

FMO

Entrepreneurial
Development
Bank

December 2022

CLIMATE ACTION PLAN

Building on our
achievements and
taking additional action
to 2030



In 2012 FMO invested in the first wind farm in Mongolia, Salkhit

FMO'S CLIMATE ACTION PLAN

Foreword by Management Board

Fatoumata Bouaré | CFOO

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In 2019, FMO signed the Climate Commitment of the Dutch Financial Sector. In view of the climate challenges ahead and our focus on sustainable development and a just and inclusive transition, we are keen to present our Climate Action Plan to 2030.

Our 2019 commitment marked a natural progression in FMO's focus on climate action in our work. Climate action is a strategic focus of FMO's and has been for many years. Already in 2017, FMO made a public commitment to strive toward 1.5°C alignment for our portfolio, long before most international banks and companies had considered such alignment.

While the key driver for the Dutch Climate Commitment was the reduction of emissions in the Netherlands itself, we considered it to be important to support this commitment as a Netherlands-based financial institution. We also believe that the Netherlands' and other industrialized countries' success in reducing emissions is critical to the success of our own work on sustainable development in emerging markets. The acceleration of climate change is already having detrimental effects globally, with the highest impact on the world's poorest and most vulnerable.

Indeed, climate action in FMO's target markets can look quite different to what it looks like in the Netherlands. In all of our markets, the focus needs to be on low-emission

growth and making our customers resilient.

In countries or regions where there is a higher income level, we mainly speak about decarbonization action. Taking into account the different starting points of the countries we work in and the need for an integrated social-environmental-climate approach for sustainable development, we base our climate action on the clear underlying goal of a just and inclusive transition. We must also build our contribution to adaptation and resilience and biodiversity investments.

FMO is uniquely positioned to effect climate action in the markets we work in and we plan to do this. In September 2022, we published FMO's Strategy 2030 "Pioneer, Develop, Scale". We are committed to taking a three-pronged approach to our climate action through a focus on three UN Sustainable Development Goals—SDG 8 (Decent Work & Economic Growth), SDG 10 (Reducing Inequalities) and SDG 13 (Climate Action).

We mark this publication as another step in our climate journey as we work toward a sustainable future together.

Executive summary

Introduction

FMO is publishing its first Climate Action Plan, providing a framework for the actions we will take to 2030 to fulfil our Sustainable Development Goal 13 (Climate Action) objectives. The Climate Action Plan provides guidance how we will build on the strong foundation of work we have already done toward this goal, given that SDG 13 has long been an integral part of FMO's core strategy.

Specifically, this plan provides additional detail of the SDG 13 components included in our Strategy 2030, including focus on the three SDGs 8 (Decent Work and Economic Growth), 10 (Reducing Inequalities), and 13 (Climate Action), and our commitment to a just and inclusive transition. The plan also serves to fulfil our obligations under the Climate Commitment of the Dutch Financial Sector. We view this plan as a foundation and expect to continue to refine our approach in the years ahead.

About us

FMO is the Dutch entrepreneurial development bank. We invest in the private sector in emerging markets

and developing economies. We create impact by focusing our activities on SDGs, sectors and markets that – in our view – are key to economic, environmental and social progress. Specifically, we focus on SDGs 8, 10, and 13. We invest in three sectors – Agribusiness, Food, & Water, Energy, and Financial Institutions. In our Strategy 2030, we aim to maximize our impact by investing along the dimensions of our progression model: “Pioneer-Develop-Scale”.

The context of our climate action

Climate action is urgent. There is now only a 50:50 chance for the world to stay on a 1.5°C-degree trajectory in the next five years. FMO's customers (both current and new) will face new risks from negative climate change consequences. In the countries in which we work, many of our customers are highly vulnerable to climate change. Social, economic, and natural systems are interlinked. We must take action in a holistic way if we are to be successful in having a positive impact in our work.

Global emissions historically come primarily from today's high-income countries. As low-income and low-middle

income countries grow, a focus must be on low emission growth to avoid contributing further to the problem.

Framing, commitments, and policies

As an international development bank in the Dutch banking context, we both gain from the Dutch banking sector's thought leadership for the climate agenda, and we also contribute, for example through our leadership in the Partnership for Carbon Accounting Financials (PCAF), and from our position statements on fossil fuels and signing the COP26 Statement on International Public Support for the Clean Energy Transition. We also work toward sharing and harmonization within the European Development Finance Institution (EDFI) Association, which applies climate standard setting for development banks operating in developing country contexts.

FMO has strong commitments toward climate action in three key areas: aligning our portfolio and investments with the Paris Agreement goals; increasing climate investments and supporting our customers; and active management of our climate action. [READ FURTHER](#) →

At a portfolio level, we are committed to reach a 'net zero' portfolio by 2050. We will further step up by aligning new investments with the mitigation and resilience goals of the Paris Agreement (country-level). For our investments, we will take an ambitious and well studied approach, while carefully balancing both social and environmental considerations, as well as the need for a just and inclusive transition; and strive to align both new transactions and our portfolio with a 1.5°C pathway.

We are committed to phasing out fossil fuels in our direct investments and implementing additional restrictions for our indirect investments. We have set an absolute emission reduction target for our power generation portfolio of 50% by 2030.

We aim to build a portfolio of at least €10 billion dedicated to SDG 13 goals.

We will take a holistic approach to our climate investment approach by targeting climate mitigation, adaptation & resilience (both including nature-based solutions), biodiversity, and other footprint reduction. At the same time, we will specifically engage with and support our customers in their climate actions and objectives. We will also invest in market creation and mobilization for climate action in order to both support new solutions and to bring additional capital to have a higher impact.

We will give further importance to the systematic integration of climate change considerations in our strategy as well as in our operations.

Our climate commitments are framed in the context of a just and inclusive transition, representing both the synergies and necessity of pursuing our core SDG goals together (SDGs 8, 10, and 13) if we are to be successful in contributing to any of them individually. We recognize that environmental and social objectives are inextricably linked and will apply this framework to our climate goals.

Our commitments are also underlined by FMO's Sustainability Policy and our strong Environmental, Social, and Governance (ESG) risk management framework. We see it as our fundamental role to be an ESG change agent.

Our Climate Action Plan – for our portfolio

We have developed a set of actions that will support our climate commitments and goals to 2030. For portfolio and investment-level Paris alignment for climate mitigation, we recognize that our methodologies must be applied differently by country and sector and that emission reduction pathways differ by country income level. We also consider our countries' differentiated responsibilities and respective capabilities. We will reduce emissions in our power generation portfolio by half while aiming to double that portfolio, underlining our commitment to phase out fossil fuel finance in our investments and finance the energy transition. [READ FURTHER →](#)

We will work toward our aim to invest €10 billion in SDG 13 by 2030 through thematic- and sector-specific approaches. We will focus on customer engagement and support; develop adaptation & resilience- and biodiversity-specific investment strategies and take specific actions toward our commitment to a just and inclusive transition.

Climate action in each of our sectors is quite distinct. For energy, we will focus on renewable energy deployment and supporting the energy transition in our markets. For local financial institutions, we will increasingly aim to have a ‘transformative’ impact on customers through a strategic approach including the development of product propositions, capabilities, and related financing with the goal of having the same effect on end beneficiaries.

For agriculture, we see an opportunity to transform the agriculture sector in our markets through the use of sustainable, resource efficient and resilient practices and business models throughout agricultural supply chains. We will invest in forestry and help build these markets.

Through our ‘Pioneer – Develop – Scale’ strategy, our market creation efforts will contribute to our impact portfolio growth objectives. We will scale our activities through our mobilization efforts.

Finally, we plan to actively manage for our climate actions. This means that we will monitor our work and adjust our actions based on data and information, including from a climate risk perspective, to ensure we are reaching our goals.

FMO’s operations

Based on measures already taken, FMO has a low level of operational emissions in our headquarters in the Netherlands. Our facilities services has embarked on multiple programs to reduce sources of waste and increase circularity in our offices. Our main Scope 3 emissions are related to flights required for us to conduct our business and strengthen our value-add to our customers. We note that travel remains a very important component of our ability to invest responsibly in distant markets. For this reason, we will also continue to offset our travel emissions through the purchase of responsible carbon offsets. ←

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chapter 1

ABOUT US

Our organization,
regional focus and
strategy

Treevive | The Netherlands

BRIDGING THE GAP BETWEEN FORESTS AND FINANCE

At COP27, FMO announced its investment in Treevive. Treevive creates a Carbon Development Platform (CDP) which advises, structures, finances, and accelerates carbon projects arising from the growing interest in Natural Climate Solutions (NCS).

Treevive supports project owners with both funding and technical assistance to accelerate the development of the carbon asset of their project.

The investment is made through our Mobilising Finance for Forests' (MFF) development capital facility.



ABOUT US

OUR VISION

At FMO, we believe in a world in which, by 2050, more than 9 billion people live well and within planetary boundaries.

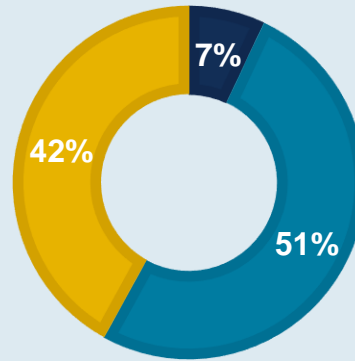
OUR PURPOSE

We create development impact by being additional in financing the private sector in low-and middle-income countries.

OUR MISSION

We enable entrepreneurs to increase inclusive and sustainable prosperity.

As the Dutch entrepreneurial development bank, we invest in the private sector in emerging markets and developing economies. Our role extends beyond financing, as we challenge and support businesses to meet international environmental, social and governance standards.



- The State of the Netherlands
- Dutch banks
- Employers' associations, trade unions, corporate and individual investors

AAA
Fitch / Standard & Poor's

2nd/ 1071 banks
Sustainalytics relative performance (1st=lowest risk)

PRIME
ISS ESG rating



641
total number of employees



56
different nationalities



47%
of senior and middle management are women

OUR FOCUS

We focus on three Sustainable Development Goals...



... covering the following core activities

- Financial products, including debt, equity, guarantees and capacity development
- Environmental, social, and governance additionality
- Opening up new 'markets' and creating new investment vehicles

We create impact by focusing our activities on the UN Sustainable Development Goals, sectors and markets that – in our view – are key to economic, environmental and social progress.



Agribusiness, food & water

This sector can ensure that by 2050, 9 billion people have access to food and that the environmental and social footprint is minimized. To this end, we invest in advanced technologies and apply international standards. We finance sustainable agribusiness companies throughout the value chain including those that make agriculture more water-efficient. We also invest in forestry.



Energy

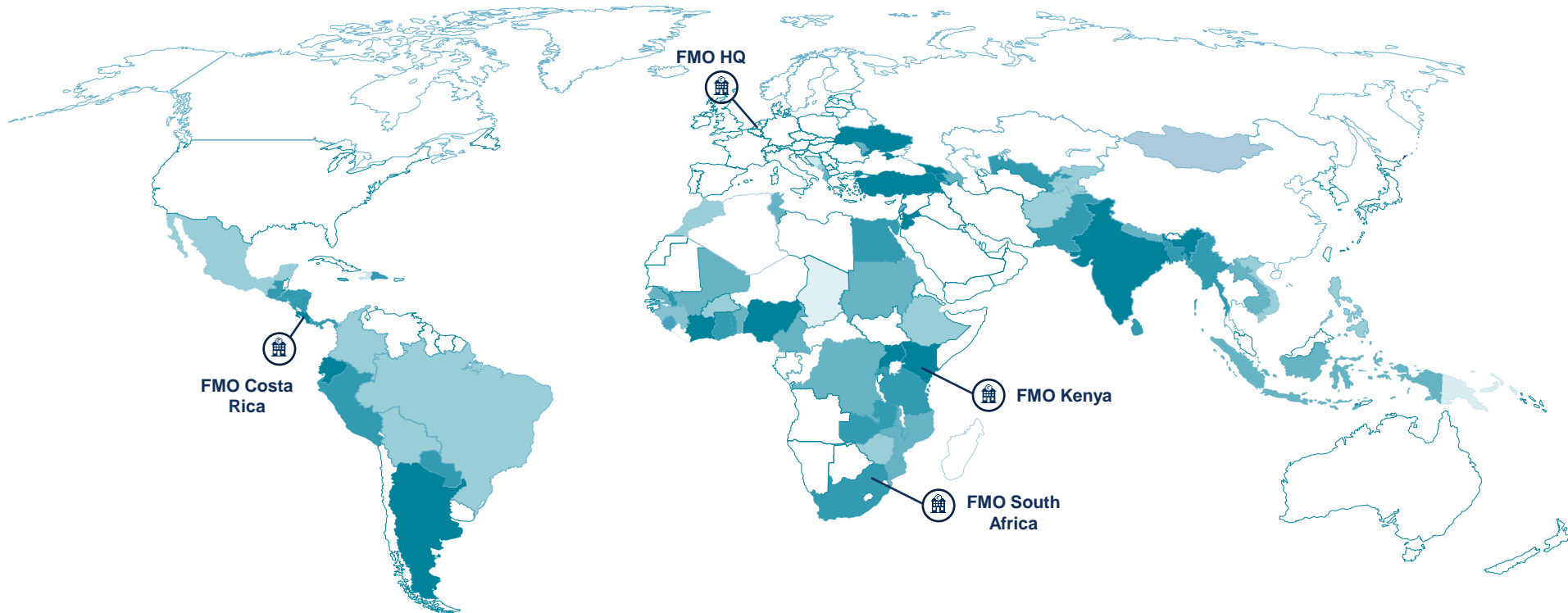
940 million people lack access to energy. Electricity is crucial for poverty alleviation, economic growth and improved living standards. We invest in renewable energy as well as in projects that provide access to energy in less developed economies.



Financial Institutions

Micro, small and medium enterprises are a key driver of economic development, innovation and employment. However, access to finance is often a barrier to growth. A healthy financial sector can bolster entrepreneurs and individuals. We provide long-term financing, risk capital and local currency products, and focus on SME financing. We also promote green lines and look for business models that serve the unbanked.

