GUIDE FOR ENVIRONMENTAL RISK QUESTIONNAIRE

FOREWORD

Environmental risks, including climate risk, are recognised as one of the top risk categories in the financial sector with impacts on lending portfolios. Climate change has been widely discussed in the recent COP26 along with other risks such as loss of biodiversity which have further increased the business risks for bank customers. Climate change comprises of physical risk and transition risk which are defined by the Task Force on Climate-related Financial Disclosures (TCFD) as:

- Physical Risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption. Organisations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organisations' premises, operations, supply chain, transport needs, and employee safety. **Acute physical risks** refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods. **Chronic physical risks** refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

- Transitioning to a low-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations. Transition risks include **policy and legal risks, technology risks, market risks and additionally reputational risks**.

In addition, loss of biodiversity has emerged as a key risk to the stability of communities and economies in terms of food provision, water availability, air quality, etc. Assessment of potential biodiversity issues at customer locations is required in the environmental risk assessment.

It is challenging to assess financial impacts of environmental issues on customers and portfolios due to (i) the relevant impacts not always clear, (ii) lack of data or quantification methods for such risks, and (iii) overfocus on near term rather than long term impacts. With requirements of environmental assessment at customer level, as well as portfolio level, banks are increasingly required to source environmental data from external sources, such as fintechs, ESG rating agencies, government agencies, etc., and further seek inputs from their customers on environmental risk impacts. This Environmental Risk Questionnaire (hereinafter "ERQ") is recommended for banks in Singapore to conduct structured discussions with their customers, upskill employees on environmental risk concepts, and simultaneously collect customer data in a standardised format. The ERQ is designed to lay out basic level questions at this stage to allow easy adaptation and is expected to evolve through an iterative process to include sector addendums in next stages.

The ERQ is divided into four sections:

(1) Risks: Questions are directed at understanding environmental risk aspects of the customer including transition risk, physical risk, reputational risk and biodiversity risk in terms of magnitude and timing of impact. Transition risk is further analysed using questions for policy and regulation risk, technology risk, legal risk and market risk. The section explores how these risks arise for the customer and what mitigation steps have been undertaken to mitigate such risks, all of which provide an assessment on how these may impact credit risk.

(2) Governance: The section focuses on understanding internal governance process, strategy and policies of the customer to manage environmental risks. The section further explores reporting standards adopted by customers such as sustainability report (including assurance), reporting against TCFD and other external ESG ratings obtained by the customer.

(3) Metrics: The section is primarily for understanding whether customers have developed measures and targets for managing environmental risks. A key focal point is on whether GHG emission data have been quantified and disclosed by customers, which will be directly relevant to understand Scope 3 financed emissions in banks' portfolios.
(4) Sustainable Financing: The section supports the identification and assessment of sustainable financing opportunities by including questions pertinent to customer's sustainable financing strategy and framework. This section also further explores financing requirements of customers.

Recommended Application of the Questionnaire

Sector	The Applicable sectors will be aligned with the Green Finance Industry Taskforce (GFIT) Taxonomy consultation paper and will cover hard-to-abate sectors, i.e.: (1) Agriculture and Forestry/Land Use; (2) Construction/Real Estate; (3) Transportation and Fuel; (4) Energy, including Upstream; and (5) Industrial. While some sectors are not considered carbon-intensive, they play a critical role in climate change mitigation and adaptation and are therefore considered for this exercise, i.e.: (6) Information and Communications Technology (7) Waste/Circular Economy (8) Carbon Capture and Sequestration Mapping available at: gfit-taxonomy-consultation-paper (abs.org.sg) Banks have flexibility to add more sectors to the ERQ depending on their assessment of environmental risk in lending portfolio. In case banks already have frameworks for assessing environmental risks, it is recommended that the abovementioned hard-to-abate sectors are included, in addition to other sectors that are already covered in the existing frameworks.

Applicability	Application of the ERQ is recommended for customers with credit exposure at USD10 million or above credit exposure (including short term exposure, such as trade finance). Individual banks are encouraged to exercise their own climate risk materiality assessment to adjust the credit exposure threshold upon which this ERQ applies.
	• The ERQ is applicable to lending transactions. Banks are encouraged to adopt the questionnaire for standalone financing facilitation transactions in capital markets, such as DCM and ECM.
	• The ERQ is recommended to be completed and refreshed at on-boarding, annual review of customers, as well as material new money transactions.
	• In case of syndicated loans, each participating bank is expected to complete their own questionnaire, similar to credit assessment of the borrower.
	• Customer Segment
	  ○ The ERQ is applicable to corporate clients and SMEs, including corporate entities which are held by private individuals.
	  ○ In case of a group consisting of sister companies, it is recommended to aggregate exposures for benchmarking against the credit exposure threshold. In case a group has

