbon footprint is part of the environmental and social assessment of a project, providing a measure of the climate impact, and is published at project level in the EIB public register within the environmental and social data sheet. Two key metrics are reported: first, absolute emissions, which is the expected annual emissions generated by the project, and second, relative emissions, which is the comparison of absolute emissions against a credible baseline.

23. In addition to publishing data on the climate impact of projects, the calculation of greenhouse gas emissions is important for other EIB decision-making. Greenhouse gas emissions data are often used as an input in the economic analysis of projects, where in general they are combined with the shadow cost of carbon to estimate the economic impact of the project. In some sectors, greenhouse gas emission metrics are applied for Paris alignment low-carbon criteria as presented in the roadmap. For example, there is an emission standard of less than 250 g CO_2e/kWh for power generation projects. Similarly, greenhouse gas emission criteria are used for certain activities to determine whether a project can be labelled as substantially contributing to climate change mitigation, including the use of criteria defined in the EU Taxonomy.

24. Aggregated project carbon footprint emissions data are reported annually in the EIB Group Sustainability Report, and included in the results framework, since this is central to the success of the Climate Bank Roadmap[14]. This analysis includes greenhouse gas data for projects whose emissions were expected to be significant, exceeding one or both of the following thresholds:

    - Absolute emissions (actual emissions from the project) > 20 000 tonnes of carbon dioxide equivalent per year for a standard year of the project's operations

    - Relative emissions (estimated increases or reductions in emissions compared to the expected alternative) > 20 000 tonnes of carbon dioxide equivalent per year

25. Analysis of the EIB carbon footprint suggests that approximately 95% of emissions generated by the EIB's investment projects are within these two thresholds. The absolute emissions from each project form the basis of the footprint approach. Assessing and reporting the prospective changes in the level of greenhouse gas emissions as a consequence of a project allows for comparison with other technologies or solutions.

26. The EIB has developed a methodology for the calculation of project carbon footprints[15] that is in line with a common framework developed with a group of international financial institutions[16]. First published in 2009, the EIB methodology is regularly updated to take account of the latest standards and best practices.

27. When reviewing the overall impact of EIB lending, it is important to assess significant greenhouse gas emissions and removals from all the sectors being financed, and not simply from sectors and projects contributing to climate action. The EIB annual carbon footprint includes a wide range of

[14] Emissions and carbon sequestration are prorated to the EIB lending volume prior to aggregation. Total project emissions (absolute) and savings (relative) would be significantly larger.
[15] EIB Project Carbon Footprint Methodologies.
[16] For further information on harmonisation efforts by international financial institutions, see: IFIs - Harmonization of Standards for GHG accounting | UNFCCC.

sectors financed, such as renewable energy generation, electricity networks, energy efficiency, transport fleets and infrastructure, industry, water and solid waste, agriculture and forestry.

28. Reporting of emissions includes scope 1 emissions (direct greenhouse gas emissions from sources operated by the project) and scope 2 emissions (indirect greenhouse gas emissions from imported energy)[17]. Scope 3 emissions (indirect greenhouse gas emissions from other sources, such as vehicle emissions from use of road infrastructure) are included for certain sectors and project types where they are considered significant and can be estimated.

29. The EIB reviews and updates the methodology regularly to take account of the latest developments in greenhouse gas standards and reporting. We are investigating options for the inclusion of further scope 3 emissions, while also identifying potential approaches for estimating the carbon footprint from intermediated finance.

Project results (level 4 and 5 indicators)

30. Project output indicators represent the direct physical outputs of supported project investments, while project outcome indicators represent the wider benefits to local populations and society. Project output and outcome indicators are presented in Table 4 below, and the final section of the Annex provides further information on the contribution of EIB Group projects signed during 2021 to the roadmap sectoral focus areas and the European Green Deal. More specific information on EIB Group contributions, particularly in environmental sustainability areas such as pollution prevention and nature protection, is expected in the future.

31. New indicators are under consideration to provide an adequate reflection of contributions to the roadmap sectoral focus areas, notably in areas such as adaptation and nature protection, farm to fork and sustainable cities and regions. The 2021 project result indicators reflect the anticipated outputs and outcomes of EIB-financed projects; however, from 2022, reporting at the level of the EIB Group will be considered.

32. The EIB has reported the carbon footprint of its project lending in a prorated format to reflect the footprint of EIB financing. To avoid potential misunderstanding, the results framework does not include additional project-level emissions data.