Our regional focus stretches across Africa, Asia, Latin America and Eastern Europe



TOTAL PORTFOLIO	
€12.5 billion*	
Region No. customers	
Africa	276
Asia	210
Eastern Europe & Central Asia	87
Latin America & The Caribbean	128
Non-specific region	52

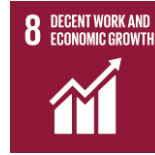
*2021 portfolio consists of €8.3 billion for FMO, €1.4 billion for public funds and €2.8 billion for mobilized funds

OUR IMPACT

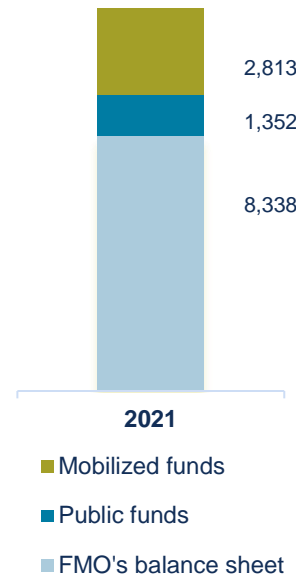
Our positive contributions towards SDG 8, 10 and 13 are measured along the following impact indicators.

Green-labelled investments contribute to climate mitigation, climate adaptation or other footprint reduction (water, waste, biodiversity).

Reducing Inequalities-labelled investments fall into one of two categories: investments in the least developed countries (reducing inequality among countries) and investments in inclusive business (reducing inequality within countries).



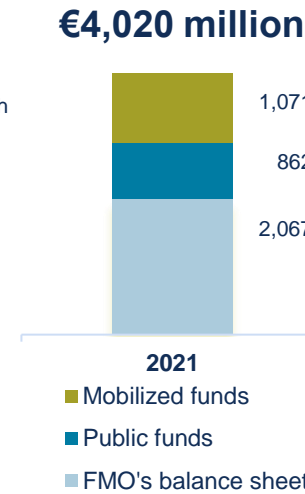
Total Committed Portfolio
€12,503 million



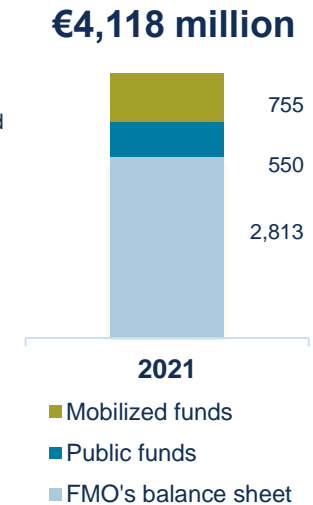
644,119
jobs supported



Reducing Inequality-labelled
Total Committed Portfolio



Green-labelled
Total Committed Portfolio



1,329,158 tCO₂e
avoided
greenhouse gas emissions

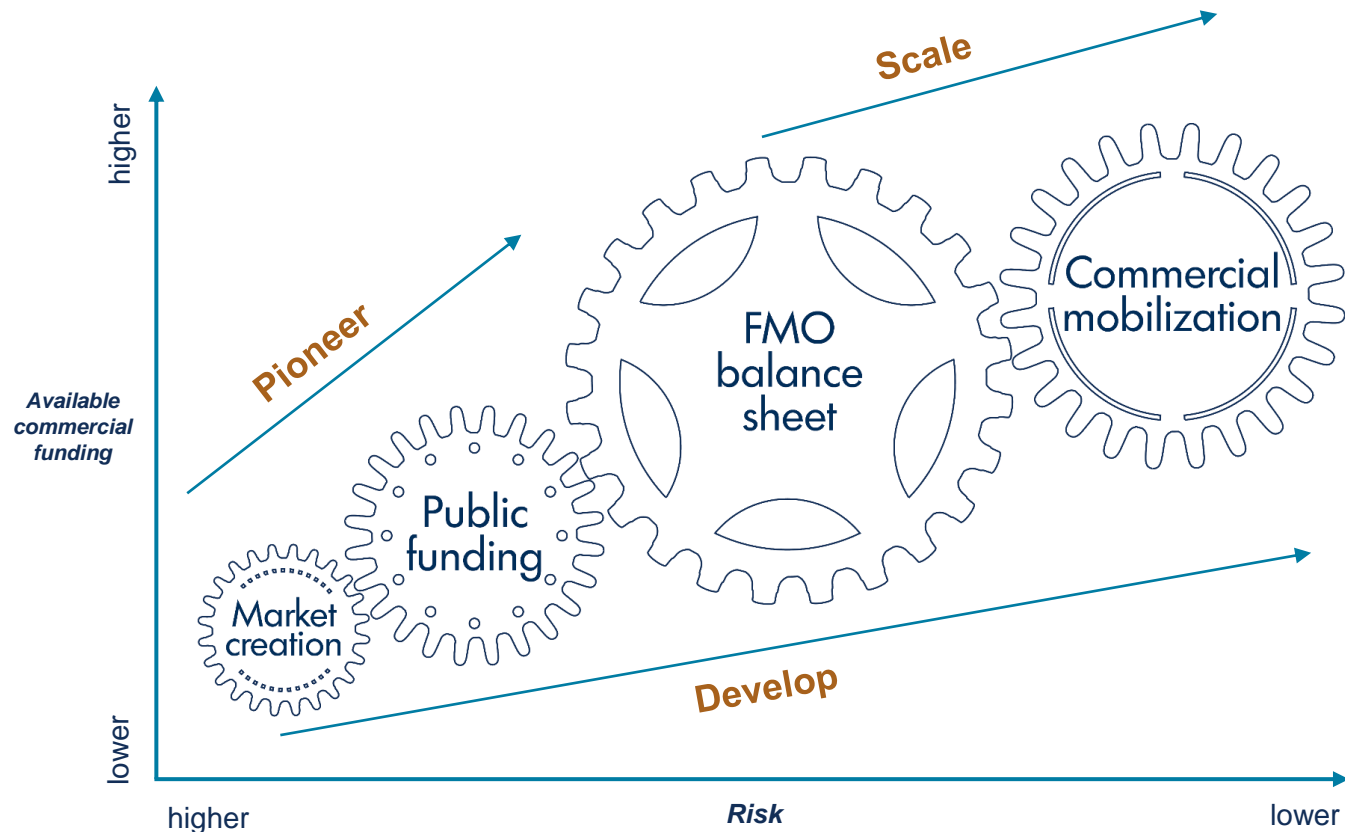
OUR STRATEGY 2030

In our Strategy 2030, we aim to maximize our impact by investing along the dimensions of our progression model.

- We start **with market creation** – developing unbankable opportunities into bankable projects.
- We move projects to **public funds**, developing new products & segments and making higher risk investments.
- Through **our own balance sheet**, we provide financial support and scale investments.
- By **mobilizing commercial partners**, we aim to further scale our impact.
- As a **change agent on environmental, social and governance** topics we support development of our customers’ capabilities throughout the progression model.

Our ambition to contribute to the Sustainable Development Goals is integrated into this framework and seen throughout the model.

OUR PROGRESSION MODEL



chapter 2

OUR CONTEXT

Background and insights into our markets

ZIZ Energie | Chad

RAMP-UP ENERGY ACCESS IN CHAD

Chad is Africa's 5th-largest and the world's 5th least-developed country, which currently has just a 6% electrification rate.

In 2006, ZIZ was contracted by the Chadian Energy Ministry for the installation of several diesel-based mini-grids across the country. By 2018, ZIZ decided to pioneer a privately-owned hybrid mini-grid approach using new legislation introduced by Chadian authorities in 2019.

ZIZ dubbed their solution "metro-grid" because of its size within the African minigrid-scape with 250,000 people gaining energy access in the first phase. The first project in Mongo was commissioned in mid-2022. At least two more cities are being commissioned in 2023.

In picture: the streets of Mongo (70,000 inhabitants)



Climate change will undermine SDGs if not urgently addressed

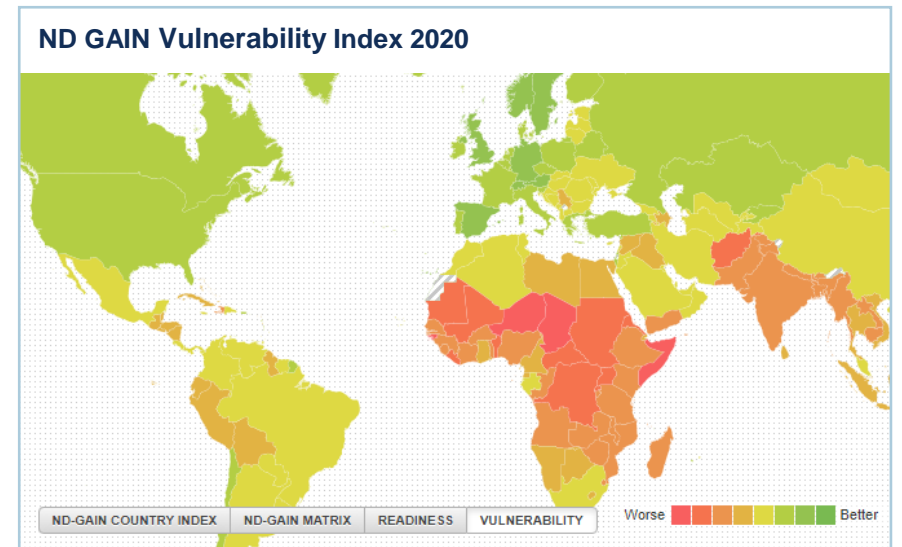
Global temperatures are rising, and the impact – especially in the regions where FMO invests - is already evident

- There is a 50:50 chance of average global temperature reaching 1.5C degrees above pre-industrial levels in the next five years
- Climate change, including increases in frequency and intensity of extremes, has reduced food and water security, hindering efforts to meet the SDGs.
- Approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change.
- FMO's customers (both current and new) will face new and never experienced risks from climate change consequences.

Social, economic, and natural systems are interlinked

A high proportion of the plant and animal species is vulnerable to climate change. Human and ecosystem vulnerability are interdependent. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt.

Conserving natural terrestrial, freshwater and marine ecosystems and restoring degraded ecosystems (including their genetic and species diversity) is essential, because ecosystems play a key role in the global carbon cycle and in adapting to climate change, while also providing a wide range of ecosystem services that are essential for human well-being and the achievement of the SDGs.



Climate action is needed in our markets and finance is lacking

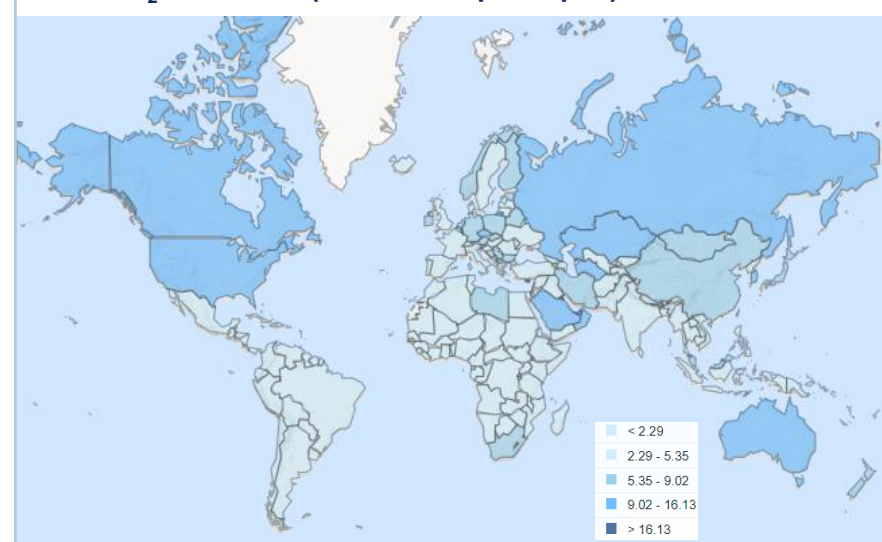
For most regions where FMO invests, the focus needs to be on low-emission growth

- In 2019, 41% of the global population live in countries emitting less than 3 tCO₂e per capita. A substantial share of the population in these low-emitting countries lack access to modern energy services. Importantly, eradicating poverty and energy poverty can be achieved without significant global emissions growth.
- Upper-middle income countries, combined with the global emissions of the lower-emitting lower-middle income and low-income countries, now account for more than two-thirds of global CO₂ emissions. As low-income and low-middle income countries grow, a focus must be on low emission growth to avoid contributing further to the problem.

Large amounts of financing are needed in the coming years

- An estimated US\$1.6 trillion to US\$3.8 trillion is required annually to avoid global warming exceeding 1.5°C, for supply-side energy system investments alone. The UN estimates that developing countries already need USD 70 billion per year to cover adaptation costs and will need US\$40 billion–US\$300 billion in 2030.
- Developed countries failed to meet the US\$1 billion annual pledge, made at the United Nations climate summit in Copenhagen, to channel US\$100 billion a year to less wealthy nations by 2020, to help them adapt to climate change and mitigate further rises in temperatures.

2019 CO₂ emissions (metric tons per capita)



chapter 3

FRAMING, COMMITMENTS AND POLICIES

Climate Fund Managers | emerging markets

WATER AS A LEVER FOR CLIMATE ACTION

Climate Investor Two (CI2) is CFM's second blended finance facility, delivering water, sanitation, and oceans infrastructure projects in emerging markets.

CI2 offers financing for the entire lifecycle of a project to developers, from design to construction, and into operations through post-construction refinancing.

Picture: CI2 will invest in the Oceans Finance Company (OFC) focusing on coastal and marine ecosystems, fish stocks improvements, biodiversity conservation and CO₂ reduction projects.



FMO- an international development bank in the Dutch climate context

Background: The climate commitment of the Dutch financial sector

In the Climate Act of May 2019, the Dutch government laid down its goals of reducing greenhouse gas emissions by 49% by 2030, compared to 1990 levels, and a 95% reduction by 2050.

