Monetary Authority of Singapore

Guidelines
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Guidelines on Environmental Risk Management (Insurers) - Transition Planning

CONTENTS

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1 Introduction

1.1 The Guidelines on Environmental Risk Management (Insurers) - Transition Planning ("TPG") set out MAS' supervisory expectations for insurers to manage the transition and physical risks they face from climate change ("climate-related risks") as part of a sound transition planning process. This builds on existing expectations set out in the Guidelines on Environmental Risk Management for insurers to incorporate environmental considerations into their risk appetite, strategies and business plans.

1.2 **"Transition planning"** refers to the internal risk management processes and strategic planning undertaken by an entity to prepare for climate-related risks and potential changes in business models associated with climate change. This includes building resilience to a range of future states of the world (including varying degrees of physical risk, and potential shifts in policy, technology, or consumer sentiments). A **"transition plan"** refers to a documented output of the transition planning process, and can be internal documents or be externally disclosed.

1.3 **The TPG are focused on risk management, but MAS recognises that as with other types of risk, business strategies can have an impact on the level of risk exposure.** The TPG set out expectations for insurers to assess and manage climate-related risks arising from these business strategies over varying time horizons and for their business strategies to take into account climate-related risks.

1.4 **The objective of the TPG is for insurers to implement a sound internal process that:**

(a) Adequately addresses their climate-related risks

Insurers need to assess and manage the risks associated with both physical and transition risks arising from climate change. These risks will ultimately impact more 'traditional' risk types like underwriting risk, for instance through increased frequency and severity of claims arising from climate-related events.

Insurers should understand the implications of climate change on their business and adapt their business models, governance and risk management practices accordingly. In this regard, insurers should have a structured, risk-proportionate process to engage customers, asset managers and investees on the material climate-related risks they face and their management of such risks.

Where insurers have chosen to set targets, they need sound internal processes to manage any material risks arising from those targets, such as by having an effective strategy to address any potential legal and/or reputational risks due to deviations from any communicated targets.

(b) Facilitates climate-related risk management (including risk mitigating actions and adaptation measures) by customers and investees, thereby supporting broader financial stability

Insurers should not indiscriminately withdraw insurance coverage and investment from customers or investees with higher climate-related risks. This could increase the risk of stranded assets, widen protection gaps and contribute to a disorderly transition that would be detrimental for the system as a whole – and potentially the insurer itself as well.

Insurers should instead seek to engage these customers and investees in a risk-proportionate manner, and provide them with an opportunity to identify and manage climate-related risks to address insurers' concerns. The data collected from customers and investees may therefore differ depending on their risk materiality to the insurer. Insurers may also take a multi-year view in engaging customers and investees on their risk profiles. The point-in-time emissions level of a customer or investee alone may not mean a higher level of risk to the insurer if the customer or investee is in the process of implementing risk management measures.

The pace of transition will depend on local circumstances, including government policies around economic transition pathways and other domestic developments. For example, the phasing out of internal combustion engine vehicles will depend on various factors such as local infrastructure readiness and consumer preferences. Where jurisdictional-level transition/decarbonisation roadmaps (e.g. for specific sectors) and/or adaptation roadmaps (e.g. for specific geographies) are in place, insurers should take these into account when engaging customers and investees by considering the impact of these roadmaps on customers and investees and encourage additional risk management actions if needed.

Application

1.5 The TPG build on and should be read together with MAS' existing supervisory guidance[1] to insurers[2]. The TPG are an elaboration of MAS' supervisory expectations around insurers' transition planning.

[1] Examples include: i) MAS' Guidelines on Environmental Risk Management ("ENRM Guidelines") – effective since June 2022 – which set out MAS' expectations for insurers to build resilience against the impact of environmental risk; ii) MAS' Information Paper in May 2022 sharing our observations on insurers' progress in addressing environmental risk, including through the consideration and integration of such risks into their business strategies and risk management processes.

[2] As defined in the ENRM Guidelines, "insurers" refers to all insurers, including insurers carrying on business in Singapore under a foreign insurer scheme established under part 2A of the Insurance Act 1966.

(a) The TPG are applicable to insurers providing insurance coverage to corporate customers, insurers' investment activities, and other activities that expose insurers to material environmental risk.

