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Towards Net Zero export credit

Current approaches and next steps

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Foreword



As the world races toward net zero by 2050, financial institutions of all kinds are aligning their business models to the imperative of driving decarbonization and growing resilience.

The Glasgow Financial Alliance for Net Zero (GFANZ) has been launched to speed the global transition to net zero. GFANZ is the strategic forum to ensure the financial system works together to broaden, deepen, and accelerate the transition. Already nearly 250 financial institutions from banks to asset managers, pension funds and insurers—responsible for over US\$80 trillion in assets—have joined this effort.

Export credit agencies are increasingly conspicuous by their absence. With mandates to grow trade in order to create jobs and support key industries, export credit agencies play critical roles in the global economy, particularly in capital-intensive sectors that are essential to the net zero transition.

While some export credit agencies are taking important steps to phase out their financing of the most polluting activities and to increase their support for the new green economy, only one, Export Development Canada, has yet committed to net zero alignment by 2050. This puts the export credit sector increasingly out of sync with both the private sector and governmental commitments under the Paris Agreement.

GFANZ is demonstrating the value of both early action and collaboration. By committing to pathways to net zero now, financial institutions are creating strategic plans that maximize their ability to benefit from the transition while mitigating the risks associated with climate change. And by working together, within and across sectors, finance institutions are building the frameworks that will define the “rules of the game” for the net zero transition that will dominate the coming decades. Early actors will be better placed to seize the trillions of dollars of opportunities at the heart of the great structural shift of our time; laggards will lose out.

It is my hope that export credit agencies will jump to the forefront of this transition by committing to net zero financed emissions by 2050 before COP26 in Glasgow in November. Those that do will be better placed to build the economies that our citizens need and future generations deserve.

A handwritten signature in black ink, appearing to read 'Mark Carney', with a long, sweeping underline.

Mark Carney

UN Special Envoy on Climate Action and Finance
Former Governor of the Bank of England

Abstract

As the world economy rapidly decarbonizes to meet global climate goals, the export credit sector must keep pace. Countries representing over two-thirds of global GDP have now set net zero targets, as have hundreds of private financial institutions. Public and private initiatives are now working to develop new standards and methodologies for shifting investment portfolios to decarbonization pathways based on science. However, export credit agencies (ECAs) are only at the beginning stages of this seismic transformation. On the one hand, the net zero transition creates risks to existing business models and clients for the many ECAs, while on the other, it creates a significant opportunity for ECAs to refocus their support to help countries and trade partners their climate targets. ECAs can best take advantage of this transition, and minimize its meet risks, by setting net zero targets and adopting credible plans to decarbonize their portfolios. Collaboration across the sector can be a powerful tool for advancing this goal.

1. Introduction

To reach the goals of the Paris Agreement, the world must reach net zero carbon emissions by 2050 at the latest. The decarbonization of the world economy in just a few short decades is a monumental task. It challenges incumbent industries and production models in every sector, it creates enormous new opportunities for economic development and jobs, and it is essential for protecting economies and societies from the impacts of climate change.

Financial institutions¹ (FIs) will play an important role in this transition. After all, they are uniquely positioned to drive Paris-aligned systemic decarbonization, because they influence, enable, and depend on the behaviour of other economic actors through their investment and lending activities. Indeed, this central enabling role of finance is explicitly recognized in the Paris Agreement (Art. 2.1(c)). To reach the goals of the Paris Agreement, all financial entities must be part of the transition to decarbonization.

The macroeconomic and scientific rationale for financial institutions to adopt climate-friendly lending and investing practices should thus be clear. But one can also make a business case for financial institutions to align to net zero. Key benefits include the following:²

- *Increased business resilience and competitiveness:* By acting proactively, the FI reduces its exposure to policy, regulatory and climate change risks. The analytical process required to align to net zero will also uncover a range of opportunities that arise through the transformations faced by the economic sectors they lend to and invest in.

¹ The Science Based Targets initiative (SBTi) defines financial institutions as those companies that derive at least 5% of their revenue (or assets) from activities related to financial and monetary transactions, including deposits, loans, investments, and currency exchange. [Science Based Targets. \(2021a\)](#) *How does the SBTi define financial institutions?*

² [Science Based Targets. \(2021b\)](#) *Financial Sector Science-Based Target Guidance.*

- *Driving innovation:* In assisting clients to meet their emission targets, FIs will need to develop new financial products that prioritize the low-carbon transition — which, in turn, will provide the FI with a new competitive income source.
- *Reputation building:* The adoption of science-based targets, the reduction of their exposure to policy, regulatory and climate-related risks, and their proactive role in the transition to a low-carbon economy will enhance the reputation of FIs as they build credibility and signal leadership. They will be the choice for stakeholders and investors wanting to limit their own exposure risks. A proactive stakeholder and investor engagement process will increase brand recognition and drive a growth of the client-base. And the FIs' active role in the transition to a low-carbon economy can also be interpreted as an extension of their fiduciary duty, i.e. the FIs' legal and ethical obligation to act in their clients' best interests, which is now extended to a wider stakeholder base.

This report describes the decarbonization transformation and considers its implications for ECAs. The report seeks to answer: What current approaches are ECAs in important member countries of the Organisation for Economic Co-operation and Development (OECD) taking? What questions and gaps remain?

ECAs occupy an important node in the international trade finance network on which world trade relies, and therefore play a key role in the transition to net zero. They provide official support for export of goods or services via export credit guarantees or insurance, direct credit and financing or refinancing, and/or interest rate support.³ After all, ECAs have historically been a key part of the financial infrastructure supporting fossil fuel development and other carbon-intensive sectors. Through their portfolios, they can both facilitate the world's transition away from a carbon-intensive economy and support the necessary steps to a low-carbon economy — for instance, through the support of 'green' infrastructure provision.

While the ECA sector has traditionally been cautious regarding significant transformations, simply adopting a “wait and see” approach to net zero compounds the risks and challenges ECAs will face.

Pressure on ECAs to align to net zero is building and many are acting. ECAs mostly have a mandate to finance or insure and guarantee exports, foster trade and help to secure jobs in the national economy, but climate action is becoming much more important. The launch of the Export Finance for Future (E3F) initiative demonstrates the willingness of a group of countries to increase support for climate-friendly projects and assess how to phase out official trade and export finance support for fossil fuels.⁴ Denmark, France, Germany, the Netherlands, Spain, Sweden and the United Kingdom have committed to improve transparency on climate-related information. The Group of Seven (G7) have also announced plans to accelerate the phaseout of carbon-intensive projects and increase export financing and insurance to transactions compatible with the Paris Agreement.⁵ The announcement

³ For a definition of officially supported credits, see, e.g., [OECD. \(2021\) Arrangement on Officially Supported Export Credits](#).

⁴ [Direction générale du Trésor. \(2021\) Seven countries launch international coalition “Export Finance for Future” \(E3F\) to align export finance with climate objectives](#).

⁵ [GOV.UK. \(2021\) G7 Climate and Environment: Ministers' Communiqué, London, 21 May 2021](#).

followed the release of the International Energy Agency's (IEA) 'Net Zero by 2050' report on May 17, 2021, which re-emphasised the necessity for such drastic steps if global heating is to be kept within the 1.5°C limit. Just this month, Export Development Canada (EDC) became the first ECA to set a net zero target, reducing operational emissions by 2030 and portfolio emissions by 2050 to net zero.⁶

Despite this progress, at present, no export credit agency has adopted a full net-zero framework and implementation plan comparable to the commitments emerging at the policy level and amongst private financial institutions. Though over two-thirds of the world economy (by GDP) has committed to net-zero, the world's ECAs still lack clear strategies of how they will get there.

This gap creates risks both for ECAs and, given their key role in many sectors, for the climate transition overall.

2. The net zero transformation and its importance for export credit

Defining net zero and its implications

In 2015, countries committed in the Paris Agreement to limit climate change by holding the increase in global average temperature to “well below” 2°C in this century and to pursue efforts to limit the increase to 1.5°C. To do so, countries must reduce their emissions in order to achieve a balance between “sources” and “sinks” of greenhouse gases (GHGs).

Net zero refers to the process of bringing down global emissions to residual levels, so that any emissions not yet feasible to eliminate can be permanently neutralized.⁷ According to the Intergovernmental Panel on Climate Change (IPCC), global CO₂ emissions must reach net zero by 2050, with non-CO₂ emissions reaching zero shortly thereafter, to retain a 50 percent chance of limiting global warming to 1.5°C in this century. Significantly, the IPCC also noted that this implies a 50 percent cut in CO₂ before 2030.⁸

⁶ [EDC. \(2021a\)](#) *EDC Net Zero 2050*.

⁷ [UN Race to Zero Campaign. \(2021\)](#) *Race to Zero Lexicon*.

⁸ [IPCC. \(2018a\)](#) *Special Report on Global Warming of 1.5°C*.

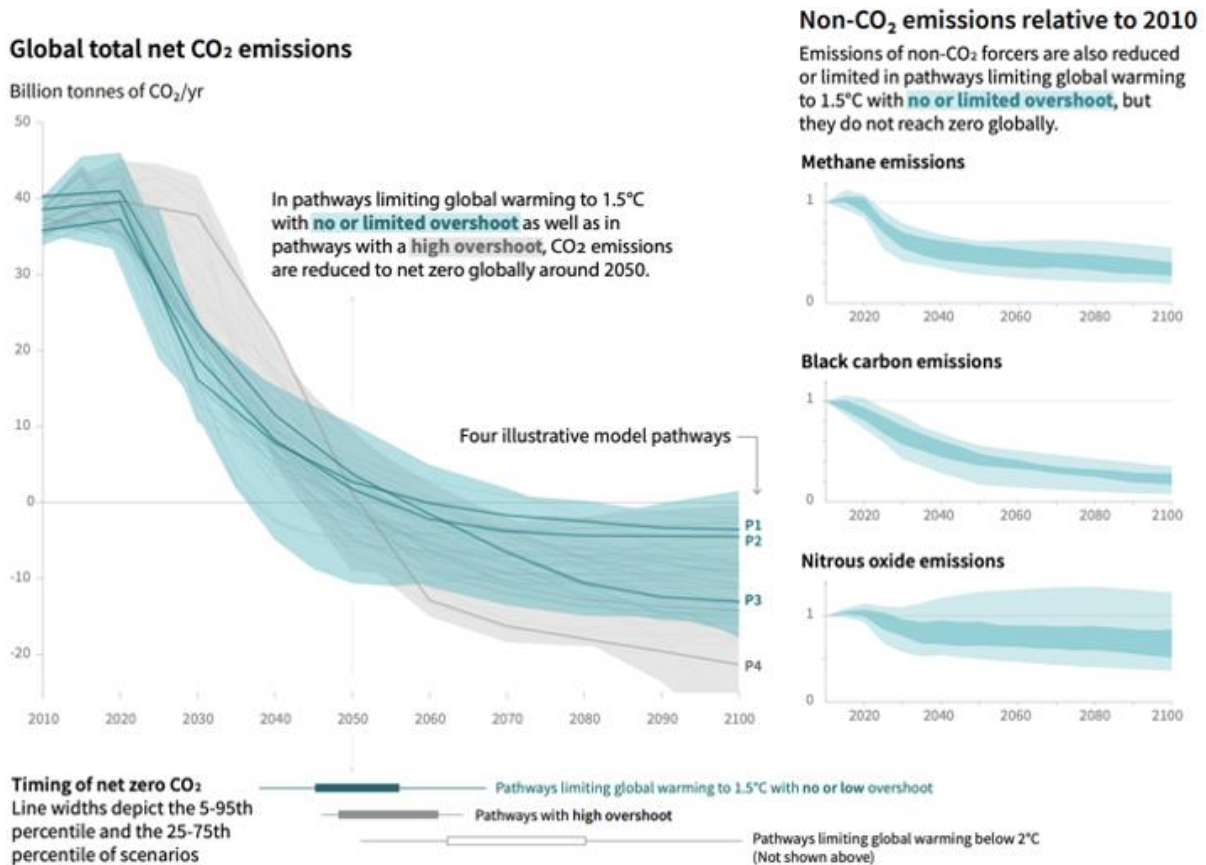


Figure 1: 'Global emissions pathway characteristics' (IPCC, 2018b:p.13).

The science thus highlights a fundamental challenge for the world economy: full decarbonization to the point of net zero in just a few short decades.

Net zero can be defined on both a global scale, and for a specific entity. Referring to the world as a whole, the IPCC defines 'net-zero' as:⁹ "When anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period." In other words, for every unit of GHG produced by man, a unit of GHG needs to be removed from the atmosphere so that a net-balance of zero can be achieved over a specified period of time.

Race to Zero,¹⁰ a global campaign to mobilize non-governmental actors to join the Climate Ambition Alliance (it currently represents 24 regions, 2,360 businesses, 163 major investors and 624 higher education institutions)¹¹ with the objective to build momentum around the shift to a decarbonized economy ahead of COP26, considers individual actors have reached a state of net zero when:¹²

⁹ UN Race to Zero Campaign. (2021) *Race to Zero Lexicon*.

¹⁰ UNFCCC. (2021a) *Race To Zero Campaign*.

¹¹ These 'real economy' actors join 120 countries in the largest ever alliance committed to achieving net zero carbon emissions by 2050 at the latest. Collectively these actors now cover nearly 25% global CO2 emissions and over 50% GDP. UNFCCC. (2021a) *Race To Zero Campaign*.

¹² UN Race to Zero Campaign. (2021) *Race to Zero Lexicon*.

“An actor reduces its emissions following science-based pathways, with any remaining GHG emissions attributable to that actor being fully neutralized by like-for-like removals (e.g., permanent removals for fossil carbon emissions) exclusively claimed by that actor, either within the value chain or through purchase of valid offset credits.”

What does this mean in practice for different economic sectors? One can take the energy sector as an example — after all, fossil fuel combustion is the largest source of GHG emissions and the central driver of climate change.¹³ In May 2021, the IEA released the ‘Net Zero 2050’ report,¹⁴ the world’s first comprehensive roadmap to a sustainable net-zero energy future. The report sets out more than 400 milestones to realize a cost-effective and economically productive transition to an affordable, clean, dynamic and resilient energy economy that is dominated by renewables like solar and wind instead of fossil fuels over the next three decades.

The core points of the IEA’s report are outlined below:¹⁵

Background:

- Despite many pledges and efforts by governments to tackle the causes of climate change, CO₂ emissions from energy and industry have increased by 60% since the UNFCCC was signed in 1992.
- Despite the fact that the number of countries and companies committing to immediate action to achieve net-zero emissions over the coming decades are growing, these pledges – even if fully achieved – are still insufficient to keep global temperatures within the agreed limits (i.e., limiting the global temperature rise to 1.5°C) and to avert the worst effects of climate change.
- The energy sector is the source of around three-quarters of GHG emissions today and holds the key to averting the worst effects of climate change.
- The path to net-zero emissions is narrow: staying on it requires international cooperation and immediate and massive deployment of all available clean and efficient energy technologies.

The IEA report was launched against a background of unsatisfactory progress towards achieving climate goals and an ever increasing urgency to fundamentally transform the energy sector, which is the economic sector globally responsible for the largest proportion of GHG emissions.¹⁶

ECAs are highly influential actors in global energy development because official export financing stimulates international trade in related technologies and promotes energy development in the Global South.¹⁷ In addition, the global shipping and air freight on which

¹³ [Science Based Targets. \(2021b\)](#) *Financial Sector Science-Based Target Guidance*.

¹⁴ [IEA. \(2021\)](#) *Net Zero by 2050 - A Roadmap for the Global Energy Sector*.

¹⁵ [IEA. \(2021\)](#) *Net Zero by 2050 - A Roadmap for the Global Energy Sector*.

¹⁶ [Ritchie, H. \(2020\)](#) *Sector by sector: Where do global greenhouse gas emissions come from?*.

¹⁷ [Wright, C. \(2011\)](#) *Export Credit Agencies and Global Energy: Promoting National Exports in a Changing World. Global Policy*. 2(SI), 133-143.

trade relies themselves contribute an increasing share of GHG emissions.¹⁸ ECAs therefore have a major role to play in the global energy transition. To that end, ECAs will have to formulate credible transition pathways, to adopt the right tools and to implement appropriate tools. ECAs also need to formulate appropriate strategies to capture opportunities and to minimize the adverse impact on their portfolios resulting from any transition.

Key pillars of decarbonization

- Energy efficiency
- Behavioural change (reducing excessive or wasteful energy use; transport mode switch, etc.)
- Refitting
- Electrification¹⁹
- Renewables
- Hydrogen
- Bioenergy
- CCUS (carbon capture, utilisation & storage)

The *key pillars of decarbonization* identified by the IEA in the 'Net Zero by 2050' report will require significant investments in 'green' infrastructure if they are to be realized. E-mobility requires charging stations, and a hydrogen economy an entire set of infrastructure of its own. Such massive infrastructure investments by the public and private sector around the world present a once-in-a-generation opportunity for ECAs and other financial institutions.

However, a global energy transition also exposes the financial sector to an unprecedented level of stranded asset risk (see below), as the value of many infrastructure components required for the production and use of fossil fuel energy will be impaired in the IEA Net-Zero Emissions by 2050 Scenario (NZE).

Some of the IEA's core projections for the net-zero energy economy are summarized in the table below:

Key predictions:

- *Economy:*
 - Investment rises across electricity, low-emissions fuels, infrastructure and end-user sectors. Annual energy sector investments, which averaged USD 2.3 trillion globally in recent years, jumps to USD 5 trillion by 2030. As a share of global GDP, average annual energy investment to 2050 in the NZE is around 1% higher than in recent years.
 - Oil and gas revenues in producer economies are 80% lower in 2050 than in recent years and tax revenues from retail oil and gas sales in importing countries are 90% lower.
- *Energy industry:*

¹⁸ [IMO. \(2020\)](#) *Fourth Greenhouse Gas Study 2020*.

¹⁹ Ever-cheaper renewable energy technologies give electricity the edge in the race to zero.

- Large energy-consuming companies, vehicle manufacturers and their suppliers adjust their designs and retool factories while improving efficiency and switching to alternative fuel supplies.
- *Innovation / Technology*
 - The emission cuts to 2030 in the NZE can be mostly achieved with technologies that are currently under development.

ECAs have to act expeditiously (and in concert with a sufficient number of other relevant economic actors) if the IEA's key scenario milestones (summarized in the table below) are to be met.

