

INVESTOR GROUP ON CLIMATE CHANGE (IGCC) ASIA INVESTOR GROUP ON CLIMATE CHANGE (AIGCC)

RESPONSE TO THE TCFD PUBLIC CONSULTATION

12 FEBRUARY 2017

Respondent Information

Q1a

Please provide your information in the boxes below

- Emma Herd
- Investor Group on Climate Change
- CEO

Please select which country you live in. – AUSTRALIA -

Q1b. Which of the following best describes your area of responsibility in your organization?

Please select ONE only.

- Academic/industry expert
- Administration
- Board member
- Compliance
- Corporate reporting
- Corporate strategy
- Finance
- General management
- Government/regulatory affairs
- Investment/asset management
- Legal
- Risk
- Sustainability

- Technology
- **Other (please specify) – CEO**

Q1C Which of the following best describes your organization type?

Please select ONE only.

- Financial services sector, including asset owners
- Non-financial sector
- Non-Governmental Organization (NGO)
- Academia
- **Industry/Trade association (Financial)**
- Industry/Trade association (Non-financial)
- Other (please specify)

Q1D Please select your primary industry from the list below:

- Please select ONE only
- **Asset management**
- Banking
- Credit rating agency
- Insurance (underwriting)
- Pension plans, endowments, foundations, and other asset owners
- Stock exchange
- Other (please specify)

Q1E – NA

Q2. Which of the following best describes your perspective on the TCFD recommendations?

Please select ONE only.

- User of climate-related financial disclosures
- Preparer of climate-related financial disclosures
- **Both a user and preparer**
- Other (please specify)

All Sector Recommendations and Guidance

The Task Force structured its recommendations around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets (see page 16 of the TCFD report). The Task Force believes it is important to understand the financial and strategic implications associated with climate-

related risks and opportunities on organizations as well as the governance and risk management context in which organizations operate.

Q3A How useful are the Task Force's recommendations and guidance for all sectors in preparing disclosures about the potential financial impacts of climate-related risks and opportunities?

Please select ONE only.

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don't know

Q3B. Please provide more detail on your response in the box below.

The Investor Group on Climate Change (IGCC) and the Asia Investor Group on Climate Change (AIGCC) welcome the release of the global Taskforce on Climate-related Financial Disclosure (TCFFD) draft recommendations. This represents a significant milestone in the development of harmonised and financially material climate change reporting. We congratulate the Taskforce on the development of a robust disclosure framework.

IGCC / AIGCC acknowledges that investors want companies to improve their reporting on climate change impacts for their business and are already demanding greater corporate disclosure. Companies are looking for guidance on how to incorporate climate change into their financial reporting. Regulators need to understand the systemic financial implications of climate change for the economy.

IGCC / AIGCC supports the overarching framework which the TCFD has developed. This includes the four thematic areas of governance, strategy, risk management and metrics and targets, along with the seven principles for effective disclosure identified in Phase One.

The TCFD recommendations as a whole clearly reflect investors' needs, as expressed in a variety of forum, for comprehensive climate-related disclosure in financial filings. They set out a framework, for comprehensive climate-related disclosure in line with financial reporting rules in various jurisdictions. This provides an extra layer of reliability to the data communicated, while allowing companies to provide a holistic comprehensive view to investors and other stakeholders.

IGCC / AIGCC believes that the recommendations will be useful for companies with extensive experience providing climate risk disclosures, but especially for companies with limited or no experience doing so.

For companies with extensive experience, the recommendations provide a framework, consistent with financial reporting rules in various jurisdictions, that any company can use

when integrating climate information into financial filings. For companies with limited experience with climate disclosure, the TCFD's reports provide clear explanations about how climate change can pose financial risks and opportunities in various sectors.

IGCC / AIGCC notes that, for all organisations, it would be extremely helpful for the TCFD to consider providing demonstrative examples of what complete disclosures in financial filings in particular jurisdiction might look like across different industries.