(b) The TPG are applicable on a group basis for locally-incorporated insurers that are headquartered in Singapore[3]. Insurers that are branches or subsidiaries of global groups may take guidance from their Group's transition planning as long as the Group's transition planning approach meets the expectations set out in the TPG.

1.6 MAS expects insurers' implementation of transition planning processes to mature as best practices evolve.

(a) MAS recognises that current data and methodology constraints may limit the insurers' ability to implement certain aspects of the transition planning processes in the immediate term. Nonetheless, that should not deter insurers from making progress on transition planning, including enhancing data availability. Insurers are expected to implement the TPG on a risk-proportionate basis, considering the nature of their customers' and investees' business models and the materiality of the resulting risks. Insurers are also expected to take an iterative approach to enhance their transition planning and embed better practices into their business-as-usual processes over time.

i. In particular, as capacity, capabilities and data availability improve, insurers should continue their efforts to address environmental risks beyond climate-related risks[4], taking into account that these risks are often inter-linked. Insurers should, to the extent possible, consider whether additional data collection and risk management measures to address other environmental risks may be needed.

(b) MAS recognises that the scale, scope and business models of insurers can be different and will continue to take a risk-proportionate supervisory approach. Insurers should implement the TPG in a way that is commensurate with the size, nature and risk profile of their activities.

[3] For a locally-incorporated insurer that is headquartered in Singapore, this refers to the group including the holding company in Singapore, as well as the insurer's subsidiaries and branches in Singapore and overseas, where applicable. For a locally-incorporated subsidiary of a foreign insurer, this refers to the subsidiary's operations in Singapore and its downstream subsidiaries and branches in Singapore and overseas, where applicable.

[4] Network for Greening the Financial System (NGFS) (2022) Statement on Nature-Related Financial Risks. Nature-related risks, including those associated with biodiversity loss, could have significant macroeconomic implications, and failure to account for, mitigate and adapt to these implications is a source of risks for individual financial institutions as well as for financial stability.

2 Governance and Strategy

2.1 **Decisions made by the insurer's Board of Directors ("Board") and senior management around business strategy and risk appetite (e.g. through portfolio allocation) should take into consideration how the current and future changes in operating environment arising from climate change will impact the insurer's risk profile.** The Board is responsible for ensuring that the insurer's risk appetite[5], framework and policies adequately address the insurer's business strategy and risks as it navigates such changes.

2.2 **The insurer's senior management should actively ensure that its climate-related business strategy and risk appetite are effectively embedded within the insurer's operations.** Steps taken should include (but are not limited to):

(a) Establishing a robust governance process, to facilitate the understanding of key climate-related assumptions, dependencies, and residual risks covering areas such as business strategies, risk appetite, risk metrics, scope, risk framework, implementation timelines and approach;

(b) Establishing a clear tone from the top around the need to address climate-related risks, such as when making decisions around business strategy and risk appetite;

(c) Establishing clear lines of communication and escalation across different parts of the insurer to address climate-related risks that cut across functions;

(d) Ensuring that internal strategies and risk appetite statements are consistent with any publicly communicated climate-related strategies and commitments[6]; and

(e) Establishing mechanisms to implement business strategies and align internal behaviour to address climate-related risks (such as through performance measurement, remuneration policy and incentive structures)[7].

2.3 **The insurer's senior management should establish a mechanism(s) through which the insurer's existing approach (and implementation thereof) to transition planning is regularly refined.** The insurer should view transition planning as an iterative process and regularly review its approach,

[5] Risk appetite statements should be actionable and decision-useful. Insurers can refer to Section 2.3, Focus Area 3: 'Risk Appetite' of the Information Paper on Environmental Risk Management (Insurers) for examples of qualitative and quantitative risk appetite statements.

[6] For example, if the insurer has set decarbonisation targets in support of a stated climate objective, it should take care that relevant and material activities are in scope of its targets (e.g. by considering both financed and insurance-associated emissions for potential inclusion).

[7] For example, as noted in the International Association of Insurance Supervisors' (IAIS) Application Paper on the supervision of climate-related risks in the insurance sector, insurers should consider the use of variable remuneration to reflect progress made in managing and mitigating climate-related risks. Aligning variable remuneration with reaching climate-related goals can be a helpful tool to support meaningful integration of good sustainability practices into decision-making.

including its risk appetite and risk framework, for continued appropriateness and effectiveness. It should also incorporate industry developments and emerging best practices into its approach in a timely manner.