In June 2019, the Dutch National Climate Agreement was concluded, which contains agreements with the key emitting sectors on what they will do to help achieve the climate goals¹.

At the same time, around 50 Dutch banks, insurers, pension funds and asset managers and their umbrella organizations signed their own commitment to contribute to the realization of the Paris Agreement and the Dutch Climate Agreement. FMO is proud to be among the signatories².

FMO proudly signed the climate commitment of the Dutch Financial Sector in 2019

With low-emission operations and a portfolio mostly outside the Netherlands and European Union, it may not have been obvious that FMO would sign the Climate

Commitment of the Dutch Financial Sector. We did this because we believe that everyone has a role to play in helping the Netherlands meet its targets. We also believe that our markets can benefit from the experience of the Netherlands and the Dutch banking sector when putting in place their own plans for climate action and low emission growth.

More than this, having the Netherlands meet its targets contributes to the success of climate action and sustainable development in the rest of the world, including where FMO invests – in emerging markets. Many of the countries in which we work are the most exposed to climate change but have contributed the least to the global rise in temperature due to high emissions. In others, decarbonization is already an important topic. We hope therefore to contribute to and learn ourselves from the growing “science” for banks to reduce emissions in their portfolios and contribute to climate action, including mitigation, resilience, and biodiversity.

With the actions we have taken, we have contributed to the Dutch dialogue already. From the early publication of a methodology for absolute emission portfolio alignment for banks in 2019 to our contribution to the Partnership for

Carbon Accounting Financials³, and from our position statements on fossil fuels and signing the COP26 Statement on International Public Support for the Clean Energy Transition⁴, we have at times contributed to public discourse in the Netherlands and beyond on these topics.

FMO is pioneering among development finance institutions (DFIs) in reporting our financed emissions and now setting a firm power generation emission reduction target. Looking ahead, we continue to face data quality challenges in our markets which may make the process of further target-setting slower than for our Dutch peers. We continue to work within the European Development Finance Institution (EDFI) context to develop standards that build on our experience within the Dutch banking community but apply to the development context. An outcome of this work is our decision to compliment our climate strategy and action plan with investment-level Paris alignment for both climate mitigation and resilience.

OUR COMMITMENTS

OUR AMBITIONS BY 2030

We will have...

- **Acted upon our commitment to reach a ‘net zero’ portfolio by 2050, taking into account the need for a just and inclusive transition.**
- **Supported customers’ increased alignment with the Paris goals and increased climate-mitigating investments.**
- **Strengthened our customers’ resilience to climate change and increased our solutions for adaptation and resilience.**
- **Increased the volume of investments contributing to biodiversity.**

Aligning our portfolio and investments with the Paris Agreement goals

- We remain committed to the goals of the Paris Agreement and to reach ‘net zero’ portfolio by 2050
- We will align new investments with the mitigation and resilience goals of the Paris Agreement (country-level)
- For our investments, we will take an ambitious and well studied approach, carefully balancing both social and environmental considerations, as well as the need for a just and inclusive transition; and strive to align new transactions and our portfolio with a 1.5°C pathway
- We are committed to reduce the emissions of our power generation portfolio by 50% by 2030, while growing our investments in renewable energy. In line with our [Position Statement on Phasing Out Fossil Fuels in Direct Investments](#), we will no longer invest in fossil fuel power generation plants unless a case would meet strict transition criteria
- We will finalize the implementation of additional fossil fuel restrictions for our indirect investments as described in our joint commitment to the [EDFI Climate and Energy Statement](#)

Increasing climate investments and supporting our customers

- We aim to build a portfolio of at least €10 billion dedicated to SDG 13 goals in climate mitigation, adaptation & resilience (both including nature-based solutions), biodiversity, and other footprint reduction
- We will invest significantly in activities that contribute to carbon removals, including forestry, aiming for up to €1 billion in investments (including mobilization) by 2030
- We will engage and support our customers in their climate actions and objectives
- We will invest in market creation and in mobilization for climate action in order to both support new solutions and to bring additional capital to have a higher impact

Active management of our climate action

- We will give further importance to the systematic integration of climate change considerations in our strategy as well as in our operations



Integrating our climate and social objectives

A just and inclusive transition

Today the term “just transition” is used in close connection to the climate agenda. For us, our commitment to a just and inclusive transition represents both the synergies and necessity of pursuing our core SDG goals together SDGs 8 (Decent Work), 10 (Reducing Inequalities), and 13 (Climate Action), if we are to be successful in contributing to any of them individually. We recognize that environmental and social objectives are inextricably linked. We have included the term “inclusive” to be explicit about our view that the just transition must take into consideration diverse contributions and needs and community voice.

This commitment also represents an approach that leverages synergies and manages the potential trade-offs of our pursuit of these three SDG objectives. This includes delivering on reduced inequalities and increased inclusion while pursuing climate action. We plan to integrate these principles into our impact management framework and into our climate action work ahead.

We also link the just and inclusive transition to our Paris alignment objectives from a climate mitigation perspective. This is because we want to be sure that in cases where customers are not yet aligned, that we engage with them toward alignment rather than simply not investing. There may also be specific situations where we determine that taking a strict position will create harm, for example for food security, and we may choose to give customers more time and support. We plan to further build these principles into specific methodologies for Paris alignment starting in 2023.

“A just transition aims to deliver climate objectives while enabling socioeconomic outcomes, accelerating progress towards both the Paris agreement and the SDGs.” – **Multilateral Development Banks Just Transition High-Level Principles**

“A just transition provides the framework to connect climate action with the need for an inclusive economy and sustainable development.”
World Benchmarking Alliance

“Just transition elements include advancing climate and environmental action; improving socioeconomic distribution and equity; and increasing community voice.” – **Impact Taskforce**

Carrying out our climate actions with care

Firm Grounding in our Sustainability Policy Universe

In our Sustainability Policy, we state our clear commitment to sustainable and inclusive development. This includes our aim to contribute to the financing of a just and inclusive transition in the economy, in line with the Paris UNFCCC COP 21 goal, to pursue efforts to limit the temperature increase to 1.5°C, and to reach net zero by 2050. We recognize the need for genuine improvements towards sustainable use of natural resources and the value of ecosystems that form the natural capital for the world economy. We state our aim to prevent their degradation, which directly poses a risk for FMO's customers and the societies in which they operate.

We also state our aim to conserve biodiversity in the broadest sense as well as our commitment to gender equality and to actively achieve inclusive development.

Our Sustainability Policy Universe includes thematic Position Statements, among which several specifically supporting our climate objectives, including our Position Statement on Phasing Out Fossil Fuels in Direct Investments and our Position Statement on Coal Generation and Mining.

Underpinned by our ESG Risk Management Framework

Environmental, Social and Governance (ESG) risk management is a fundamental part of our strategy where we continuously assess and aim to improve the ESG performance of our investments. We see it as our fundamental role to be an ESG change agent. Through our ESG engagement we create positive impact across all SDGs, ranging from environmental management, biodiversity impacts, community projects, and provision of health and education services by customers.

We select our customers based on their ESG management capacity and willingness to work with FMO to improve. Our approach to ESG risk management is fully integrated in our investment process and based on internationally accepted standards, such as the UN Guiding Principles for Business and Human Rights and the IFC Performance Standards, as defined in our Sustainability Policy.

chapter 4

OUR CLIMATE ACTION PLAN For our portfolio

Sahyadri Farms | India

SEEDING CHANGE

In 2010 a group of 10 farmers took the initiative to collectively produce and export fresh grapes to Europe. That initiative has grown into the leading fruits and vegetable export and processing company that Sahyadri Farms is today, servicing over 18,000 farmers, covering more than 31,000 acres and 9 crops.

Sahyadri Farms wants to expand its processing capacity for fruits and vegetables-based products, set up a biomass plant to generate electricity from process waste and enhance its infrastructure.

In picture: Mohan Patil, a grape farmer that works with Sahyadri Farms



OUR KEY CLIMATE ACTIONS TO 2030

Building on our achievements to date, but recognizing there is still much to be done to strengthen our internal systems and maximize the impact of our climate action, the following are a first set of key climate actions we foresee to 2030.

Aligning our portfolio and investments with the Paris Agreement goals

Reduce emissions in our investments so that in 2050, our portfolio's aggregate absolute emissions, when added with our carbon removal investments' negative emissions, results in net zero emissions. We will strive to align the overall portfolio emission reductions with aggregate country- and sector-specific 1.5°C emission reduction pathways, taking into account a just and inclusive transition

Reduce power generation portfolio emissions by 50% to 2030 while at the same time approximately doubling our sustainable power generation portfolio and overall energy portfolio. Consider additional targets on other parts of the portfolio

Review new investments for Paris alignment from a mitigation and resilience perspective

Implement our commitment under the EDFI Climate and Energy Statement regarding fossil fuels in our indirect investments and consider other policies that support our goals

Increasing climate investments and support to our customers

Aim to build a portfolio of at least €10 billion in SDG 13 investments

Increase our climate mitigating investments and investments that contribute to solutions for adaptation and resilience and biodiversity

Provide sector-specific solutions for energy, financial institutions, and agriculture and forestry

Continue to invest in carbon removals, specifically forestry and help build these markets

Contribute to our impact portfolio growth objectives through our market creation efforts. Scale our activities through our mobilization efforts

Engage with our customers to increase their Paris alignment, and provide them with capacity development and other support

Active management of our climate action

Monitor our work at a portfolio level, including absolute and relative emission levels

Continue to improve data quality and collection, including at the level of our customers

Adopt an adaptive management approach and adjust our actions based on data and information

Implement a climate risk framework to manage the portfolio for both physical and transition climate risk

Aligning our portfolio and investments with the Paris Agreement goals

FMO's financed emissions

Our customers' emissions

We report on our financed emissions Scope 1 (direct emissions of activities under our customers' control), Scope 2 (indirect emissions from energy purchased by our customers), and on Scope 3 (indirect emissions from goods and services purchased by our customers). We also report on the financed emissions of our customers ("Scope 3 – Investments"), which includes the Scope 1, 2 and some Scope 3 emissions in their portfolios*.

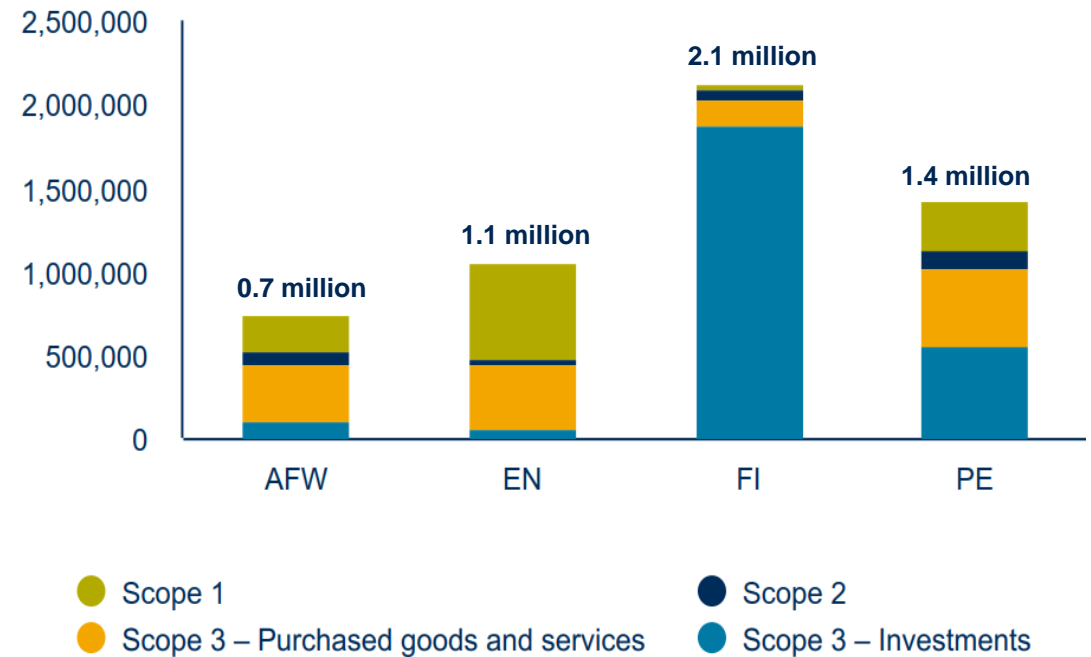
Of the approximately 5.3 million tCO₂e emissions we reported in 2021, approximately 1.1 million tCO₂e were in the Scope 1 of our financed emissions and 0.3 million tCO₂e in Scope 2. Overall, 91% of emissions were attributed to FMO's own balance sheet, while 9% were attributed to funding from Public Funds. Emissions linked to mobilized funds and emission removals,

for example from our forestry portfolio, are not included in these figures.

The financed absolute GHG emissions are reported in line with the Global GHG Accounting and Reporting Standard for the Financial Industry published by the Partnership for Carbon Accounting Financials (PCAF).

The majority of FMO's financed absolute GHG emissions are still estimated through economic modeling via the Joint Impact Model (JIM). While we continue to improve our GHG emission data collection, in many of our markets, such data is not yet readily available. The JIM allows us to have a view on our portfolio and sources of emissions in the interim.