Further, IGCC / AIGCC notes that the quality of investor disclosure is highly dependent upon the quality of disclosure by investee companies. To ensure effective disclosure at the asset owner/manager level, strong and comparable disclosures are required at the investee company level. Until this is the case, it will remain challenging to assess risk at the listed entity level. Further standardisation of methodology for assessing risk and opportunity by companies (including for scenarios) will support more effective aggregation at asset owner/manager level.

IGCC / AIGCC has identified a number of areas, where further clarification and development would be beneficial.

The Task Force's decision not to endorse specific reporting metrics may limit the recommendations' usefulness to investors and stakeholders. This could lead to a continued or increased lack of consistency in the climate reporting metrics companies use in financial filings, hindering comparability. It could also discourage companies from providing robust disclosure in the immediate term, as some may choose to delay reporting and wait until specific reporting metrics are required or recommended by financial regulators before they discuss climate issues extensively in financial filings.

The language and metrics themselves are currently geared more towards risk than opportunity (e.g. carbon emissions data is typically used as a risk metric). IGCC / AIGCC would welcome strengthening the narrative disclosure around opportunity pursuit and the specification of further metrics related to opportunities, for example green revenues (revenues from products that help to mitigate climate change).

IGCC / AIGCC supports the need to describe the actual and potential impacts of climate-related risks and opportunities across "the relevant short-, medium-, and long-term horizons, taking into consideration the useful life of the organization's assets or infrastructure". However, there are a number of measures which could be developed to strengthen disclosure against these timeframes.

IGCC / AIGCC notes that one of the factors driving the *status quo* of poor reporting and disclosure, is that many risks and opportunities have not been identified as financially *material* within the designated time horizon, even in circumstances where external stakeholders consider these issues to be potentially material to company performance.

We therefore support recommendations that companies disclose both which risks and opportunities they have identified as financially material and those that they might have determined as being immaterial to date- but which have been identified as potentially

material by investors, regulators or other key stakeholders. Providing this additional level of disclosure, will assist the market in understanding how and why companies are determining the financial materiality of disclosure risks and opportunities over varying timeframes. The recommendations might be complemented in the future, for example, with a standard short-list of suggested key risks/opportunities by sector built and adapted from tables A1 and A2 (p.11 & 12).

Furthermore, what time spans are to be considered - short, medium and long-, might vary greatly amongst organisations. The recommendations could also propose what likely short, medium and long-term horizons should be for each sector. These could be developed in detail by sector-specific experts as part of, or under the umbrella, of the Task Force or an equivalent body.

On specific metrics, regarding Table 1, on pages 11-12 of the Recommendations report, we offer two suggestions. Under Transition Risks: Markets, we recommend adding “Changing competitor behavior” and “Changing consumer behavior.” For example, OPEC and several major oil and gas companies have changed their market strategies in light of concerns about stranded assets.

In the same table, under Transition Risks: Policy and Legal, we recommend adding “Potential for the removal of fossil fuel subsidies,” given the G20 commitment to phase them out by 2020.

Regarding implementation of the TCFD recommendations, IGCC / AIGCC notes that climate change-related disclosures are already mandatory in some jurisdictions. The TCFD report should make clear many companies are already required under existing laws in various locations to disclose climate-related financial risks. Currently this appears to be poorly understood or complied with. IGCC / AIGCC believes that providing additional guidance on how the TCFD recommendations can be aligned with existing financial disclosure requirements would be beneficial for take up and application rates of the framework.

Supplemental Guidance

Q3C. How useful is the Task Force’s supplemental guidance for certain sectors in preparing disclosures about the potential financial impacts of climate-related risks and opportunities? Please see the TCFD Annex for supplemental guidance.

Please select ONE only.

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don’t know

Q3D. Please provide more detail on your response in the box below.

IGCC / AIGCC supports the approach taken by the TCFD to develop additional supplementary guidance for key industry sectors. We note that TCFD members have carefully considered which sectors are potentially and presently most affected by climate risk because of carbon intensity of operations or products, as well as the unique and distinct role of the financial sector in addressing climate change. For the most part, the divisions and groupings are logical and make sense.

Non-financial sector

IGCC / AIGCC has two specific comments on the non-financial sector supplemental guidance.