	multiple corporate entities which are borrowers, a single ERQ can be completed in case business nature of all group entities is similar. In case of different business nature, multiple ERQs need to be completed as per businesses of individual entities.
SME Segment	It is acknowledged that Large Corporates have wider capabilities on environmental risk and the associated data is available through their public disclosures. SGX requirements on mandatory climate-related disclosures based on TCFD has also strengthened reporting standards for listed companies. As such, large corporates generally have a broader coverage of environmental risks and public disclosure of associated data. In comparison, mid-market corporates and small/medium enterprise segment corporates are generally in early stages of understanding climate risk, assessing impact on their business and formulating mitigation and adaptation strategies. Hence, there may be limitations on data availability in the SME customer segment. To cater to the varying degrees of climate risk exposure and data availability, users of the ERQ (i.e., banks) should exercise their discretion to identify questions that are deemed mandatory, and questions that are complimentary (i.e., good to have), therefore considered Optional in line with its climate risk materiality assessments and credit risk appetite. For instance, for an SME customer, some questions related to climate risk data and public disclosures may not generate appropriate responses at this point, given SME customers generally do not report with reference to TCFD or other disclosure standards. These questions are likely assigned as Optional, rather than Mandatory for this customer segment.
Group/ Subsidiary	The ERQ assesses the customer at group level, for e.g., in case a customer is a subsidiary of a multinational corporation, board policy at the group level can be provided to evidence governance. Only in case of physical risk, listing for properties should be provided at the borrower level, unless the bank is of the view that assessment of properties at group level leads to better assessment of physical risk.
Timeline	Banks are recommended to apply the questionnaire as early as possible within the remits of their infrastructure in line with their launching and capacity building requirements, if any. A non-digital version ERQ is recommended at this stage with digitisation through Project Greenprint to be progressed in 4Q2022.

RISK SECTION

1.1 Physical Risk

PHYSICAL RISK: Has the customer faced or expected to face any impact from **physical risk**?	YES - Medium Risk
When would the impact be expected to materialise?	3-10 years
Additional Comments: • if YES, how did such risk arise? • What are the measures implemented by the customer to address impact of such risks? • If the customer has completed a physical risk assessment, please provide a copy of the assessment report. • Please provide key asset locations of the customer, including both operating assets and collateral assets. (The list should include material assets of the customer. For detailed asset selection criteria and guidance for companies with more than five assets, please refer to the guidance note.)	

SN	Asset Type	Classification	Address					
			Street	District	City	Province/State	Country	Postal Code
1		Choose an item.						
2		Choose an item.						
3		Choose an item.						
4		Choose an item.						
5		Choose an item.						

Physical climate hazards include:

- Acute physical hazards, generally considered to consist of lethal heatwaves, floods, wildfires, extreme precipitation, as well as storms (including hurricane, cyclones and typhoon); and
- Chronic physical hazards, generally considered to consist of rising sea levels, rising average temperature and ocean acidification.

In addition, the abovementioned physical risks may also cause indirect effects, such as loss of ecosystem services, e.g. desertification, water shortage, degradation of soil quality or marine ecology. Please refer to the Climate-related Risk Drivers and Their Transmission Channels published by the Basel Committee on Banking Supervision for further information regarding how physical climate risks may affect banks' financial risks via micro-and macro-economic transmission channels.

Relationship managers should provide physical risk rating in line with the following criteria:

- **High Risk** – Physical risks faced or expected to be faced by the customer: (i) are diverse, (ii) have significant impact on its own operation, business performance or business value chain, or (iii) require significant efforts on the implementation of mitigation measures.

- **Medium Risk** – Physical risks faced or expected to be faced by the customer (i) are few in number, (ii) having limited impact on its operation, business performance or business value chain, or (iii) can be readily addressed through mitigation measures.
- **Low Risk** – Physical risks faced or expected to be faced by the customer only have minimal impact or no impact to its operation, business performance and value chain.

Relationship managers are encouraged to discuss with relevant management representatives of the customer, e.g. General Manager, Operation Manager and/or Environmental Health and Safety Manager, to provide additional comments.

How did such risk arise?
Commentaries to this question may include (i) details of historical events encountered by the customer relating to the abovementioned physical climate hazards, e.g. type of physical climate hazards encountered, date of the event, duration of the event, etc.; (ii) details of future potential physical risks that the customer is expected to face; (iii) details of the relevant assessments completed by the customer relating to historical and future potential physical risks.

What are the measures implemented by the customer to address impact of such risks?
Commentaries to this question should include mitigation measures implemented by the customer in view of the physical risks faced or to be faced by the customer. Potential mitigation measures may include (i) development of a Business Contingency Plan, Emergency Preparedness and Response Plan or risk management programs relating to physical risks, (ii) development of business strategies to address physical risk, (iii) optimisation of supply chain management approach for managing physical risk, (iv) Capex and Opex planned for addressing physical risk, (v) Insurance coverage undertaken for such physical risk, etc.

Example
Company ABC Pte Ltd (henceforth, ABC) is a company in the microelectronics industry which has three manufacturing facilities, i.e. Facility A in Country X, Facility B in Country Y and Facility C in Country Z. Approximately 70% of its total revenue comes from Facility A and Facility C. In 2019, Facility A suspended its operation due to a severe flood. In 2020, ABC completed a climate risk assessment, which revealed potential climate risks that the company is expected to face in short, medium and long term time horizon.