33. Project-level indicators are determined during project appraisal and reflect the expected results of EIB-supported projects for which sufficient information was available to determine project results at the time of appraisal and for which a first signature was recorded in the reporting year. Project output and outcome indicators therefore provide a forward-looking assessment of contributions to sectoral focus areas by EIB-financed projects.

[17] The EIB methodology uses the concept of "scopes 1, 2 and 3" based on definitions from the WRI/WBCSD Greenhouse Gas Protocol Corporate Accounting and Reporting Standard when defining the project boundaries.

2021 Indicators

Table 1. EIB Group outputs 2021

Outcomes		Outputs		Indicators	2021 figures
1. Supporting green investment	1.1	Providing green finance	1.1.1	EIB climate mitigation finance	€25.1 billion
			1.1.2	EIB climate adaptation finance	€1.3 billion
			1.1.3	EIB environmental sustainability finance	€12.3 billion
			1.1.4	EIF climate action and environmental sustainability finance	€432 million
			1.1.5	EIB climate action and environmental sustainability finance (inside EU)	€24.8 billion
			1.1.6	EIB climate action and environmental sustainability finance (outside EU)	€2.8 billion
			1.1.7	EIB climate action and environmental sustainability innovation finance	€1.9 billion
			1.1.8	Number of projects contributing 100% to climate adaptation (EIB)	22
			1.1.9	Number of intermediated (debt, equity) transactions including a dedicated climate action and/or environmental sustainability contribution (EIF)	12
			1.1.10	Number of multi-beneficiary intermediated loans (MBILs) signed including a dedicated climate action and/or environmental sustainability window (EIB)	19
			1.1.11	Proportion of MBILs signed including a dedicated climate action and/or environmental sustainability window (EIB)	27%
			1.1.12	Proportion of MBIL finance committed to climate action and/or environmental sustainability windows (EIB)	12%
			1.1.13	Number of financial intermediaries supported in climate action and environmental sustainability lending through advisory assignments	10
	1.2	Developing the green bond market	1.2.1	Total annual sustainability funding / Total funding	21%
			1.2.2	Total annual sustainability funding / Total climate and sustainability bond eligible disbursements	96%
2. Supporting investment that alleviates the socioeconomic consequences of transition and delivers a positive social impact	2.1	Considering social equity and vulnerability in climate-related investments	2.1.1	Number of projects signed that have climate-related positive gender impacts — indicator introduced mid-2021	8
			2.1.2	Share of climate action and environmental sustainability projects with a positive gender impact — indicator introduced mid-2021	2.4%
			2.1.3	Number of advisory assignments supporting a just transition	25

Outcomes		Outputs		Indicators	2021 figures
3. Supporting low greenhouse gas emissions and climate-resilient development	3.1	Applying its Paris alignment framework to projects and counterparties	3.1.1	Number of EIB projects with low residual physical climate risk	190
			3.1.2	Number of EIB projects with medium residual physical climate risk	43
			3.1.3	Number of projects with high residual physical climate risk	0
			3.1.4	Absolute emissions of EIB financing by sector:*	
				- Industry	1.1 $mtCO_2e$/year
				- Energy	0.4 $mtCO_2e$/year
				- Mobility	0.7 $mtCO_2e$/year
				- Other (water, sewerage, forestry, food and agriculture)	0.2 $mtCO_2e$/year
			3.1.5	Relative emissions of EIB financing by sector:*	
				- Industry	-0.1 $mtCO_2e$/year
				- Energy	-1.7 $mtCO_2e$/year
				- Mobility	-0.3 $mtCO_2e$/year
				- Other (water, sewerage, forestry, food and agriculture)	-0.2 $mtCO_2e$/year
	3.2	Assessing and mitigating climate change-related risks to its balance sheet**	3.2.1	EIB Group portfolio (signed exposure)	€626.02 billion
			3.2.2	Share of overall EIB Group portfolio covered by climate risk screening tool, of which:	81%
			3.2.3	Share rated as medium and high risk for physical risk	18%
			3.2.4	Share rated as medium and high risk for transition risk	53%
4. Accountability and application of coherent environmental, climate and social policy and disclosure frameworks	4.1	Application of the EU sustainable finance framework in line with best banking practices	4.1.1	Total annual climate and sustainability bond eligible signatures / Total annual signatures	25.3%
			4.1.2	Total annual climate and sustainability bond eligible disbursements / Total annual disbursements	29.7%
	4.2	Deployment of integrated environmental, climate and social policies, risk management and reporting systems	4.2.1	Publication of Task Force on Climate-related Financial Disclosures report	Yes
			4.2.2	EIB Group internal carbon footprint (absolute emissions)	7 708 tCO_2e
			4.2.3	EIB Group internal carbon footprint (net emissions)	4 356 tCO_2e
			4.2.4	EIB Group carbon footprint per employee (internal operations)	0.99 tCO_2e
			4.2.5	EIB Group roadmap results framework and reporting mechanism established and operational	Yes