Financed absolute GHG emissions per investment area



*Of Scope 3 'Investments' in the Financial Institution portfolio, 62% comes from our Financial Institution customers' own customers' Scope 1 and 2 emissions, and 38% comes from emissions related to their customers' Scope 3 emissions from purchased goods and services. Specific use of proceeds (e.g. green credit lines) cannot yet be taken into account in emission estimations due to a lack of data. Source: FMO Annual Report 2021 (rounded figures), p. 50 – 52

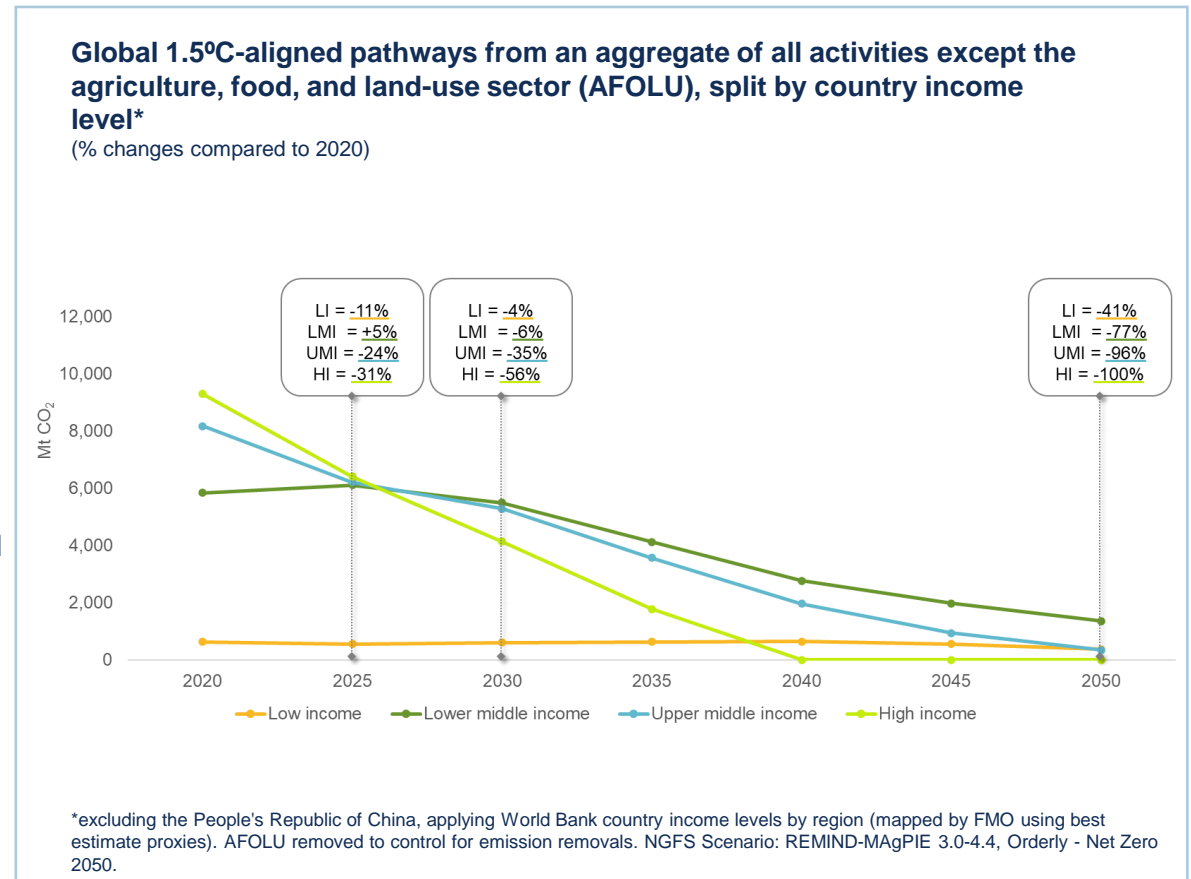
Emission reduction targets and climate action differ by region and sector

A highly diverse region with unique circumstances and responsibilities

FMO specifically targets investments in low-income, lower-middle income, and upper middle-income countries. These countries have different starting points for climate action than the Netherlands, based on current emissions and historic responsibility. This is recognized in the Paris Agreement as “the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances”.

At FMO, we recognize that a starting point for Paris alignment are the Nationally Determined Contributions (NDCs) and National Adaptation Plans, and while we will seek to align our investments with these plans, we also seek to raise the ambition level of our customers and strive toward 1.5°C pathway alignment.

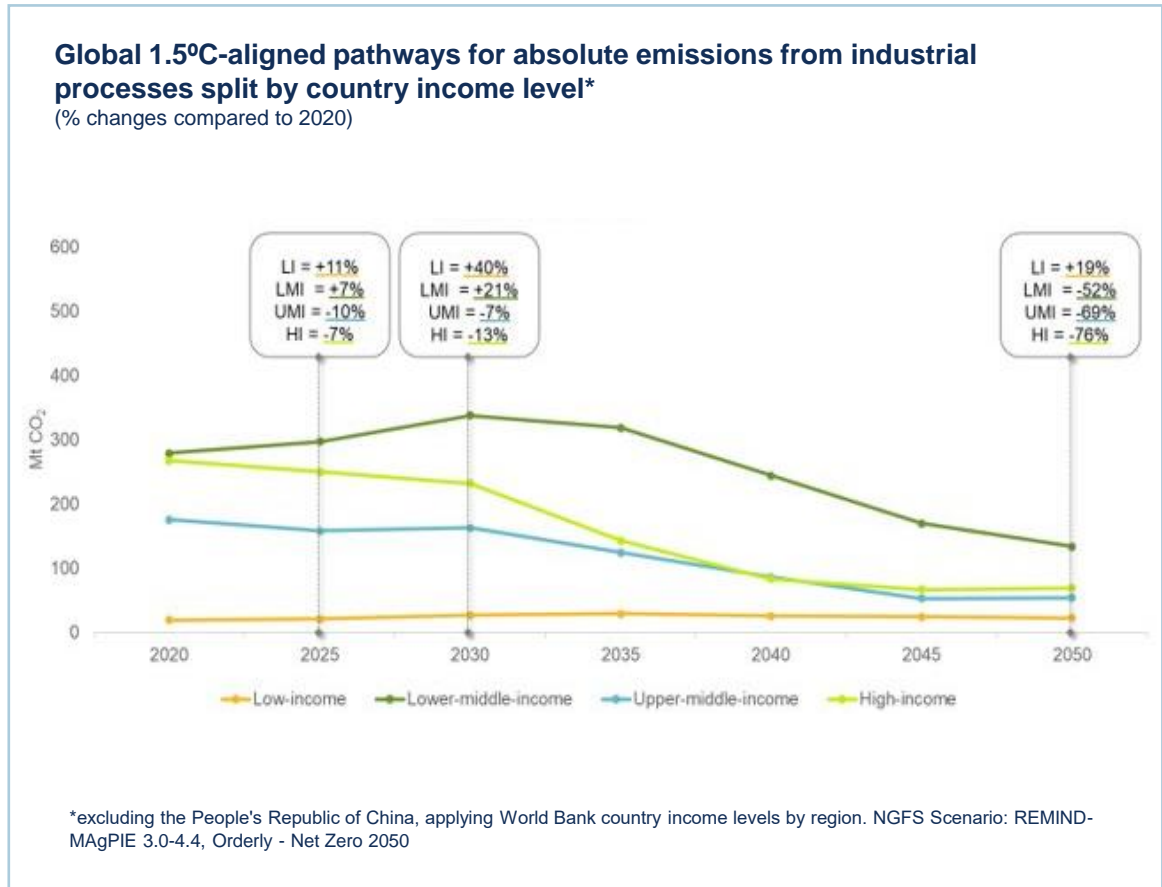
Even 1.5°C pathway alignment means different things for different countries, as demonstrated in the graph here. Low-income countries have a significantly lower starting point in terms of national emissions than higher income countries. At the same time, there is a need for significant sustainable economic growth in most of our portfolio over the next years if we are to attain the 2030 SDGs. This is why at FMO we are taking a differentiated approach in our strategy, focusing on low-emission and resilient growth in low-income countries and additionally on decarbonization in lower-middle income and upper-middle income countries. [READ FURTHER →](#)



Emission reduction pathways differ by sector

We invest in energy solutions, agriculture, food, and water, and indirectly in the real sector by supporting local financial institutions and funds. Decarbonization pathways for our activities vary greatly based on the location of the activity and readily-available technological solutions. For example, fossil fuel power generation can already largely be substituted by renewable energy, whereas in the case of industrial processing, low-emission solutions are not yet always readily available, but efficiencies may be able to be improved in a first instance.

Emission reduction pathway models by country income levels help us understand how particular activities we invest in should evolve toward 2050, taking into consideration inputs such as GDP and population growth models as well as the availability of technological substitutes. However, the models used are least-cost models that do not consider other potential breakdowns of the remaining carbon budget, for example, based on grandfathering, per capita convergence, or ability to pay. For this reason, we use the least-cost models only to provide direction to our assessments.



Alignment of our portfolio toward our ‘Net Zero’ 2050 commitment

We are committed to a 2050 ‘net zero’ portfolio

Toward 2030, we strive to align our portfolio emissions with a 1.5°C pathway, taking into account a just and inclusive transition. There are many unknowns ahead including how climate change itself will evolve, how our markets and customers will respond, and what solutions are needed and effective. Our plan is to achieve ‘net zero’ in 2050 by (1) reducing the emission intensity of our investments; and (2) increasing investments in carbon removals (primarily forestry), so that when all carbon equivalent emissions – positive and negative - are aggregated in 2050, our portfolio emissions are ‘net zero’.

We will strive to use country- and sector-based 1.5°C pathways as guidance for the emission intensity requirements of our investments and portfolio but seek to carefully balance our climate objectives with customer- or location-specific social and environmental considerations, including the need for a just and inclusive transition. For this reason, our portfolio may not be perfectly aligned with applied 1.5°C pathways on a year-to-year, linear basis.

Our first models of applying available science-based, industry-specific, 1.5°C low or no overshoot pathways to our portfolio, considering the country income levels and our sectors of investment, as well as our expected growth levels to 2030, show that portfolio alignment would require a strong decrease in emission intensity (emissions per EUR million invested) each year.

From an absolute emissions perspective, because our portfolio is scheduled to grow faster than GDP assumptions included in 1.5°C pathway scenarios, we must adjust the curves for growth. First results indicate that 1.5°C pathway alignment would result in our aggregate portfolio absolute emissions remaining flat or increasing slightly to 2030 and then declining to 2050.

Based on these first assessments and continuing to refine our methodology, we will begin to track the developments of our portfolio emissions to continue to evaluate how best to target and reach our climate mitigation objectives (see [‘Next steps’](#)).

We are committed to reducing our power generation emissions

We commit to reducing our Scope 1 power generation-linked CO₂e emissions by 50% from 2021 until 2030. While global 1.5°C pathways for power generation require an approximate 60% reduction in emissions by 2030, the application of regional pathway analyses to our power generation portfolio shows that 1.5°C-aligned emission reductions in our regions of investment should be much less – approximately a 38% reduction unadjusted for portfolio growth by 2030 and a 12% reduction adjusted for portfolio growth. Therefore, our 50% reduction target is more ambitious than 1.5°C pathway alignment. For more details on our target, please refer to the [Appendix](#). **READ FURTHER →**

Our commitment to set a target to reduce our power generation emissions is a significant one, considering our ambition to grow this portfolio from approximately €2 billion in 2021 to approximately €4 billion in 2030 (including mobilized funds).

This means that we will need to invest strongly in renewable energy, limiting any additional fossil fuel investments to those that fulfil our Position Statement on Phasing Out Fossil Fuels in Direct Investments strict transition criteria. We set a power generation target due to the high quality of the data we have for this sector and to underline the commitments we have made on phasing out fossil fuels in direct investments.

Next steps

We are committed to reducing emissions in all of our sectors and seek to set additional targets as our data is improved, methodologies applicable to our markets and areas of investment become clearer, and when we have further studied how to treat potential dilemmas (like food security in agriculture).

We expect to differentiate between country income levels and specific sectoral pathways, as well as between direct and indirect investments, as we have done for power generation. We will continue to improve our data collection, including at the level of our customers, and use it to assess our progress, as a component of our climate action workstream ahead.

Implementing investment-level Paris alignment reviews for new transactions

We are committed to investment-level Paris alignment

We commit to aligning new transactions with the mitigation and resilience goals of the Paris Agreement (country-level). We will do this by implementing an investment-level Paris alignment review for new transactions. Beginning in 2023, we will have a dedicated workstream focused on developing methodologies and our in-house capacity to implement this commitment to transaction-level alignment. This will be largely based on methodologies already developed by the Multilateral Development Banks and which are under development by the EDFIs.

For mitigation alignment, new investments will be assessed on their consistency with countries' NDCs and low GHG development pathways, making sure that they contribute to long-term progress toward decarbonization for that country and are not inconsistent with a transition to a decarbonized economy. At the same time, we will strive to align new transactions with the relevant 1.5 °C pathway.

For alignment with Paris Agreement resilience objectives, physical climate risks shall be identified, assessed and addressed to ensure that new investments are not inconsistent with the country's climate adaptation and resilience objectives. This will build on the information we have from the implementation of our climate risk framework at FMO.

We will take an ambitious and well studied approach to our climate mitigation objectives, while carefully balancing both social and environmental considerations, as well as the need for a just and inclusive transition.

We do not expect this to be straight-forward, especially when considering our markets and areas of investment. Examples of dilemmas we will need to consider include how to consider food security in our climate mitigation ambitions for agriculture; what is a "fair" pace of transition in the investments in least developed countries; and how quickly to require change in our financial institution clients, for example. We wish to take care that our actions are not harming other sustainable development objectives, while taking into account the expectation that an orderly and early transition can help lead to a just and inclusive transition.

Extending commitments and policies to achieve our goals

Commitments and policies as tools to achieve our climate goals

Commitments and policies can be an important tool for steering for and achieving our climate objectives. Besides the Climate Commitment of the Dutch Financial Sector, examples of FMO's use of these tools toward our climate objectives include:

- [Position Statement on Phasing Out Fossil Fuels in Direct Investments](#)
- [Position Statement on Coal Generation and Mining](#)
- [Statement on International Public Support for Clean Energy Transition](#) (COP 26)
- [EDFI Climate and Energy Statement](#)

We will continue to develop our Sustainability Policy universe to support our SDG 13 objectives. This may include excluding additional types of investments or developing new position statements that guide our investments and work, for example for indirect investments, deforestation, and similar topics. For example, we are now working on implementing our commitment to the EDFI Climate and Energy Statement for the exclusion of [specific fossil-fuel related activities](#) in indirect investments.