Key scenario milestones:²⁰

- Global energy-related and industrial process CO₂ emissions fall by nearly 40% between 2020 and 2030, and to net zero in 2050. There is a 75% reduction in methane emissions from fossil fuel use by 2030.
- Coal demand declines by 90% to less than 600 Mtce in 2050, oil declines by 75% to 24 mb/d and natural gas declines by 55% to 1750 bcm. The fossil fuels that remain in 2050 are used in the production of non-energy goods where the carbon is embodied in the product (like plastics), in plants with carbon capture, utilisation and storage (CCUS), and in sectors where low-emissions technology options are scarce.
- Universal access to sustainable energy is achieved by 2030.
- Solar PV and wind become the leading source of electricity globally before 2030 and together they provide nearly 70% of global electricity generation in 2050.
- Energy efficiency, wind and solar provide around half of emissions savings to 2030, while increasing electrification, hydrogen use and CCUS deployment, for which not all technologies are on the market yet, provide more than half of the emissions savings between 2030 and 2050.
- Behavioural changes by citizens and business are projected to provide around 4% of the cumulative emissions reductions and to curb energy growth and facilitate clean energy transitions.
- Annual energy sector investment, which averaged USD 2.3 trillion globally in recent years, jumps to USD 5 trillion by 2030 in the NZE. As a share of global GDP, average annual energy investment to 2050 in the NZE is around 1% higher than in recent years.

Figure 2 depicts the transition pathway as outlined by the IEA report.

²⁰ In the NZE, these changes take place while the global economy more than doubles through to 2050 and the global population increases by 2 billion.

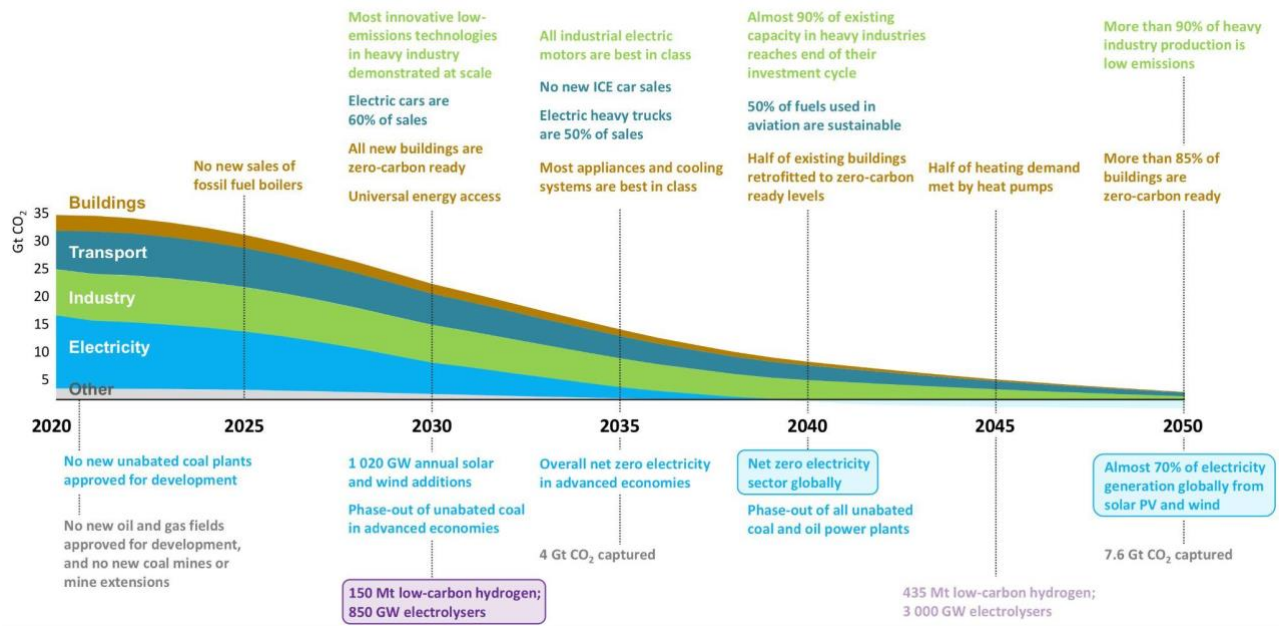


Figure 2: 'Transition pathway out to 2050 in IEA Net Zero scenario' (Authors' preparation based on [IEA, 2021:p.152](#)).

The transition pathway depicted above provides a clear roadmap for ECAs as it specifies a timeline with respect to the major changes that various energy-related sectors will be undergoing over the next three decades. For instance, electric cars are expected to account for 60% of all car sales by 2030, while annual solar and wind additions are expected to amount to 1,020 GW. ECAs can appropriately re-adjust their portfolios (e.g., invest in renewable energy assets and divest from fossil fuel assets) and develop innovative financing solutions for their clients on the basis of these milestones. Besides, the insights that ECAs (and other FIs) acquire through the process of developing these solutions might turn out to be highly valuable for future policy decisions. After all, it is these institutions that commit such recommendations and scenarios to the 'market test'.

Lastly, the IEA report identified international cooperation as one of *the* decisive factors for the realization of the presented net zero pathway. Where political cooperation falls short of expectations, private sector initiatives can help to keep the economy on track toward net zero. As mentioned above, the financial sector might be particularly well-placed to steer this transformation, because its operation and products (i.e., financial instruments) require standardization and transparency in addition to close cooperation between the various industry partners. Both the cooperation of ECAs and changes to ECAs' portfolios can thus play an important role in the transition to net-zero.

Although the discussion above focuses primarily on the energy sector, many of the same arguments apply to other sectors financed by ECAs.

Global uptake of net zero targets

The global path to net zero is increasingly clear, with significant challenges but also enormous benefits. Net zero commitments have now spread globally to cover over two-thirds

of the global economy, according to a report from Oxford Net Zero and the Energy and Climate Intelligence Unit (ECIU).²¹ This rapid growth in the adoption of net zero emissions targets since the Paris Agreement and the publication of the IPCC Special Report on Global Warming of 1.5°C report shows that a significant proportion of political and business leaders now accept the case for reaching net zero by mid-century.

The Oxford Net Zero and ECIU study covers some 4,000 entities, including every country as well as many states, regions, large cities and companies.

It provides the following snapshot of the current state of net zero commitments:

- 61% of global GHG emissions are covered by national net zero commitments
- 68% of global GDP is covered by commitments
- 56% of the world's population is covered by commitments.

The report emphasises that, in order to move forward, it is crucial to set long-term, science-based targets, and then to develop well-thought through strategies as to how these targets are to be met. It is important that entities are clear about what they are pledging – reductions in which GHG, on what timescale and using which offsets. Setting out a detailed, credible and predictable pathway boosts the credibility of these pledges and significantly reduces the uncertainties involved in the transition, which should send an unequivocal signal to investors.

The logical pathway for nations, meanwhile, lies in publishing both a long-term strategy containing a mid-century net zero target and a Nationally Determined Contribution (NDC) under the Paris Agreement before COP26, and making the second consistent with the first.

In the corporate realm, the report found that 20% of Forbes Global 2000 companies have adopted a net zero target, though the uptake varies significantly by sector (see Figure 3). For ECAs, it is significant that many of the world's largest corporations are moving rapidly toward net zero alignment.

²¹ [Black, R. et al. \(2021\)](#) *Taking Stock: A global assessment of net zero targets*, Energy & Climate Intelligence Unit and Oxford Net Zero.

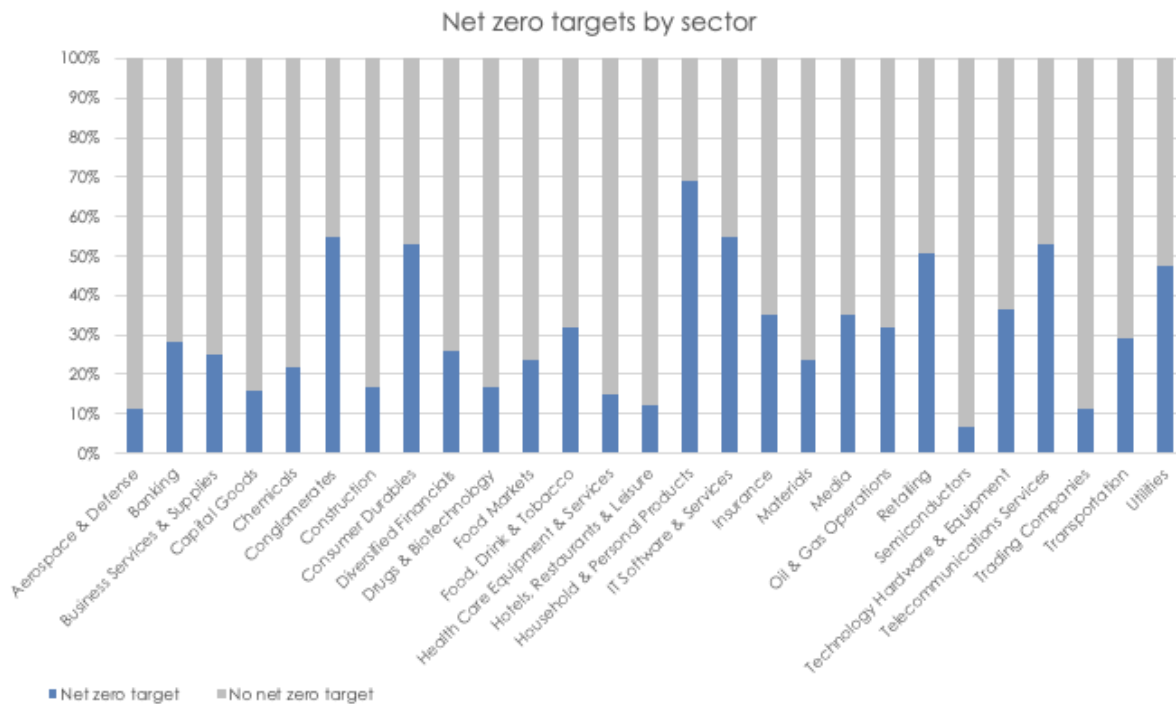


Figure 3: 'Share of Forbes Global 2000 firms with net zero targets by sector' ([Black, R. et al., 2021](#)).

Export credit sits at the crux of the net zero transformation

Export credit will play a key role in the transition to net zero. After all, ECAs have historically played an important role in supporting the fossil fuel sector. For instance, EDC provided an average of USD 7.6 billion in financial support to oil and gas companies between 2012 and 2017. Over the same period, EDC facilitated a total of USD 5 billion in cleantech finance.²² This example demonstrates that ECAs are key for both exiting the carbon-intensive economy and for driving the transition to a low-carbon economy.

Expansion of global trade and investment requires sufficient, reliable and affordable sources of financing. Short-term trade credit as well as medium and long-term export finance are essential elements of exporters' operations. However, structural problems appear in the supply of finance and insurance due to market failure. This applies not only for high-carbon sectors but also for climate-related infrastructure projects in emerging markets and developing economies. Imperfect information or information asymmetries between banks, project developers or exporters and buyers prevent mutually beneficial investment from occurring.²³ In addition to safeguarding adequate liquidity, managing risk is an essential component of firms' tasks when developing economic activity. There are, however, significant gaps in private offerings for trade credit and political risk insurance.

²² [Shishlov, I. et al. \(2020\)](#) *External and internal climate change policies for export credit and insurance agencies.*

²³ [Auboin, M. & Blengini, I. \(2019\)](#) The impact of Basel III on trade finance: the potential unintended consequences of the leverage ratio. *Journal of Banking Regulation.* 20, 115-123.

Imperfect information or externalities are typical reasons for market failure and financing gaps concerning export finance and trade credit insurance. Public institutions have an opportunity to intervene for the public benefit with a view to improving otherwise suboptimal market outcomes. These suboptimal market outcomes arise because the costs of risk diversification, liquidity management, and coordination among creditors can limit the ability of private financial agents to offer comparable insurance products.²⁴

The main function of ECAs is related to risk mitigation. The need for post-shipment supplier credits arises when exporters extend credit to their foreign buyers. By providing risk mitigation functions, agencies can secure a “level playing field” for firms. In addition to limiting the risk of exporters, the provision of export credit insurance also provides incentives to commercial banks to finance transactions. Banks are able to rely on loan repayments due to insurance, rather than depending on the borrower's financial capacity. Moreover, the involvement of public agencies demonstrates to commercial lenders and insurers through positive underwriting decisions that financing transactions in uncertain political and economic environments can be viable. In this way, ECAs can play an important role in mobilizing financing from private-sector sources.²⁵ Furthermore, public agencies have comparative advantages to self-insurance of exporters and investors regarding monitoring of counterparties' creditworthiness and processing of claims.

The standard principle of intervention for ECAs is that the agency is not competing with commercial institutions in the provision of the product, thereby filling a need that would otherwise not be met. This concept of additionality also drives the development of the Arrangement on Officially Supported Export Credits of the Organisation for Economic Co-operation and Development (OECD Arrangement). It is based on the idea that exporters should compete globally based on product quality, price and financing conditions but not with government support.²⁶ In addition, ECAs play a crucial role in mobilizing financing from private-sector sources, creating catalytic effects in export development.

Traditionally, most ECAs thus follow a market failure approach with an “insurer of last resort” concept — they only step into the breach with insurance products when commercial banks or private insurers do not offer sufficient facilities due to high country risks, significant buyer risks or long financing tenors.²⁷ Furthermore, governments have created institutions in the last decades to support export transactions through direct lending or a product mix of financing and insurance offerings if there is market failure.

Originally insurers or lenders of last resort, many ECAs are now more actively pursuing opportunities following a “trade facilitator” approach. They support companies more independently from commercial banks with targeted solutions. This is often in line with governments' new foreign trade strategies. Aims include a rules-based multilateral trade system, an inclusion of the United Nations Sustainable Development Goals (SDGs) in foreign

²⁴ [Heiland, I. & Yalcin, E. \(2020\)](#) Export market risk and the role of state credit guarantees. *International Economics and Policy*. 18, 25–72.

²⁵ [Klasen, A. \(2020\)](#) Quo Vadis, Global Trade?. In: Klasen, A. (eds.) *The Handbook of Global Trade Policy*. Oxford, John Wiley & Sons Ltd, pp. 3-22.

²⁶ Mulligan, R.M. (2007) Export Credit Agencies: OECD Arrangement for Officially Supported Export Credits. *Journal of Management Research*. 7(2), 103-116.

²⁷ [Bischoff, B. & Klasen, A. \(2012\)](#) Hermesgedeckte Exportfinanzierung. *Recht der Internationalen Wirtschaft*. 11, 769-777.

trade policy, as well as stronger integration of exporters in global and regional supply chains. Digitisation often plays a crucial role, and many governments prioritize innovative sectors such as renewable energy, life sciences and robotics. Several ECAs are even more proactive with a “trade creator” model. Credendo in Belgium provides solutions through — or close to — “market window” financing, by applying terms and conditions consistent with those available from commercial banks. In Canada, the “pull strategy” represents EDC’s most substantial investment in trade creation. SACE offers a “push strategy programme” to open doors for “Made in Italy”. Participation in large-scale foreign infrastructure projects is a crucial part of the strategy of Korea Trade Insurance Corporation (KSure) and the Export-Import Bank of Korea (KEXIM). Together with other institutions such as Korea Development Bank, both institutions are actively involved in project generation and consortium formation.

ECAs thus play a critical role within the global trade finance network and are therefore well-positioned to be pivotal in any transition to net-zero.²⁸ Just how influential can be inferred from the fact that trade finance is estimated to contribute to between 80-90% of all world trade.²⁹ Together with private credit insurers, government-backed ECAs provide around USD 2.5 trillion of payment risk protection to exporters, investors and banks. This is equivalent to 13% of world cross border trade for goods and services.³⁰ ECAs can influence the portfolio of goods produced in the country of origin (particularly in export-led companies) by promoting the export of certain goods, as well as influence the mix of goods reaching the country or countries of destination. Moving away from ECAs’ traditional role of supporters of manufacturing goods and carbon-intensive industries, as well as broader mandates and principles of intervention, agencies have the opportunity to intervene and employ climate-related initiatives to alter their impact. A general cessation of any financial support for (capital) goods central to coal projects could thus seriously undermine the capability of certain developing countries to embark upon such projects in the first place.

3. Net zero finance

Global alignment to net zero requires the world of finance to align as well. Article 2.1(c) of the Paris Agreement specifies that it “aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts by: [...] (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”³¹

Indeed, Article 2.1(c) is considered to be “one of the most important parts of the Paris Agreement: aligning finance to support climate action is the means to meeting both the temperature and adaptation goals.”³² It is financial institutions that steer capital flows through the economic system, thereby exerting an enormous influence upon the activities of their debtors and investees, the growth of industries and new innovation. Unsurprisingly,

²⁸ [Bronswijk, A. et al. \(2020\)](#) Working towards a commitment to net zero. *Berne Union Yearbook*. 2020, 153-157.

²⁹ [WTO. \(2021\)](#) *Trade finance*.

³⁰ [Berne Union. \(2021\)](#) *Credit insurance and its role in supporting global trade*.

³¹ [UNFCCC. \(2015b\)](#) *Paris Agreement*.

³² [Whitley, S. et al. \(2018\)](#) *Making finance consistent with climate goals*.

therefore, financial institutions' largest impact on climate change is through their investment and lending activities. New investments or funding could be tied to certain environmental criteria, and the (implicit) threat of withdrawals of funds nudges economic actors to adopt climate friendly practices.

We currently see a large number of financial institutions, including the world's largest banks, asset managers, asset owners, and insurers moving quickly to adopt net zero targets and to create methodologies and approaches for, inter alia, measuring portfolio emissions, setting net zero targets and interim goals, defining sector-specific pathways to net zero, and engaging with clients and other stakeholders.

Private sector alignment to net zero

Many private finance entities (including banks, asset managers, asset owners, and others), as well as development finance entities, are making rapid progress toward net zero alignment. The last 18 months have seen the emergence of a number of global alliances through which private financial entities commit to, and collaborate on, alignment to net zero.

In April 2021, the Glasgow Financial Alliance for Net Zero (GFANZ) was launched under the auspices of former Bank of England Governor, now UN Special Envoy on Climate Action and Finance, Mark Carney. The Alliance brings together over 160 firms (and counting) responsible for assets totalling USD 70 trillion, all committed to alignment to net zero.³³ This umbrella includes the most rigorous net zero initiatives across the financial sector to accelerate the transition to net zero emissions by 2050, including the Net Zero Asset Owner Alliance, the Net Zero Asset Managers Alliance, and the Net Zero Banking Alliance. All GFANZ member alliances must be accredited by the UN Race to Zero campaign. They must use science-based guidelines to reach net zero emissions, cover all emission scopes, include 2030 interim target setting, and commit to transparent reporting and accounting in line with the UN Race to Zero criteria.