1.1	**PHYSICAL RISK:** Has the customer faced or expected to face any impact from **physical risk**?	YES - High Risk
	When would the impact be expected to materialise?	3-10 years

How did such risk arise?
In September 2019, a severe flooding occurred in Country X due to heavy precipitation and affected the operation of Facility A, a semiconductor fabrication facility of ABC. Reportedly, no safety incidents or injuries were caused by the flood within the premise of Facility A; however, operations were suspended for 3 months due to physical damages caused at its facility. In addition, there was a suspension of Facility A's operation due to the physical damages at Facility C, as the majority of the components used by Facility C for its production come from Facility A.

According to management representatives of ABC, the company completed an assessment of financial impacts of the flood and the revenue loss was estimated at 17% of its revenue in 2019 (circa US$ 105 million). In addition, asset damage caused by the flood at Facility A was estimated at US$ 37 million, which was covered by an insurance company.

<u>Future Potential Physical Risks:</u>

Management representatives of ABC reported that they had completed a climate risk assessment in 2020 in line with the TCFD Recommendations. This exercise assessed potential physical risks in short-term (in three years), medium-term (in ten years) and long-term (above ten years), and the following physical risks were identified during the assessment:

1. Medium-term risks:
    - Elevated flooding risks at the location of Facility A in Country X. The assessment revealed that the flooding risks at the location of Facility A may increase by approximately 5 folds by 2029 under the Representative Concentration Pathway (RPC) 6.0 scenario and the RPC 8.5 scenario;
2. Long-term risks:
    - Potential coastal flooding risk at the location of Facility B in Country Y due to sea level rising. The location of Facility B may be fully under water by 2060 under the RPC 8.5 scenario.

What are the measures implemented by customer to address impact of such risks?

Post the flood in 2019, ABC has fully restored its operation at Facility A and implemented the following mitigation measures:

- Completed a flooding risk assessment at Facility A and improved flooding risk management components in its Emergency Preparedness and Response Plan; and
- Allocated Capex of US$ 6 million for upgrading the flood protection infrastructure at Facility A.

Under its climate risk assessment, the company has:

- Reviewed and optimised its climate risk governance structure and appointed a Chief Sustainability Officer to oversee this topic together with its Corporate Sustainability Office;
- Developed a new business strategy to mitigate potential physical risks, including shifting production capacity at Facility B to another location which is more resilient to physical risks;
- Commenced its public disclosure of climate risks and impacts in line with the TCFD Recommendations;
- Committed to review its physical risk profile on a biannually basis to ensure potential physical risks can be addressed in time.

<u>Please provide key asset locations of the customer, including both operating assets and collateral assets.</u>

Relationship mangers should provide detailed geographic locations of both operating assets and collateral assets of a customer. This information should be limited to assets owned by the borrower, or collateral assets pledged to the lender, unless the relationship manager is of the view that review of group assets is essential for physical risk assessment. Ideally, the list should cover (i) operating assets that account for the majority (>50%) of the borrower's production capacity or generate the majority of the company's revenue; and/or (ii) pledged assets that account for the majority of the collateral value.

Given the difference in customer segments, we expect the below table to capture asset information of SME borrowers. For large corporate borrowers, in consideration of the complexity of their operations, as well as information availability in the public domain, we recommend banks to leverage on third-party databases (e.g. XDI) to collect geographic information at asset level and support other climate risk related assessments, e.g. the Industry-Wide Stress Tests required by Monetary Authority of Singapore (MAS).

In the case that a customer has more than five operating assets and/or collateral assets, this list should at least provide address information of the top five assets in terms of (i) production capacity, (ii) generated revenue, or (iii) collateral value. Relationship managers are also encouraged to provide address information for more assets of the customer.

SN	Asset Type	Classification	Address

			Street	District	City	Province/State	Country	Postal Code
1	Water Reclamation Plant	Operating Asset	533 Changi Road	East Coast	Singapore	-	Singapore	488585
2	Wastewater Treatment Plant	Operating Asset	No. 785 South Guanlu Road	Liuhe District	Nanjing	Jiangsu	China	210047
3	Wind Power Farm	Operating Asset	Alatan Emole Town	New Barag Right Banner	Hulunbeier	Inner Mongolia	China	021000
4	Office Building	Collateral Asset	877 Hill Street	Jalan Besar	Singapore	-	Singapore	179899
5	Resort	Collateral Asset	Jl. Petitenget	North Kuta	Denpasar	Bali	Indonesia	80361

(Information presented above is for illustration purpose only and does not represent asset locations of any companies)

1.2 Transition Risk

Transition risks are associated with economic dislocation (such as large-scale job losses) and the financial losses that could result from the process of adjustment towards a low-carbon economy. The sources of transition risk include Policy and Regulation Risk, Technology Risk, Legal Risk and Market Risk (i.e. change in consumer sentiment). The assessment of the impact of each risk on customer may be subjective and should be conducted to reflect actual risk the bank faces.

Relationship managers may be guided by the following criteria to provide a risk rating:

If the impact is expected to materialise within 10 years and the impact on the customer's operation can be identified (but not necessarily quantified), the risk is either Medium or High Risk. A broad explanation of the risk ratings is as follows:

- **High Risk** – risks faced or expected to be faced by the customer: (i) are imminent, (ii) have significant impact on its operations, or (iii) require significant efforts on the implementation of mitigation measures.
- **Medium Risk** – risks faced or expected to be faced by the customer (i) are likely to materialise soon (next 3-5 years), (ii) having limited impact on its operations and/or (iii) can be readily addressed through mitigation measures.
- **Low Risk** – risks faced or expected to be faced by the customer only have minimal impact or no impact to its operation, business performance and value chain.