First, we note that the groupings of companies for the non-financial sector guidance are currently quite broad. As disclosure users, investors anticipate that the balance of risks and opportunities (and therefore the corresponding disclosure) will be significantly different for companies in different industries.

This is particularly evident for the Materials and Buildings grouping. For example, the scope 1+2 emissions of major mining /chemicals;/construction and materials companies typically range from 20 million to 190 million tCO₂e per year as compared to companies in the Real Estate Management and Development sectors where the most carbon generative company listed on the FTSE 100, Land Securities, generates less than 100,000 tCO₂e. Equally, we anticipate that the sectors within the agriculture grouping will face significantly different risks.

IGCC / AIGCC would support further review of the structure of these broad groupings to address some of the disparate challenges within broad groupings.

Second, IGCC / AIGCC recommends the inclusion of three additional climate disclosures as part of the non-financial sectors recommendations. Please see q.5 for further detail.

Financial sector guidance

IGCC / AIGCC welcomes the development and inclusion of specific additional guidance for Asset Owners and Asset Managers, along with other financial sector participants. We note that the TCFD has sought to recognise some of the particular challenges of disclosure for investors, and the high dependence upon effective corporate disclosure from other industry sectors as a key enabler.

It is worth remembering though that reporting by asset owners and asset managers is highly dependent upon effective company disclosure across the rest of the economy. The guidelines and recommendations leave ample room for selecting metrics. Further guidance as the recommendations are implemented on methodological standardisation and metrics for assessing risk and opportunity by companies (including for scenarios) are crucial building blocks of comparability and consistency. Until strong and comparable disclosures are fully mandatory or a reality, risk assessment at the listed entity level will continue to be

extremely challenging; and effective aggregation at asset owner or manager level inadequate.

IGCC / AIGCC note that investor disclosure should be as full and frank as possible, while recognising that climate change disclosures are imperfect and evolving. Based on a 'best endeavors' principle, we would support additional commentary in the supplementary guidance to provide assistance to investors in balancing these challenges.

This could provide guidance on how investor disclosure set out why it has chosen the path that it has, any relevant limitations with current disclosure (such as data limitations and/or onerous costs) and any further commitments for working towards improving transparency and disclosure in the future (both at an organisational level and in collaboration with others).

Beyond methodological barriers, smaller asset owners and managers face additional barriers given their smaller capabilities to meet the financial sector guidance. Their reporting limits should be acknowledged. The cost implications of preparing climate disclosure are a legitimate factor to be considered, and the impact of these implications will vary with the size and type of the investment organisation.

Within the supplemental guidance for the financial sector, insurers are treated uniquely, and appropriately, as both *Insurance Companies* and as *Asset Owners*. To make insurers' unique dual reporting requirements more explicit within the guidance offered, we suggest that the TCFD add a sentence such as:

Insurance companies, in order to meet the disclosure standards recommended in this report, should respond to the Supplemental Guidance for Insurance Companies as well as the Supplemental Guidance for Asset Owners.

Essentially, we believe that a slightly clearer statement of expectations for insurance companies' disclosure would help avoid any ambiguity among insurance sector respondents.

Organizational Decision-Making

Q4A. If organizations disclose the information consistent with the Task Force's recommendations, how useful will that information be to your organization in making decisions (e.g., investment, lending, and insurance underwriting decisions)?

Please select ONE only.

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don't know

Q4B. Please provide more detail on your response in the box below.

Investor members of IGCC / AIGCC use climate risk information for corporate engagement and investment decisions. Investors have been hindered in their efforts to use climate risk information in investment decisions because of the lack of comparability, quality and consistent reporting of data.

Asset owners and managers' investment decisions could greatly benefit if the guidelines and recommendations are fully adopted by companies across most geographies. As much as possible, data provided needs to be reliable, comparable, and based on relevant and metrics across sectors.

We note specifically that, if companies disclose information consistent with the TCFD recommendations, this will be very useful for corporate engagement decisions. In the immediate term, however, reporting may not be as useful as desired for affecting investment decisions, due to ongoing concerns around comparability of data under the TCFD proposed framework. (The exception is in the case where the TCFD recommended a single set of reporting metrics: use of the GHG Protocol for calculating and disclosing Scope 1, 2 and, where applicable, 3 greenhouse gas emissions). This will likely be an evolving area of practice as more information is disclosed.