Net Zero Asset Owner Alliance³⁴:

The Net Zero Asset Ownership Alliance, launched in September 2019 at the UN Climate Action Summit and convened by the UNEP's Finance Initiative and the Principles of Responsible Investing, aims to unite Asset Owners in committing to achieve the net-zero GHG emissions by 2050 goal. It recognises the important role that Asset Owners play in achieving net-zero by 2050. After all, Asset Owners can drive the development of industry best practice through investment mandates. The aim of the initiative is to build commitment to decarbonize asset portfolios, to increase transparency, to foster joint engagement and to monitor any progress, based on the most authoritative scientific input to ensure consistency. Insurance companies in particular, with their long-term investment horizons and liabilities, are not only acutely vulnerable to climate-change related risks but also have a key role to play in catalysing the decarbonization of the global economy and investing in

³³ [UNFCCC. \(2021b\)](#) *New Financial Alliance for Net Zero Emissions Launches.*

³⁴ [UNEP FI. \(2021a\)](#) *United Nations-covered Net-Zero Asset Owner Alliance.*

climate-resilience. The Alliance will seek to work with and enhance a range of other existing initiatives including: (a) the Science-Based Targets initiative; (b) Climate Action 100+, (c) The Investor Energy & Climate Action Tool, and (d) The Investor Agenda.

Founding members of the Alliance are the Allianz Group, the Caisse des Dépôts, the Caisse de Dépôts et Placement du Québec (CDPQ), the Folksam Group, Pension Denmark, and SwissRe.

Notable signatory parties are Allianz, AXA, The Church of England, Danica Pension, Generali, Munich Re, Nordea Life and Pension, Swiss Re and Zurich.

Net-Zero Banking Alliance³⁵:

The Net-Zero Banking Alliance, convened by the UNEP's Finance Initiative and co-launched by the Prince of Wales' Sustainable Markets Initiative Financial Services Taskforce (FSTF), recognises the vital role of banks in supporting the global transition of the real economy to net-zero emissions. It currently has over 45 signatory parties from 23 countries with over USD 28 trillion in assets under management that have agreed to commit to aligning their lending and investment portfolios with the net-zero GHG emissions by 2050 goal. Like the other initiatives, the Net-Zero Banking Alliance has agreed to use robust, science-based guidelines.

The Alliance will reinforce, accelerate and support the implementation of decarbonization strategies, providing an internationally coherent framework and guidelines in which to operate, supported by peer-learning.

Notable signatory parties of the Net-Zero Banking Alliance include Bank of America, BBVA, Barclays, BNP Paribas, Citi, Credit Suisse, Deutsche Bank, HSBC, LGT, Lloyds, Morgan Stanley, NatWest, Société Générale, Handelsbanken, Santander and UBS.

Net-Zero Asset Managers Initiative³⁶:

The Net Zero Asset Managers Initiative, launched in December 2020, aims to align the asset management industry behind the net-zero GHG emissions goal and to have them commit to net zero GHG emissions by 2050 or sooner on an industry and portfolio level. The initiative currently lists 87 signatories who manage a total of USD 37 trillion in assets. Notable signatory parties of the Net-Zero Asset Managers Initiative include AXA, BlackRock, Fidelity, Lazard, Nordea, Schroders, Swedbank, UBS, and Vanguard.

³⁵ [UNEP FI. \(2021b\) Net-Zero Banking Alliance.](#)

³⁶ [Net Zero Asset Managers Initiative. \(2021\) Net Zero Asset Managers Initiative.](#)

Development finance approaches to net zero

International financial institutions (IFIs) can play a key role in the transition to net zero through strategic investments. The transition will be highly capital intensive as buildings, energy, industry and transport assets and infrastructure need to be built or repurposed. In fact, one of the key hurdles in the fight against climate change is to enable the investments required for this transition, particularly as a significant proportion of these investments will be large-scale (i.e. no abandonment option) and upfront (i.e. sunk costs), which increases the uncertainties and risks of the required investments. The private sector might be unable or unwilling to shoulder such risks and uncertainties. Non-private sector finance and the public sector will therefore have to play a strategically important role in overcoming these market failures, particularly in the early stages of the transition. Finance will also play a more critical role in the net-zero economy of the future in terms of both the quantity and quality of the capital it provides.³⁷

Many development finance institutions have begun to accelerate the development of their approaches to net zero. For example, the European Bank for Reconstruction and Development (EBRD), a multilateral developmental investment bank, recently proposed to fully align its activities with the goals of the Paris Agreement by 2023.³⁸

In addition, the development finance sector has come to recognize the importance of building a joint alliance to facilitate an alignment of international trade finance with the Paris Agreement and SDGs, while ensuring a level playing field. For this reason, 450 Public Development Banks (PDBs) signed a joint declaration to commit collectively to reorientate their financial flows at the Finance in Common Summit (FiCS) in November 2020.³⁹ Further, they pledged to reach net zero in the second half of this century by supporting the implementation of Nationally Determined Contributions (NDCs) and are jointly working on explicit policies to exit coal financing by November 2021. The FiCS is a huge opportunity to join forces and enable the sharing of best practices between PDBs.⁴⁰ Similarly, the major MDBs⁴¹ and the European Development Finance Institutions (EDFI) members have committed to exclude fossil fuel financing.^{42 43} Further, the MDBs and relevant IFIs have agreed a 'Framework for a Harmonised Approach to Greenhouse Gas Accounting', which identifies established methodologies such as the GHG Protocol, the EU Emissions Trading Scheme or ISO 14064 (Part 1 and 2) for measuring the financial institutions' scope 3 emissions.⁴⁴

³⁷ [Robins, N. et al. \(2020\)](#) *Financing climate action with positive social impact - How banking can support a just transition in the UK*.

³⁸ [EBRD. \(2021\)](#) *The EBRD at 30: The bank steps up its climate ambition*.

³⁹ [FiCS. \(2020\)](#) *Joint Declaration of all Public Development Banks in the World*.

⁴⁰ [Himberg, H., Xu, J. & Gallagher, K.P. \(2020\)](#) *Climate Change and Development Bank Project Cycles*.

⁴¹ Including the World Bank Group (WBG), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Asian Development Bank (ADB), the African Development Bank (AfDB), the Inter-American Development Bank Group (IDBG), the Islamic Development Bank (IsDB) and the more recent Asian Infrastructure Investment Bank (AIIB) and New Development Bank (NDB).

⁴² [ADB. \(2019\)](#) *High Level MDB Statement*.

⁴³ [EDFI. \(2020\)](#) *EDFI Statement on Climate and Energy Finance*.

⁴⁴ [UNFCCC. \(2015a\)](#) *International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting*.

The variety of joint commitments and initiatives outlined above highlights the importance of collective action. The section that follows outlines the core approaches of the World Bank, the European Investment Bank, and the FMO Dutch Development Bank as an example of a bilateral development finance institution (DFI), to provide an overview of existing best practices.

General climate alignment policies of major DFIs

*The World Bank*⁴⁵

The World Bank is already the largest multilateral provider of climate finance. Between 2016 and 2020 alone, it provided USD 83 billion in climate finance to developing countries. Climate financing is used toward mitigation, to reduce GHG emissions, and to help recipient countries to adapt and build resilience against negative climate effects. Further, the World Bank aims to integrate climate and development to maximise the impact of climate finance.

To deliver on their commitments to reduce GHG emissions and reduce poverty, the World Bank has agreed to prioritize the following: First, the World Bank Group will significantly increase the financial resources allocated to climate-related policies; 35% of its financing will support GHG emissions reductions over the next five years, and 50% of climate financing will support adaptation and resilience.

Secondly, enhanced tools to track climate impact — such as new metrics to better capture resilience, alignment and actual impact — shall be developed and implemented.

Thirdly, climate diagnostics shall be improved and expanded; in 2022, a new Country Climate and Development Report (CCDR) will be introduced, which will:

- examine mechanisms by which climate change is affecting a country and key features of the economy that affect the climate; and
- identify opportunities for reducing the impact of climate change on poverty.

Fourthly, the World Bank Group will support transformative investments in key systems that are responsible for a significant proportion of global GHG emissions and that have the greatest climate vulnerabilities (i.e., energy, agriculture, transport, manufacturing).

Fifthly, the World Bank Group has committed to support the transition out of coal by:

- enhancing private sector mobilization through de-risking and the promotion of new climate markets;
- using World Bank resources to leverage private sector resources to develop and scale new climate-smart technologies;
- re-aligning incentives through tax and subsidy policies and carbon pricing; and
- increasing access to grant and concessional funding.

⁴⁵ [World Bank Group. \(2021\)](#) *Climate Change Action Plan 2021-2025*.

Lastly, the World Bank has pledged to align its financing flows with the objectives of the Paris Agreement (World Bank: by July 1, 2023; for IFC and MIGA; 85% of new operations will be aligned by July 1, 2023, and 100 percent of these by July 1, 2025).

The European Investment Bank⁴⁶

The European Investment Bank (EIB) has made climate action one of its priorities. It has set itself the mission to play a leading role in providing the finance needed for the EU to become climate neutral by 2050 and to achieve the commitments to limit global warming to 1.5°C.

The EIB has identified three strategic areas where it will focus its medium to long-term climate action:

- reinforce the impact of climate financing;
- building resilience to climate change; and
- integrating climate change considerations across all EIB standards, methods and processes.

In terms of concrete actions, the EIB Group committed in 2019 to:

- support investment in climate action and environmental sustainability to the tune of €1 trillion over the next decade;
- gradually increase the share of EIB financing dedicated to climate action and environmental sustainability to reach 50% by 20205 and beyond; and
- align all its financing activities with the principles and goals of the Paris Agreement by the end of 2020.

The FMO Dutch Development Bank⁴⁷

The FMO Dutch Development Bank committed to contribute to limiting the global temperature rise to well below 2.0°C or, preferably, 1.5°C, as agreed at the Paris Climate Summit in 2015.

Since 2015, the FMO Dutch Development Bank has a Green Label in place that directs its investments towards reducing GHG emissions, supporting climate adaptation and preserving and growing natural capital. For instance, 80% of its energy portfolio is allocated to renewables and the Agriculture Food and Water department is investing into forestry and climate smart agriculture.

Furthermore, the Bank is leveraging new opportunities for climate finance through blending structures like Climate Investor One, ElectriFI, and the Dutch Fund for Climate and Development (DFCD).

⁴⁶ [EIB. \(2020a\)](#) *Climate Strategy*.

⁴⁷ [FMO. \(2021\)](#) *Taking climate action*.

Emerging methodologies - Making sure ECAs are at the table

As more and more FIs align to net zero, they are developing a wide range of methodologies to measure and manage carbon. The methodologies tend to be based on the 2006 IPCC Guidelines (IPCC, 2006), the GHG Protocol (WRI/WBCSD, 2001), the Project Protocol (WRI/WBCSD, 2006), and methodologies developed under the Clean Development Mechanism (CDM).⁴⁸ Harmonization of methodologies applied by IFIs will be crucial for a uniform analytical approach to net zero. Key questions revolve around what methodologies to use, what sectors to cover, and how to aggregate and report the findings.

This proliferation of methods may have significant implications for how ECAs work in the future. For example, counterparties and clients may require ECAs be able to operationalize their preferred carbon accounting methodology. It is therefore important that more agencies, in addition to ECAs such as EDC, KEXIM and UK Export Finance (UKEF), are part of the rapidly emerging technical discussion around these questions.

Appendix 2 provides an overview of some of the most prominent or developed examples. Just those initiatives related to carbon accounting are listed in the table below.

Table: *Inventory of international initiatives related to carbon accounting of investments*⁴⁹

Initiative	Coordinator	What it is about	Coverage (e.g., sector, asset class, region)	Current status (as of Oct 31, 2019)
Collective Commitment on Climate Action	UNEP FI	Pledges to align portfolios with Paris Agreement, engage with stakeholders on climate neutrality, and disclose progress within 1 year	Global	33 banks with USD 13 trillion of assets signed up
Climate Action in Financial Institutions	Institute for Climate Economics (I4CE)	A collaborative platform for implementing the five voluntary Principles for Mainstreaming Climate Action, sharing best practices, and collaborating on innovative	Global	34 development banks and 10 commercial banks signed up

⁴⁸ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁴⁹ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry.*

		approaches		
United Nations-convened Net-Zero Asset Owner Alliance	UNEP FI, PRI, AIGCC, CDP, Ceres, IGCC, IIGCC	Implement portfolios' GHG emissions to net zero by 2050 through engaging corporates and policy makers on actions	Global	Led by 12 asset owners with over USD 2 trillion assets under management (AUM)
Investor Agenda	UNEP FI, PRI, IGCC, CDP, Ceres, AIGCC	An NGO-led initiative to provide investors a set of climate actions in investment, corporate engagement, investor disclosure, and policy advocacy with the aim of keeping global warming within 1.5°C	Global	More than 250 - nearly 800 - investors are acting in line with the four focus areas
Partnership for Carbon Accounting Financials (PCAF)	Navigant	An open industry-led collaboration to measure and disclose portfolio GHG emissions	Global with regional teams; nine asset classes with regional variation	56 financial institutions with USD 3.5 trillion assets signed up
Task Force on Climate-Related Financial Disclosure (TCFD)	FSB	A disclosure framework for climate-related financial risk through four pillars - governance, strategy, risk management, metrics and targets	Global	More than 2,300 organizations supporting TCFD
Paris Agreement Capital Transition Assessment (PACTA)	2 Degrees Investing Initiative	Framework to measure alignment of financial markets with climate goals and scenarios	Global with 5 regional splits; 5 asset classes; 8 sectors	Over 700 financial institutions globally

		with a 5-year time horizon.		
Poseidon Principles	Poseidon Principles Association	An assessment and disclosure framework for climate alignment for ship finance portfolios.	Global; shipping sector	12 banks with approximately USD 100 billion in shipping finance signed up
IIGCC Paris Aligned Investment Initiative	IIGCC	An initiative to develop concepts, assess methodologies and test portfolios for the alignment with the Paris Agreement.	Global; 4 asset classes	Over 40 investors with more than €11 trillion AUM participate
UNEP FI TCFD pilots	UNEP FI	Implementing TCFD, focus on scenario analysis, developing pilot analytical tool and indicators for both transition and physical risks	Global	16 global banks, 20 asset managers and owners
Science Based Target for Financial Institutions	SBTi	Under the SBTi framework, launched project to help financial institutions align their lending and investment portfolios with the ambition of the Paris Agreement	Global; 4 asset classes; up to 9 sectors	More than 40 financial institutions publicly committed to set targets; framework to be published in 2020
Climate Action 100+	PRI, IIGCC, Ceres, AIGCC	An investor initiative showcasing growth and influence of the world's largest emitters and mobilizing corporate action on climate	Global; 161 listed companies	More than 370 investors with more than USD 35 trillion in AUM

		change.		
CDP Financial Service Sector Disclosures	CDP	Extend questionnaires to focus on financing and investing initiatives. Investors receive CDP access to climate change data, deforestation, and water security to engage, make decisions, and reduce risks	Global	Over 525 investors with assets of USD 96tn; over 7,000 companies with 50% of global market capitalisation

4. Current approaches in export credit

Current approaches to climate alignment in officially supported export credits circle around three areas: (i) multilateral regulations, (ii) international frameworks, as well as (iii) national commitments and policies.

A lack of multilateral regulations

The OECD Arrangement is the most relevant regulatory framework for ECAs at the international level.⁵⁰ It sets minimum standards for export credits supported by public ECAs or financed from public funds.⁵¹ Although the OECD Arrangement comprises several climate-related sector-specific rules, such as the Renewable Energy, Climate Change Mitigation and Adaptation and Water Projects Sector Understanding, it only covers a few climate-action related constraints and no incentives such as lower minimum pricing or an alignment to net zero.⁵² The same applies for agencies' portfolio measurement and tracking approaches related to carbon-intensive activities and associated GHG emissions. However, the Participants to the OECD Arrangement did agree in 2020 to examine at least the areas of "Net zero energy buildings" and conditions for low emission and high energy efficiency fossil fuel power plants in more detail.

⁵⁰ [OECD. \(2021\)](#) *Arrangement on Officially Supported Export Credits*.

⁵¹ See, e.g., [Søndergaard-Jensen, M. \(2019\)](#) Will OECD Governments Avoid the Path Towards a New Credit War? *Global Policy*. 10(3), 427-431; and [Agarwal, N. & Wang, Z. \(2017\)](#) Does the US EXIM Bank really promote US exports. *World Economy*. 41(5), 1378-1414.

⁵² Regarding restrictions, see., e.g., [Liao, J.C. \(2021\)](#) The Club-based Climate Regime and OECD Negotiations on Restricting Coal-fired Power Export Finance. *Global Policy*. 12(1), 40-50.

Sustainability and governance issues are also focal points of other arrangements at the OECD level. Governments have agreed on additional uniform procedures, which go beyond laying down financing conditions. This includes the OECD Council Recommendation on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (Common Approaches).⁵³ Implemented in 2003, the Common Approaches inform the way that ECAs should address and monitor environmental, social and human rights due diligence with regard to supported projects. For this purpose, there are reporting rules for three project categories. Category A designates projects with a high potential to affect the environment and the society negatively. These projects include, for example, crude oil refineries or thermal power stations. Category B projects cover less frequent or side-specific adverse environmental and social impacts, while Category C projects are considered as almost neutral.

Furthermore, some ECAs have adopted or follow other regulatory frameworks such as the Equator Principles (EPs). The EPs are a global framework to promote sustainable environmental, social and human rights decision-making in financing projects.⁵⁴ Since their introduction in 2003, 118 financial institutions in 37 countries have adopted the EPs including EDC, Export Finance Australia (EFA), the Export-Import Bank of the United States (US EXIM) and UKEF. However, the EPs are a risk management framework and are primarily intended to provide a minimum standard for due diligence and monitoring to support responsible risk decision-making.⁵⁵ The updated Equator Principles, EP4, include provisions for climate change assessment but no net zero commitment.

The same applies for other regulations such as the IFC Performance Standards (IFC PS) and the Environmental, Health and Safety Guidelines of the World Bank Group. In many countries, ECA-supported projects must be carried out in conformity with these international benchmarks for environmental and social risk management. The IFC PS include eight categories (Figure 4) and are used alongside with the World Bank Guidelines.⁵⁶ They do, however, not comprise targets or regulations for measurement of GHG portfolio emissions.

⁵³ [OECD. \(2016\)](#) *Recommendations of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (The "Common Approaches")*.

⁵⁴ See, e.g., [Contreras, G., Bos, J.W.B. & Kleimeier, S. \(2019\)](#) Self-regulation in sustainable finance: The adoption of the Equator Principles. *World Development*. 122, 306-324.

⁵⁵ [Conley, J.M. & Williams, C.A. \(2011\)](#) Global Banks as Global Sustainability Regulators?: The Equator Principles. *Law & Policy*. 33(4), 542-575.