* Emissions and carbon sequestration are prorated to the EIB lending volume prior to aggregation. Total project emissions (absolute) and savings (relative) would be significantly larger. Mt CO2e = megatonnes of CO_2 equivalent.

** As of 31 December.

Table 2. EIB Group outcomes 2021

	Outcomes*		Indicators	2021 figures
1	**Supporting climate action and environmentally sustainable investments**	1.1	EIB climate action investment supported**	€57 billion
		1.2	Volume of EIB environmentally sustainable investment supported**	€30.6 billion
		1.3	Volume of climate and sustainability bond eligible finance	€22 billion
2	**Supporting investment that alleviates the socioeconomic consequences of transition and delivers a positive social impact**	2.1	Just transition investment supported (EU)	-
		2.2	Global climate action and environmental sustainability investment supported with a positive social impact (gender)	-
3	**Supporting low greenhouse gas emissions and climate-resilient development**	3.1	Counterparts committed to improving their Paris alignment plans and related disclosures	-

* Reporting on indicators under points 2.1 and 3.1 to begin from 2022.
** Many projects contribute to both climate action and environmental objectives (e.g. a reforestation project may help sequester carbon and protect biodiversity). The total volume of climate action and environmentally sustainable investment support is presented in Table 3 below.

Table 3. EIB Group commitments 2021

	Commitment indicators	2021 figures	Ambition
1.1	Share of EIB finance dedicated to climate action and environmental sustainability	50.8%	More than 50% by 2025
1.2	Share of climate adaptation in EIB climate action finance	4.9%	15% by 2025
1.3	Volume of climate action and environmental sustainability investment supported by the EIB Group	€75 billion	€1 trillion total by 2030
1.4	Carbon footprint of EIB finance:		
	Absolute emissions in $mtCO_2e$/year	2.3	Associated with
	Relative emissions in $mtCO_2e$/year	-2.3	Paris alignment

*** Many projects contribute to both climate action and environmental objectives (see indicators 1.1 and 1.2 in Table 2 above). As a result, the total volume of climate action and environmentally sustainable investment supported by the EIB Group is less than the sum of the volumes of EIB climate action and environmentally sustainable investment supported.

Table 4. Project results (outputs and outcomes) 2021

	Roadmap focus area	Indicator type	Indicator*	2021 figures**
1	Building greater resilience to climate change	Outcome	People with reduced exposure to drought risk	0.3 million
		Outcome	People facing reduced risks of flooding	0.6 million
		Output	Construction and rehabilitation of dykes, flood barriers and flood retention basins	
			Capacity of reservoirs or raw water storage facilities constructed or rehabilitated	230 kilometres
		Output	Capacity of retention or room-for-river areas constructed or rehabilitated	
				0.35 million cubic metres
		Output		
				5.36 million cubic metres
2	Making buildings energy-efficient	Outcome	Energy savings from EIB-financed green projects	3.0 million megawatt hours per year
		Outcome	Smart energy meters installed	2.1 million
		Output	Households in new or renovated energy-efficient housing units	163 000
3	Promoting clean energy	Output	Additional electricity generation capacity from renewable energy sources	11 300 megawatts
			Additional electricity produced from renewable energy sources per year	
		Outcome	Additional heat production capacity from renewable energy sources	27 900 gigawatt hours per year
			Additional heat produced from renewable energy sources per year	
		Output	Power lines installed or upgraded	35 megawatts
		Outcome		250 gigawatt hours per year
		Output		62 800 kilometres
4	Smarter, more sustainable transport	Outcome	Additional annual trips made on EIB-financed public transport	346 million
		Outcome	Additional annual demand for goods served by the rail freight services generated	
			Railway tracks upgraded or built	1.2 million tonnes per year
		Output	Stations constructed or upgraded	330 kilometres
		Output	Public transport vehicles and rolling stock purchased or rehabilitated	45
		Output	Urban rail and bus lanes upgraded or built	6 350
		Output	Stations or stops upgraded or built	200 kilometres
		Output		55
5	Striving for greener industry	Output	Patents issued	14 000
6	Eliminating pollution	Outcome	Wastewater treated to acceptable standards	2.1 million person equivalent