We continue to have specific dedicated in-house capacity for developing new policies and overseeing existing policies. In addition, we collaborate with partners such as the Association of European Development Finance Institutions to exchange knowledge and harmonize on principles and guidelines where possible.

It is currently not part of our strategy to divest (sell assets we have already financed) for the purpose of our climate ambitions and portfolio alignment. We believe it is our role to engage with our customers rather than divest at this stage. As we design our investment-level Paris alignment methodologies, we expect to further build criteria for engagement to ensure that our efforts are effective. In certain cases, if customers are unwilling to engage or do not meet our requirements, we may choose to not invest or divest.

Increasing climate investments and supporting our customers

Toward our €10 billion SDG 13 goal

Building on FMO's climate finance and mobilization track-record

For SDG 13, since 2015, we have steered our financing through our [Green Label](#), which has three key components: climate mitigation, climate adaptation, and other footprint reduction. In 2021, 33% of FMO's portfolio was dedicated to our climate objectives (SDG 13), or €4.1 billion (Annual Report 2021). New investments that are labelled are subject to reasonable assurance qualifications by FMO's auditor.

By 2030, we aim to finance €10 billion in climate action by directly financing assets that contribute to our SDG 13 objectives, by engaging with customers like our financial institutions to encourage their further investments in these objectives, through activities that contribute to developing our markets (market creation), and by mobilizing additional capital to closing the financing gap needed in emerging markets.

Our track-record shows that we have the capacity to meet our ambitions. Our investments under our Green Label so far are diverse, from the green bond FMO supported with long-standing customer Ameriabank, to our investment in Sembrar Sartawi, a rurally operating microfinance institution in Bolivia. Beyond meeting the criteria of the Green Label, many of our investments are transformational in enabling customers to expand their own climate and environmental activities and influence their broader market or ecosystem.

Activities we will support to reach our ambitions

Financial Institutions

- Financing assets targeting climate mitigation, adaptation & resilience, biodiversity, etc.
- Engaging with customers to help build their climate strategies/ capacity and to decarbonize their portfolios

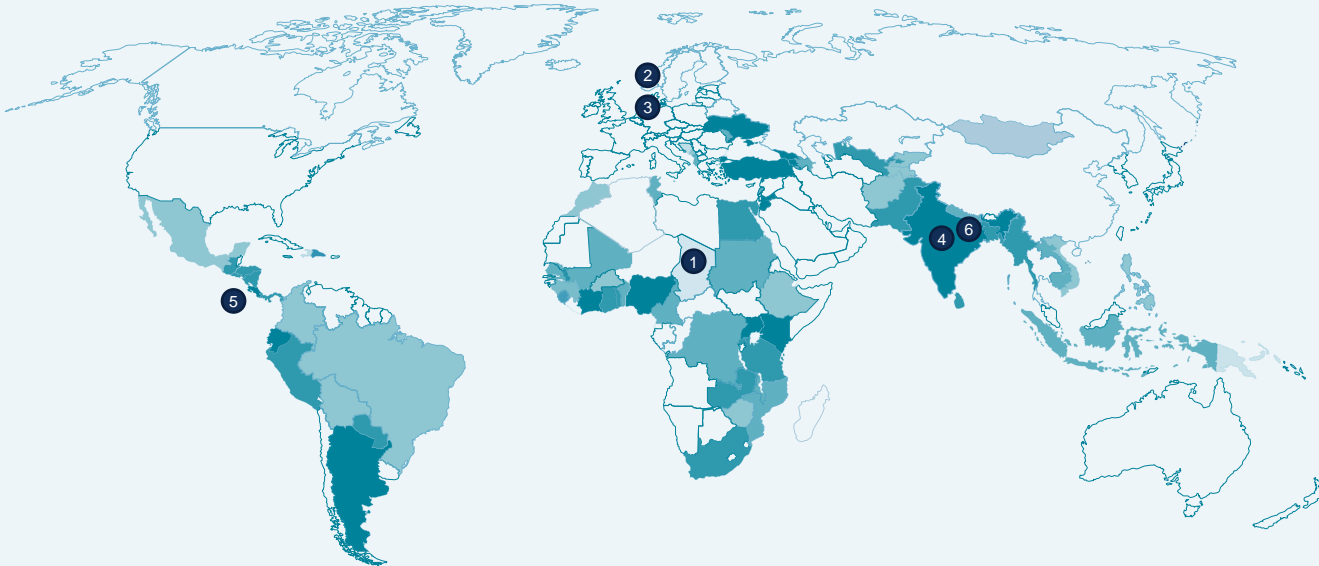
Energy

- Utility scale generation projects (solar, wind, hydropower, geothermal)
- Transmission & distribution, storage, electrification
- Access to energy (mini-grids)

Agribusiness, Food & Water

- Efficiency investments along the value chain
- Sustainable and efficient land use practices
- Engaging with customers to help build their climate strategies/ capacity and to decarbonize
- Investments to support adaptation & resilience and biodiversity (incl. forestry)

Examples of FMO's SDG 13 investments



1



ZIZ Energie | Chad

Pioneer in building and providing access to energy in a fragile state


2



Treevive | The Netherlands

A Carbon Development Platform (CDP) aimed at accelerating carbon projects

3



Climate Investor Two

Life-cycle financing for water, ocean infrastructure projects in emerging markets

4



Sahyadri Farms | India

Farmer-led company helps farmers run their businesses more sustainably

5



Banco Pichincha | Ecuador

Supporting green projects and financial inclusion in Ecuador.

Customer engagement and support

Engaging and supporting our customers in their climate actions and objectives: what we will do

A core component of our Strategy 2030 is increased customer engagement. Our goal is to work with our customers on the transition and take a studied approach to our work. This builds on many years of experience. For example, over the years, our Corporate Governance team has developed a program to provide training for “climate in the boardroom” aimed at raising awareness on the risk of climate change and the need to incorporate this in the governance structure.

Our Capacity Development program supports our sustainable development objectives, including climate action. In 2022, we continued to develop our assistance highlighted by a major program for our financial institution customers – the Green Finance Framework Agreement. This type of framework is an example of what we plan to do more of as part of our Climate Action Plan.

Going forward, our customer engagement will take different forms including:

- Corporate governance advisory work focused on climate governance and climate risk, building on the work we have done in this area to date
- Capacity development funding, building on platforms like our Green Finance Framework
- Engagement with portfolio companies and new customers to influence them to set targets and transition plans to reduce their emissions over time or at a minimum to consider technical solutions together
- Supporting green finance innovation in our investments
- Active shareholding by ensuring that our investees are prepared for both climate risks and opportunities
- Creating coalitions with key nature conservation organizations, contributing to the understanding of the landscape approach, and promoting community and stakeholder engagement.

We expect there will always be more demand for this service than we can provide, and therefore we will also seek to target supporting those customers where we can have the greatest impact.

FMO’s Green Finance Capacity Development Program

FMO supports its financial institution customers on their green finance journey through dedicated investments, capacity development, and advisory assistance.

To expand our activities and increase efficiencies, FMO launched a “Green Finance Framework” capacity development program in 2022 . Under this program, various specialist consultants are engaged to provide specific advisory assistance to our customers based on their needs, supporting climate mitigation and adaptation investments.

This can include portfolio scans to identify opportunities, product development support, supporting the embedding of green finance in daily processes and operations, strategy development, and climate risk support. In this way, we hope to raise the ambition and impact of our customers’ own climate action efforts.

Thematic approach

Investing in adaptation and resilience: what we will do

Sustainable growth in our markets in the years to come will depend on the ability of the countries we work in and our customers to prepare for this change, by investing in both adaptation and resilience measures. Because solutions are often locally specific, one of the big challenges ahead is to invest at scale. We will work to meet this challenge by seeking to make our investments more resilient; investing in adaptation and resilience solutions; and in pioneering and scaling, through partnerships.

It is our ambition to strengthen our customers' resilience to climate change. We will commence our work by further developing our methodologies and operations to identify physical climate risks for new investments and assess such risks to ensure that the investment is not inconsistent with the country's climate adaptation and resilience objectives (investment-level Paris alignment for resilience). We will also continue to build on work we have started, for example through our work on climate risk in the board room and climate governance in general, to help more customers identify and address such risks and have a positive impact in their own activities. [READ FURTHER →](#)



Sembrar Sartawi | Climate risk insurance for smallholders in Bolivia

To understand and monitor customers' exposure to agro-climate risk, Sembrar Sartawi assessed data on agricultural production and client livelihood, in order to measure and understand client resiliency and vulnerability. Sembrar Sartawi partnered up with an insurance partner that is willing to cover exposure to key climate risks clients face using a parametric climate risk coverage. This can be combined with Sartawi's loan offering, ensuring that farmers do not need to repay the loan upon losses derived from adverse climate risk events, such as freeze, hail, strong wind and drought.

A US\$6 million Dutch Fund for Climate and Development (DFCD) loan was provided to further expand Sartawi's loan portfolio to rural clients facing climate risk events, many of those were clients with loans-linked to this insurance product. Additionally, the loan can also be used for purchasing environmentally certified seeds as well as investing in energy efficient equipment.

We are also committed to investing in adaptation and resilience solutions as part of our €10 billion commitment for SDG 13 goals. This will build on our experience to date, including with the Dutch Fund for Climate and Development (DFCD).

The DFCD takes a landscape approach to identifying adaptation and resilience solutions and builds on the expertise of four partners working on the fund – WWF, SNV, Climate Fund Managers, and FMO. The DFCD also provides a model for scaling adaptation and resilience solutions, an area we will seek to build on further, also as part of the effort of the Adaptation and Resilience Investor Collaborative (ARIC) for which FMO was a founding member.

In 2023, we will commence a workstream to specifically further build out our adaptation & resilience approach, tailoring it further based on the specificities of our sectors, our customers' needs, and building on our experience to date.



In the Kafue Flats in Zambia, the Dutch Fund for Climate and Development (DFCD) is supporting a sugar cane cooperative setting up sub-surface drip irrigation.

The Kafue Flats is a 6,500km² floodplain located in the southern region of Zambia. It is one of the main sugar production regions in the world and the Kafue River provides hydropower to about half of the country.

The region is also increasingly threatened by climate change. Droughts impact both the region's water supply, important for crop production, and the country's electricity.

WWF, through the DFCD Origination Facility, has supported KASCOL, a cooperative, with a grant to investigate the feasibility of sub-surface drip irrigation and other sustainable intensification opportunities.

The project is about introducing drip irrigation which would reduce the need for water, electricity and fertilizers as compared to furrow irrigation, benefitting also other crop production.

The goal of the project is to reduce the climate risks of the farmers, the communities they live in, and the wider Kafue landscape.

Thematic approach

Investing in biodiversity: what we will do

Biodiversity and climate objectives are increasingly intertwined, and we will contribute to improved biodiversity in the markets in which we operate. As part of our objective to develop a portfolio contributing €10 billion to SDG 13, we will seek to increase the volume of investments which contribute to biodiversity to 2030. This builds on our ongoing work under our ESG framework on IFC Performance Standard 6 (protecting biodiversity) for many of our customers already as well as specific investments that FMO has made that contribute to biodiversity.

Together with our partners (for example, the UK Government (BEIS) in forestry), we engage on climate adaptation and resilience, and biodiversity, by creating coalitions with key nature conservancy organizations, contributing to the understanding of the landscape approach, promoting community and stakeholder engagement.

We have also made investments which specifically contribute to biodiversity and will build on this experience going forward.

We will devote capacity to this topic and continue to build our strategy in the coming years in order to measure biodiversity in our portfolio, promote biodiversity positive investments, and engage with our customers on this topic.



The EcoEnterprises Fund | 20-years of impact investing in biodiversity

EcoEnterprises Fund is a venture fund focused on biodiversity, climate solutions and regenerative food systems with whom FMO has a long-standing relationship. Since its founding more than twenty years ago, the fund has pioneered investing in small businesses that preserve the integrity of natural capital while contributing to local economies and biodiversity.

The fund's investments have generated compelling positive impacts. These include protecting critical ecosystems and biodiverse working landscapes. The fund's investments have also successfully preserved natural resources by promoting their regeneration and sustainable use while serving as an important economic engine to bring much-needed income to local communities, especially for women and Indigenous peoples.

Thematic approach

Investing in a just and inclusive transition: what we will do

FMO is committed to SDG 8, SDG 10 and SDG 13, recognizing the importance of these three SDGs toward the impact goals we wish to achieve in our work. We also recognize that these goals are inextricably linked and pay close attention to these connections, for example between climate action and gender equality. In 2021, we had €1.48 billion of investments in our portfolio that achieved all three SDGs, contributing significantly to these goals, and thereby receiving our “Green” and “Reducing Inequalities” labels. Our Strategy 2030 emphasizes this nexus further. Given the diversity of our markets and customers, our action on a just and inclusive transition will require know-how and engagement. While we have already embarked on this work with our focus SDGs, we will be further designing and enhancing our approach going forward.

We see our action in three key areas:

Targeting climate objectives, inclusion, and socio-economic objectives together, thereby accelerating progress towards both the Paris Agreement and the SDGs.

- We will seek to support investments that have a high impact on our core three SDGs, as evidenced by our target portfolio of €10 billion for SDG 10 and €10 billion for SDG 13 by 2030. We will also seek to integrate these three objectives into our impact framework to maximize these objectives.
- Building on our ESG management framework, we will seek to strengthen the community voice in our climate action including social dialogue and stakeholder engagement.
- We will utilize our “Pioneer-Develop-Scale” model to enable the market for investments which contribute to a just and inclusive transition, investing in opportunities which support this goal, and scaling our investments by mobilizing additional capital toward these objectives.

Supporting investments that contribute to the equitable distribution of the benefits of the transition and the new green economy and which help offset any negative effects of the transition.

- We will seek to support the creation of inclusive opportunities for decent jobs and the accessibility and affordability of related products and services in our investments. We will do this supporting investments that contribute to SDGs 8 and 10.