We appreciate the Task Force's emphasis on ongoing leadership and strong support from the G20, G20 member nations and the FSB to promote widespread adoption of the recommendations.

We encourage the Task Force to support the G20 and FSB to play a strong role in encouraging the use of comparable reporting indicators in different jurisdictions. We also encourage the TCFD to re-form the Task Force, at minimum, for the purpose of creating annual reports on progress by corporations and investors in implementing the TCFD's recommendations. We note that the issuance of annual reports on implementation has been a crucial element to the success of the FSB's Enhanced Disclosure Task Force

Additional Disclosures

Q5. What other climate-related financial disclosures would you find useful that are not currently included in the Task Force's recommendations?

We would encourage the Task Force to include the following climate disclosures as recommendations for the non-financial sector guidance.

- **Board expertise:** The level of expertise in climate risk at board level, and/or the ability to access climate expertise outside the company to inform the board.
- **Remuneration link:** IGCC / AIGCC recommends that disclosure is sought on whether the Board and management have climate-related performance metrics tied to remuneration. In addition, we recommend the inclusion of a request for narrative disclosure on how climate change is considered as part of the remuneration strategy, for example, how climate change is factored into peer group selection.

IGCC / AIGCC notes that the CDP requests remuneration information in its current disclosure survey. We also note that this will be likely be highly relevant for some industry sectors and less for others, therefore it might be appropriate to address these issues in the supplementary guidance.

- **Governance and disclosure of public policy positions and activity:** Given the importance of legislation in addressing climate change and determining transition risk, IGCC / AIGCC recommends that the Taskforce's disclosure recommendation requires that the processes used by the Board and management to ensure consistent public policy positions are adopted by companies and the trade associations to which they belong. Information on private lobbying activity should be disclosed, as well as the Board member ultimately responsible for their climate policy.

Scenario Analysis

Q6. The Task Force recommends organizations describe how their strategies are likely to perform under various climate-related scenarios, including a 2°C scenario (see page 16 of the TCFD report). How useful is a description of potential performance across a range of scenarios to understanding climate-related impacts on an organization's businesses, strategy, and financial planning?

Please select ONE only.

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don't know

Q7. Please provide more detail on your response in the box below.

IGCC / AIGCC notes that the Taskforce made significant progress in advancing the implementation and standardisation of scenarios analysis as a key tool for creating greater portfolio resilience and communicating to markets material financial risks arising from climate change. We also note that the identification of appropriate scenarios and assumptions is complex.

The Task Force recommendations added the full weight and authority of the G20 and the Financial Stability Board to the importance of scenario analysis as a key tool to assess and respond to the risks and opportunities created by energy transition and a necessary component of climate-related financial disclosure. IGCC / AIGCC welcomes this clear and detailed rationale, endorsement, and plan for ensuring that all sectors integrate scenario analysis into their strategy and risk management processes and ensure that such analysis and resulting disclosures are subjected to the review and governance processes that accompany disclosures in financial statements.

IGCC / AIGCC supports the key principles, recommendations and technical supplement that the Task Force has developed and appreciates the opportunity to provide additional feedback. We also note that there remain challenges with the way in which the scenario analysis recommendations have been set out and would support further work in refining and strengthening the approach.

We recommend a more refined scenario approach with a set of commonly determined assumptions and procedures to help guide implementation. While innovation is to be encouraged, the scenario recommendations at company level currently risk providing a level of flexibility that makes comparison and aggregation challenging for investors. Comparability of companies is reduced if they use substantially divergent scenario sets. More guidance – more granularity on core parameters- would help promote the development and use of relevant scenario analyses.

IGCC / AIGCC is broadly supportive of the Task Force's decision not to dictate the use of a particular or specific 2°C scenario at this stage. We also recognise that many organisations have stated that the value of scenario analysis lies as much in the process of determining shared views on potential pathways, as in the outcomes of the final analysis. Allowing companies to develop their own scenarios will broaden and deepen the current level of understanding that particular policies, technologies, and market strategies may have upon achieving the 2°C objective.