3 Risk Management

Portfolio management – forward-looking risk assessment tools

3.1 **The insurer should employ a range of forward-looking tools, such as scenario analysis and stress testing in its transition planning process for risk discovery and quantification.** In the deployment of these tools, the insurer should consider the impact of climate-related risks on its portfolios under a range of plausible scenarios. The results of such exercises, where material over relevant time horizons, should be incorporated into the insurer's planning processes (including its internal capital adequacy assessment process) so as to trigger the appropriate management actions. For example, this could include, but is not limited to, decisions around business strategy and risk appetite, enhancements to risk management policies and practices, or the bolstering of capital and liquidity levels.

3.2 **The insurer should continue to develop its capabilities in climate scenario analysis and stress testing, referencing leading industry practices wherever possible[8].** Climate scenario analysis can be used to identify and assess emerging risks which the insurer should take into consideration in its transition planning. For example, certain assets may present increased risks if those sectors become negatively impacted by policy shifts or technological changes related to climate change. Non-life insurers can use scenario analysis to measure the compounding impact of several catastrophe risk perils occurring consecutively in short order. Parameters and assumptions for climate stress testing scenarios may be adopted from modelling work performed by meteorological agencies, regulators or other external experts[9]. The insurer should use models that are pertinent to its geographical scope and nature of business. It is important that the insurer understands these models, the uncertainties of their results and their underlying assumptions when deciding on the models' relevance.

3.3 **The insurer should endeavour to address material data gaps to allow it to adequately capture and differentiate the level of climate-related risks that its counterparties face.** When modelling the impact of climate-related risks, the insurer should factor in relevant and reasonably reliable forward-looking information to capture the estimated level of climate-related risks that counterparties are exposed to. This could include counterparties' transition plans, where these are reasonably expected to be implemented.

[8] Insurers can refer to the IAIS' Application Paper on the supervision of climate related risks in the insurance sector. Other scenario analysis guides and publications have also been produced by the NGFS and United Nations Environment Programme Finance Initiative (UNEP FI).

[9] In developing climate risk modelling frameworks, the insurer can leverage external reference scenarios, such as the scenarios published by the NGFS.

Portfolio management – data and metrics

3.4 **The insurer should recognise the inherent limitations of using proxy data[10] to bridge data gaps when performing its climate-related risk assessments at the individual investment/customer and portfolio levels.** The insurer should document the decisions on its choice of proxy data, such as the sources, underlying assumptions, methodologies and limitations, so that future iterations and enhancements are made on an informed basis. The insurer should articulate how the use of the proxy data chosen could have material implications on its risk assessment outcomes so that limitations from the use of such proxy data are adequately factored into the decisions taken. The use of proxy data should not detract from longer-term efforts to obtain primary data that is more decision-useful.

3.5 **The insurer should utilise metrics to track its risk exposures and determine if its risk exposures are in line with its risk appetite and associated targets, where relevant.** The choice of metrics[11] will depend on how the insurer approaches the management of relevant risks and its business model. In selecting the appropriate metrics across the short-, medium- and long-terms, the insurer should:

(a) Clearly identify the scope and coverage of these metric(s), including the customer and investee segments in scope (e.g. large corporates within a particular sector and geography) at the appropriate sectoral and geographical granularity;

(b) Consider the insurer's business and risk profile at an appropriate level of granularity;

(c) Recognise limitations arising from the choice of metric(s) and/or lack of data, and supplement with additional information as necessary;

(d) Monitor these metric(s) with a multi-year risk perspective including having a process to understand the key drivers of changes in such metric(s) (particularly if there is a material difference between actual and planned outcomes), so as to facilitate better risk identification and management; and

(e) Review all relevant risk metric(s) periodically for continued relevance given the evolving nature and understanding of climate change.

[10] This includes cases where the insurer chooses to source its data from data vendors, where the reasonableness of any assumptions or proxies used by the vendor in deriving missing datapoints should be recognised, assessed and considered in decision-making where material.

[11] Potential metrics (and associated targets) that insurers may voluntarily choose to utilise could include: portfolio financed emissions with associated portfolio decarbonisation targets across specific dates, sector-level policies (which could factor in jurisdictional, regional and/or global sectoral transition pathways) or proportion of portfolio exposed to specific physical hazards.