⁵⁶ [IFC. \(2012\)](#) *Performance Standards on Environmental and Social Sustainability*.



Figure 4: 'IFC Performance Standards' (IFC, 2021).

Participants of the OECD Arrangement, China and other non-OECD countries created the International Working Group on Export Credits (IWG) in 2012. The intention was to build a platform to discuss and negotiate a new set of universal rules for officially supported export credits.⁵⁷ Due to the fact that different views exist on scope, general definitions, as well as includable transactions and financial institutions, the European Commission, the United States and other OECD countries suspended further negotiations in 2020.

To reach the objectives of the European Union (EU) Green Deal and to create a common understanding on sustainability, the European Commission (EC) recently introduced the EU Taxonomy. It will be mandatory for the financial sector by the end of 2021. The classification scheme provides a scale to assess an economic activity's impact on environmental sustainability to improve the market regulation for sustainable financing.⁵⁸ The approach is based on four conditions, which are considered to be environmentally friendly, and supplemented by six environmental objectives. Because the objectives include climate change mitigation and adaptation, the framework could be used in the context of measuring whether an ECA's activity contributes to a net zero economy. However, the scope of the EU Taxonomy only applies for financial operations within the EU, while the core business of ECAs addresses global transactions. Furthermore, European ECAs are currently exempt from complying with the EU Taxonomy.

The Berne Union (BU) is another platform for exchange of information and guidelines for ECAs. Founded in 1934, it is the leading platform for the export credit and investment insurance industry. Although the BU does not create a regulatory framework for its public and private members, its Guiding Principles reflect the collective ways members conduct business. The principles include a sensitivity about environmental issues and a recommendation to take such issues into account in the conduct of ECA business.⁵⁹ However, there are no binding obligations. An approach to net zero targets is also not part of the BU statutes or Guiding Principles.

⁵⁷ Klasen, A. (2017) Beyond Gridlock in Trade. In: Hale, T. & Held, D. (eds.) *Beyond Gridlock*. Cambridge, Polity, pp. 65-82.

⁵⁸ [Schütze, F. et al. \(2020\)](#) EU Taxonomy increasing Transparency of Sustainable Investments. *DIW Weekly Report*. 10(51), 485-492.

⁵⁹ [Berne Union. \(2006\)](#) *Berne Union Guiding Principles*.

A rise of international frameworks

Example: TCFD recommendations

The recommendations of the G20 Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD) are emerging as a leading framework for measuring, managing and reporting climate-related exposures. An implementation of the TCFD recommendations does not mean a commitment to an alignment to net zero. However, organisations implementing the recommendations can make significant improvements towards achieving net zero over time. Regulatory responses such as the TCFD aim to increase transparency and incentivize a move away from high-carbon assets.⁶⁰ The recommendations are structured around governance, strategy, risk management, as well as metrics and targets (Figure 5).⁶¹



Figure 5: 'Core TCFD Elements' ([TCFD, 2017:p.v](#)).

The first layer includes the disclosure of an organization's governance and management's role in assessing and controlling climate-related risks and opportunities. The second layer recommends a description of short, middle and long-term risks and opportunities, as well as their impact on corporate strategy and financial planning. Furthermore, the risk management system to identify, assess, and manage climate-related risks and opportunities and the integration in the corporate risk management approach should be described. The fourth area includes the disclosure of performance indicators in order to control and monitor risks and opportunities in line with corporate strategy.

Looking at ECAs, EDC committed to support the TCFD recommendations in 2018 as a key component of its climate change policy. In the course of the publication of its Annual Report 2020, EDC issued its first stand-alone climate-related disclosure, including a detailed climate-related portfolio breakdown. The Canadian ECA implemented initial steps regarding governance, strategy, risk management, as well as metrics and targets.⁶² EDC also developed an exposure-based approach to target setting regarding the measurement and reduction of the portfolio's carbon intensity. This initial approach focused on a target to reduce exposure to EDC's most carbon intensive sectors by 15% over five years in 2019, reaching the 2023 target ahead of schedule (Figure 6).

⁶⁰ [Semieniuk, G. et al. \(2020\)](#) Low-carbon transition risks for finance. *Wires Climate Change*. 12(1), 1-24.

⁶¹ [TCFD. \(2017\)](#) *Recommendations of the Task Force on Climate-related Financial Disclosures*.

⁶² [EDC. \(2021b\)](#) *EDC 2020 Annual Report Climate-Related Disclosure*.

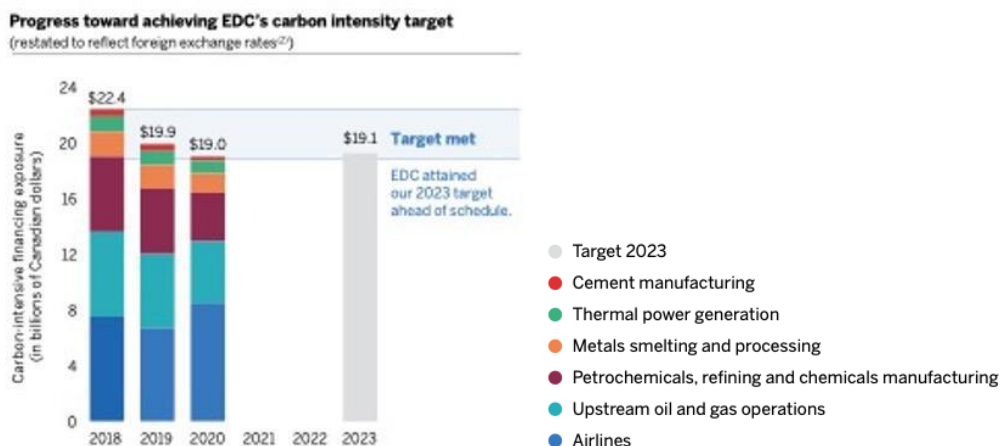


Figure 6: 'Progress toward achieving EDC's carbon intensity target' ([EDC, 2021c:p.63](#)).

Examples from other countries suggest that TCFD could be the emerging best practice for export credit agencies. The United Kingdom intends to become the first country to make TCFD-aligned disclosures mandatory across the economy. The British ECA, UKEF, made its first climate-related disclosure in June 2021. EKN in Sweden has decided to report in line with the TCFD recommendations as of 2022. OeKB Group in Austria is working on the implementation of the TCFD recommendations by continuously reviewing a gap analysis. Nippon Export and Investment Insurance (NEXI) in Japan joined the TCFD consortium in 2019 to support private-sector climate-related financial disclosures. In May 2021, KEXIM in the Republic of Korea became a supporter.

Example: The E3F Initiative

Several European countries launched a new coalition in 2021 to align export finance with climate objectives. As mentioned above, Denmark, France, Germany, the Netherlands, Spain, Sweden and the United Kingdom are demonstrating their willingness to work intensively on climate action. The E3F initiative includes restrictions on coal support, scaling down support not consistent with the Paris Agreement, a significant increase in financing and insurance for climate-friendly projects, as well as a review of all climate-related activities. The respective governments also agreed to work on improved transparency on climate-related information, moving towards a common approach for measurement and tracking.⁶³ The launch of the E3F coalition evidences that climate action-related matters are now becoming priority themes for many European governments and their official export finance instruments. However, a commitment to an alignment to net zero is still missing from this coalition and approaches also significantly vary from country to country.

National commitments and policies

⁶³ [Direction générale du Trésor. \(2021\)](#) Seven countries launch international coalition "Export Finance for Future" (E3F) to align export finance with climate objectives.

The increased interest of governments to create comprehensive climate strategies requires a renewed and strengthened role for ECAs. Most agencies align their strategies with their respective government's policy goals, to provide development or impact returns. As such, ECAs' strategies are increasingly focused on promoting sectors of strategic importance despite the fact that it can be challenging to incentivize specific sectors under the World Trade Organization's Agreement on Subsidies and Countervailing Measures (SCM Agreement), the OECD Arrangement and other legal frameworks such as EU State Aid.⁶⁴ For example, EFA supports the Australian government's agenda by actively seeking to support infrastructure financing activities. Participation in large-scale infrastructure projects in foreign countries is a crucial part of Korea's industrial strategy. In Korea, industrialisation for export today focuses on green technologies and renewable energies, sustainable transport and green building construction. However, the approach regarding national commitments and policies varies. On the climate dimension, the most advanced ECAs are likely EDC, UKEF, Denmark's Export Credit Agency (EKF), Atradius Dutch State Business (Atradius DSB) in the Netherlands and Exportkreditnämnden (EKN) in Sweden. Significant activities towards climate action also appear in other countries such as France, Germany, Switzerland and the United States.

EDC: Adopting a 2050 net zero target

In July 2021, EDC became the first ECA to announce a 2050 net zero target and some initial steps toward it. EDC's decision followed the Canadian government's net zero legislation, and the issuance of a Statement of Priorities and Accountabilities directing EDC to take cognizance of the climate imperative.⁶⁵ The announcement came with several immediate commitments.

First, EDC will reduce support to six most carbon intensive sectors in their portfolio by 40% below 2018 levels. These sectors include airlines, cement manufacturing, metals smelting and processing, petrochemicals, refining and chemicals manufacturing, thermal power generation, as well as upstream oil and gas, collectively representing more than one quarter of the agency's 2020 financing business. This increases the prior target that aimed for a 15% reduction of EDC's 2018 exposure to carbon intensive sectors (amounting to CAD 22.4 billion) by 2023, which EDC achieved already in 2020. As discussed above, EDC's financial support to oil and gas companies was substantial in recent decades. The July 2021 commitment will thus lead to a sharp reduction in support for foreign fossil fuel sectors, targeting an exposure to carbon intensive industries of up to CAD 13.5 billion by December 31, 2023.

Second, and potentially most significantly, EDC has committed to set science-based sectoral emission intensity targets in some of its most carbon-intensive sectors for 2030. EDC has not yet released the methodologies that will be used to determine these pathways, but has stated it will publish them by July 1, 2022. The details of such pathways, which are also being debated by a range of private sector net zero initiatives, will be crucial for determining the credibility of EDC's net zero plan in the medium term. The same applies for the intention to expanding targets to the full portfolio of the Canadian export credit agency. EDC has also committed to reach net zero operational emissions (scopes 1 and 2) by 2030.

⁶⁴ See, e.g., Bacon, K. (2017) *European Union Law of State Aid*. Oxford, Oxford University Press.

⁶⁵ [Government of Canada. \(2021\) Statement of Priorities and Accountabilities for Export Development Canada.](#)

In proceeding with its plan, EDC has drawn on some key international standards and processes. For example, it will report progress on its net zero alignment via the TCFD framework, has joined PCAF to align to their accounting methodology and will use the PACTA for Banks methodology to pilot target-setting.

EDC's announcement of a long-term net zero target represents a notable milestone for the sector. Given that the Canadian trade sector is relatively emissions intensive, EDC's leadership makes it more difficult for other ECAs to say they cannot set a similar level of ambition. At the same time, the sectoral 2030 targets expected to be announced within one year will need to be rooted in robust, science-based pathways to net zero to make the commitment credible. With EDC's ambitions to focus much more on long-term results, it is assumed that the new 10-year corporate strategy will further elaborate how EDC will implement its net zero commitment.

UKEF: Implementing a new climate strategy in 2021

UKEF has also become one of the more advanced ECAs regarding climate action. The UK government was at the forefront of negotiating the SDGs, and UKEF plays an important role in supporting progress towards achieving the goals.

Focus areas include the setting up of a new director-led Strategy, Policy and Climate Change Directorate and climate-change representation on the UKEF board and appointment of a dedicated Head of Climate Change, the development of a climate strategy, as well as internal policies to deliver that strategy, additional procedures for the identification, assessment and management of climate change impacts, and committing to considering how UKEF will take account of climate in its decision-making across all its products.⁶⁶ The UK government also recently announced that it will no longer provide support to the fossil fuels sector internationally, including export credits. This policy came into effect in March 2021.

UKEF's new climate strategy will be published in September 2021. The agency already has a clean growth direct lending facility to support UK businesses with business models operating in sustainability sectors. Clean growth is defined by the Green Bond Principles. UKEF has significantly increased its support for renewable energy and clean growth and continues to expand support in these areas. It is unclear, at this stage, if UKEF will implement a net zero approach.

EKF: Giving evidence for a climate-friendly portfolio

Denmark has a long tradition of aiming high regarding national energy targets. Climate policies aim to cover at least half of the country's total energy consumption through renewable energy by 2030. EKF launched its climate-finance related activities at a very early stage.⁶⁷ At a multilateral level, EKF fathered initiatives on mobilising private sector climate finance as early as 2013. The Danish ECA has no explicit climate strategy but does have a progressive environment, social and governance (ESG) policy to ensure consistent and

⁶⁶ See, e.g., [UKEF. \(2021\) Annual Report and Accounts 2021](#).

⁶⁷ [Vassard, J., Richter, K. & Lindhardt, O. \(2015\) Money Matters on Our Way to a Greener Future: Biogas Plants' Financing with Export Credits. *Global Policy*. 6\(3\), 315-317.](#)

ambitious ESG principles. ESG factors are based on international standards.⁶⁸ Although there is no full alignment to net zero, the Danish ECA is one of the most climate-friendly agencies globally; wind projects accounted for 70% of its portfolio at year-end 2020.⁶⁹ The Danish government also passed a resolution in 2020 prohibiting Danish export credits for coal-fired power plants, thermal-coal extraction and thermal-coal logistics.

Looking at reporting and measurement, EKF considers implementing the TCFD recommendations or the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry. Currently, the agency reports on the “emissions saved” and “emission contributed” in transactions. The agency measures annual GHG emissions in accordance with IFC PS, reporting annually on ESG to the OECD, the Equator Principles Association and UN Global Compact. EKF implemented a new tool in 2019 to improve the methodology for evaluating positive environmental impacts from renewable energy projects, establishing a methodological shift. CO2 displacement is quantified as the marginally reduced emissions in a country's power system achieved from the project over the full span of the project's useful life. The CO2 displacement depends on the supplied energy volume by the given energy technology and the power generation mix and demand of the country or region. Between 2017 and 2020, transactions in renewable energy projects supported by EKF resulted in a reduction of 509 million tonnes CO2e.

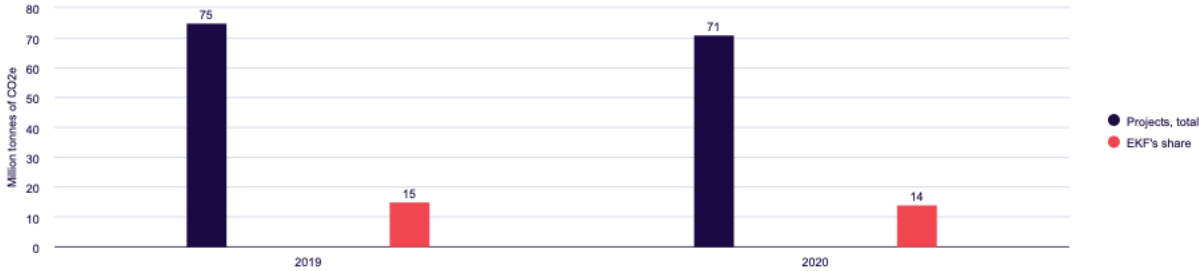


Figure 7: ‘Total expected CO2e displacement achieved by EKF-financed projects’ (EKF, 2021:p.19).

New climate-related finance offerings are a significant part of EKF's activities. The agency is a core player in Denmark's new Green Future Fund. The fund aims to intensify efforts to promote exports of Danish climate technologies and global decarbonization. EKF was granted up to USD 2.3 billion and financed seven new clean energy export transactions in 2020. Support for new scalable climate technologies, including storage and conversion of clean energy into hydrogen, will be an area of focus in 2021

Atradius DSB: Measurement and reporting as a starting point

Aiming for a rapid transition to a low-carbon economy, the Netherlands placed ambitious GHG reduction targets at the centre of its energy and climate policy. The Dutch government and Atradius DSB are also pursuing an increasingly ambitious green agenda for export support. A focus is to be more transparent regarding the Dutch ECA portfolio and promote more green transactions.⁷⁰ The strategic approach regarding climate action also aims at

⁶⁸ [EKF. \(2020\) EKF CSR Report 2019.](#)

⁶⁹ [EKF. \(2021\) EKF Annual Report 2020.](#)

⁷⁰ [Bronswijk, A. et al. \(2020\) Working towards a commitment to net zero. Berne Union Yearbook. 2020, 153-157.](#)

phasing out fossil fuel support and creating incentives for climate-resilient exports. Both the government and the export credit agency pursue the objective to work on a multilateral climate finance agenda. For instance, the Netherlands was one of the main drivers of the E3F initiative. As a small economy dependent on exports, the government aims to build and strengthen international coalitions for climate-related activities in order to avoid too many disadvantages for Dutch exporters.

In 2019, the Dutch ECA introduced its first-ever measurement and reporting methodology on climate-related financing. The purpose of the labelling is to map out how “green” the Dutch ECA’s insurance portfolio is. Definitions are in line with the IFC approach and the framework for sustainability bonds of the Dutch Development Bank FMO. Transactions contributing to combating climate change and its impact are labelled dark green, for instance wind energy projects integrating environmental criteria. If projects take steps to combat climate change and its impact bridging towards 2050, the transaction is labelled medium green. Light green projects lead to more efficient use of natural resources.⁷¹ Therefore, the driver of the green reporting approach is to focus on climate mitigation, climate adaptation and other footprint reduction (Figure 8). In 2021, Atradius DSB will also start reporting on support for the fossil fuel sectors and monitor developments surrounding the EU taxonomy for sustainable financing. However, the Dutch government has not yet defined a net zero approach for its export credit agency.

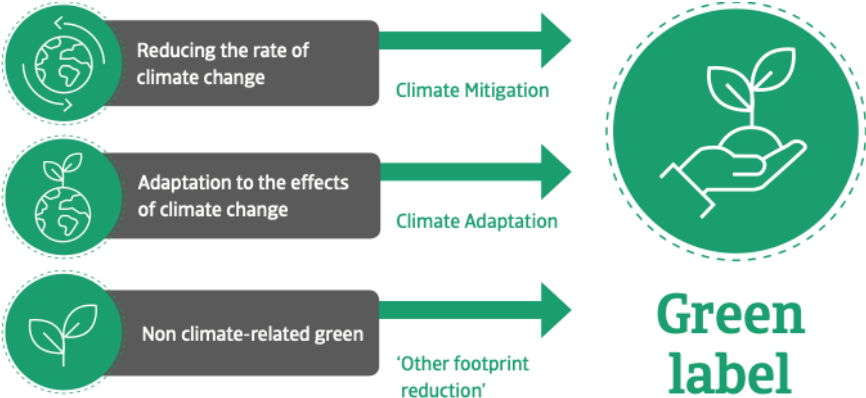


Figure 8: ‘Atradius DSB green label approach’ ([Atradius Dutch State Business, 2021:p.3](#)).