* Project-level indicators subject to review and refinement during 2022, with new indicators expected for the following focus areas: 1: Adaptation; 7: Protecting nature; 8: Farm to fork; and 9: Sustainable cities and regions.

** Aggregated annual values are rounded down to provide a conservative estimate of overall anticipated project outputs and outcomes supported.

Support for the European Green Deal sectoral focus areas in 2021

34. This section highlights key areas of support for the European Green Deal. It is structured according to the nine sector-based areas outlined in workstream 1 on accelerating the transition through green finance. This section illustrates some of the project-based outputs and outcomes from the results framework.

Focus area 1: Building greater resilience to climate change

35. In 2021, the EIB lent €1.3 billion for climate change adaptation, of which 82% was in the European Union. This represents 4.9% of total EIB support for climate action. This lending increases the resilience of projects to current and future climate change, with a focus on water, agriculture, infrastructure, urban development and disaster risk management. There were a number of extreme weather events globally in 2021, including tragic flooding in Europe in July.

36. A number of projects stand out. In Greece, the EIB helped the public civil protection service increase its ability to prevent and manage extreme events such as wildfires. In response to the floods in July, the Bank helped the Belgian region of Wallonia strengthen its water infrastructure and adapt it to future extreme events. Outside the European Union, the EIB improved water supply infrastructure in the Jordan Valley, increasing the efficiency of water usage as water scarcity increases because of climate change. In Benin, the Bank helped extend and rehabilitate rainwater drainage systems and roads, addressing the risk of increasingly destructive flooding.

37. In 2021, EIB finance reduced the vulnerability to drought and floods for over 900 000 people, helped construct 230 kilometres of flood protection, and increased river water retention capacity of over 5 million cubic metres.

38. In 2021, the EIB presented its first dedicated Adaptation Plan with a target to increase the share of climate action finance devoted to adaptation to 15% by 2025. This represents a significant increase in adaptation lending and includes measures to strengthen support for the public and private sectors.

Focus area 2: Boosting energy efficiency

39. In 2021, total EIB financing of energy efficiency projects amounted to €4.7 billion, of which over 95% was within the European Union. This support is nearly 10% higher than the average over the previous three years. Approximately 70% of this lending targeted energy efficiency in buildings and occurred while construction costs and supply problems were rising. As energy prices began to rise in the latter half of 2021, the incentive to invest in efficiency increased.

40. The renovation of buildings played a prominent role in EIB energy efficiency lending, in line with the Bank's priorities and the EU Renovation Wave Strategy. The Bank supported a number of scalable products, such as energy efficiency mortgages for new construction and renovation, and other measures, such as one-stop shops in Spain, supported by the ELENA facility. In some places, in Hungary and Italy, for example, such products were introduced to support national building rehabilitation programmes that help low-income households facing steep rises in electricity and fuel costs.

41. Given the complexity of energy efficiency investments, the split incentives arising from complex ownership and tenancy arrangements, and the technical design and scope considerations, advisory support and technical assistance played key roles in accelerating investment projects. The EIB has

offered more support to investment projects through European Commission-backed instruments such as the ELENA facility, Private Finance for Energy Efficiency, JASPERS, the Horizon 2020 facility and the European Investment Advisory Hub, which forms the basis for the InvestEU Advisory Hub from 2022.

42. Once implemented, our green projects will save an estimated 3 088 GWh/year, with a greenhouse gas reduction of 175 $ktCO_2e$. EIB lending also supported over 163 000 new or renovated energy-efficient housing units and the installation of 2.1 million smart energy meters.

Focus area 3: Promoting clean energy

43. In 2021, the EIB lent €5.7 billion for renewable energy. Overall growth in investment in solar and wind projects grew in Europe compared to 2020, despite a number of supply problems caused by the coronavirus pandemic. As the global gas crisis took effect towards the end of the year, renewable investments, in terms of security of the energy supply and affordability, became increasingly visible.