(a) Policy and Regulation Risk

Consider climate-related developments in policy and regulation, such as the following: Regulatory measures that make fossil fuel use or the pricing of carbon emissions more expensive, fossil fuel phase-out and introduction of carbon taxes; tightened energy efficiency standards for domestic and commercial buildings that may affect risk in banks' buy-to-let lending portfolios and increase investment costs due to the retrofitting of commercial buildings and manufacturing plants. *<source: GFIT Handbook on implementing environmental risk management>*

Impact on customer's business may be through government regulating carbon assets/emissions (e.g. carbon tax) in order to meet Nationally Determined Contributions (NDCs), etc. Relationship managers need to assess this risk and rely on information available such as regulatory timeline, percentage of business the customer operates / assets likely to be impacted, customer's abilities to mitigate the risk. Examples of such regulations that may impact customer's business include end the sale of petrol and diesel cars by 2030, phasing out carbon intensive technologies by 20XX, imposing of a carbon tax by 20XX, imposing emission permits for carbon intensive industries, etc.

Relationship managers are expected to assess if there is any link between these commitments/regulations and the approvals required or viability of customer's business operations OR will this impact customer's business activity or operations materially. After having identified the risks, the relationship managers should try to understand whether the customer has identified these risks and is working towards mitigating them. The measures could be at broader policy level or at operational level.

Sample Responses

- The customer has established target for GHG emissions reduction or commitment to align its operational emission to net zero trajectory.
- The customer has a diversification strategy to adapt its business to the changing regulatory landscape.
- The customer has plans to retrofit, repurpose its operation to become more energy efficient, and/or invest in energy efficient technology.
- The customer has incorporated risk mitigation in its Capex and Opex plan (please also provide information on targeted implementation timeframe if available).

Example

Company DEF Pte Ltd (henceforth, DEF) is a Power Company in Indonesia which has four key business activities – power generation, utilities services, fuel management and storage tank leasing. Approximately 70% of its total revenue comes from power generation and 50% of the power is generated using coal.

Example Answer:

1.2	**TRANSITION RISK:** Has the customer faced or expected to face any impact from **policy or regulation risk**?	YES - High Risk
	When would the impact be expected to materialise?	<3 years

How did such risk arise?

Indonesia is set to introduce a carbon tax at a minimum rate of 30 rupiah per kilogram of CO2 equivalent. The GOI is set to pilot the tax in coal-fired power generation sector beginning April 2022. This tax could increase the operating cost of the company by X%. Following that, the government intends to finalise a presidential decree on the economic value of carbon and build a technological system for a carbon tax and carbon exchange. By the end of the year the Ministry of Energy and Mineral Resources is expected to begin a pilot project for carbon trading in the power industry. Under this project, the businesses that exceed the emission limit would be required to obtain an emission permit certificate from another entity whose emissions are within the limit.

What are the measures implemented by customer to address impact of such risks?

DEF has launched a comprehensive climate change strategy in 2018 which includes targets to reduce emissions and diversify into renewables, achieve a 25% reduction from 2020 baseline of emissions intensity by 2025 and quadruple gross

installed renewable energy capacity. By 2030, the company targets to halve their absolute emissions with commitment not to consider new investment in new coal-fired energy assets. DEF has publicly announced these commitments and have a roadmap to achieve them. With these measures, the impact of carbon tax is expected to be reduced although risk still remains high given the concentration in coal power generation.
(Information presented above is for illustration purpose only)

(b) Technology Risk

Technological innovations in alignment with transition to a lower carbon/energy-efficient economy can lead to significant impact on the organisations. For e.g., new and emerging technologies, such as renewable energy and carbon capture and storage, impact the competitiveness of corporates engaged in traditional energy sources. The timing of technology will impact displacement of traditional products and adaptation ability of organisations will determine continued competitiveness in their markets (e.g. the improved price competitiveness of electric vehicles is expected to disrupt demand for traditional ICE vehicles over the medium / long term).

This risk primarily arises with technological changes in the market in which the customer operates. For example, the automotive market has significantly been impacted by the advent of electric vehicles with further competition emerging as existing luxury car makers realign their portfolio with launch of electric cars. Customers are usually looking at adding more capex to conduct research on new product or actively diversify their portfolio to products which are aligned to their transition pathways.

Example

1.2	**TRANSITION RISK:** Has the customer faced or expected to face any impact from **technology risk**?	YES - Medium Risk
	When would the impact be expected to materialise?	3-10 years

ABC operates a chain of petrol stations in Germany.

How did such risk arise?
With electric vehicle sale currently making up almost 5% of total new vehicle sales in the country, and with expectations that the adaptation for electric vehicle will continue to grow over the medium to long term, ABC's business model could be disrupted unless investments are made to diversify its business operations. Further, ABC also operates service stations next to its petrol stations which are likely to be impacted as electric vehicles require less extensive servicing and are heavier on replacement of parts.