In recent years, Atradius DSB has introduced several schemes to make export credit insurance more appealing for transactions falling into its green label. This contains enhanced cover conditions for green project financing, relaxed underwriting criteria for green transactions up to approximately USD 6 million and an extended definition of export on a case-by-case basis. In addition, the Dutch ECA intends to launch a new green guarantee for capital expenditure investments and working capital offering aiming at enhanced support for innovative exporters.

EKN: Ceasing from issuing new guarantees for some sectors

Sweden is a leader in decarbonization and was the first country to introduce carbon pricing, adopting an energy and climate framework with ambitious interim and long-term goals. It is part of EKN’s strategic approach to act as a catalyst for investment required to reach the

⁷¹ [Atradius Dutch State Business. \(2020\) The Green Label.](#)

goals of the Paris Agreement, as well as a driver for change in international regulatory frameworks and fora within the EU, the OECD and the BU. EKN adopted a new sustainability policy in 2019.⁷² In addition to export promotion, contributing to the achievement of the SDGs and the objectives of the Paris Agreement are set down as important tasks. In 2020, EKN decided to cease issuing new guarantees for exports to new fossil fuel extraction projects. The agency also decided to cease issuing new guarantees for exports to the extraction and transportation of coal.⁷³

In comparison to other agencies, the fossil fuel transaction share with regard to the extraction of coal and oil is low in the Swedish ECA's guarantee portfolio. The same applies to SEK's loan portfolio. Total guarantees granted in connection with the extraction of fossil fuels amounted to approximately 0.5% to 0.7% of EKN's issued guarantees between 2015 and 2019. The agency has not implemented a full net zero approach or a full reporting system regarding GHG emissions and now wants to further develop the measurement and analysis of climate-related risks at transaction, sector and portfolio levels. As mentioned above, EKN will report the portfolio according to the emerging international best practice. The same applies for SEK, the Swedish Export Credit Corporation. As of 2022 at the latest, both institutions will report in line with the TCFD recommendations. The Swedish ECA intends to publish statistics for transactions that contribute to the transition and reduced GHG emissions from 2022.

Furthermore, EKN decided to test opportunities for issuing guarantees to climate-related investments in Sweden related to exports. The agency also wants to examine if transactions contributing to climate transition will receive better terms and conditions. Proposals for more synergies between export financing and insurance as well as development finance related to climate-action will also be developed.

Other emerging practices

Other ECAs such as CESCE in Spain are also working on new green finance strategies. Although interviewees mentioned that a net zero commitment might not be included in CESCE's new approach, measurement and reporting could become part of the Spanish ECA's operations. Since 2020, CESCE also offers beneficial financing conditions for climate change and water projects within the framework of the financing conditions defined by the OECD.

In addition to Bpifrance's analysis regarding the carbon-intensity of the portfolio of the French ECA, the government recommended to phase-out Bpifrance support for fossil fuel projects with an iterative approach. This includes, for example, no new support for coal power plants and non-conventional hydrocarbon exploration, as well as conventional oil exploration and exploitation. The French government also intends to cease new support for conventional gas exploration and exploitation by 2035. Furthermore, Bpifrance launched a Climate Plan in 2020.⁷⁴ Bpifrance is not only aiming to decarbonize its own balance sheet, but also to help French companies to transform and successfully achieve their own transition. Pillars include a EUR 3.6 billion package to finance business transformation, doubling the funding dedicated

⁷² [EKN. \(2020\)](#) Sustainability policy.

⁷³ [EKN. \(2021\)](#) Annual Report 2020.

⁷⁴ Bpifrance. (2021) Green Bond Framework. Paris, Bpifrance.

to renewable energy to EUR 12.7 billion, and an innovation financing package for greentech companies. Bpifrance will also finance and/or refinance its existing and future green loan offerings through the issuance of green bonds.

In Germany, the ECA was demand-driven for decades without specific industrial or climate policy objectives. However, climate action has become an important area. This is due to rising insurance volumes for climate-friendly technology as well as policy shifts. A new renewable energy initiative tries to improve German exporters' position with enhanced ECA cover conditions.⁷⁵ Furthermore, the government is currently working on an ECA climate strategy. This includes narrowing down cover for climate-adverse transactions. For example, deliveries for new coal-fired power plants are no longer eligible for cover. Restrictions also apply for oil field development and exploitation. A full reporting framework or net zero commitment is not part of the strategy.

U.S. President Joe Biden announced in January 2021 that the government will identify steps through which US EXIM and other public institutions can promote ending the international financing of carbon-intensive fossil fuel-based energy while advancing sustainable development and a green recovery.⁷⁶

Asian ECAs in OECD countries such as the Korea Trade Insurance Corporation (K-SURE) and NEXI have been far more reluctant regarding climate action and carbon rules — they are yet to adopt a net zero commitment or transparent measurement. This resistance is particularly driven by intensified export competition between China, Japan and South Korea. Coal-power industries have been important components of economic growth and industrialization experiences.⁷⁷ However, due to the paradigm shift to green energy and towards eco-friendly societies, enhancing responsibility is more important for K-SURE today. Support for new industry exports reached an all-time high in 2020. In addition to an expansion of insurance climate-related transactions, K-SURE also intends to strengthen its foundation for environmental management practices.⁷⁸

5. Barriers, risks, and opportunities

As ECAs consider how to align their operations to net zero, they face a number of barriers and risks, but also opportunities. A proactive, strategic approach is therefore required.

Barriers

Mandates. As publicly mandated entities, ECAs approaching the net zero transition face the question: who is asking us to do this? While all governments committed in Article 2.1(c) of the Paris Agreement to align financial flows to the goals of the Agreement, this high-level

⁷⁵ [Euler Hermes. \(2021\)](#) *Annual Report 2020*.

⁷⁶ [White House. \(2021\)](#) *Executive Order on Tackling the Climate Crisis at Home and Abroad*.

⁷⁷ [Liao, J.C. \(2021\)](#) The Club-based Climate Regime and OECD Negotiations on Restricting Coal-fired Power Export Finance. *Global Policy*. 12(1), 40-50.

⁷⁸ [K-SURE. \(2021\)](#) *Annual Report 2020*.

commitment requires translation to the immediate objectives of ECAs. Compounding the problem, ECAs are typically under the authority of ministries of economic affairs, trade or finance, which do not usually have the leading mandate within a government for climate change. However, this is beginning to change as climate considerations acquire greater urgency. For instance, the E3F initiative demonstrates the willingness of a group of countries to increase support for climate-friendly projects and assess how to phase out official trade and export finance support for fossil fuels.⁷⁹ Denmark, France, Germany, the Netherlands, Spain, Sweden and the United Kingdom have also committed to improve transparency on climate-related information. So has the Group of Seven nations – the United States, Britain, Canada, France, Germany, Italy and Japan – plus the European Union – which announced on May 21, 2021, that they had agreed to end their international financial support for non-climate neutral coal projects by the end of this year. Further, it has been agreed that any such support for all other fossil fuels is going to be phased out over the next decade, in order to meet globally agreed climate targets. The announcement followed the release of the International Energy Agency’s (IEA) ‘Net Zero by 2050’ report on May 17, 2021, which re-emphasised the necessity for such drastic steps if global heating is to be kept within the 1.5°C limit.

Methodologies. As described above, there is a wide range of methods for net zero alignment being developed across the financial sector. However, most ECAs are not yet part of these discussions, and have not developed standardized approaches for measuring their portfolio emissions or defining net zero alignment for the products they offer.

Capacity. Finally, many ECAs, especially smaller ones, face significant staffing and expertise challenges. Management and staff of agencies are generally seen as competent and knowledgeable regarding underwriting decisions and risk management. The same applies for transaction-related environmental, social and human rights assessments. However, there is limited knowledge regarding climate-related portfolio measurement and reporting. Most ECAs also work with a limited number of employees. For example, agencies such as CESCE in Spain and SERV in Switzerland had approximately 60 employees in each case in 2019 for significant new export credit insurance volumes of more than USD 2 billion. Environmental teams for the assessment of transactions are often small, and specific units or functions for climate action strategies and reporting are usually not implemented.

Risks

Climate-related trade friction. The global economy has for some time been in a period of significant trade tension, driven both by structural factors and geopolitical conflicts. As countries deepen their net zero transitions, many will follow the EU and move to adopt climate-related border measures to ensure that domestic producers are not adversely harmed by high-carbon imports. This shift creates various risks for ECAs. For those in jurisdictions like the EU that are adopting carbon border measures, failing to align to net zero will lead trade partners to quickly bring charges of hypocrisy. After all, how can a jurisdiction restrict imports of carbon-intensive goods while financing their exports? And for those ECAs

⁷⁹ [Direction générale du Trésor. \(2021\)](#) Seven countries launch international coalition “Export Finance for Future” (E3F) to align export finance with climate objectives.

looking to export into jurisdictions adopting carbon border measures, high-carbon clients will become increasingly unviable. In both cases, a net zero alignment strategy reduces risks.

Conflicting principles of intervention. The standard principle of intervention for ECAs is that the agency is not competing with commercial institutions in the provision of export financing or trade credit insurance, thereby filling a need that would otherwise be not met. This concept of additionality also drives the development of the OECD Arrangement. It is based on the idea that exporters should compete globally based on product quality, price and financing conditions but not with government support. In addition, ECAs play a crucial role in mobilizing financing from private-sector sources, creating catalytic effects in export development. There is a risk that ECAs must achieve net zero by aggressively looking for deals, for example, in the renewable energy sector while being under the obligation not to crowd out the private sector, and also not to compete with other ECAs.

Rule-taking not rule-making. As the rules and approaches toward net zero are being defined across the finance sector, ECAs risk being left out of the design phase of critical standards. Due to the reluctance of government agencies to take the lead on multilateral regulations and international frameworks for net zero measuring, reporting and enhanced climate action, there is no global standard for portfolio measurement. Although there have been numerous individual actions and some initiatives for rule-making, there is no international best practice at the EU, OECD or BU level leading to confusion. Meanwhile, numerous other initiatives and frameworks such as the TCFD recommendations and the PCAF Global GHG Accounting and Reporting Standard for the Financial Industry sprout. ECAs seem to have become rule-takers and not rule-makers in the field of export-related climate finance and reporting. This includes a discussion of the opportunities and risks regarding different methodologies in order to avoid a joint understanding of what are most relevant frameworks for agencies.

Stranded assets and stranded clients. As the net zero transition unfolds, incumbent industries face the risk of being left with unviable assets. Stranded assets⁸⁰ can be defined as assets that have been subject to unanticipated or premature write-downs (or conversion to liabilities) due to unanticipated shifts in the economic and/or regulatory landscape. For instance, the value of petrochemical assets would be significantly impaired if the IEA's net zero scenario came to be realized. As the relevant current and emerging environment-related risks are often poorly understood and are regularly mispriced, the current economic and financial system is overexposed to such environmentally unsustainable assets. Risk factors include new government regulations (e.g., carbon pricing, air pollution regulation), a changing resource landscape (e.g., shale gas), falling clean technology costs (e.g., solar PV, onshore wind energy) and behavioural changes (e.g., lower demand for petrochemical products, combustion-engines, fossil fuel divestment campaigns). All of these could threaten the economic viability of many of these assets and, indeed, even result in significant costs and liabilities.

Un-level playing field. Because the transition to net zero is happening at different rates, front-runners sometimes feel competitive pressures from laggards. The inverse of the risk of stranded assets is the risk of competitive disadvantage. There is a risk that an ECA setting a stringent net zero standard will lose business to ECAs with weaker standards.

⁸⁰ [Caldecott, B., Tilbury, J. & Carey, C. \(2014\) Stranded Assets and Scenarios.](#)

Opportunities

A renewed mandate for innovation / industrial policy. The scale and scope of the green transformation creates a huge need for innovation and the development of new industries. Businesses investing in green innovation are able to perform better due to market differentiation and cost reduction with a potential positive effect on firms' financial, social and environmental outcomes.⁸¹ As SDGs and climate action become much more important for several ECAs, there is an opportunity to include innovation and industrial policy objectives in their mandate. Climate policy goals can be associated with employment in the national economy or new industrial policy objectives, securing and regaining technological competence, competitiveness and industrial leadership.

Green growth. The green transformation signifies and creates new economic growth opportunities that allow to tackle the twin challenges of current times, viz., expanding economic opportunities for all (e.g., jobs) while alleviating major environmental pressures (e.g., climate change). 'Green growth' is envisioned to address these challenges and to promote economic growth through the following channels:

- *Productivity gains:* Incentives to promote a more efficient use of natural resources and assets, and the reduction in waste and energy consumption;
- *Fostering innovation:* Incentives and stable policy frameworks to promote innovative solutions to environmental and economic problems;
- *The creation of new markets:* Stimulating the demand for green goods, services and technologies; and
- *Reducing (regulatory) uncertainty and the risks* of negative shocks to economic growth from potentially irreversible environmental impacts.

The vision entails the creation of economic growth opportunities for all while ensuring that the natural assets are not impaired in their ability to deliver their (life-supporting) services.

Organizational efforts on green growth

- IEA: In 2020 the IEA published a strategy towards a "Clean Energy New Deal".
- IMF: In 2020 Kristalina Georgieva, the head of the IMF, urged governments to provide emergency loans to the green sectors and to tax / stop subsidizing the fossil sectors.
- World Bank: In 2012, the World Bank published its report "Inclusive Green Growth: The Pathway to Sustainable Development".
- UNESCAP: In 2012, the United Nations Economic and Social Commission for Asia and the Pacific released the "Low Carbon Green Growth Roadmap for Asia and the Pacific".
- International Chamber of Commerce (ICC): In 2012, the ICC published the "Green

⁸¹ [Kraus, S., Rehman, S.U. & García, G.J.S. \(2020\)](#) Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological Forecasting & Social Change*. See also Aguilera-Caracuel, J. & Ortiz-de-Mandojana, N. (2013) Green Innovation and Financial Performance: An Institutional Approach. *Organization & Environment*. 26(4), 365-385.

Economy Roadmap”, a guide for businesses and policymakers.

- OECD: In 2011, the OECD published its strategy towards green growth.
- UNEP: In 2008, the United Nations Environment Programme (UNEP) led the Green Economy Initiative.

National green growth efforts

- USA: In 2020, U.S. President Joe Biden announces a green job and green infrastructure plan.
- EU: In 2019, the European Green Deal was launched as “Europe’s new growth strategy”.
- China: Since at least 2006 (with its 11th 5-Year Plan), China has been committed to achieving a green economy.
- UK: In 2020, green growth was strongly advocated by the Committee on Climate Change.

Portfolio diversification:

The optimization of a portfolio usually involves the maximisation of the portfolio’s returns and a minimization of the risks it is exposed to. ECAs (and other FIs) can therefore boost their returns by rebalancing their portfolios toward sectors that are expected to benefit from green growth (and alternative solutions such as circular economy approaches), and reduce the risks (e.g., stranded asset risk) that they assume by minimizing the exposure to certain sectors/products (e.g., coal).

The rebalancing of the portfolio can follow a step-by-step approach:

1. Decrease exposure to any carbon-intensive industries;
2. Increase exposure to low-carbon industries and industries likely to benefit from ‘green growth’ and similar approaches; and
3. Pro-active portfolio management that influences portfolio assets and their mix

The first (and easiest) step in rebalancing a portfolio is the sale of any low-return and/or high-risk asset(s). In this case, this would include several fossil-fuel related facilities and projects that are significantly exposed to ‘stranded asset’ risk.

The second, and more difficult, step involves an active exposure to the green economy. This is more difficult and involves, at least at first, a greater degree of risk because it ‘breaks new ground’: The long-term success of new technologies, etc. is difficult to estimate, there exists no (or very little) empirical data on the performance of new financial instruments such as

'green bonds' (e.g., see Export Development Canada),⁸² and reliable assessment methodologies are still in need of development.

Lastly, once the entity become more familiar with the concept and the intricacies of 'green' investments, and have the assessment tools that they require for a rational decision process at their disposal, they can take a more proactive approach and start influencing companies and policies to change the mix of assets and production processes in the national economy.

Following this three-step process allows entities to rebalance their portfolios in lockstep with the evolving understanding of the respective risk and return factors as well as the development of new (financial) instruments and (assessment). This way, the transition remains manageable with a steep learning curve and a limited downside risk.

The business case for ECAs to appropriately diversify their portfolios would be based on a four-part rationale: resilience, policy, demand, and innovation. Adoption of an appropriate portfolio construction and diversification policy would help ECAs reduce their exposure to 'sunk asset' and 'climate change' risks and thereby augment their resilience and competitiveness. It would also preempt vulnerabilities to (costly) new policies and changes in the regulatory environment. In fact, by becoming rule-makers rather than rule-takers, ECAs can effectively anticipate and contribute to climate policy and regulatory shifts. Clients (and investors) increasingly expect (demand) financial institutions such as ECAs to adopt ESG principles and to be transparent about such matters as carbon exposure of their portfolios. A portfolio shift might direct ECAs to support more innovative companies as well as to make use of innovative ('green') financial instruments.

6. Conclusion: Cooperating for net zero alignment

This report has a clear finding and a simple implication. ECAs are lagging behind countries, the corporate sector, and private finance institutions. They need to rapidly catch up. The good news is that existing work creates a strong basis to build on. ECAs can draw from, adapt, and build on the rapidly expanding processes and methodologies FIs are using to drive net zero alignment across their portfolios.

We offer three recommendations on the way forward.

Commit. With the first ECA net zero target now having been set, it is time for the industry as a whole to align its long-term ambition to climate science. Leading ECAs should upgrade their climate goals to include net zero by 2050 at the latest, while adopting short-term steps to accelerate the transition. Appendix 1 outlines the elements such a commitment could and should cover.

⁸² Green bonds: On a conceptual level, green bonds are straightforward. They constitute fixed income securities where the proceeds from the offering are applied exclusively towards funding 'green projects.' Beyond the concept, however, the reality of green bonds becomes fuzzy and riddled with difficulties.

Collaborate: As initiatives like E3F or the Glasgow Finance Alliance for Net Zero show, there is value in moving together. Should a number of leading ECAs be ready to commit to net zero, they could form a powerful core of first movers. Such a group would create a useful platform for discussing technical questions on measurement and transition with like-minded peers.

Converge: Ultimately, the whole ECA community will need to align to net zero. Though there might be a small number of ECAs that move first, their success will be measured in part on how quickly others follow. The role of developing and emerging economies especially will be key. Global organizations like the OECD and the Berne Union can help ensure a sector-wide transition that leaves all ECAs in a stronger position in a net zero economy.