44. EIB support was largely directed to scaling up established technologies: solar panels, onshore and offshore wind power, as well as electricity transmission and distribution grids. Innovation also stands out in 2021. There were investments in floating offshore wind, which has significant potential in large parts of the world that do not have a shallow continental shelf, which is required for wind power projects that need to be attached to the seabed. We also supported the combination of solar panels with battery storage to provide flexibility when there is not enough renewable power available.

45. The EIF continued to support early-stage technology venture capital fund managers in renewable energy. Backed by an EIF guarantee, the Spanish bank Banco Sabadell will finance venture capital funds investing in companies active in renewable energy. The EIF has invested €200 million in a number of EU climate and infrastructure funds, with a focus on Central and Eastern Europe.

46. Outside the European Union, the EIB supported the first independent utility scale (100 MW) solar panel project in Uzbekistan. This is the first part of a wider plan to install 450 MW by 2025 in a power system otherwise dominated by natural gas. In Madagascar, the EIB also supported a high-voltage transmission line to connect the island and replace the current system that is based on heavy fuel oil with a new system that uses hydropower.

47. In 2021, the EIB supported the installation of 11.3 GW of extra renewable energy capacity globally, expected to generate nearly 28 TWh of green power per year. To put this in perspective, globally approximately 260 GW of new solar and wind capacity was installed, of which 43 GW was in the European Union. To deliver this green power to people and businesses, the electricity transmission and distribution network needs to be improved. In 2021, the EIB also supported the construction and upgrade of nearly 63 000 kilometres of power lines.

Focus area 4: Smarter, more sustainable transport

48. In 2021, the EIB lent €9 billion to help reduce greenhouse gas emissions in the transport sector, including €7.8 billion in the European Union. Reducing transport emissions globally is a key priority if global warming is to be kept below 1.5˚C. The decarbonisation of transport will require investment in a range of technologies.

49. The EIB has a long history of supporting low-carbon transport on trains, trams and metros. In 2021, notable projects include two metro lines in the Indian city of Agra. The project covers 30 kilometres of metro line and 27 stations, and is expected to carry over 78 million passengers annually. A second project is the renewal of an important north-south section of the rail network in central Cameroon that is expected to carry an additional 245 000 passengers per year, as well as nearly 150 000 tonnes of cargo.

50. Newer forms of sustainable transport were also supported. In the rail sector, it can be challenging to justify the high costs of electrifying parts of a network with relatively light demand. Hydrogen-powered trains can be a lower cost alternative. In 2021, the EIB supported the acquisition of four green hydrogen-powered trains to provide regional rail services on a reopened rail line in the northern Netherlands. This is a pilot phase that is expected to result in 600 000 passenger trips a year. If this is successful, more diesel trains are expected to be replaced by hydrogen ones.

51. A second example in 2021 is the EIB's support for Poste Italiane's fleet renewal programme, which includes 1 300 electric tricycles and quadricycles and about 2 850 electric cars and vans. These vehicles offer last-mile delivery services in cities and reduce urban air pollution. A shift to electric mobility and transport is accelerating. In 2021, full electric vehicles and plug-in hybrid vehicles accounted for 18% of new passenger cars registered in the European Union. This is up from 10.5% in 2020 and 3% in 2019.

52. The EIF signed four securitisation transactions with different European banks and leasing providers during 2021. These are expected to support over €380 million of investments in low-carbon and electric vehicles.

53. In 2021, EIB finance supported over 500 kilometres of new or renovated tracks and lanes, over 100 stops and stations and over 6 300 vehicles (train, tram, metro, bus). This is estimated to result in almost 350 million additional passenger trips on public transport and 1.2 million tonnes of additional cargo transported annually by rail.

Focus area 5: Striving for greener industry

54. In 2021, the EIB lent €1.9 billion to innovative green industry projects as more leading companies in steel, chemicals and aviation commit to lower emissions and strive to develop technologies that are in their infancy. Meeting net-zero targets requires significant development of deep decarbonisation technologies, such as hydrogen, carbon capture, biochemistry, and synthetic chemistry, as well as materials efficiency, energy efficiency, and circular production.