What are the measures implemented by customer to address impact of such risks?
Per discussion with the customer, the cost of installing each electric vehicle charging station is on average c.USD50k each and it has a long term capex in place to gradually install charging stations throughout its network over the next 5 years at a total capex of USD50m. The customer is also looking at changing its servicing model and has already started adding capabilities of servicing electric vehicles. The additional capex will be funded 50% via operating cash flows and 50% incremental debt, considered to be manageable based on the company's current financial profile with low net external gearing of 0.25x and net leverage of 0.83x. As the transition is expected to be gradual and management has

a feasible strategic plan in place to adopt to technological changes, the risk is expected to be acceptable with a Medium Term / Medium Risk rating assigned.

(c) Legal Risk

As awareness on environmental risk increases, recent years have seen an increase in related litigation claims by NGOs, shareholders, insurers against corporates which are having a negative impact on environment. Reason for such litigation largely include failures of corporates to mitigate impact of their activities on environment or failure to adapt to climate changes. As further objective information is available on environmental impact of corporate activities, litigation risk is also likely to increase.

In case of ongoing litigation, Relationship Managers should review the impact on customer's business and assess requirement to mark this as high risk in case there is material existing or prospective impact. In case customer has no existing/prospective environmental litigation, Relationship Managers should refer to litigation for other players in the industry to assess level of risk for a customer.

Example

1.2	**TRANSITION RISK:** Has the customer faced or expected to face any impact from **legal risk**?	YES - High Risk
	When would the impact be expected to materialise?	<3 years

XYZ is one of the largest oil and gas companies engaged in primarily upstream production. The production of fossil fuels is directly linked to climate change impact.

How did such risk arise?
Customer is a long-established oil major and introduced climate change studies in 1980s to determine the impact of fossil fuels on humankind. Post initial stages of funding, customer reduced such studies and focused funds on lobbying governmental agencies to block actions to limit carbon emissions and allegedly further funded media campaigns to reflect lower cost of using fossil fuels. State Agencies have collectively bough legal action against XYZ for intentional misinformation campaigns alleging "XYZ knew about the consequences of climate change and have knowingly contributed to worsening of crisis while misinforming the public about their actions".

What are the measures implemented by customer to address impact of such risks?
While the law-suit is broad based, increasing evidence has emerged on XYZ initiating studies using "uncertainty" to note that numbers and predictions may not be exact. Further, funding arrangement for political lobbies supporting fossil fuels and participation in organisations campaigning for favourable regulations are increasingly corroborating the claim. Legal implications are expected in terms of XYZ being considered liable for damages caused due to misinformation efforts. While XYZ continues to actively provision against existing (potential >USD10-20bn) and prospective legal claims, increased litigation is expected and hence this continues to remain an unmitigated risk for XYZ. The risk is considered to be high and near term.

(d) Market Risk

This refers to the risk of change in supply and demand for certain commodities and end products (e.g. long term market demand for thermal coal is on a declining trend relative to other clean energy sources). The change in customer behaviour driven by increased awareness of environmental issues will also impact the demand for specific products (e.g. consumption of single-use plastic products is expected to decline in lieu of customer's awareness on the environmental impacts). A cost to transition will lead to an increase in price / less competitive priced product (e.g. the additional cost for a bus company to transition its fleet into electric vehicles may lead to the need to increase ticket prices for customers and therefore impacting competitiveness).

Example

1.2	**TRANSITION RISK:** Has the customer faced or expected to face any impact from **market risk**?	YES - High Risk
	When would the impact be expected to materialise?	3-10 years

XYZ is a single-use plastic manufacturer with plastic cups, plates, straws and cutleries being its core products.

How did such risk arise?

There is limited product diversity with 100% of production related to single-use plastic products. The company's customers comprise major local supermarket chains as well as retail outlets. Given the shift in consumer sentiments towards single-use plastic products, XYZ's business model is expected to be challenged in the medium term in the absence of strategic changes.

What are the measures implemented by customer to address impact of such risks?
The financial cost associated with such change is expected to be material, as the existing machineries are specifically for the production of single-use plastics and cannot be converted to produce other products. Given XYZ's weak financial profile with a highly geared balance sheet, the additional Capex required to convert existing production facility is expected to place significant strain on business's debt repayment capacity and credit profile. End demand risk is assessed as Medium Term / High Risk.

1.3 Reputational Risk

Environmental risk can also be a source of potential reputational risk to the organisation as it impacts the society perception of its contribution towards transition to a low carbon economy and conservation of natural resources. A positive view of the organisation's efforts on managing environmental risk can improve public perception in community for organisation's product; whereas negative view can lead to consumers preferring competing products. Increased shareholder concern is also an impact in case organisation is not successful in managing environmental impacts.

Example

1.3	Does the customer have activities in sensitive sectors that have an adverse impact on the environment which are a reputational risk to the bank?	YES - High Risk
	When would the impact be expected to materialise?	<3 years

How did such risk arise?
PQR is an energy investor and has recently invested in a large portfolio of coal fired power plants considering the strong demand for energy in the related jurisdictions. While returns are expected to be high, the energy investor has faced more queries from its investors, particularly institutional and high net worth investors, who have targeted the high carbon emission strategy of PQR. In discussions, PQR's investors have objected to such investment which are high reputational risk and new investors have been shy to enter due to the high carbon intensity portfolio now.