List of References

- ADB. (2019) *High Level MDB Statement*. Available from: <https://www.adb.org/sites/default/files/page/41117/climate-change-finance-joint-mdb-statement-2019-09-23.pdf> [Accessed 04th July 2021].
- Agarwal, N. & Wang, Z. (2017) Does the US EXIM Bank really promote US exports?. *World Economy*. 41(5), 1378-1414.
- Aguilera-Caracuel, J. & Ortiz-de-Mandojana, N. (2013) Green Innovation and Financial Performance: An Institutional Approach. *Organization & Environment*. 26(4), 365-385.
- Atradius Dutch State Business. (2020) *The Green Label*. Available from: https://atradiusdutchstatebusiness.nl/en/documents/the_green_label_eng.pdf [Accessed 01st July 2021].
- Auboin, M. & Blengini, I. (2019) The impact of Basel III on trade finance: the potential unintended consequences of the leverage ratio. *Journal of Banking Regulation*. 20, 115-123. Available from: <https://doi.org/10.1057/s41261-018-0071-6> [Accessed 16th July 2021].
- Bpifrance. (2021) *Green Bond Framework*. Paris, Bpifrance.
- Berne Union. (2006) *Berne Union Guiding Principles*. Available from: <https://bublob.blob.core.windows.net/assets/Images//Berne%20Union%20Guiding%20Principles%202006.pdf> [Accessed 25th May 2021].
- Berne Union. (2021) *Credit insurance and its role in supporting global trade*. Available from: <https://www.berneunion.org/Articles/Details/529/How-credit-insurance-supports-the-real-economy> [Accessed 30th May 2021].
- Bischoff, B. & Klasen, A. (2012) Hermesgedeckte Exportfinanzierung. *Recht der Internationalen Wirtschaft*. 11, 769-777.
- Black, R., Cullen, K., Fay, B., Hale, T., Lang, J., Mahmood, S. & Smith, S.M. (2021) *Taking Stock: A global assessment of net zero targets*, Energy & Climate Intelligence Unit and Oxford Net Zero. Available from: https://ca1-eci.edcdn.com/reports/ECIU-Oxford_Taking_Stock.pdf?mtime=20210323005817&focal=none [Accessed 09th June 2021].
- Bronswijk, A., Gabriel, R., Hale, T. & Klasen, A. (2020) Working towards a commitment to net zero. *Berne Union Yearbook*. 2020, 153-157. Available from: <https://www.berneunion.org/Publications> [Accessed 17th July 2021].
- Caldecott, B., Tilbury, J. & Carey, C. (2014) *Stranded Assets and Scenarios*. Available from: <https://www.smithschool.ox.ac.uk/research/sustainable-finance/publications/Stranded-Assets-and-Scenarios-Discussion-Paper.pdf> [Accessed 06th June 2021].
- Conley, J.M. & Williams, C.A. (2011) Global Banks as Global Sustainability Regulators?: The Equator Principles. *Law & Policy*. 33(4), 542-575. Available from: <https://doi.org/10.1111/j.1467-9930.2011.00348.x> [Accessed 22nd May 2021].

Contreras, G., Bos, J.W.B. & Kleimeiers, S. (2019) Self-regulation in sustainable finance: The adoption of the Equator Principles. *World Development*. 122, 306-324.

Direction générale du Trésor. (2021) *Seven countries launch international coalition "Export Finance for Future" (E3F) to align export finance with climate objectives*. Available from: <https://www.tresor.economie.gouv.fr/Articles/2021/04/14/seven-countries-launch-international-coalition-export-finance-for-future-e3f-to-align-export-finance-with-climate-objectives> [Accessed 06th June 2021].

EBRD. (2021) *The EBRD at 30: The bank steps up its climate ambition*. Available at: <https://www.ebrd.com/news/2021/ebrd-at-30-the-bank-steps-up-its-climate-ambition.html> [Accessed 4th July 2021].

EDC. (2019) *EDC Climate Change Policy Public Response Paper*. Available from: https://www.edc.ca/content/dam/edc/en/non-premium/edc_11113466_climate_broch_en_v6_final.pdf [Accessed 15th May 2021].

EDC. (2021a) *EDC Net Zero 2050*. Available from: <https://www.edc.ca/content/dam/edc/en/non-premium/edc-net-zero-emissions-2050.pdf> [Accessed 23rd July 2021].

EDC. (2021b) *EDC 2020 Annual Report Climate-Related Disclosure*. Available from: <https://www.edc.ca/content/dam/edc/en/corporate/corporate-reports/annual-reports/2020-climate-related-disclosure.pdf> [Accessed 28th May 2021].

EDC. (2021c) *EDC 2020 Annual Report*. Available from: <https://www.edc.ca/content/dam/edc/en/corporate/corporate-reports/annual-reports/2020-annual-report.pdf> [Accessed 28th May 2021].

EDFI. (2020) *EDFI Statement on Climate and Energy Finance*. Available from: <https://www.edfi.eu/wp/wp-content/uploads/2020/11/1.-EDFI-Statement-on-Climate-and-Energy-Finance-Final.pdf> [Accessed 04th July 2021].

EIB. (2020a) *Climate Strategy*. Available from: https://www.eib.org/attachments/strategies/eib_climate_strategy_en.pdf [Accessed 05th June 2021].

EIB. (2020b) *EIB Project Carbon Footprint Methodologies*. Available from: https://www.eib.org/attachments/strategies/eib_project_carbon_footprint_methodologies_en.pdf [Accessed 13th June 2021].

EKF. (2020) *EKF CSR Report 2019*. Available from: https://www.ekf.dk/media/ql0jasw5/csr_2019_final_signed.pdf?v=637604690915781682 [Accessed 30th May 2021].

EKF. (2021) *EKF Annual Report 2020*. Available from: <https://www.ekf.dk/media/aejfd1u/annual-report-2020.pdf?v=637604669518188929> [Accessed 30th May 2021].

EKN. (2020) *Sustainability policy*. Available from: https://www.ekn.se/globalassets/ekn-sustainability-policy_2020.pdf/ [Accessed 01st June 2021].

EKN. (2021) *Annual Report 2020*. Available from: <https://www.ekn.se/globalassets/dokument/rapporter/arsredovisningar/en/ekn-annual-report-2020.pdf/> [Accessed 01st June 2021].

Euler Hermes. (2021) *Annual Report 2020*. Available from: https://www.agaportal.de/Resources/Persistent/bdd1093eccf512ee6e328af4e24d3c9ffcef296b/e_ib_2020.pdf [Accessed 17th July 2021].

FiCS. (2020) *Joint Declaration of all Public Development Banks in the World*. Available from: <https://financeincommon.org/sites/default/files/2021-06/FiCs%20-%20Joint%20declaration%20of%20Public%20Development%20Banks.pdf> [Accessed 04th July 2021].

FMO. (2018) *Absolute GHG Accounting Approach for Financed Emissions*. Available from: <https://www.fmo.nl/en/library/download/urn:uuid:a85bc36b-feb5-4321-9a49-4dd3dd00bfb8/absolute+ghg+accounting+approach+final+for+consultation+oct+2018.pdf> [Accessed 15th June 2021].

FMO. (2021) *Taking climate action*. Available from: <https://www.fmo.nl/climate-action> [Accessed 05th June 2021].

Government of Canada. (2021) *Statement of Priorities and Accountabilities for Export Development Canada*. Available from: <https://www.international.gc.ca/global-affairs-affaires-mondiales/partners-partenaires/edc/mandate-mandat.aspx?lang=eng> [Accessed 10th July 2021]

GOV.UK. (2021) *G7 Climate and Environment: Ministers' Communiqué, London, 21 May 2021*. Available from: <https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communique/g7-climate-and-environment-ministers-communique-london-21-may-2021> [Accessed 25th May 2021].

Heiland, I. & Yalcin, E. (2020) Export market risk and the role of state credit guarantees. *International Economics and Policy*. 18, 25-72. Available from: <https://doi.org/10.1007/s10368-020-00466-2> [Accessed 20th May 2021].

Himberg, H., Xu, J. & Gallagher, K.P. (2020) *Climate Change and Development Bank Project Cycles*. Available from: <https://www.afd.fr/sites/afd/files/2020-11-12-12-26/climate-change-development-bank-project-cycles.pdf> [Accessed 04th July 2021].

IEA. (2021) *Net Zero by 2050 - A Roadmap for the Global Energy Sector*. Available from: https://iea.blob.core.windows.net/assets/20959e2e-7ab8-4f2a-b1c6-4e63387f03a1/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf [Accessed 25th May 2021].

IFC. (2012) *Performance Standards on Environmental and Social Sustainability*. Available from: https://www.ifc.org/wps/wcm/connect/24e6bfc3-5de3-444d-be9b-226188c95454/PS_English_2012_Full-Documents.pdf?MOD=AJPERES&CVID=jkV-X6h [Accessed 23rd May 2021].

IFC. (2021) *Performance Standards*. Available from: https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards [Accessed 23rd May 2021].

IIGCC. (2021) *Paris Aligned Investment Initiative Net Zero Investment Framework*. Available from: <https://www.parisalignedinvestment.org/media/2021/03/PAII-Net-Zero-Investment-Framework-Implementation-Guide.pdf> [Accessed 16th June 2021].

IMO. (2020) *Fourth Greenhouse Gas Study 2020*. Available from: <https://www.imo.org/en/OurWork/Environment/Pages/Fourth-IMO-Greenhouse-Gas-Study-2020.aspx> [Accessed 22nd May 2021].

IPCC. (2006) *IPCC Guidelines for National Greenhouse Gas Inventories*. Available from: <https://www.ipcc.ch/report/2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/> [Accessed 10th June 2021].

IPCC. (2018a) *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. Available from: <https://www.ipcc.ch/sr15/> [Accessed 09th May 2021].

IPCC. (2018b) Summary for Policymakers. In: IPCC (eds.) *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. pp. 1-49. Available from: <https://www.ipcc.ch/sr15/> [Accessed 09th May 2021].

Klasen, A. (2017) Beyond Gridlock in Trade. In: Hale, T. & Held, D. (eds.) *Beyond Gridlock*. Cambridge, Polity, pp. 65-82.

Klasen, A. (2020) Quo Vadis, Global Trade?. In: Klasen, A. (eds.) *The Handbook of Global Trade Policy*. Oxford, John Wiley & Sons Ltd, pp. 3-22.

Kraus, S., Rehman, S.U. & García, G.J.S. (2020) Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological Forecasting & Social Change*. Available from: <https://doi.org/10.1016/j.techfore.2020.120262> [Accessed 17th July 2021].

K-SURE. (2021) *Annual Report 2020*. Available from: <https://www.ksure.or.kr/en/company/annualRptListInq.do> [Accessed 02nd June 2021].

Liao, J.C. (2021) The Club-based Climate Regime and OECD Negotiations on Restricting Coal-fired Power Export Finance. *Global Policy*. 12(1), 40-50. Available from: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/1758-5899.12894> [Accessed 22nd May 2021].

Mulligan, R.M. (2007) Export Credit Agencies: OECD Arrangement for Officially Supported Export Credits. *Journal of Management Research*. 7(2), 103-116.

Net Zero Asset Managers Initiative. (2021) *Net Zero Asset Managers Initiative*. Available from: <https://www.netzeroassetmanagers.org/> [Accessed 02nd June 2021].

OECD. (2016) *Recommendations of the Council on Common Approaches for Officially Supported Export Credits and Environmental and Social Due Diligence (The “Common Approaches”)*. Available from: [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=tad/ecg\(2016\)3](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=tad/ecg(2016)3) [Accessed 21th May 2021].

OECD. (2021) *Arrangement on Officially Supported Export Credits*. Available from: [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=tad/pg\(2021\)6](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?doclanguage=en&cote=tad/pg(2021)6) [Accessed 21th June 2021].

PCAF. (2020) *The Global GHG Accounting and Reporting Standard for the Financial Industry*. Available from: <https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf> [Accessed 06th June 2021].

Ritchie, H. (2020) *Sector by sector: where do global greenhouse gas emissions come from?*. Available from: <https://ourworldindata.org/ghg-emissions-by-sector> [Accessed 22nd May 2021]

Robins, N., Tickell, S., Irwin, W. & Sudmant, A. (2020) *Financing climate action with positive social impact - How banking can support a just transition in the UK*. Available from: <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/07/Financing-climate-action-with-positive-social-impact-How-banking-can-support-a-just-transition-in-the-UK-1.pdf> [Accessed 04th June 2021].

Schütze, F., Stede, J., Blauert, M. & Erdmann, K. (2020) EU Taxonomy increasing Transparency of Sustainable Investments. *DIW Weekly Report*. 10(51), 485-492. Available from: https://www.diw.de/documents/publikationen/73/diw_01.c.807288.de/dwr-20-51-1.pdf [Accessed 25th May 2021].

Science Based Targets. (2021a) *How does the SBTi define financial institutions?*. Available from: <https://sciencebasedtargets.org/sectors/financial-institutions#how-does-the-sb-ti-define-financial-institutions> [Accessed 07th May 2021].

Science Based Targets. (2021b) *Financial Sector science-based Target Guidance Pilot Version 1.1*. Available from: <https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf> [Accessed 07th May 2021].

Semieniuk, G., Campiglio, E., Mercure, J., Volz, U. & Neil, R.E. (2020) Low-carbon transition risks for finance. *Wires Climate Change*. 12(1), 1-24. Available from: <https://doi.org/10.1002/wcc.678> [Accessed 27th May 2021].

Shishlov, I., Weber, A., Stepchuk, I., Darouich, L. & Michaelowa, A. (2020) *External and internal climate change policies for export credit and insurance agencies*. Available from: https://ethz.ch/content/dam/ethz/special-interest/gess/cis/cis-dam/CIS_2020/Working%20paper%20Axel.pdf [Accessed 15th May 2021].

Søndergaard-Jensen, M. (2019) Will OECD Governments Avoid the Path Towards a New Credit War? *Global Policy*. 10(3), 427-431. Available from: <https://doi.org/10.1111/1758-5899.12726> [Accessed 20th May 2021].

TCFD. (2017) *Recommendations of the Task Force on Climate-related Financial Disclosures*. Available from: <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf> [Accessed 27th May 2021].

UKEF. (2021) *Annual Report and Accounts 2020-21*. Available from: <https://www.gov.uk/government/publications/uk-export-finance-annual-report-and-accounts-2020-to-2021> [Accessed 18th July 2021].

UNEP FI. (2021a) *United Nations-covered Net-Zero Asset Owner Alliance*. Available from: <https://www.unepfi.org/net-zero-alliance/> [Accessed 02nd June 2021].

UNEP FI. (2021b) *Net-Zero Banking Alliance*. Available from: <https://www.unepfi.org/net-zero-banking/> [Accessed 02nd June 2021].

UNEP FI. (2021c) *UN-covered Net-Zero Asset Owner Alliance - Inaugural 2025 Target Setting Protocol*. Available from: <https://www.unepfi.org/wordpress/wp-content/uploads/2021/01/Alliance-Target-Setting-Protocol-2021.pdf> [Accessed 17th June 2021].

UNFCCC. (2015a) *International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting*. Available from: https://unfccc.int/sites/default/files/resource/International%20Financial%20Institution%20Framework%20for%20a%20Harmonised_rev.pdf [Accessed 04th July 2021].

UNFCCC. (2015b) *Paris Agreement*. Available from: https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf [Accessed 20th May 2021].

UNFCCC. (2021a) *Race To Zero Campaign*. Available from: <https://unfccc.int/climate-action/race-to-zero-campaign> [Accessed 10th May 2021].

UNFCCC. (2021b) *New Financial Alliance for Net Zero Emissions Launches*. Available from: <https://unfccc.int/news/new-financial-alliance-for-net-zero-emissions-launches> [Accessed 20th May 2021].

UN Race to Zero Campaign. (2021) *Race to Zero Lexicon*. Available from: <https://racetozero.unfccc.int/wp-content/uploads/2021/04/Race-to-Zero-Lexicon.pdf> [Accessed 9th May 2021].

Vassard, J., Richter, K. & Lindhardt, O. (2015) Money Matters on Our Way to a Greener Future: Biogas Plants' Financing with Export Credits. *Global Policy*. 6(3), 315-317. Available from: <https://doi.org/10.1111/1758-5899.12262> [Accessed 30th May 2021].

White House. (2021) Executive Order on Tackling the Climate Crisis at Home and Abroad. Available from: <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad> [Accessed 15th July 2021].

Whitley, S., Thwaites, J., Wright H. & Ott, C. (2018) *Making finance consistent with climate goals*. Available from: <https://cdn.odi.org/media/documents/12557.pdf> [Accessed 20th May 2021].

World Bank Group. (1998) *Greenhouse Gas Assessment Handbook*. Available from: <https://documents1.worldbank.org/curated/en/168201468740108140/pdf/multi0page.pdf> [Accessed 10th June 2021].

World Bank Group. (2012) *Greenhouse Gas Analysis at the World Bank*. Available from: <https://documents1.worldbank.org/curated/en/260951468330293602/pdf/697110P11055700as0Analysis00PUBLIC0.pdf> [Accessed 06th June 2021].

World Bank Group. (2021) *Climate Change Action Plan 2021-2025*. Available from: <https://openknowledge.worldbank.org/bitstream/handle/10986/35799/CCAP-2021-25.pdf?sequence=2&isAllowed=y> [Accessed 04th June 2021].