55. More than half of EIB innovation investments in heavy industry and general manufacturing will be used to speed up the development of deep decarbonisation technology. Examples include projects in areas already undergoing decarbonisation, such as electricity (innovative wind technology) and electric vehicles, as well as in more challenging areas including green aviation (for example, innovative propulsion systems allowing adoption of low-carbon fuels), green hydrogen (for example, development of catalytic technology) and sustainable and decarbonised steel (for example, alternative fuels and reductants, and hydrogen-based steelmaking).

56. Innovation in energy efficiency and circular production is especially important as fuel and electricity prices rise. These fields account for 45% of EIB innovation lending. In Sweden, a first-of-its-kind circular textile fibre production facility was built, producing the only commercially available virgin-

quality textile-to-textile recycled material. Another initiative supported a Spanish firm developing bioplastic materials, as well as more sustainable and environmentally friendly production methods based on recycled materials and renewable energy.

57. In September 2021, the EIF and the European Institute of Innovation and Technology agreed to join forces to boost European innovation for the green and digital transitions. The two institutions will share information on financing and innovative opportunities for European SMEs and startups in sectors including climate, energy and environmental technologies, digital and deep technologies, and education and skills. This demonstrates the EIB Group's commitment to digital innovation and skills transformation in European businesses.

58. EIB lending to green industry projects is expected to result in over 14 000 new patents in low-carbon technology and innovations in energy and resource efficiency.

Focus area 6: Eliminating pollution

59. In May 2021, the European Commission adopted an action plan "Towards Zero Pollution for Air, Water and Soil." The goal is that by 2050, air, water and soil pollution will be reduced to levels no longer considered harmful. During 2021, the Bank supported projects that prevent pollution to water, soil and air.

60. The EIB lent €437 million for wastewater collection and treatment projects, of which approximately 58% was outside the European Union. The outcomes of these projects can be quantified in reduced pollution into water bodies of over 2 million population equivalent per day. In addition, since all these wastewater treatment facilities are designed including secondary treatment, it is expected that they will reduce the discharge of microplastics by up to 80%.

61. In the transport sector, air pollution is caused primarily by exhaust emissions. It is import to reduce fuel combustion in transport, which will cut greenhouse gas emissions and improve air quality, especially in cities. In 2021, the Bank provided over €7 billion in financing for transport projects that had zero emissions. This includes investments in electric systems on rails, trams, metro systems and road transport, as well as the infrastructure supporting electrified transport.

62. The EIB also continued efforts to reduce pollution in the oceans, with a specific focus on plastics. The Bank supports the Clean Oceans Initiative in partnership with several national development banks around Europe. This initiative has reached more than 80% of its original financing target of €2 billion. The Bank's contribution is more than €600 million. It is estimated that EIB projects will help nearly 3 million people through improved wastewater, stormwater and waste management, with associated positive impacts on urban and marine environments and public health. Considering its success and impact, partners have agreed to extend and increase the initiative's target to €4 billion by December 2025.

63. The EIF invested €30 million in Ginkgo III, a fund dedicated to the decontamination and redevelopment of land in Europe. The EIF is among the fund's largest contributors, underlining its commitment to support the European Green Deal.

Focus area 7: Protecting nature

64. In 2021, the landmark *Economics of Biodiversity: The Dasgupta Review* was published. This emphasised the urgent need to preserve natural capital, as reflected in the European Green Deal

and the Convention on Biological Diversity's post-2020 global biodiversity framework. The EIB is committed to supporting a "nature-positive" future through investments and other activities.

65. In 2021, the EIB financed approximately €40 million worth of projects to protect, conserve and restore biodiversity and ecosystems. This included projects within the European Union, financed through the Natural Capital Financing Facility and under broader regional development and research programmes. There are limited investment possibilities in natural capital, reflecting the absence of revenue drivers in this sector, the difficulty of pricing biodiversity and ecosystem benefits and the risks characterising investments in fragile natural systems.

66. EIB-supported project examples within the European Union in 2021 include the Natural Capital Financing Facility's Ginkgo Fund III integration of nature-based solutions into urban redevelopment projects. This was designed to increase green spaces in city development and link them to other green urban areas. In addition, the Natural Capital Financing Facility's Eau de Paris project will support the water utility's biodiversity strategy, restoring river connections around hydraulic structures, greening an aqueduct, restoring the local habitats of shrubs, and other biodiversity enhancements.