What are the measures implemented by customer to address impact of such risks?
PQR has taken immediate notice of such reaction from its investors and has decided to reduce carbon intensity of overall portfolio by launching additional funds based on green assets, such as wind power and solar energy, and to pitch these to green investors for institutions and private banking. However, given the current portfolio mix of 70% coal and reluctance of FIs to consider customers with heavy coal portfolio, a smooth transition is considered challenging with risks of tightened financing and high gearing emerging for PQR. Given the current portfolio, Immediate/High Risk is allocated.

1.4 Biodiversity

Biodiversity risk arises from the decline in ability of nature to maintain flow of ecosystem leading to economic impact on organisations. Ecosystem resilience is important for economies as all activities directly or indirectly rely in some form on ecosystem services. Primary industries, such as agriculture (related trade), forestry and fisheries, rely directly on sourcing from the ecosystem. Secondary industries, such as energy production, manufacturing, tourism, retail, etc., rely indirectly through the primary industries and also through impact on their assets from nature related hazards caused by loss of biodiversity. Corporates could face risks, such as higher operational costs related to decline of ecosystems, relocation of production facilities due to declining supply of raw materials, stranded assets, supply chain disruptions, price volatilities, etc.

Example

1.4	Does customer's business activity or production locations impact biodiversity (or are dependent on it) including nature, water, soil, ecosystems, or habitats for human and non-human species?	YES - Medium Risk
	When would the impact be expected to materialise?	3-10 years

How did such risk arise?

XYZ customer is a beverage company with production dependent on sufficient amount of high-quality freshwater requirement for the production of its beverage portfolio and hence directly related to revenue. Further, the customer is also dependent on agricultural commodities such as fruit, coffee, tea, etc. As sale of products increases, direct and indirect dependence on water and agricultural resources is likely to increase further.

What are the measures implemented by customer to address impact of such risks?

Customer has initiated a robust plan to increase water efficiency and reuse along with reduction of water usage in the production process. It has also conducted a water foot-printing study of its production facilities and value chain to ascertain sources of water and project future impact in coming years. In terms of its agricultural commodities, the customer has initiated analysis of its concentrations in geographical areas and has management action plan to diversify supply chain across suppliers and geographies. Through its supply chain education program, the customer has focused on projects with farmers to increase productivity of agricultural commodities, as well as replenishment of water through improved water efficiency.

The customer annual discloses data and metrics, including targets, such as targeted increase in productivity of agricultural commodity suppliers, water replenishment of 100% water used in beverage products back to communities and nature by 2020, sustainable certification of supply chain of at least 90% by 2025. While the risk remains high, given the mitigation steps undertaken by the customer, this is rated medium with impact in medium term.

GOVERNANCE SECTION

2.1 Internal Governance

Does the customer have internal governance processes (including board level oversight) regarding the identification and management of environmental risks including transition risks and physical risks?	YES

This can be through the implementation of a policy or procedure as well as having board level oversight and management alignment. For policies and procedures, relationship managers should assess whether these explicitly cover environmental risks, including climate risks, on a standalone basis and set out clear rules, as well as roles and responsibilities, to manage environmental risk such as quantifiable targets and/or commitments for implementation.

Example

Does the customer have internal governance processes (including board level oversight) regarding the identification and management of environmental risks including transition risks and physical risks?	YES

The customer has a climate change management policy with board oversight through a Climate Committee. The customer has also defined targets:

- Net zero target for 2050 and has set interim milestones every 5 years;
- Reduce absolute energy consumption by 7% by 2025; and
- Halve GHG emissions across the product lifecycle by 2035.

Relationship Managers can also review whether management's and/or executives' incentives are aligned with the attainment of the company's climate change commitment and/or policy. This requires the customer to make explicit reference to management's or executives' incentives or remuneration packages and their linkage to the attainment of climate change commitments. However, the exact amount/percentage or other relevant metric need not be disclosed.

Example
The CEO and certain senior executives are included in a bonus scheme with 4 pillars of performance to be measured. One of these 4 pillars is Sustainability (including climate). The quantum of the bonus per person is based on the fulfilment of targets in their respective areas of responsibility including sustainability related targets. The result is linked to the measurable profit targets (qualitative, quantitative, general, individual) set in advance within their respective areas of responsibility. The targets within each area of responsibility are aimed at promoting the company's development in both the short and the long term.

Further indicators of robust governance process can also include board member or board committee nominated with explicit responsibility for oversight of climate change. This needs to be supported by evidence of an assigned board member or board committee and their roles and responsibilities within the company's sustainability management structure. Reference to oversight of ESG or sustainability matters rather than 'climate change' explicitly is acceptable.

Example
The Nomination and Sustainability Committee of the Board of Directors of Company X provides strategic guidance on climate-related matters and reports to the Board of Directors, which has overall oversight. In 2019, the Board of Directors approved the Group's long-term climate ambition to achieve net zero greenhouse gas emissions by 2050. The Nomination and Sustainability Committee oversees all aspects of our environmental, social and governance performance.

2.2 Policy

Has the customer developed adequate policy and/or strategy to address climate transition risks and physical risks in all material aspects, including the reduction of its GHG emissions?	YES

For policies, do these explicitly cover environmental risks on a standalone basis and set out clear rules as well as roles and responsibilities for tackling environmental risks, such as quantifiable targets or commitments for implementation.