Integrating the just and inclusive transition element into our investment-level Paris alignment work.

- In our investment-level Paris alignment analyses for climate mitigation, we will integrate the need for a just and inclusive transition in our work. This will consider the impact on key stakeholders, including employees, suppliers, customers and wider society.

Sector-specific overview*



Focus on energy | Building on our track-record in financing the energy transition

FMO's experience in financing the energy sector in our markets is part of what has led us to scale up our efforts in our Strategy 2030 and the "Pioneer-Develop-Scale" model. We started by pioneering, financing some of the first-ever renewable energy projects in our markets, such as the first solar park in sub-Saharan Africa (Gigawatt in Rwanda) and the first commercial wind park in Mongolia (Salkhit). These investments helped develop the regulatory framework for the countries' further renewable energy expansion. In 2021, we had a portfolio of €2.9 billion committed in energy sector investments, of which €2.5 billion was in renewable energy.

We have also provided more than just financing. The Nepal Hydropower Initiative is an example where FMO has worked with both international and local partners to help build a common environmental and social framework for the hydropower sector among local financial institutions.

Through our partnership with the Government of the Netherlands, we have developed funds like the Access to Energy Fund and Building Prospects Fund, that support market development and access to energy, supporting a just and inclusive transition in our markets.

We have also been working with partners to scale. This includes leading transactions through syndicating, such as the K-Electric transaction in Pakistan and by mobilizing capital through partnerships, including our origination of and investment in Climate Investor One.

Going forward, we will continue financing utility scale clean energy generation projects (solar, wind both on-shore and offshore, hydropower and geothermal), with an increased attention towards the least developed countries and fragile states. These efforts will be an important driver behind our climate mitigation and resilience goals.

Towards 2030, through sector initiatives, partner engagement, and other means, we will work to remove bottlenecks currently slowing down the sustainable energy transition in some of our markets. We will also work toward sustainable energy access and inclusion, while further scaling both already established / proven and innovative technologies and solutions. Further emphasis will be on segments like the off-grid and mini-grid sector, transmission and distribution, energy storage solutions and commercial and industrial projects.

From an emissions perspective, we are setting a 2030 emission reduction target on our power generation portfolio, which makes up the majority of our Energy portfolio. Going forward, we will further study how to treat residual emissions in other parts of the portfolio, including transition-enabling sectors like transmission and distribution.



Focus on energy | Examples of FMO's investments in the energy transition

FMO plays a material role in the initial development and launch of Climate Investor One

Climate Investor One (CIO) uses a whole-of-life financing approach to deliver renewable energy infrastructure projects across Africa, South and Southeast Asia, and Latin America.

The facility generates its own proprietary pipeline through use a development and technical assistance vehicle, before offering projects to the Construction Equity Fund for construction financing through an all-equity approach.

Climate Fund Managers, the fund manager of CIO, is looking to establish a credit fund to provide post-construction operational debt to projects. The whole-of-life financing approach is intended to save both the time and cost of implementing renewable energy projects and improving the quality of delivery through CFM's in-house engineering, financial, and environmental, social and governance centers of excellence.

FMO supports access to energy in Burkina Faso with solar power

Burkina Faso has some of the most expensive electricity costs in the West African region, averaging USD 0.22/kWh, due to their heavy dependence fossil fuel and on countries such as Ivory Coast and Ghana for importing electricity.

In December 2020, FMO signed a €32.4 million senior loan to finance the development and construction of the Kodení Solar project, a 38 MWp / 30 MWac photovoltaic (PV) solar power plant connected to the national power grid, developed and owned by Africa REN.

It is funded partly by the FMO-managed Access to Energy Fund, FMO and the Interact Climate Change Facility. The Kodení solar project will be based in Kodení, a village near Burkina Faso's economic capital Bobo-Dioulasso.

FMO supports renewable energy projects in Pakistan

Since 2018, the Pakistan Government has actively prioritized and endorsed the potential for including clean, affordable and sustainable energy resources, to meet the energy needs in the country.

FMO provided US\$ 22.5 million to Gharo Solar Ltd for the development, construction and operation of a 50MW PV solar project in Pakistan.

The solar project financed by FMO makes use of innovative bi-facial solar panels, which increase total energy generation. This is the first time that bi-facial solar panels are utilized in Pakistan. This project will provide power to almost 190,000 Pakistanis. It creates economic benefits by boosting Pakistan's energy self-reliance and mitigates the country's carbon footprint.

Sector-specific overview*



Focus on financial institutions | Financing the local financial institution sector

FMO has been active in investing in financial institutions in our markets for many years. This has allowed us to indirectly invest in the real sector of the markets where we aim to have a positive impact, together with experienced partners. With the challenges we have ahead on the climate, environmental, and social nexus, we believe this partnership will be even more important.

The impact of climate change is often location specific, and solutions for resilience will also need to be local. In addition, to achieve a just and inclusive transition, local know-how will be critical. This is why we will continue to work with our partner institutions on building their own resilience and strengthening their contribution to the challenges.

FMO will increasingly aim to have a ‘transformative’ impact on customers through a strategic approach including the development of product propositions, capabilities, and related financing with the goal of having the same effect on end beneficiaries.

We will guide customers toward increased Paris alignment in their portfolios and activities, through helping develop climate governance and climate risk frameworks and tools to work with their clients. We will specifically start with pan-regional customers as agents of change, gradually expanding to all customers over time.

Sector initiatives that also target our SDG objectives will broaden our impact, which we will meet through:

- In-house specialization and advisory capacity;
- Increased use of capacity development and technical assistance and related funding;
- Engagement of local and specialist partners;
- Building long-term relationships with customers as they move along the progression curve.

Our work will build on our track-record in supporting our customers in innovative ways and “moving the needle” on climate in the markets where we are active. For example, FMO supported the first issued Green Bond by our long-standing customer Ameriabank. We also have provided

credit lines to our customers specifically to finance climate-action related activities, such as with AkLease in Turkey and Banco Pichincha in Ecuador ([see next page](#)).

For our financial institution portfolio, we will also work to improve the emission data of our financial institution’s own portfolio emissions. Currently for most institutions, this is difficult data to obtain. The Joint Impact Model ([see page 49](#)) provides modelled data so that we and our customers can estimate portfolio emissions. We seek to help our customers improve data quality as part of the work commencing in 2023.



Focus on financial institutions | Examples of FMO's investments in supporting financial institution customers' climate action

FMO supports AmeriaBank, Armenia, with issuing first Green Bond

FMO's long-standing partner AmeriaBank issued a Green Bond in EUR for the equivalent of US\$50 million, marking a milestone in the local financial market as the first ever Green Bond project in Armenia.

The debut Green Bond was issued in close cooperation with FMO, which is also the anchor investor in the transaction.

FMO supports green projects and financial inclusion in Ecuador

FMO signed a US\$116 syndicated facility to its existing customer Banco Pichincha to finance green projects and women-owned SMEs in Ecuador.

Banco Pichincha has a fully defined Green strategy, offering various Green loan products throughout different sectors in Ecuador. The bank further aims to contribute to the sustainable development of Ecuador's agriculture sector, through technical assistance partnerships with experienced commercial banks.

Green line financing is a way for FMO and its Financial Institutions customers to actively promote sustainable initiatives and endorse 'green' business.

FMO supports AK Lease Turkey in its ambitions toward a 100% ECO leased portfolio by 2030

FMO served as Mandated Lead Arranger and provided €25 million to AK Lease in Turkey to contribute to develop the company's green portfolio.

AKLease offers financial leases mainly in the fields of renewable energy, manufacturing and textiles. The funding will be used to support the company's growth in the renewable energy and energy efficiency sector.

The total syndicated amount is €83 million, which FMO mobilized with two impact investors (Blue Orchard Microfinance Fund and ILX fund); ASN & NN funds managed by FMO Investment Management; and with Munich Re and OeEB via European Financing Partners.

Sector-specific overview*

Focus on the land use sector | Financing agriculture and forestry

Climate change has an impact on food production while primary agriculture and other parts of food supply chain contribute to rising GHG emissions. At the same time, the land use sector is part of the solution to achieving our temperature goals, with its ability to remove emissions through carbon sequestration. At FMO, we see an opportunity to transform the agriculture sector in our markets through use of sustainable, resource efficient and resilient practices and business models throughout agricultural supply chains.

Our focus will remain on strengthening local agricultural and food supply chains for both local or regional markets to increase local production and reduce reliance on imports, to improve local access to nutritious food, to reduce food waste (e.g. through more and improved storage and distribution).

We continue our focus on decent work and economic inclusion of the Bottom 40% of income distribution, including smallholder farmers and women.

Towards 2030, emphasis will be on engagement and investing more in global merchants, input providers and food companies with leverage to increase sustainable practices, along the (international) agricultural supply chains.

An additional focus will be on engaging with our customers on raising the resilience of their supply chains, while working towards Paris Agreement goals. In our markets, balancing the need for just and inclusive transition with sustainable growth, at times may present us with a dilemma.

We will continue expanding our integral / landscape approach for supporting and investing in sustainable land-use and ecosystem protection and restoration, among others, our work on forestry (carbon sequestration), climate smart and regenerative agriculture, soil improvements and livelihoods.

All of this work will build on innovative work we have already started, for example, by investing in forestry through the Mobilizing Finance for Forests program and in activities that specifically support a landscape approach for resilience through the DFCD. We have also begun supporting our customers with resilience to climate change by providing climate risk assessment tools and financing new types of inputs that are resilient to climate change.

From an emissions perspective, our portfolio is diverse from both a regional and sector perspective, making setting specific sector-wide targets still challenging. We will develop a specific investment-level Paris alignment approach in 2023 for our investments in this sector and continue to develop approaches to obtain improved customer-level data to improve our steering for climate mitigation and resilience.



Focus on the land use sector | Examples of FMO's investments climate action in agriculture and forestry

FMO mobilizes finance for forests

In 2021, Mobilizing Finance for Forests (MFF) was established by the United Kingdom (UK) government as a blended finance investment program to combat deforestation and other environmentally unsustainable land use practices contributing to global climate change.

Through MFF, FMO has been appointed by the UK government to invest up to £150 million across a mix of investment funds and direct investments in selected tropical forest regions in Africa, Asia and Latin America.

These projects increase the value of standing forests and lower the incentive to cut them down or integrate forest protection and restoration into agricultural production. The program's investees are supported with technical assistance.

FMO supports United Exports by increasing resilience to climate change

United Exports ("UE") is the largest blueberry producer and marketer in South Africa. UE has ambitious growth plans and a carbon emissions mitigation strategy. Increasingly it is experiencing the adverse impacts of climate change.

FMO and IFC provided financing in support of frost-risk mitigation through the use of next generation OZblu® varieties. Being able to produce blueberries at times of the year that are less susceptible to detrimental weather means that the product has a longer shelf life. This in turn enables UE to ship, as opposed to airfreight, 90% of their production, significantly reducing their carbon footprint.

FMO and Conservation International pilot project of Climate Smart Forestry in Suriname

At COP 27, FMO and Conservation International launched a long-term partnership around innovative finance and science in the agriculture and forestry sectors. We will leverage our combined strengths in sustainable finance to increase impact on the ground for people and nature.

Our first project will protect forests in Suriname and support Indigenous and Maroon communities to manage their lands through improved sustainable forestry practices.

Climate Smart Forestry provides forest managers with a menu of responsible practices along with a credible way to quantify emissions reductions from improved harvesting practices. A benefit sharing mechanism with the communities is envisioned which will be used to support the conservation of biological diversity and the sustainable use of its components.

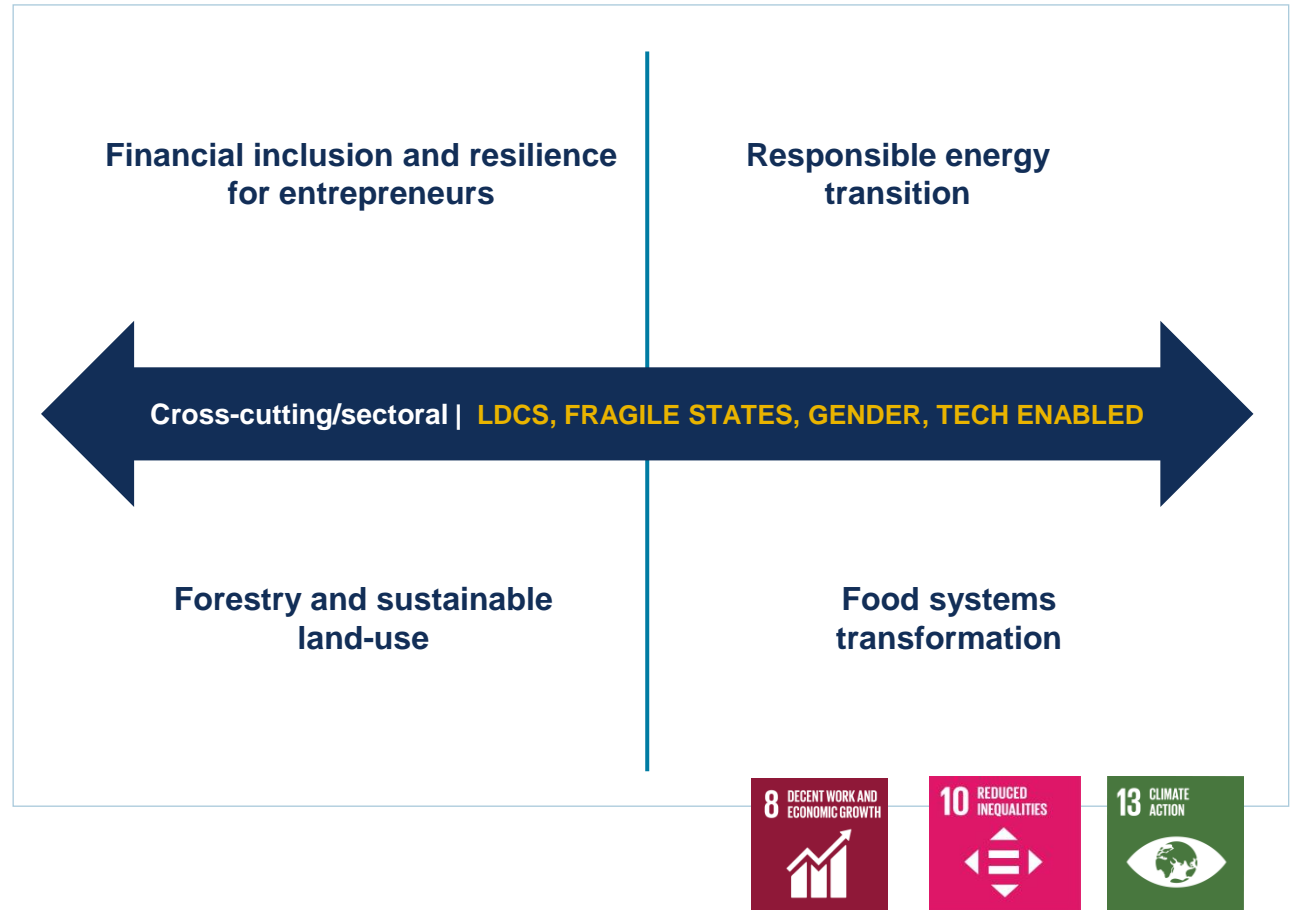
Pioneering for climate action

Market creation: what we will do

In order to advance our impact contributions (including for climate action), through ‘**market creation**’ we aim to develop unbankable opportunities into bankable projects, as well as drive topics and business models of the future. We expect to focus on four themes, where each has potential to further strengthen our climate action.