3.6 **The insurer should consider the impact of any targets set or lack thereof on the insurer's business strategy and risk profile, with residual risks identified and addressed.** For instance, it could include establishing appropriate governance guardrails and risk management processes for risks arising from short-term deviations from such targets. Where an insurer has published decarbonisation targets across the short-, medium- and long-term for their insurance and investment portfolios, it should consider:

(a) Clearly identifying and calibrating the customer and investment segments in scope by considering their financed and insurance-associated emissions[12] profiles at the appropriate granularity;

(b) Taking a multi-year perspective by supplementing[13] point-in-time financed and insurance-associated emissions data with additional information on possible future financed and insurance-associated emissions[14] where relevant. This is because short-term fluctuations in financed and insurance-associated emissions may not be inconsistent with longer-term reductions;

(c) Assessing whether the targets set could impact the insurer in other ways, such as by changing its overall risk profile from a geographical/industry diversification perspective; and

(d) Regularly review targets set for continued relevance considering relevant developments[15] at the global, regional and jurisdictional level.

Implementation strategy (people, processes, systems)

3.7 **The insurer should equip its staff, including through capacity building and training, with adequate expertise to assess, manage and monitor climate-related risks in a rigorous, timely and efficient manner**. The insurer should develop staff capability to effectively engage customers, asset managers and investees on developing a credible strategy as a response to climate-related risks. Where relevant, the insurer can consider using stakeholder engagement toolkits (such as analytical tools or customer assessment templates) to facilitate consistent engagement processes by its staff.

[12] Gross, rather than net, metrics should be used to distinguish the effects of carbon credits.

[13] Point-in-time emissions data would not capture future reductions in financed and insurance-associated emissions (e.g. a multi-year investment to install carbon abatement technology).

[14] Usage of such projected future emissions should recognise their inherent uncertainty of materialisation, and be premised on the willingness and capability of customers' and investees' abilities to follow through with their plans.

[15] Future climate policy and technological changes may result in the evolution of jurisdictional, regional and/or global transition pathways over time. This could have consequent impact on the business models and risk profiles of the insurers' customers and investees. Insurers should factor in such developments when assessing the impact to their exposures from these customers and investees.

3.8 **The insurer should regularly review its internal governance and processes, including its risk management framework, to manage climate-related risks in a systematic manner**. Scalable and consistent processes will allow the insurer to cascade and implement its climate-related risk strategy and plans effectively. This could include alignment of existing products, investments, services and business activities with the insurer's strategy, as well as embedding of strategic climate considerations in decision-making processes.

3.9 **The insurer should develop and implement a data strategy to build, maintain and analyse relevant climate-related data to support effective decision-making.** Relevant climate-related data could include information to enable tracking of the insurer's commitments, transition and physical risks, mitigating factors (e.g. status and adequacy of customers' and investees' plans to address risks), sector analysis to identify changes in business operating environment as well as information on other climate-related risks impacting its portfolio. System(s) should be in place to reliably collect, aggregate, and enable accessibility of relevant climate-related data across the insurance group as part of the overall data governance and IT infrastructure. The insurer should have appropriate mechanisms in place to facilitate improvement of data-related processes over time, including the identification of new-to-insurer relevant datapoints and data sources, data collection processes as well as participation in and support of emerging developments of technological solutions[16]. As data availability and quality are expected to improve over time, insurers should build systems and processes that will be able to accommodate future enhancements (e.g. inclusion of new datapoints or additional granularity).

[16] This may include, but are not limited to, utilising data obtained from customers', asset managers' and investees' disclosures when made available over time and supporting industry initiatives to harmonise data.

4 Underwriting

Engagement with customers

4.1 **Customer engagement is a means for insurers to manage their climate-related risks arising from exposures to their customers.** Customers that do not take steps to adapt to a changing business environment could face higher climate-driven losses or have a reduced capacity to meet their financial obligations.