For strategy, has the customer set out a distinct set of quantifiable targets and/or commitments, not limited to the reduction of GHG emissions and whether these targets fall within an acceptable time range?

Customers can impose both short and long-term targets, such as within next 3 years, 3-10 years or long term >10 years.

The nature of the target can be an emissions reduction target, an energy savings target, an investment target, a portfolio composition target or other relevant targets relating to the customer sector (e.g. 'flaring target' in the O&G sector).

2.3 Sustainability Reporting

Does the customer publish a Sustainability Report?	YES
Is the sustainability report externally assured?	YES

Does the customer document and publicly disclose a Sustainability Report that covers environmental risks as a part of the report?

External assurance refers to a third-party verification of the report being conducted, similar to that of a financial audit on annual accounts.

2.4 TCFD

Does the customer report environmental data as per TCFD?	NO

'YES' should only be selected if the TCFD Recommendations have been implemented and customer is publishing an explicit TCFD-aligned disclosure (either as a separate 'TCFD' report, or a sustainability report which is mirroring the TCFD-recommended structure or an index which maps the content within a given report to the TCFD Recommendations).

Additionally, it is considered acceptable if the company is meeting the principles of the TCFD Recommendations and addresses them in a sustainability report. For example, the majority of the TCFD Recommendations (but not all) have been applied (i.e. governance, risk management, strategy, metrics & targets).

The TCFD Recommendations can be found below and follow four distinct areas:
https://www.fsb-tcfd.org/recommendations/
https://www.fsb-tcfd.org/publications/

1. Governance:
2. Strategy:
3. Risk Management:
4. Metrics and Targets:

2.5 External Rating

Has the customer obtained any external rating for environmental performance?	NO
Additional Comments: if yes, • Please share rating details; and	Rating Agency | Rating | Date

• Please provide rating report.	

Does the customer have a publicly disclosed ESG rating? Some of the commonly known ESG ratings include S&P, CDP, MSCI, Fitch and Sustainalytics. The rating must be administered based on customer provided information and should be from the latest year in order to obtain a "yes" answer. Additional comments should include name(s) of the rating agency, year of assessment, overall rating(s) obtained by the company, as well as rating(s)/score(s) specifically relating to environmental aspects. In addition, ESG rating reports are recommended to be provided attached as part of the additional comments.

METRICS SECTION

3.1 Transition Plan

Has the customer developed its transition plan with metrics and interim targets to achieve its relevant commitment?	NO

Transition plan is an aspect of an organisation's overall business strategy that lays out a set of targets and actions supporting its transition toward a low-carbon economy, including actions, such as reducing its GHG emissions. Key considerations of a transition plan may include emission targets (absolute emissions and/or emissions intensity), target year, baseline and, if specified, target coverage (e.g. company-wide, business division, product, country/region). This may also refer to net zero targets and pathways aligning to internationally recognised organisations.

Example
- Explicit evidence that the Scope 1, 2 and 3 (if applicable) targets have been submitted to or validated by SBTi.
- Scope 1, 2 and 3 absolute emissions or emissions intensity targets to be captured.
- Scope 1 and 2 absolute emissions or emissions intensity targets to be captured.

Additionally, has the customer provided at least one example in which the company explains changes to its production mix to lower carbon intensive products?

An assessment can be made on whether any plans have been detailed to make any investment in any low carbon technology, which does not necessarily have to be linked to the entity's climate change commitments. This could be carbon capture, utilisation and storage, energy transition technology or any other technologies that reduce carbon emissions as a whole. Additionally, the response may include provision of examples how the company intends to align to future emissions related policies, environmental laws and regulations. Regulations are expansive and differ by sector and country. As such, consideration should be given (but is not limited) to the following:
- Carbon pricing & taxation;
- Phasing out / restrictions on fossil fuels;
- Fracking / exploration limits and/or bans being placed upon on- and offshore development;
- Emissions taxation - emissions limits; and
- Emissions regulations including control areas/land use planning.

3.2 GHG Emissions

Does customer measure its GHG emissions? If yes, please provide annual GHG emission data (scope 1/ scope 2/ scope 3) from the customer.	YES
Additional Comments: including comments on positive/negative trends in emission data.	

	2019	2020	2021	Externally Assured (Y/N)
Scope1				
Scope 2				
Scope 3				
Total				
Emission Intensity				

A 'Yes' response should be supported by either a) absolute emissions or b) emission intensity figures for past [3] years. If available, both absolute and intensity figures should be captured in the table. Please kindly note that emissions here refer to gross emissions.

In addition, the scope of GHG emissions should be in line with the *GHG Accounting Protocols* published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) and include seven greenhouse gases covered by the Kyoto Protocol, i.e. carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

For Scope 2 emissions, it should include evidence to demonstrate if methodology is location-based, market-based or not specified. Commentary should also be provided if the company does not cover all categories of Scope 3.

Measuring units should be considered as well (e.g. hundreds/thousands/millions). For example, if a company reports in thousands of tonnes, the number will need to be multiplied by 1,000 to convert to tonnes. If emissions are provided on an equity basis, in this instance, it is acceptable to capture the equity basis breakdown of emissions with respective commentary in the evidence.