While there will be additional dedicated capacity toward this effort at FMO starting in 2023, it is not a new activity for us. In fact, we have been contributing to market creation activities already, especially through our capacity development work and the blended funds we manage. For example, the DFCD blended finance structure supports early-stage projects’ bankability and scaling.

Going forward, we will continue attracting both public and private funds to expand **blended finance**, as well as develop new climate fund propositions.



Focus on pioneering | Examples of FMO's market creation activities

Gender-smart climate solutions

The Rallying Cry is an ecosystem initiative at the climate gender nexus, that cultivates women led businesses in Africa delivering on climate action, many in the agribusiness space.

The purpose is to incubate and accelerate to shift capital to these businesses and amplifying their voices at for example, the annual climate summit (COP) to get climate policy that works on the ground.

This project is an opportunity for FMO, the international development finance community and private sector to catalyze, identify and support gender-smart climate solutions on the African continent.

Scalable climate solutions program

The DFCD enables private sector investment in projects aimed at climate adaptation and mitigation in developing countries.

The Dutch Ministry of Foreign Affairs has made available €160 million to increase the resilience of communities and ecosystems most vulnerable to climate change.

The DFCD is managed by a pioneering consortium of Climate Fund Managers, World Wide Fund for Nature Netherlands (WWF-NL) and SNV Netherlands Development Organisation, led by FMO.

Empowering innovative business models for impact

The FMO Ventures Program is a €200 million investment program supported by contributions from the Ministry of Foreign Affairs of the Netherlands and a guarantee from the European Union. Its purpose is to empower innovative business models applying disruptive technology to enable/improve affordable access to goods and services to un(der)served communities.

By focusing on early-stage growth phase of entrepreneurs in fintech, agritech and energy access, the program aims to foster the maturity of the venture capital ecosystem in emerging markets. Through this work, the program has already supported ventures that seek to contribute to climate change like SolarX in Mali, Burkina Faso and Senegal, and ZIZ Energie in Chad.

Scaling for climate action

Scaling through private capital mobilization: what we will do

There is a growing investor appetite for investments linked to climate action, especially as investors seek to make an impact in their own portfolios and as climate risk grows. At the same time, to be able to close the SDG financing gap, including for SDG 13, it is necessary for the private sector to participate at a larger scale than is currently the case. Development finance institutions can and are expected to play a crucial role in mobilization of more private capital*.

At FMO, we are experienced with mobilizing private capital, with three primary channels for this work: FMO Investment Management, Partnerships for Impact (syndications and blended facilities), and FMO's issuance of sustainability and green bonds.

As part of our Strategy 2030, we aim to accelerate impact by upscaling mobilization of private and public capital by aiming to double this portfolio by 2030.

We plan to do this by:

Developing climate fund propositions for large scale mobilization, following a just and inclusive transition approach, targeting both climate impact and social impact

Blending public and commercial funding for high impact propositions in least developed countries

Exploring possibilities for equity mobilization

Strengthening syndication efforts by increasing sourcing capacity of transactions, and by expanding and diversifying our investor base.

* Source: Scaling Blended Finance, UN/PRI. Time to deliver mobilizing private capital at scale for people and planet , ITF.

Active management of our climate action

Improving our systems for active management of climate action

Monitoring our work and improving data/ information collection

We strongly believe that going forward, in order to achieve the impact we aim for, having the right data and additional information needed for measuring and steering our work will be key. For this reason, we will have two dedicated workstreams in 2023 for this purpose – a data collection component under our climate action workstream and a workstream to review and revise our impact management framework. These workstreams will also integrate sustainable regulatory objectives, including climate risk and requirements of the EU Sustainable Finance regulations.

A key factor in the work we have ahead is collecting relevant data and information. Data collection in our markets and for our specific customer types is not always readily available, especially for investments in smaller companies and for financial institutions and funds, which need to obtain data from their clients. To tackle this challenge, together with our development finance institution partners, we launched the Joint

Impact Model (JIM) in 2021. The JIM allows us to model the emissions data we do not have and to have an indication of our portfolio emissions. Going forward, we will need to prioritize getting actual data versus modelled data based on our customer profiles.

Our intent of our data/ information collection drive is to not only use the information we gather to report and for compliance purposes, but to better actively manage our portfolio and tailor our climate actions to what is most effective. We will continue to work on improving our systems ahead.

It is our goal that while on our own journey to improve our data and information collection, that we also help our customers improve their own. For this reason, in 2022, we established the JIM Foundation, a non-profit FMO spin-off which manages the JIM and creates credible oversight for its development. Its mission is to provide the means to quantify impact aligned with industry standards, contributing to impact harmonization

for the financial sector in emerging economies. The JIM Foundation, via the JIM-PCAF program, will begin a technical assistance program to support 25 financial institutions in emerging markets in 2023 to use the JIM, aiming to reach 500 institutions by 2030. The aim is to help financial institutions increase transparency for stakeholders, manage climate-related transition risks, develop climate-friendly financial products, and develop emission target-setting. [READ FURTHER →](#)



Integrating Climate Risk Considerations

Building our systems and sharing with our customers

Integrating climate risk at FMO is about ensuring that risks to our portfolio due to climate change (physical and transition risks) are structurally identified, assessed, and managed. It is also about bringing this knowledge to our customers and structuring our transactions with the same considerations. Ultimately managing climate risk is another way to drive the change we want to see in our markets.

Since 2021 we have set up a project structure to embed climate risk within our operations and activities, and to implement the expectations of the European Central Bank guidance on climate-related and environmental risks.

Central to the project is the creation of an environmental and climate risk framework for FMO and our customers. As part of the project scope, we have been working on the areas of governance, strategy, and risk management.

In 2022 we started piloting our methodology in our focus sectors. This scan is expected to inform us regarding the different types of physical and transitional risks we are exposed to. We will continue improving and updating our methodology, and we aim to embed the climate risk assessment in our regular investment processes in 2023. We also seek to share our findings with our customers in the future. ←



Bringing Climate Risk Tools to Our Customers: Partnership with Wageningen University

In partnership with Wageningen University, Heineken and the African Cotton Foundation, FMO is developing and piloting a climate risk tool for agriculture customers in Africa (Climate Resilient Agri Sourcing in Africa or CRASA).

The effects of climate change will have a major impact on the production and sourcing of agricultural commodities in many African countries. Extreme weather conditions such as drought and heavy rainfall are putting pressure on both food staples and cash crops such as coffee and cocoa.

CRASA aims to improve the insights of farmers, processors and investors to be better prepared and adequately respond to the projected impacts. The project is co-funded by Topsector Agri & Food of the Dutch Government.

Governance of our Climate Action Plan and targets

Continuous embedding of our climate-related requirements, goals, and actions in our governance and reporting structures and practices

Governance

Overall climate action plan ownership is assigned at the Management Board level . The responsibility of overseeing the climate related risks is part of the Chief Risk Officer Role, and we will continue embedding climate risk roles and responsibilities within our overall three lines of defense governance model.

Reporting

In FMO's Annual Report (with external auditor's limited assurance), we will report annually:

- Progress on our power generation target (the power generation target baseline will be confirmed in our Annual Report 2022)
- Financed emissions (Scopes 1, 2 and two Scope 3 categories 'Purchased goods and services' and 'Investments')
- Green-labelled investment amounts

We will report in our annual TCFD report our progress towards embedding climate risks and opportunities in our work and operations.

Going Forward

In 2023, as part of a review of our impact management framework at FMO, we will seek to create additional metrics and targets that reflect the impact of our Climate Action work. We will also be working further on internal management and reporting systems to actively manage our impact goals.

chapter 5

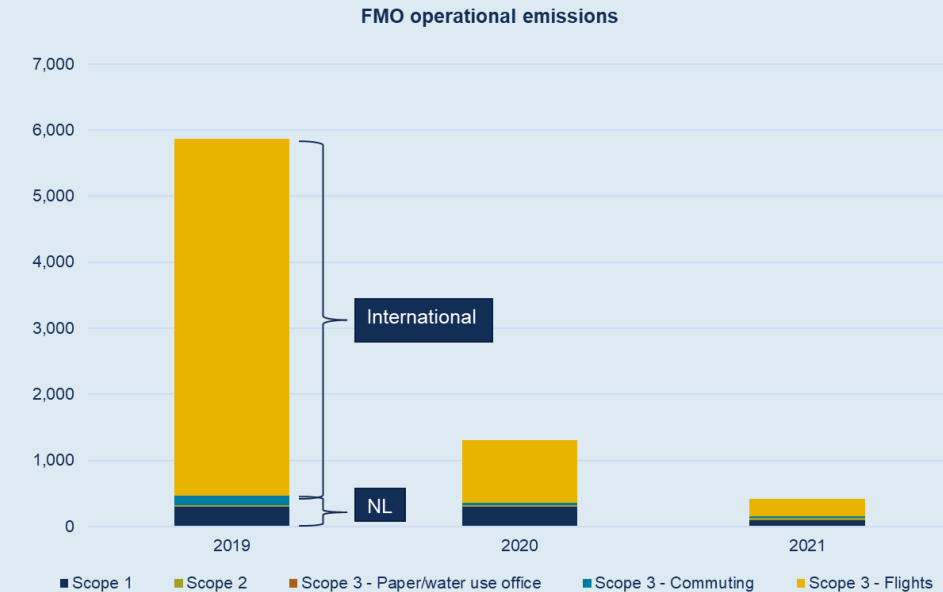
OUR OPERATIONS

FMO contributes to:



Our operations

Maintaining low-emission operations, even as we continue to grow



FMO’s operational carbon footprint is low. Our building in the Netherlands uses district heating from industrial heat waste and is powered with 100% renewable energy*. We use LED lighting throughout our building.

Our Facilities Services has embarked on multiple programs to reduce sources of waste and increase circularity in our offices. Some highlights include:

- For the reupholstering of chairs, we cooperate with people who have difficulties accessing labor market
- We have reused old cupboard doors as plant trays and for storytelling
- We strive for a paperless office and removed hardcopy magazines and flip charts
- We have a fleet of company bikes to use for local travel needs provided by a company that employs men and women returning to the job market to make new bikes from discarded ones

- We recycle or re-use many of our materials – printing paper, coffee grounds, paper cups, orange peels; and our kitchen waste is used for composting in a worm hotel in our parking lot.

Our main Scope 3 emissions in 2019 (reduced in 2020 and 2021 mainly from COVID-19 related travel restrictions) are related to flights required for us to conduct our business and strengthen our value-add to our customers. Travel remains a very important component of our ability to invest responsibly in distant markets. In our travel policy, FMO employees are encouraged to consider the environment in planning their travel.

Travel up to 500km in Continental Europe must be done by train or car and all flights shorter than six hours must be economy class. For this reason, we will also continue to offset our travel emissions through the purchase of responsible carbon offsets.

*FMO has three other small regional offices which we will also track and seek to improve efficiencies in the coming years.