67. The EIF made commitments to three specialised blue economy funds during 2021. These involved a €35 million commitment, supported by a European Fund for Strategic Investments guarantee, to Ocean 14, a private equity fund aiming to conserve and sustainably use ocean, sea and marine resources. It will target growth-stage technologies and companies promoting sustainable fishing, aquaculture and alternative proteins, as well as ocean conservation and health, including marine flora regeneration and plastic waste solutions.

68. In addition, the EIF committed €21 million to Faber Blue Pioneers Fund, which aims to invest in early-stage companies developing deep tech solutions in areas such as blue biotech, seafood and feed, ocean health and intelligence, as well as the decarbonisation of multiple blue economy industries. And finally, the EIF backed the Norwegian venture capital fund Norce Sarsia Venture, which focuses on early-stage ventures targeting ocean-related deep tech and energy technologies.

69. Outside the European Union, the Okavango Capital Fund combines nature conservation and rural livelihood improvement with commercial returns by investing in smaller companies operating in food security, climate technology and nature tourism. This also supports financial inclusion and innovative digital technologies in East and Southern Africa.

70. With appropriate financial incentives and technical assistance (eight technical assistance assignments were signed under the Natural Capital Financing Facility alone in 2021), the EIB can promote the mainstreaming of environment and biodiversity considerations in its operations through a range of financial products, notably under EU-supported national investment programmes. To this end, the EIB is developing its project biodiversity indicators in 2022, in conjunction with other multilateral development banks' drives to adopt nature-positive investment definitions.

Focus area 8: Farm to fork

71. The EIB finances projects across the agricultural, fisheries, food and forestry value chains and provided €734 million in direct lending to climate action and environmental sustainability investments in the bioeconomy sector in 2021, with an additional €970 million supporting wider measures in these sectors. EIB climate action lending in the sector can be broken down across the

value chain, with nearly 20% going to primary production, 60% to processing industries, just under 10% to wholesale/retail and other services and 15% to bioenergy.

72. This included EIB support for innovation in new renewable bioeconomy technologies, notably the construction and operation of a facility for second-generation bioethanol production from cereal straw and an innovative bio-propylene glycol production unit in Poland.

73. The EIB also contributed to sustainable and renewable biomaterials and bioenergy production in the forest value chain, including support for the production of sustainable and renewable packaging materials and of bioenergy through new or upgraded biomass boilers and recovery boilers in vertically integrated pulp and paper mills.

74. Agrifood technology has been a major theme for the EIF over the last two years. In 2021, the EIF committed to two agrifood technology funds that are expected to help environmentally sustainable solutions in this sector. These are Yield Lab Europe, a fund based in Ireland supporting early-stage innovation in sustainability of the agrifood industry, and Food Tech Opportunity II, a French-based fund focused on the sustainability and efficiency of the food system.

75. The bioeconomy sector has a critical role to play in helping vulnerable regions adapt to climate change. The EIB supported the development of more climate-resilient crop seed varieties and sustainable plant-based food ingredients in the European Union, as well as agricultural water efficiency investments in the Jordan Valley and Egypt.

Focus area 9: Sustainable cities and regions

76. In 2021, an additional environmental sustainability contribution was recorded under the new EIB climate action and environmental sustainability objective. The total contribution represented €9.7 billion of direct urban lending, demonstrating the significant contribution of urban financing to EIB green lending. In 2021, to help fight the impact of COVID-19, additional support was given for urban health, energy and education.

77. Project examples in the sector include the Athens Resilience Strategy 2030 and its Integrated Territorial Investment Programme, focused on renewable energy and energy efficiency (including public buildings) and improvements in open spaces and green areas, cycling infrastructure, pedestrian areas, and waste management and recycling.

78. A transport project in Clermont-Ferrand in France received technical and financial advisory support from the European Investment Advisory Hub to integrate energy and urban mobility investments and to improve access to finance with a financial plan, leading to the approval of a €90 million loan for an energy transition programme. The project includes the construction of two bus lines with a fleet of 40 new zero-emission buses, the renewal of the bus fleet (including hydrogen buses), the creation of a depot and maintenance centre, as well as a carbon-free energy generation and storage facility to serve the two lines.

79. In addition to financing urban infrastructure, 2021 was the first full year of the Cities Climate Gap Fund, with 14 early-stage technical assistance assignments approved for climate-smart investments in cities such as Cuenca (Ecuador), Danané (Côte d'Ivoire), Podgorica (Montenegro) and Port Vila (Vanuatu).

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