4.2 **The insurer should have a structured process to engage customers on the climate-related risks that they face and their response to such risks.** The insurer should encourage customers, particularly those identified as vulnerable to transition[17] and/or physical risks, to proactively manage these risks. Where relevant, such engagements may include, but are not limited to:

(a) Referencing available information about potential future trajectories (e.g. jurisdictional, regional and/or global sectoral transition pathways, future sector technological mix) and potential physical hazards[18] arising from climate change to identify risks that customers are materially exposed to;

(b) Addressing the risk of an increasing protection gap (which could arise due to increased frequency and intensity of climate-driven catastrophes) and the longer-term viability of customers' business models;

(c) Considering transition and/or physical risk management measures (such as investments in adaptation measures or recovery efforts after hazard events), including their impact on cashflows and capital expenditure; and

(d) Factoring in customers' forward-looking risk profile and risk management actions in the insurer's risk assessment and management.

4.3 **The insurer should engage customers on a risk-proportionate basis.** This may entail adjustments in the frequency and intensity of customer engagement in relation to the level of risk that the customer poses to the insurer.

4.4 **The insurer should seek to collect sufficient climate-related risk data about the potential impact of climate change on customers' business and risk profiles, so as to inform its risk decisions and underwriting strategies. The customer engagement process can be a means to collect such information.** The insurer can take a risk-proportionate approach in data collection

[17] Such as those directly engaging in carbon intensive activities or indirectly dependent on such activities through supply chain linkages.

[18] Such as acute or chronic physical hazards that could directly affect customers' business operations through damage to or disruption of key physical assets, or indirectly through impacts on the insurability of their assets and operations.

from its customers, including by differentiating the extent and granularity of climate-related risk data collected from such customers based on their risk materiality to the insurer, business and risk profile, size and capabilities. For example, the amount of data collected from small- and medium-sized enterprise (SME) customers might be proportionately lesser than that from large customers posing material climate-related risks to the insurer[19]. The insurer can consider developing or building on existing structured templates to facilitate collection of consistent and comparable customer data. Examples of climate-related risk data could include, but are not limited to the following:

(a) Customers' self-assessed impact of transition and physical risks;

(b) Customers' climate-related commitments, initiatives and strategies;

(c) Mechanisms put in place by customers to deliver such climate-related commitments, initiatives and strategies (e.g. incentives, compensation, etc);

(d) Customers' key asset locations;

(e) Customers' exposure to supply chain risks (including pass through of carbon costs) and impact on working capital cycles;

(f) Customers' carbon emissions data and vulnerability to changes in government policies, technological developments, and shifts in consumer and investor sentiments; and

(g) Customers' existing or planned measures to address transition and physical risks.

4.5 **The insurer should not indiscriminately withdraw insurance coverage from customers exposed to higher climate-related risks.** Doing so would hinder companies with plans to implement risk management measures from securing the insurance coverage they need, thereby widening the protection gap and increasing the risk of a disorderly transition.

Risk selection

4.6 **The insurer should account for sectoral specificities and, where appropriate, take a differentiated approach for sectors (at an appropriate level of granularity) posing higher climate-related risks in its transition planning.** The insurer can consider the use of global, regional and/or jurisdictional sectoral transition pathways, as well as jurisdictional specificities (e.g. presence of sector-level plan) to inform risk decisions and facilitate engagement with customers. These considerations should be underpinned by sufficient understanding of the

[19] The insurer can take an iterative approach in data collection from customers and enhance such data collection over time as corporates' ability to provide such data improves.

sectoral transition pathways it references, including the underlying assumptions and scope of these pathways, to guide its approach.

4.7 **Likewise, the insurer should factor in different characteristics of customers (e.g. different levels and sources of climate-related risks, different stages of readiness), and take a differentiated approach, where appropriate, in its transition planning.**

(a) The insurer can consider the circumstances of each customer, such as its jurisdictional operating environment (e.g. the presence of any jurisdictional-level climate-related sectoral initiatives, targets or plans), in engaging its customers.

(b) For customers or sectors exposed to high physical risk, the insurer should consider the physical risks these customers or sectors are exposed to at an appropriate level of granularity, and model the expected climate-related losses. The insurer can also consider factoring the existence and progress of risk reduction measures such as jurisdiction-level adaptation projects into its risk assessment process.

(c) The insurer should address climate-related risks across its customer base comprehensively, in a risk-proportionate manner. For instance, customers that generate revenue based on climate solutions [20] could be particularly exposed to risks from uncertainties around technology development and adoption, supply chain challenges and the operating environment. Insurers should hence recognise the potential correlations or novel risks that such exposures bring, whether individually or in aggregate.