However, this also heightens the importance of including further articulation and disclosure on the development, key parameters, and assumptions applied, along with the results of the scenario analysis in financial statements.

We note that our consultation with investors on the draft recommendations have identified the following residual issues on the current recommendations on scenario analysis.

The Paris Agreement explicitly includes wording on the overarching goal of moving to 1.5°C as well as the 2°C goal. Many have argued that genuine stress testing should include reference to 1.5°C as a part of the Paris Agreement commitment to keep emissions “well below 2°C” as part of the scenario analysis guidance, as a key factor in transition risk.

At the other end of the spectrum, for many companies and industry sectors physical risk can be some of the most financially material climate change risks (and opportunities), therefore including guidance on a 3°C or 4°C scenario would also be beneficial, as focusing principally on 2°C may limit the determination of materiality.

For the conduct of the 2°C scenario, we would support providing better guidance on the range of 2°C scenarios which can be reviewed, with a narrowing down of the options able to be usefully applied to avoid scenario arbitrage. We would also support better articulation on applied timeframes, potentially aligned to the Paris Agreement goal of limiting warming to 2°C by 2050.

Finally, for all scenarios, we would support clearer and more specific guidance on how reporters should set out the underlying assumptions applied in the scenario analysis and the process undertaken internally, as process can often be just as significant as the end analysis in determining how effectively a company understands and is managing their climate change impacts. This would clearly need to balance concerns on commercial sensitivity of information disclosed, with the need for a standardised and comparable framework for undertaking genuine scenario analysis.

Without an ability to review and assess the underlying inputs and process for developing the analysis, it can be impossible to ascertain the validity of the results. One additional set of information that IGCC / AIGCC recommends prescribing is how the company uses the results of the scenarios in testing investment decisions or strategic plans. This should include further information about how the scenario analysis is being informed by the board and how often the board is being updated on the processes and results of the scenario analysis to inform strategic planning.

In summary, IGCC / AIGCC would strongly support the commitment set out in the draft recommendations to undertake further work on scenario analysis, as set out in Figure 8. Key Areas for Further Work.

Q.8 The Task Force recognizes that there are challenges around disclosing sufficient information to allow a better understanding of the robustness of an organization's strategy and financial plans under different plausible climate-related scenarios. Some challenges may arise from unfamiliarity with scenario methodologies and metrics, insufficient practice standards, or cost. What do you view as effective measures to address potential challenges around conducting scenario analysis and disclosing the recommended information?

Please rank up to three most effective factors that apply. Please rank by dragging from left to right where "1" is your top factor.

- 3. Further work by industry trade groups and disclosure users on critical elements to be disclosed is needed to help overcome concerns that some information may be commercially sensitive**
 - Reduce the cost of conducting and disclosing scenario analysis
- 2. Additional methodologies and tools should be developed for use by organizations to enable more effective scenario analysis**
 - Allow a year or two to phase-in scenario analysis and related disclosures
- 1. Establish better practice standards around conducting and disclosing scenario analyses so that there are clearer rules of the road**
 - Other
 - We do not anticipate any difficulties
 - Not applicable

Q9. Please provide more detail on your first choice in the box below.

IGCC / AIGCC believes that disclosing a full methodology that sets out assumption of scenarios pragmatically but which is also comparable to other company scenarios is essential. This will take time to emerge. A pragmatic first step to encourage the implementation of comparable mapping of climate risk and opportunity in portfolios and at investee company level is to develop a best practice standard. Standardisation will have the result of reducing cost, which is a serious barrier and promote 'learning by doing' to accelerate take up across the market.

Metrics and Targets

Q10A The Task Force is recommending that organizations disclose the metrics they use to assess climate-related risks and opportunities in line with their strategy and risk management process. For certain sectors, the report provides some illustrative examples of metrics to help organizations consider the types of metrics they might want to consider. How useful are the illustrative examples of metrics and targets?

For illustrative examples see the following pages in the TCFD Annex

- Energy Group: pages 54-58
- Transportation Group: pages 66-70
- Materials and Buildings Group: pages 78-82
- Agriculture, Food, and Forest Products Group: pages 91-94

Please select ONE only.