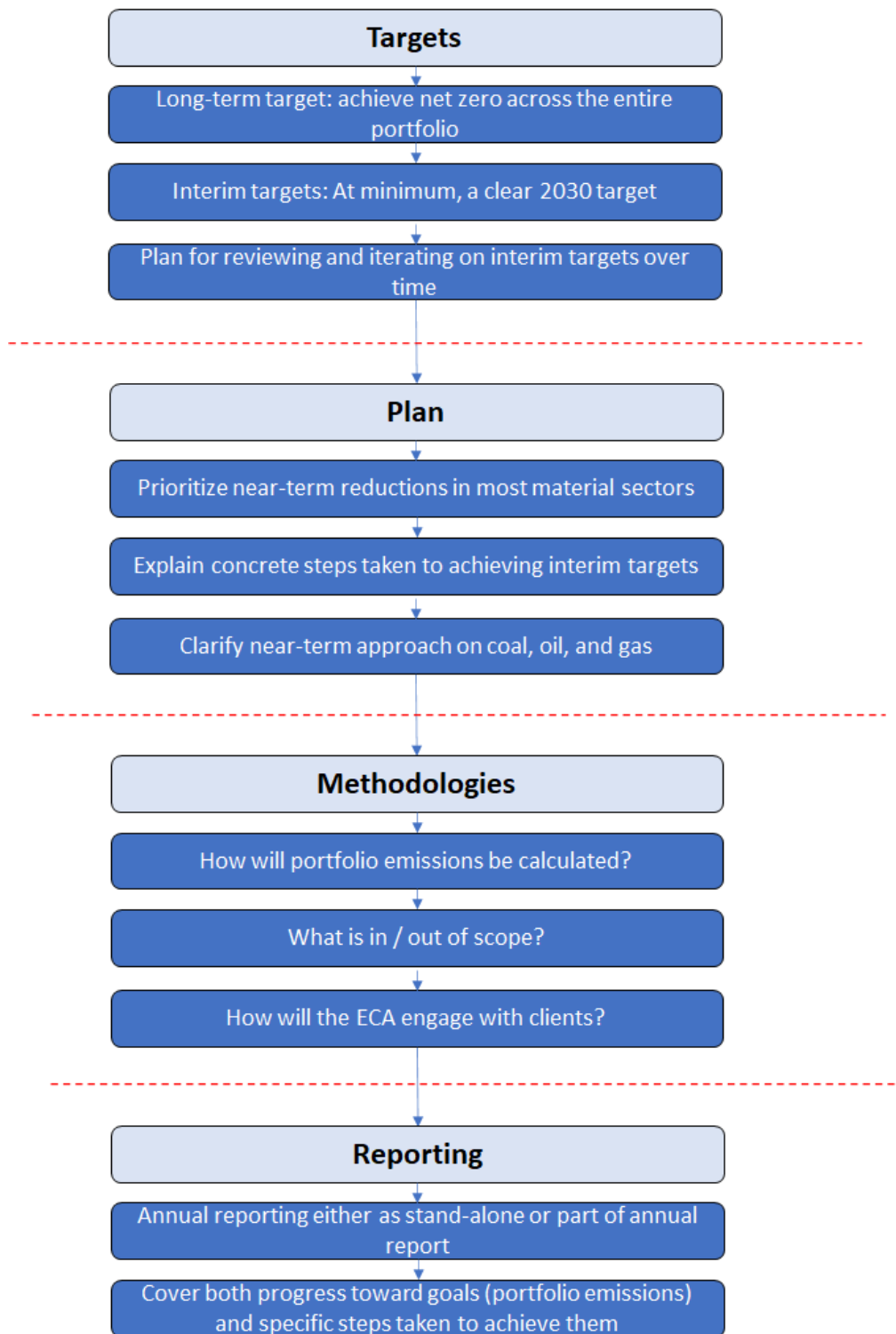
WRI & WBCSD. (2003) *Project Protocol*. Available from: <https://ghgprotocol.org/standards/project-protocol> [Accessed 10th June 2021].

Wright, C. (2011) Export Credit Agencies and Global Energy: Promoting National Exports in a Changing World. *Global Policy*. 2 (SI), 133-143. Available from: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1758-5899.2011.00132.x> [Accessed 22nd May 2021].

WTO. (2021) *Trade finance*. Available from: https://www.wto.org/english/thewto_e/coher_e/tr_finance_e.htm [Accessed 30th May 2021].

Appendix 1: Elements of a model net zero commitment for export credit agencies

What elements does a model net zero commitment for ECAs require? The following diagram outlines the main components and actions of a Net-Zero Framework for ECAs 1.0 and signposts to the corresponding sections of this document which provide more detail in the recommended actions.



Policy commitment / Target:

- Each of the ECAs ought to be committed to achieving net zero by 2050.
- Each of the ECAs ought to be committed to accounting for the GHG emissions of direct trade finance / investments that they finance.
- Each of the ECAs ought to state this commitment publicly in relevant policy and strategy documents.

Plan

- ECAs ought to prioritize near-term reduction in most material sectors.
- ECAs ought to develop a clear strategy, set clearly defined milestones, and communicate the next steps to be taken to achieve interim targets.

Methodology

Scope of measurement (what needs to be measured)

- Generated emissions.
- Emission removals.
- Avoided emissions.

Robust methods for measuring financed emissions

Standardized, robust measures to measure financed emissions enables ECAs to:

- Assess climate-related risk in line with the Task Force on Climate-Related Financial Disclosures (TCFD).
- Set science-based targets (SBTs) using methods by the SBTi.
- Report to stakeholders like the Carbon Disclosure Project (CDP).
- Inform climate strategies and actions to develop innovative products that support the transition towards a net zero emissions economy.
- Take action to align their portfolios with the goals of the Paris Agreement.

Screening:

- ECA shall screen each proposed direct investment for likely significant GHG emissions.
- ECAs may establish *de minimis* criteria for GHG screening. ECAs will undertake GHG accounting for all direct investments consistent with the screening criteria.
- Where a sector or investment is excluded from GHG accounting, this will be stated in the ECA's relevant policy and procedures.

GHG Emissions Accounting:

ECAs will account for the GHG emissions of their portfolio assets as follows:

- ECAs shall base their GHG accounting on established methodologies (e.g., the GHG Protocol, the Clean Development Mechanism methodology)
- Each ECA will estimate the absolute GHG emissions for its portfolio assets
- GHG accounting must include Scope 1 and Scope 2 emissions (as defined in the GHG Accounting Protocol). ECA may (at this stage) choose to include Scope 3 emissions attributable to a project. But due to the issue of double-counting they should be kept separate from Scope 1 and Scope 2 emissions.

- The results of the GHG accounting shall be expressed in tonnes of CO₂-equivalents, using the global warming potential of GHGs as defined by the UNFCCC

Reporting:

- At a minimum, each ECA shall report annually on the aggregate (net) GHG emissions for their portfolios.
- In addition, ECAs may choose to undertake additional reporting on baselines, gross emissions, portfolio-wide net emissions, lifetime GHG emissions, etc.
- ECAs may choose to further disaggregate GHG data by sector, country or project.
- Definitions, assumptions and methodologies shall be recorded and made available to decision makers within the ECA and to external stakeholders as appropriate.

Future steps / cooperation:

- The document will be subject to periodic review as appropriate.
- (Further) Cooperation between the ECAs is required to achieve a harmonization of emissions accounting standards, to establish a mechanism for data sharing and peer review of their respective GHG accounting.

Appendix 2: Carbon management methodologies used by finance institutions

Overview of methodological questions for net zero alignment

Net zero alignment raises many important questions. One set of questions that needs to be addressed right from the outset concerns the methodological approach to be adopted to measure and account for the GHG footprint of the FI's portfolio(s). After all, once a FI has committed to net zero (i.e., set itself the goal to achieve carbon-neutrality across its portfolios), it needs the appropriate tools to measure the current portfolio footprint and to track its progress on the path toward net zero. What follows is a brief overview of some of the core elements of such a methodology and an outline of some of the key points it needs to address. Some prominent examples are then reviewed.

The portfolio carbon footprint - an overview:

Definition: A portfolio's carbon footprint is the sum of the proportional amount of each portfolio asset's emissions.

Use: The portfolio carbon footprint can be used to compare it to various benchmarks, to identify priority areas for action, and to track progress in the 'decarbonization' of a portfolio.

Caveat: A carbon footprint is generally not intended to be a comprehensive life-cycle analysis of a project/product. The costs and informational requirements would often be prohibitive. Instead, carbon footprint assessments take place *ex-ante* (rather than *ex-post*) and with limited information and resources. For instance, the EIB does not generally take downstream emissions of the products resulting from the EIB-financed investment projects into consideration when assessing the carbon footprint. Further, the carbon footprint of an asset is usually only registered for the time of the holding period. After that, it ceases to be part of the portfolio and its carbon-footprint is no longer registered on the books of the FI, even though it usually continues to exist (physically) and to emit GHGs.

Current limitations:

- Methodologies do not yet exist for all types of assets
- Lack of harmonization around methodologies and accounting approaches

Methodology:

At the entity level:

Carbon footprint measurements can be *cradle-to-gate* or *cradle-to cradle*:

- *Cradle-to-gate*: measures a company's footprint up to the point it sells a product to a consumer, after which any related emissions become part of their footprint. For instance, if a car manufacturer sells a car, the footprint associated with the use of the car is allocated to the purchaser, not the manufacturer.
- *Cradle-to-cradle*: consider the whole lifecycle of a product, from sourcing of raw materials, through the use phase, and the eventual disposal.

The most thorough approach would involve the measurement of GHG emissions across the entire value chain / life cycle of a product (upstream and downstream) that is verified by a reliable external party. The information for such comprehensive analysis is often not available, though, and the costs to obtain those might be prohibitive.

Generally, for a comprehensive account of the emissions of any facility/company, it is necessary to combine voluntarily-reported, partially-verified data with estimations across some or all of Scopes 1, 2 and 3, using a variety of modelling techniques such as Economic Input-Output Life Cycle Assessment (EIO-LCA) models.

At the portfolio level:

A carbon footprint at the portfolio level is typically constructed by the following steps:

1. Obtain carbon emissions data on companies or projects or products owned in a portfolio, either from verified disclosure or from estimated/interpreted sources;
2. Choose an appropriate benchmark;
3. Determine the respective weights of the individual portfolio items;
4. Normalise / refine results;
5. Compare them to the benchmark.

How best to execute these steps is still under development. The aim is to allocate GHG emissions according to accounting rules that follow the GHG Protocol.

Next, some prominent examples are reviewed.

The World Bank

The World Bank Group has been devising various accounting methodologies to capture the GHG footprint of its diverse portfolio. The International Finance Corporation (IFC), the World Bank Group's private sector arm, began gross GHG accounting for direct investments in 2009 and GHG accounting for all mitigation activities in 2011. The World Banks has now

agreed methodologies for several areas such as energy, forestry and agriculture projects,⁸³ and it has constantly been adding new ones (e.g., transport, water, urban development).

Methodological Foundations

IFIs such as the World Bank Group use the frameworks and methodologies listed below as a starting point for performing their GHG analyses:^{84 85}

- The *GHG Protocol* (WRI/WBCSD, 2001) provides accounting and reporting standards, sector guidance, and calculation tools for businesses and local and national governments.
- The *GHG Protocol for Project Accounting* (WRI/WBCSD, 2006): This is the most widely accepted conceptual framework for assessing GHG emissions at the project level. (Then there are supplementary materials, like for example, in the energy sector, the *GHG Protocol Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects* (WRI/WBCSD, 2005) that supplement the *Project Protocol*).
- The *2006 IPCC Guidelines* (IPCC, 2006) provide general guidance on how to create national GHG inventories and a tiered approach and database of emission factors
- *Clean Development Mechanism (CDM) methodologies* can be used to estimate GHG emissions reductions.
- The *GEF Manual for energy efficiency and renewable energy* (GEF, 2008) provides guidance on calculating GHG reductions from renewable energy (efficiency) projects.

The IFC's Carbon Emissions Estimator Tool (CEET)

The International Finance Corporation (IFC), the World Bank Group's private sector arm, has developed the Carbon Emissions Estimator Tool (CEET) to estimate GHG emissions from investment applicable to all IFC departments other than Financial Markets.⁸⁶ The CEET methodology is consistent with the widely used GHG Protocol's Corporate Accounting and Reporting Standard (WRI/WBCSD, 2006) and builds on the Carbon Tool developed by le groupe Agence Française de Développement (AFD).⁸⁷ The CEET also includes emission factors from the United Nations Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA).⁸⁸ The CEET allows to estimate actual project emissions based on information commonly collected during project appraisals and to compare it to alternative projects and / or reference scenarios.⁸⁹

The steps in the World Bank's methodology for computing a project's GHG impacts:

⁸³ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁸⁴ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁸⁵ IFIs such as the European Bank of Reconstruction and Development (EBRD) have developed their own methodologies based upon listed methodologies and frameworks such as the 2006 IPCC Guidelines and Project Protocol. [IPCC. \(2006\)](#) *IPCC Guidelines for National Greenhouse Gas Inventories.* [WRI & WBCSD. \(2003\)](#) *Project Protocol.*

⁸⁶ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁸⁷ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁸⁸ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

⁸⁹ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank.*

Staying within the energy sector, which constitutes the major source of anthropogenic GHG emissions, the World Bank’s methodology suggests the following steps in the assessment of the GHG impacts of energy sector projects:⁹⁰

1. Step 1: Define project boundaries
2. Step 2: Estimate project fuel consumption impact
3. Step 3: Estimate carbon emission impact
4. Step 4: Estimate carbon oxidized during fuel conversion
5. Step 5: Estimate total carbon dioxide emissions impact

(These steps refer to the calculation of CO2 only and not to the other major GHGs (methane and nitrous oxide).

The Annual Carbon Emission Impact (t C/yr) is calculated by multiplying the Annual Fuel Consumption Impact (TJ/yr) by the carbon emission factor (t C/TJ).

Recommendations:

The table below provides recommendations for a World Bank approach to the energy sector:⁹¹

GHG Principle	Recommendations
Net vs. Gross	Conduct net GHG analysis of energy sector projects.
Project Boundary and Scope	Define the boundary as the physical site of the project facility, include off-site facilities that exist solely for the purpose of the project; at least consider scope 1 and 2 emissions; include scope 3 emissions when they are measurable and expected to be significant.
Baseline	Develop dynamic baseline scenarios based on project-specific data to the extent that it is possible to do so. Employ data and assumptions used for economic analysis and always err on the conservative side. Zero or pre-project static baseline emissions based on benchmark emission factors may be applied when likely project alternative has not been identified
Time frame	Estimate GHG emissions over the economic life of the project, as specified in the project appraisal document
Emission Factors	Employ t lest tier 2, and where possible tier

⁹⁰ [World Bank Group. \(1998\)](#) *Greenhouse Gas Assessment Handbook*.

⁹¹ [World Bank Group. \(2012\)](#) *Greenhouse Gas Analysis at the World Bank*.

Gases Included	3 data. Else, tier 1 default factors should be applied CO ₂ , CH ₄ , N ₂ O, and SF ₆ . Other GHGs should be considered when their contribution is expected to be significant.
Threshold	Assess projects that generate net GHG emissions greater than 20 ktCO ₂ e per year.

GHG Analysis - Challenge and Lessons

The table below summarises some of the key challenges and lessons in the analysis of GHG emissions.⁹²

<p>GHG Analysis – Challenges and Lessons</p> <p>The main challenges encountered during the GHG emission assessment process:</p> <ul style="list-style-type: none"> ● Data quality and availability ● Defining the project baselines ● Difficulties in defining the project boundaries ● Acceptance by project officers to add a new dimension to the project appraisals ● Strategy regarding the use of the results of the assessment for project analysis and selectivity ● Inconsistencies in operational assumptions made to produce a probable future emission level ● Monitoring, once projects start to operate. ● Quality check. <p>Key lessons learnt from GHG calculator:</p> <ul style="list-style-type: none"> ● Framework conditions <ul style="list-style-type: none"> ○ GHG assessment needs to be incorporated into the Terms of Reference for environmental due diligence or feasibility studies at an early stage ○ Lack of partner institutions' capacity and interest can pose problems. ● Data quality and availability <ul style="list-style-type: none"> ○ Transparency about the assumptions and the limits of their accuracy helps to deflect criticism from external stakeholders ○ Baselines are best chosen by project teams ○ Mainstreaming of approach / methodology is required at the project team level ○ GHG emissions accounting by project teams is a good capacity building exercise to learn about common sources of GHG emissions in their respective sectors and can lead to identifying low-cost mitigation opportunities ○ It is not necessary to be a specialist to perform GHG accounting, if staff is supplied with the appropriate tools, training, and well-defined methodology. ● Methodology development <ul style="list-style-type: none"> ○ Project-specific emission factors should be used whenever available, provided that their origin is well-documented.

⁹² [World Bank Group. \(2012\) Greenhouse Gas Analysis at the World Bank.](#)

- Asking project team members to perform calculations can be perceived as an additional burden to existing work without any clear added benefit,
- GHG accounting is a “work in progress” and the process should be designed for flexibility and continuous improvement.
- Methodologies used to calculate GHG emission reduction impact of projects may have to be adjusted in line with the MRV guideline and other rules to be developed under the UNFCCC and /or other international negotiation process
- MRV standards from Clean Development Mechanism (CDM) are not practical for ODA finance.

The European Investment Bank

The **European Investment Bank** (EIB) incorporates the carbon footprint into its overall economic cost-benefit analysis of a project. To that end, the EIB uses an economic (shadow) price of carbon to convert changes in tonnes of GHG into euros.

The EIB methodologies are based upon the internationally recognised IPCC Guidelines, the WRI GHG Protocol and the IFI’s Harmonised Approach to GHG Accounting.⁹³ In the absence of project specific factors, the methodologies adopt an IPCC factor applicable at the global or transnational level (termed tier level 1 in IPCC). The development of the methodologies has also been informed by ISO14064 parts 1 and 2 and the Verified Carbon Standard which provide guidelines for the development of GHG inventors at the corporate and project levels

The Guiding Principles of the EIB methodologies are: completeness, consistency, transparency, conservativeness, balance, accuracy, relevance (i.e., >20,000 tonnes CO₂e per year).

The EIB methodologies allow for the estimation of two measures of GHGs from investment projects financed by the bank:

- (a) The absolute GHG emissions or sequestration of the project; and
- (b) The relative (i.e., “with” vs “without” project) GHG emissions.

The GHGs included in the footprint include the seven gases listed in the Kyoto Protocol, namely: carbon dioxide (CO₂); methane (CH₄); nitrous oxide (N₂O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF₆); and nitrogen trifluoride (NF₃). The GHG emissions quantification process converts all GHG emissions into tonnes of carbon dioxide called CO₂e (equivalent) using Global Warming Potentials (GWP).

⁹³ [EIB. \(2020b\)](#) *EIB Project Carbon Footprint Methodologies*.

Steps for calculating the carbon footprint

- 1) *Define the project boundaries:*[1] The project boundary defines what is to be included in the calculation of the absolute and relative emissions.
- 2) *Determine what emissions scopes (1, 2, or 3) to include:* The EIB methodologies use the concept of “scope” based on the definitions from the WRI GHG Protocol ‘Corporate Accounting and Reporting Standard’, when defining the boundary to be included in the emissions calculation. (Scope 1, Scope 2, Scope 3)
- 3) *Quantify absolute project emissions (if the emissions > +/- 20,000 tonnes CO₂e/year):* The absolute emissions should be calculated based in project-specific data. Where project-specific data is not available, it is good practice to use default factors based on sector specific activity data and through the application of documented emission factors.
- 4) *Identify & quantify baseline emissions:* Baseline emissions provide a credible alternative scenario “without” the project, against which the “with” project scenario can be compared – providing thereby an indication of how measured in GHG metrics, the project performs.
- 5) *Calculate relative emissions:* Relative emissions equals “with” project emissions with the baseline case.

[1] The EIB is currently assessing to include the upstream emissions from energy sources in its carbon footprint calculations. This would include the upstream emissions of fossil fuels, electricity generation and biomass.