[20] Climate solutions here collectively refers to (i) assets that directly eliminate, remove or reduce GHG emissions; (ii) indirectly contribute to, but are critical for, emission reductions by facilitating the deployment of assets that directly contribute to GHG emissions reductions; and/or (iii) nature-based solutions.

5 Investment[21]

Engagement with asset managers and investees

5.1 **Engagement with asset managers and investees is a means for insurers to manage their climate-related risks from exposures through their investments, which may materialise over an extended period.** Asset managers that do not develop robust climate-related risk management capabilities and investees that do not take steps to adapt to a changing business environment could have a reduced capacity to deliver the expected returns.

5.2 **The insurer should have a structured process to engage asset managers and investees[22] on the climate-related risks that they face and their response to such risks.** The insurer should encourage its asset managers to proactively manage climate-related risks in the insurer's investment portfolio on an ongoing basis.

5.3 **The insurer should engage asset managers and investees on a risk-proportionate basis.** This may entail adjustments in the frequency and intensity of the engagements in relation to the level of risk that the investment poses to the insurer.

5.4 **The insurer should seek to collect sufficient climate-related risk data about the potential impact of climate change on the insurer's investment portfolio, so as to inform its risk decisions and investment management strategies, and the engagement with asset managers and investees can be a means to collect such information.** The insurer can take a risk-proportionate approach in data collection from its asset managers and investees, including by differentiating the extent and granularity of climate-related risk data collected based on the investment's risk materiality to the insurer. Examples of climate-related risk data could include data/proxy data used by asset managers in their climate-related risk assessments.

5.5 **The insurer should not indiscriminately divest from investees exposed to higher climate-related risks.** Doing so would hinder investees with plans to implement risk management measures from securing the financing they need, thereby increasing the risk of stranded assets and a disorderly transition.

Portfolio management approach

5.6 **The insurer should account for sectoral specificities and, where appropriate, take a differentiated approach for sectors (at an appropriate level of granularity) posing higher climate-related risks in its transition planning.** The insurer can consider the use of global,

[21] Insurers with investment activities should also refer to the relevant sections of the TPG for Asset Managers, for sound practices on transition planning with respect to investments.

[22] Insurers should also refer to the relevant sections of the TPG for Asset Managers for sound practices on engagement with investees.

regional and/or jurisdictional sectoral transition pathways, as well as jurisdictional specificities (e.g. presence of sector-level plan) to inform investment decisions and facilitate engagement with asset managers and investees. These considerations should be underpinned by sufficient understanding of the sectoral transition pathways it references, including the underlying assumptions and scope of these pathways, to guide its approach.

5.7 **Likewise, the insurer should factor in different characteristics of investments (e.g. different levels and sources of climate-related risks, asset managers and investees who are at different stages of readiness), and take a differentiated approach, where appropriate, in its transition planning.**

(a) The insurer can consider the circumstances of each asset manager and investee, such as its jurisdictional operating environment (e.g. the presence of any jurisdictional-level climate-related sectoral initiatives, targets or plans), in its engagements.

(b) For investments in sectors exposed to high physical risk, the insurer should consider the physical risks these investments are exposed to at an appropriate level of granularity (such as by determining the current realisable value based on sufficiently granular physical hazard estimates). The insurer can also consider factoring the existence and progress of risk reduction measures such as jurisdiction-level adaptation projects into its risk assessment process.

(c) The insurer can utilise a range of financing solutions (e.g. blended finance, early retirement of carbon-intensive assets) to support its asset managers and investees in carrying out risk management measures based on specific and meaningful risk metrics.

(d) The insurer should address climate-related risks across its investment portfolio comprehensively, in a risk-proportionate manner. For instance, investments focused on climate solutions [23] could be particularly exposed to risks from uncertainties around technology development and adoption, supply chain challenges and the operating environment. Insurers should hence recognise the potential correlations or novel risks that such exposures bring, whether individually or in aggregate.

[23] Climate solutions here collectively refers to (i) assets that directly eliminate, remove or reduce GHG emissions; (ii) indirectly contribute to, but are critical for, emission reductions by facilitating the deployment of assets that directly contribute to GHG emissions reductions; and/or (iii) nature-based solutions.