APPENDIX 1: Details of our power generation emission reduction target

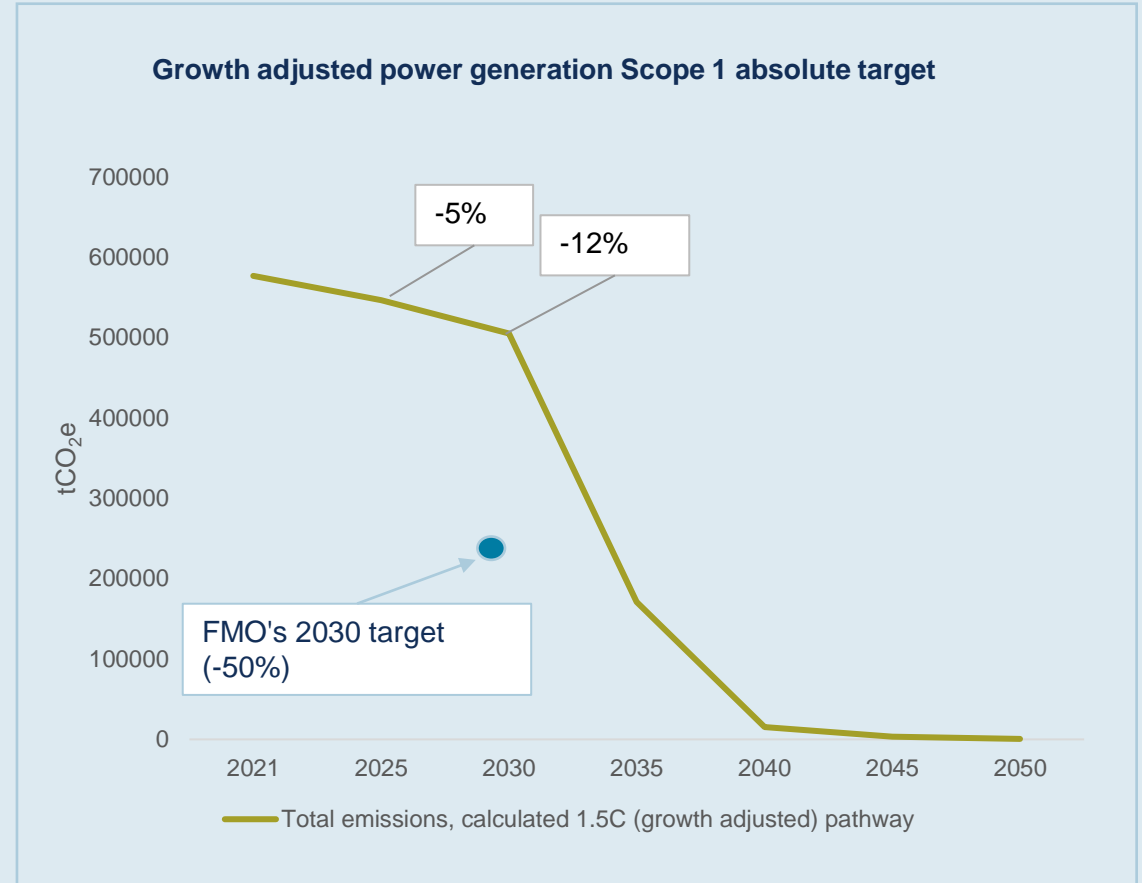
Power generation emission reduction inputs and target

Data

- Our target focuses on active investments that have production of electricity (NACE code 35.11) as their main economic activity.
- The 2021 baseline that we use for power generation is 577,021 tCO₂e. The baseline is calculated based on customers' 2021 Scope 1 emissions attributed in line with the PCAF Global Standard. The outstanding amounts include FMO-A, public funds, and mobilized capital. This baseline is subject to audit in our Annual Report 2022 and will be confirmed at that time (limited assurance).
- FMO's 2021 portfolio for power generation by commitment was approximately 21% in low-income countries; 64% in lower-middle income countries; and 14% in upper-middle income countries.

Key Assumptions

- Portfolio distribution by country income level (low-income, low-middle income, upper-middle income) will remain constant to 2030 compared to 2021.
- Power production growth projections are based on 2030 Strategy projections including mobilized funds (average of ~8.0% p.a. between 2021-2030) Thereafter, a projection of 4% p.a. is used.
- The pathway from 2030 to 2050 is only an indication now, which will be updated when more is known about the portfolio and the assumptions we should use. This should not be understood as a target for that period.
- For renewable energy customers without reported emissions data, the assumption is made that their Scope 1 emissions are zero.



Methodology: power generation target

Methodology

We have been guided in our target setting process by expert consultant Guidehouse Netherlands BV. Our target is based on a calculated 1.5°C pathway provided by the following database: REMIND-MAGPIE 3.0-4.4, Scenario: Orderly - Net Zero 2050 scenario (electricity), broken down by region and country income level within regions (upper middle income, lower middle income, low income using World Bank categorization), using our best estimate of proxies where there is no perfect match. Because no region fully represented low-income countries, we used the lower middle-income pathways as a conservative proxy for the purpose of this target (see next page for detail).

- We apply the targets to our power generation portfolio (Scope 1 financed emissions) based on the country income levels of our outstanding investments in the 2021 baseline.
- We set only Scope 1 emissions as this is the primary emission driver of power generation plants.
- Projections are modified to allow for additional growth where FMO's portfolio is projected to grow faster than the indicated growth in the modelled scenario ("growth adjusted" targets).
- We have chosen to use a more robust target because in our Position Statement on Phasing Out Fossil Fuels in Direct Investments, we may only invest in limited fossil fuel investments until 2026, based on strict investment criteria.

The target we have set is one we believe is achievable and ambitious compared to 1.5°C scenarios for power generation in our markets.

Notes

We have chosen not to use the Sectoral Decarbonization intensity scenario for power generation (provided by the Science-Based Target Initiative (SBTi)) because it is a global scenario, and not region-specific. The NGFS scenario we use provides a regional view, although it remains imprecise due to the wide differences between countries in the regions. We expect that going forward, more granular pathways will become available.

We do have a limited number of fossil fuel plants in other parts of our portfolio, for example in equity funds we have invested in. These are not included in this target, however we continue to review our policies and approaches to further reduce our investments in these industries.

Outcomes

With growth adjustment (the percentage growth FMO's portfolio is expected to grow above the compound annual growth rate (CAGR) in the NGFS scenario), the following emission reduction percentages were applied, demonstrating the difference in 1.5°C models by country income level:

Change Compared to 2021 Absolute Emission Targets of Scope 1 Electricity Generation (%)							
Scope 1	2021	2025	2030	2035	2040	2045	2050
Low income	0%	-5%	-12%	-70%	-97%	-99%	-100%
Lower middle income	0%	-5%	-12%	-70%	-97%	-99%	-100%
Upper middle income	0%	-57%	-71%	-91%	-100%	-100%	-100%
Total							
% Change per period	0%	-5%	-8%	-66%	-91%	-78%	-91%
% Change Compared to 2021	0%	-5%	-12%	-70%	-97%	-99%	-100%

FMO's power generation target: select NGFS model inputs/ analysis by FMO

REMIND-MAgPIE 3.0-4.4, Scenario: Orderly - Net Zero 2050 scenario (electricity), divided by country income level

Change in GHG Emissions Compared to 2021 (if negative, capped at 0) (calculated by FMO)							
Country Income Level (applied by FMO)	2020	2025	2030	2035	2040	2045	2050
Low income (uses lower middle income curve as a proxy)	100%	92%	62%	21%	2%	0%	0%
Lower middle income	100%	92%	62%	21%	2%	0%	0%
Upper middle income	100%	41%	21%	7%	0%	0%	0%
High income	100%	34%	11%	0%	0%	0%	0%

Emission data per available region											
Region	Scenario	Variable	Unit	2020	2025	2030	2035	2040	2045	2050	Income classification (applied by FMO for this target)*
REMIND-MAgPIE 3.0-4.4 Canada, NZ, Australia	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	181.0475	13.7061	-3.3921	-9.7685	-15.4001	-20.0165	-23.0176	High income
REMIND-MAgPIE 3.0-4.4 China	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	4580.4343	1642.1493	526.0421	125.1452	17.0595	-23.0805	-38.7604	Upper middle income
REMIND-MAgPIE 3.0-4.4 Countries from the Reforming Economies of the Former Soviet Union	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	566.9806	276.9409	207.883	97.9354	4.8253	-15.7437	-21.4899	Upper middle income
REMIND-MAgPIE 3.0-4.4 EU 28	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	623.5656	126.063	-21.0486	-51.1556	-55.1841	-57.6086	-58.9829	High income
REMIND-MAgPIE 3.0-4.4 India	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	1114.0045	1086.5851	784.7093	310.2549	16.8418	11.8931	7.1561	Lower middle income
REMIND-MAgPIE 3.0-4.4 Japan	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	385.8591	240.6287	125.1011	4.2845	-9.2556	-10.9529	-11.5459	High income
REMIND-MAgPIE 3.0-4.4 Latin America and the Caribbean	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	209.4297	57.9273	27.7809	-1.1007	-16.6844	-28.416	-38.6603	Upper middle income
REMIND-MAgPIE 3.0-4.4 Middle East, North Africa, Central Asia	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	820.1249	604.9137	529.2319	198.1678	-0.61	-2.1403	-2.9445	Upper middle income
REMIND-MAgPIE 3.0-4.4 Non-EU28 Europe	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	141.0603	28.1102	9.9471	0.1641	-2.3688	-3.75	-4.9477	Upper middle income
REMIND-MAgPIE 3.0-4.4 Other Asia	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	893.713	830.5123	518.6945	138.9109	17.2031	-0.4248	-1.063	Lower middle income
REMIND-MAgPIE 3.0-4.4 Sub-saharan Africa	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	210.6138	124.946	82.6694	19.7565	7.5666	-2.3294	-5.2288	Lower middle income
REMIND-MAgPIE 3.0-4.4 United States of America	Net Zero 2050	Emissions CO2 Energy Supply Electricity	Mt CO2/yr	1610.6706	582.5141	206.3706	15.4692	-42.6717	-58.7404	-65.5225	High income

Change in GDP PPP (calculated by FMO based on NGFS model inputs)								CAGR (calculated by FMO)		
Income type	2020	2025	2030	2035	2040	2045	2050	2020-2025	2020-2030	2025-2030
Low income	100%	123%	152%	182%	215%	254%	297%	4.27%	4.26%	4.26%
Lower middle income	100%	123%	152%	182%	215%	254%	297%	4.27%	4.26%	4.26%
Upper middle income	100%	119%	141%	163%	182%	201%	220%	3.58%	3.46%	3.34%
High income	100%	109%	118%	125%	133%	142%	150%	1.78%	1.64%	1.50%

APPENDIX 2: Glossary

Glossary

Absolute emissions | Emissions attributed to a financial institution's lending and investing activity. Expressed in tons CO₂e. [PCAF](#)

Adaptation | Human-driven adjustments in ecological, social or economic systems or policy processes, in response to actual or expected climate stimuli and their effects or impacts (LEG, 2011). Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation. [Glossary of key terms \(unfccc.int\)](#)

Attribution factor | The share of total greenhouse gas (GHG) emissions of the borrower or investee that are allocated to the loan or investments. [PCAF](#)

Carbon dioxide equivalent emissions | Carbon dioxide equivalent is a measure used to compare the emissions from various greenhouse gases based upon their global warming potential. [OECD Glossary of Statistical Terms - Carbon dioxide equivalent Definition](#)

Climate change | Refers to any change in climate over time, whether due to natural variability or as a result of human activity. [Glossary of key terms \(unfccc.int\)](#)

Climate change mitigation | Climate change mitigation is achieved by limiting or preventing greenhouse gas emissions and by enhancing activities that remove these gases from the atmosphere. ([Working Group III — IPCC](#))

CO₂-equivalent (CO₂e) | The amount of carbon dioxide (CO₂) that would cause the same integrated radiative forcing (a measure for the strength of climate change drivers) over a given time horizon as an emitted amount of another GHG or mixture of GHGs. Conversion factors vary based on the underlying assumptions and as the science advances. [PCAF](#)

Emission reduction target (science-based) | Targets adopted by companies to reduce GHG emissions. They are considered science-based if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement—to limit global warming to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C. [PCAF](#)

Emission removal | The action of removing GHG emissions from the atmosphere and store it through various means, such as in soils, trees, underground reservoirs, rocks, the ocean, and even products like concrete and carbon fiber. [PCAF](#)

Financed emissions | Absolute emissions that banks and investors finance through their loans and investments. [PCAF](#)

Greenhouse gas (GHG) emissions | The seven gases mandated under the Kyoto Protocol and to be included in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC)—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). [PCAF](#)

Network of Central Banks and Supervisors for Greening the Financial System (NGFS) | The Network of Central Banks and Supervisors for Greening the Financial System. ([NGFS](#))

Net Zero emissions | Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period. Where multiple greenhouse gases are involved, the quantification of net zero emissions depends on the climate metric chosen to compare emissions of different gases (such as global warming potential, global temperature change potential, and others, as well as the chosen time horizon). [Glossary — Global Warming of 1.5 °C \(ipcc.ch\)](#)

1.5°C pathway alignment | Aligning financial flows with a relevant 1.5°C pathway.

1.5°C pathway | A pathway of emissions of greenhouse gases and other climate forcings that provides an approximately one-in-two to two-in-three chance, given current knowledge of the climate response, of global warming either remaining below 1.5°C or returning to 1.5°C by around 2100 following an overshoot. [Glossary — Global Warming of 1.5 °C \(ipcc.ch\)](#)

Paris Agreement | The Paris Agreement, adopted within the UNFCCC in December 2015, commits participating countries to limit global temperature rise to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C, adapt to changes already occurring, and regularly increase efforts over time. [PCAF](#)

Paris alignment | Delivering the goals of the Paris Agreement and more specifically in “making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development” (United Nations 2015). [2019 I4CE, New Climate Institute](#)

Glossary

Pathway | Pathway concepts range from sets of quantitative and qualitative scenarios or narratives of potential futures to solution-oriented decision-making processes to achieve desirable societal goals.

Resilience | The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization and the capacity to adapt to stress and change. [Glossary of key terms \(unfccc.int\)](#)

Scope 1 emissions | Direct GHG emissions that occur from sources owned or controlled by the reporting company—i.e., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc. [PCAF](#)

Scope 2 emissions | Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company. Scope 2 emissions physically occur at the facility where the electricity, steam, heating, or cooling is generated. [PCAF](#)

Scope 3 emissions | All other indirect GHG emissions (not included in Scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions that occur in the supply chain (for example, from production or extraction of purchased materials) and downstream emissions that occur as a consequence of using the organization's products or services. [PCAF](#)

Scope 3 category 15 (investments) emissions | This category includes scope 3 emissions associated with the reporting company's loans and investments in the reporting year, not already included in scope 1 or scope 2. [PCAF](#)

Sustainable Development Goals (SDGs) | The 17 global goals for development for all countries established by the United Nations through a participatory process and elaborated in the 2030 Agenda for Sustainable Development, including ending poverty and hunger; ensuring health and well-being, education, gender equality, clean water and energy, and decent work; building and ensuring resilient and sustainable infrastructure, cities and consumption; reducing inequalities; protecting land and water ecosystems; promoting peace, justice and partnerships; and taking urgent action on climate change. [Glossary — Global Warming of 1.5 °C \(ipcc.ch\)](#)

tCO₂e | Tons of carbon dioxide equivalent.

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Important legal information

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