The FMO Dutch Development Bank

The FMO Dutch Development Bank considers an absolute approach to GHG accounting to be the most appropriate way to establish and report the financed emissions of its portfolio.⁹⁴ This approach supplements the FMO’s earlier GHG avoidance measurement - i.e., GHG emissions have been based on emissions avoided using the IFI harmonized approach for project-level GHG accounting - with an absolute metrics that can assess the annual emissions of the portfolio.

Definitions⁹⁵

Absolute emissions are the actual/estimated emissions generated or sequestered as a result of an investment.

⁹⁴ [FMO. \(2018\)](#) *Absolute GHG Accounting Approach for Financed Emissions.*

⁹⁵ [FMO. \(2018\)](#) *Absolute GHG Accounting Approach for Financed Emissions.*

Avoided emissions are the emissions that are avoided as a result of a project (e.g. a renewable energy project that replaces fossil-fuel based power generation), when compared to a baseline scenario established in accordance with the GHG Protocol

GHG covered

The greenhouse gases accounted for can include those covered by the GHG Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). Emissions are expressed in tonnes CO₂ equivalent using the global warming potentials for each greenhouse gas.⁹⁶

Calculation

Data

Absolute emissions will be calculated annually. The following represents the data-of-preference, i.e. primary GHG data is preferred.⁹⁷

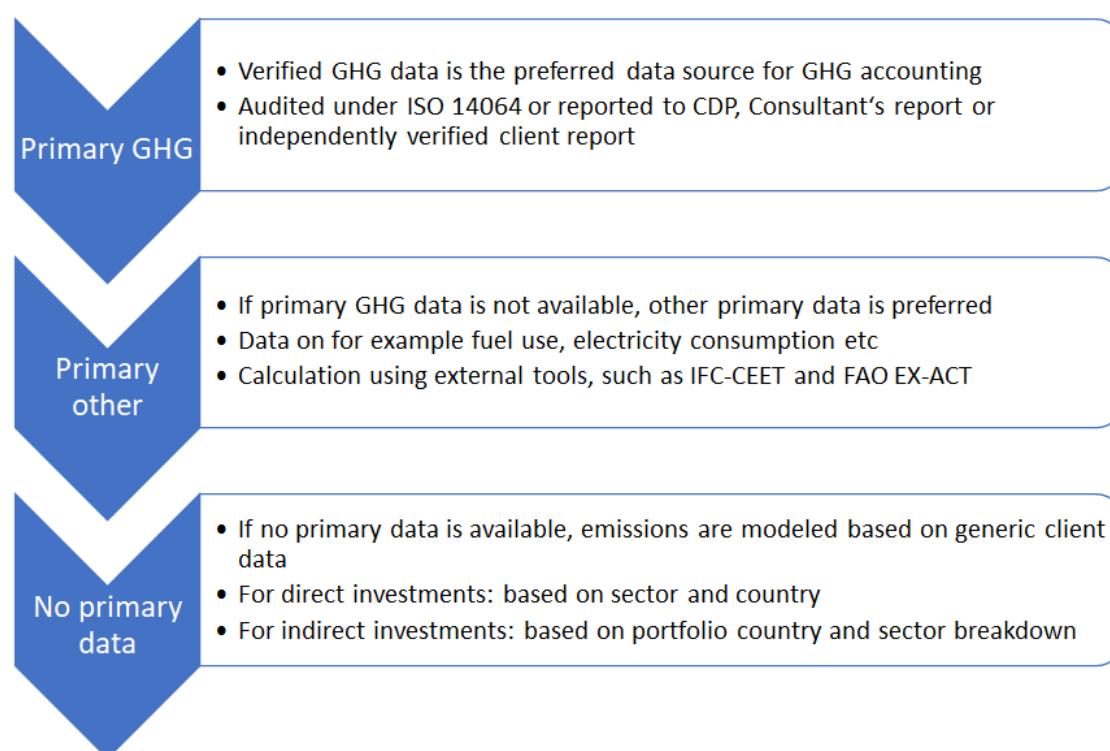


Figure 9: 'Hierarchy of data used for calculation of absolute GHG emissions' (Authors' preparation based on [FMO, 2018:p.8](#)).

Primary data is preferred over modelled data.

⁹⁶ [FMO. \(2018\)](#) *Absolute GHG Accounting Approach for Financed Emissions*.

⁹⁷ [FMO. \(2018\)](#) *Absolute GHG Accounting Approach for Financed Emissions*.

If direct GHG data is not available, the absolute emissions will be estimated either by using operational data on fossil fuel use or applying an economic input-output model.⁹⁸

Attribution

- The annual emissions will always be related to project size or company value.⁹⁹
- Only the financed GHG emissions of the FMO's portfolio are included in the accounting approach.¹⁰⁰
- The accounting will only be for financed emissions for the duration of the investment (i.e., no lifecycle treatment).¹⁰¹

Calculation

The basic calculation methodology can be expressed as activity * emission factor * (investment size / attribution factor).¹⁰² The precise formulas are summarized below.

Primary (Non-GHG) data available

Annual physical activity [e.g., kg] * Emission factor [tCO₂e / e.g. kf] * Investment size FMO [M€] / Total company value or total project size [M€]

No primary data available (i.e. modelled data)

$\Sigma(\text{Investment size FMO [M€]} * \text{Annual economic activity [M€ output / M€ invested]} * \text{Economic emission factor [tCO}_2\text{e/M€ output]})$

The inputs are specified as follows:¹⁰³

- **Activity**: There are two types of activities used in the absolute GHG accounting approach:
 - *physical*: the physical activity that generates or sequesters emissions (e.g., the burning of fossil fuel)
 - *economic*: sectors / countries the investment will be used

Physical activity is used when primary data is available, while economic activity is used when no primary data is available
- **Emission factors**: There are types of emission factors in the absolute GHG accounting approach:
 - *physical*: emission factor associated with a physical activity

⁹⁸ [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

⁹⁹ [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

¹⁰⁰ [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

¹⁰¹ [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

¹⁰² [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

¹⁰³ [FMO. \(2018\)](#) Absolute GHG Accounting Approach for Financed Emissions.

- *economic*: emission factor associated with an economic activity
- ***Investment size***: The following considerations are required when determining FMO's investment size: 1) financing lifetime; 2) the inclusion of repayments, provisions and write-offs; 3) the value of the investment; and 4) the approach to guarantees.

The above represent a sample of the various approaches to GHG emissions adopted by IFIs. In the next section, we shall take a closer look at the existing frameworks and pioneering approaches that could provide an impetus and basis for ECAs to develop their own methodologies for their trade finance activities.

PCAF

The Partnership for Carbon Accounting Financials (PCAF), started by eleven Dutch financial institutions as a joint effort to improve carbon accounting, has evolved into a global collaboration with more than 55 financial institutions with a total of USD 3.5tn in assets under management.¹⁰⁴ Over the past two years, PCAF Netherlands has launched two reports, proposing a set of common principles and harmonised guidelines for loans and investments along several different asset classes.

Asset classes covered¹⁰⁵

1. Sovereign bonds
2. Listed equity
3. Project finance
4. Mortgages
5. Commercial real estate
6. Corporate debt: bonds
7. Corporate/SME loans
8. Indirect investments
9. Public loans

Overarching principles

PCAF blended a selection of already existing carbon accounting principles with generally accepted accounting principles.

'Follow the money' is a key principle for carbon-footprinting financial assets, i.e. monetary transactions should be followed as far as possible to understand and account for the

¹⁰⁴ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

¹⁰⁵ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

carbon impact in the real economy.¹⁰⁶

The carbon footprint of any financial institution should include: Scope 1, Scope 2 and (where possible) Scope 3.^{107 108}

Methodological principles¹⁰⁹

Measurement principles

- The seven GHGs listed in the Kyoto Protocol are measured: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). These seven gases can be expressed in carbon dioxide equivalents (CO₂e).
- *Absolute emissions* are expressed in metric tonnes of carbon dioxide equivalent tCO₂e.
- *Relative emissions* are expressed in metric tonnes of carbon dioxide equivalents per million Euro invested: tCO₂e/M€.

Attribution principles

- Emissions need to be attributed based on the FI's investment share.¹¹⁰

Principles for emission data

Data sources

PCAF distinguishes three options to calculate the financed emissions from business loans:

1. Option 1: reported emissions
2. Option 2: physical activity-based emissions
3. Option 3: economic activity-based emissions

Options 1 and 2 are based on reported emissions or primarily physical activity data by the borrower or third-party data providers.¹¹¹ Option 3 is based on region- or sector-specific average emissions or financial data using public data sources or data from third-party providers.

¹⁰⁶ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

¹⁰⁷ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

¹⁰⁸ For scope 3 emissions, PCAF follows a phased-in approach, which requires scope 3 reporting for lending to and making investments in companies depending on the sector in which they are active.

¹⁰⁹ [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

¹¹⁰ PCAF states that "the financial value of the asset that, in relation to the investment, determines the proportional share for accounting the carbon footprint, should include all financial flows (i.e., equity and debt) to the investee as much as possible". [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry*.

¹¹¹ Recommended third-party data providers: CDP, Bloomberg, MSCI, Sustainalytics, S&P/Trucost and ISS ESG.

Data quality

High quality emissions data is defined as follows:

- Emissions data is consistent, both across entities and across time
- Emissions data reflects the underlying emissions generating activities of the entity
- Emissions data is accompanied by a relevant level of assurance

In addition, the PCAF Global GHG Accounting and Reporting Standard incorporates a data quality scoring with specific guidance per asset class. Data quality ranges from estimated data with very limited support (i.e., economic-based sectoral emissions factors), score 5, to audited GHG emissions data on the client-level with highest quality score 1 (see figure below).

Participating institutions are asked to publish the existing PCAF hierarchy of data quality table below. And where relevant, more precise information about the data should be provided.

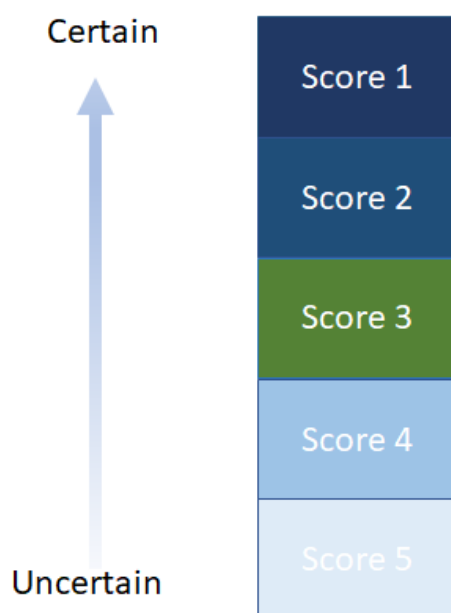


Figure 10: 'Data quality scores' (Authors' preparation based on [PCAF, 2020:p.40](#)).

Asset class methodologies

The PCAF specifies individual methodologies for the different asset types (see above).

The table below provides a brief outline of the methodology for SME loans (collectively referred to as corporate loans), as they might provide a blueprint for the development of methodologies tailored to the needs of ECAs.

Topic	Outcome
Scopes covered	Scope 1 and scope 2 minimum. Scope 3 if relevant and available
Portfolio coverage	Ideally, 100% of the portfolio should be covered. In any case, the coverage of the corporate loan portfolios should be clearly communicated (both the criteria and the relative coverage of the outstanding exposure).
Attribution	<p>The lender accounts for a proportion of the GHG emissions of the financed company determined by the ratio between the lender's exposure and the enterprise value of the company.</p> <p>If no company data is available, the financial institution can use sector data for the attribution of emissions. In this case, the attribution is determined by the financial institutions' market share in the sector as defined by the outstanding loans of the financial institution to the sector divided by the total balance sheet of the sector:</p> <p>Financed emissions = Absolute emissions sector * (Outstanding with the sector / Total balance sheet sector)</p>
Data	<p>For corporate loans a twofold approach is taken to estimate and account for emissions and carbon intensity. The first approach builds on company-specific source data, provided by the borrower. The second approach is based on region/sector-specific average emissions data, using public data sources for data from third party data providers for financial and emissions data.</p> <p>In other cases, PCAF proposes to follow carbon accounting approach 1 for corporate loans, applying the following hierarchy of preference for the data sources:</p> <ol style="list-style-type: none"> 1. Audited GHG emissions data from the company, in accordance with the GHG Protocol 2. GHG data calculated by a credible external expert, in accordance with the GHG Protocol 3. Sector-specific non-GHG source data, used to calculate GHG emissions with an approved GHG calculation tool such as IFC-CEET, the AFD carbon calculation tool or comparable sector-specific tools issued by credible institutions such as the FAO (for agriculture).

SBTi Finance

¹¹² [PCAF. \(2020\)](#) *The Global GHG Accounting and Reporting Standard for the Financial Industry.*

SBTi Finance facilitates the setting of science-based targets for financial institutions to align their lending and investment activities with the Paris Agreement.

Methodology

1. Compiling a GHG Inventory

An institution-wide GHG inventory is the foundation for setting science-based targets (SBTs).

The SBTi has identified the PCAF’s Global GHG Accounting and Reporting Standard (see above) as a freely available methodological approach to the measurement and disclosure of portfolio-wide or asset-level-financed emissions for the relevant asset classes.

The figure below demonstrates the overlap in terms of asset classes between the PCAF and the SBTi

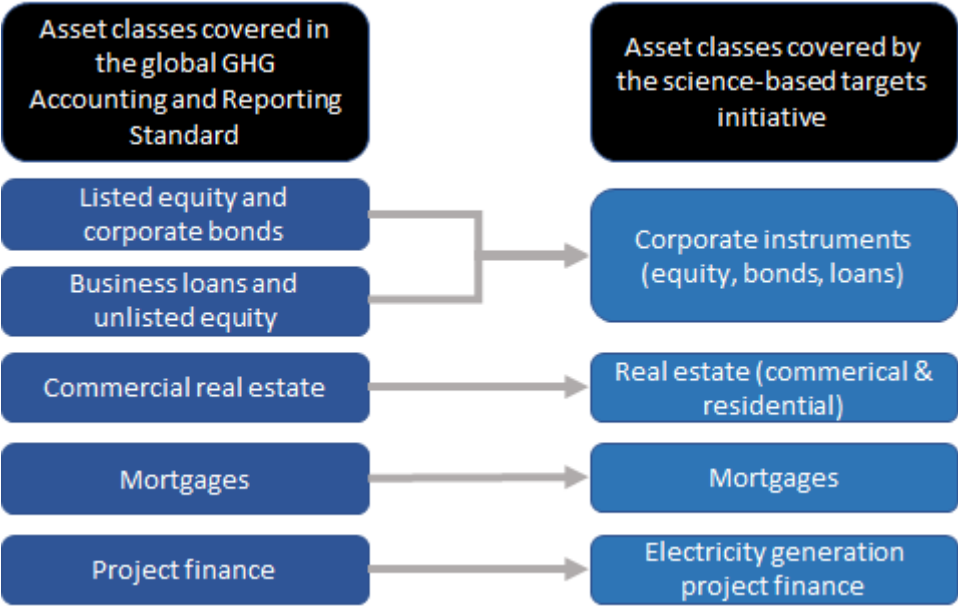


Figure 11: ‘Asset Class Overlap between the PCAF and the SBTi’ (Authors’ preparation based on [PCAF, 2020](#); [Science Based Targets, 2021b](#))

2. Target setting

Financial institutions may use PCAF methods to conduct a portfolio-wide emissions screening and prioritize which part of a portfolio to focus on for target setting (i.e., asset classes and sectors)

Following this prioritization, financial institutions measure emissions associated with their investing and lending activities to determine the emissions baselines from which emission-based SBTs are set

Setting SBTs

The SBTi supports three methods for financial institutions:

- the Sectoral Decarbonization Approach (SDA);
- the SBT Portfolio Coverage Approach; and
- the Temperature Rating Approach.

Scope 1 and 2 emissions are the starting point for setting SBTs. They are required as a minimum for all financial institutions (ideally, scope 3 is also included).

3. *Monitoring*

At the monitoring stage, financial institutions setting targets shall annually measure their progress against the target.

Paris Aligned Investment Initiative's Net-Zero Investment Framework¹¹³

The Paris Aligned Investment Initiative was launched by the Institutional Investors Group on Climate Change (IIGCC) in 2019. More than 110 IIGCC members, representing over USD 33tn in assets under management, provided key inputs to the development of a draft Net Zero Investment Framework.

Actions to align portfolios and achieve targets

Steps to be taken to align portfolios and to achieve targets:

1. For existing active assets, positively weight towards good performers and underweight poor performers within a sector on alignment criteria.
2. For new active assets, apply screening criteria as part of investment analysis for inclusion based on alignment or potential for transition.
3. Use specialist benchmarks, products or funds focussed on alignment and climate solutions.
4. For passive assets, apply an index that utilises positive weightings based on alignment criteria and a climate solutions revenue metric.
5. Increase allocation to green bonds that are based on verifiable forward-looking use of proceeds for climate mitigation activities, as part of the strategy to increase investment in climate solutions.

Emissions accounting and offsetting

¹¹³ [IIGCC. \(2021\) Paris Aligned Investment Initiative Net Zero Investment Framework.](#)

At the asset level

- Investors should assess scope 1, 2 and material scope 3 emissions associated with the asset, using GHG Protocol accounting methodologies

At the portfolio level

- Investors should set targets based on scope 1 and 2 emissions associated with their investments. In the longer-term, inclusion of scope 3 emissions may be possible. In any case, these have to be considered and reported separately from scope 1 and 2 due to the significant issue of double-counting.

General principles

- Investors should not use purchased offsets at the portfolio level to achieve emissions reduction targets (credits purchased by participants within regulated carbon markets that are designed to meet the net zero emissions goal can be used).
- decarbonization and avoided emissions should generally be treated separately.

Net-Zero Asset Owner's Protocol¹¹⁴

The Net-Zero Asset Owner Alliance (NZAOA) is a group of 37 of the world's largest investors, with a total of USD 5.7tn in assets under management, that have pledged to reduce carbon emissions in their portfolio to net-zero by 2050. The NZAOA's "2025 Target Setting Protocol" sets out how individual members will set a target achievable in the next five years.

The Protocol commits each member organization to formulate ambitious targets for 2025 that cover:

1. Engagement targets with companies and policy-makers
2. Sub-portfolio emission targets
3. Sector emission intensity-based reduction targets
4. Climate-positive investment targets

The Alliance members will issue their intermediary targets and report on progress in line with Paris Agreement Article 4.9.

¹¹⁴ [UNEP FI. \(2021c\)](#) UN-covered Net-Zero Asset Owner Alliance - Inaugural 2025 Target Setting Protocol.