If emissions are reported in "tonnes" or "metric tonnes" or "metric tons" - no conversion is required. If emissions are reported in imperial "tons", conversion to tonnes will required (Ratio tons: tonnes 1:0.90718474).

3.3 Fossil Fuels

What is the proportion of fossil fuel in terms of production or revenue?	[x%]
Additional Comments: if client has plans to reduce proportion of fossil fuels.	

Evidence provided in this section should include insights into the company's current reliance on fossil fuels or high carbon products by analysing current revenue mix. Below is some sector specific guidance to help identify what proportions could be applicable.

Sector Guidance

Oil & Gas Upstream: In 2019, what was the percentage of production of Oil & Gas vs Biofuels or other non-fossil fuel types?

Oil & Gas Downstream: In 2019, what was the percentage of revenue from refining or using Oil & Gas vs Biofuels and other non-fossil fuel types?

Transport: In 2019, what was the percentage of vehicles (land/air/sea) with gasoline/diesel/oil engines vs electric/hybrid/fuelcell drive systems produced or used?

Commodities and trading: in 2019, what was the percentage of revenue from the extraction, production/processing, transportation or trading of fossil fuels/high carbon products?

Building materials and services to the CRE industry: Building materials and services to the CRE industry: In 2019, what was the percentage of production/revenue generated using energy from fossil fuels or other carbon intensive methods?

CRE: In 2019, what was the percentage of properties within the portfolio that are supplied by fossil fuels/ high carbon fuels vs. renewables and low carbon alternatives?

Manufacturing and Supply Chain: In 2019, what was the percentage of the energy used for manufacturing and /or transportation of produced goods from fossil fuels vs renewables/lower carbon alternatives?

Metals and Mining: In 2019, what percentage of revenue was generated from the mining and/or processing of fossil fuels or from using energy from fossil fuels vs renewable and new energy sources?

Telecommunications and Media: In 2019, what was the percentage of energy used for manufacturing, transportation of goods, or provision of services to customers was from fossil fuels vs renewables/lower carbon alternatives?

Utilities: In 2019, what percentage of energy produced and/or used was from fossil fuels vs biofuels and renewables?

Food and Household: In 2019, what was the percentage of energy used for production and /or transportation of goods was from fossil fuels vs renewables/lower carbon alternatives?

Pharmaceuticals, Biotechnology & Life Sciences: In 2019, what was the percentage of energy used for research, production and /or transportation of goods and services was from fossil fuels vs renewables/lower carbon alternatives?

SUSTAINABLE FINANCING SECTION

4.1 Sustainable Finance Strategy

Has the Company established a Sustainable Finance (SF) strategy or a SF framework? That is, has the Company defined a SF roadmap and investment requirements?	YES

Relationship Managers are encouraged to discuss with the customer on its Sustainable Financing framework or strategy through which the customer intends to finance its transition plan. This may be a framework or a general strategy and may include various products, such as green loans, green bonds, working capital facilities (including sustainable supply chain), etc. The section will assist the Business Line in assessing green financing opportunities with the customer particularly related to transition.

4.2 Financing requirements

Has the Company identified financing requirements over the next 2-5 years to enable decarbonisation or facilitate sustainability-related projects/initiatives?	YES

In order to respond to this question, the assessment should consider whether the customer has detailed plans to make any investment in any low carbon technologies, which does not necessarily have to be linked to the entity's climate change commitments. This could be carbon capture, utilisation and storage, energy transition technology or any other technologies that reduce carbon emissions as a whole. Some examples in sectors are as below:

Oil and Gas: Has the company made plans to invest in low carbon technologies or energy efficiency measures?

Transport: Has the company made plans to invest in the production or use of lower carbon engines, fuel types or adapted logistics to reduce emissions?

Commodities and Trading: Does the company intend to invest in the adaption of existing assets, extraction and production processes, transportation choices or own-use energy sources towards lower carbon options?

Building materials and services to the CRE industry: Investment in changes to fuel types and energy consumption to power operations, as well as production of/services to new construction materials and technologies (e.g. recycled materials, zero embodied carbon materials, plant based materials).

CRE: Investment in new projects/changing mix of current portfolio/retrofit projects which increases the overall percentage of properties that are net-zero or with improved energy efficiency.

Manufacturing and Supply Chain: Has the company set out plans to invest in a change to energy use/efficiency measures, raw materials or processes in order to prepare for transition?

Metals and Mining: Has the company set out plans to invest in a change to energy use/energy efficiency, a change to materials mined or methods used to process and transport goods, or methods to provide services in order to prepare for transitions?

Telecommunications and Media: Has the company set out plans to invest in a change to energy use/efficiency, raw materials or processes including transportation in order to prepare for transitions?

Utilities: Has the company made plans to invest in low carbon technologies to produce and distribute energy and/or water or to invest in energy efficiency improvement measures?

Food and Household: Has the company set out plans to invest in a change to energy use/efficiency, raw materials or processes in order to prepare for transitions?

Pharmaceuticals, Biotechnology & Life Sciences: Has the company set out plans to invest in a change to energy use/efficiency, raw materials or processes in order to prepare for transitions?