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don't know

Q10B. Please provide more detail on your response in the box below.

The report leaves it up to each organisation to select the metrics they want to use to assess climate-risks and opportunities. While we believe we ought to work towards convergence and standardisation as previously mentioned, the disclosure of what metrics are already being used will be useful to evaluate the information provided by reporting organisations. IGCC / AIGCC notes that the provision of the table with 'alignment' and 'rationale for inclusion' columns are particularly helpful for existing metrics.

IGCC / AIGCC notes that the TCFD's Implementing the Recommendations report states, in several places, "Organizations should define metrics and targets that are tailored to their particular climate-related risks and opportunities and that address the key financial

disclosure areas in the Task Force’s supplemental guidance.” The Task Force should consider clarifying that comparability will be hindered if organizations define metrics and targets individually, and they should instead strive to use existing metrics and targets wherever possible and where appropriate as a first step. The Task Force could also provide additional discussion of the existing reporting indicators that are most aligned with the TCFD’s recommendations.

In a number of cases, the TCFD’s illustrative examples tables include a metric without indicating any alignment with existing report metrics. These tables would be more useful for corporations and investors, and more likely to result in quicker uptake of the TCFD’s recommendations, if they provided information about how these metrics and others are aligned with existing reporting indicators.

We also note that the promotion of existing metrics available for use should not inhibit the development and adoption of new metrics over time, which better articulate key dimensions of financially material risk and opportunity. IGCC / AIGCC would support further work being undertaken by the TCFD on further developing metrics and targets as part of the next phase of work.

IGCC / AIGCC also considers important that the TCFD recommendations:

- Specify disclosure of further metrics related to opportunities, in particular, green revenues (revenues from products that help to mitigate climate change)
- Emphasise the need to disclose scope 3 emissions for energy, agricultural products, mining and transportation sectors.

More broadly, the TCFD guidance that Scope 3 emissions are sought ‘where appropriate’ is likely to be insufficient to address current under reporting of scope 3 emissions. Scope 3 emissions are relatively more challenging to estimate than scope 1 and 2. Currently, many organisations do not disclose scope 3 emissions at all and those that do, disclose those sources that are easiest to estimate, rather than those that are most important. Such partial disclosure of scope 3 emissions risks being misleading and undermines comparability. For many organisations it is not until a scope 3 footprint has been undertaken that the full scale of risks (and opportunities) are identified.

Reporting organisations may need additional guidance on what constitutes ‘appropriate’ and we encourage the TCFD to expand on the expectations for scope 3, both in the general guidance and in the sectoral guidance in a tailored fashion. We recommend creating a distinct scope 3 requirement separate from the scope 1 and 2 requirement (separate sentence in the guidance) to give additional emphasis to this important matter.

For the supplemental guidance IGCC / AIGCC recommends consideration of the following additional metrics:

- **Energy – Oil & Gas**
 - Reserves to production ratio
- **Energy – Electric Utilities**

- Volume of electricity the company help its customers save as a percent of total electricity sales
- **Transportation**
 - Lifecycle emissions of the fleet
 - Ratio of ICE vs. other advanced vehicles (ZEV, EV, hydrogen, biofuel, etc.)
 - Emissions efficiency of vehicles relative to emissions limits in all applicable jurisdictions
 - For companies in this sector, disclose key metrics by fleet and manufacturing business units/functions

Carbon-related Assets in the Financial Sector

Q11. Part of the Task Force's remit is to develop climate-related disclosures that would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector.

Beyond the metrics included in the Task Force's guidance, and supplemental guidance, what other metrics could be used to measure carbon-related assets in the financial sector?

IGCC / AIGCC would support further work being undertaken to define and articulate, Carbon-related Assets in the Financial Sector. In providing feedback, we have sought to comment specifically from the institutional investor perspective.

Broadly speaking, metrics can be grouped under the following categories:

Carbon footprinting: For many organisations, carbon footprinting has been a useful place to start the consideration of metrics for investor disclosure on climate change. The footprint can be the absolute level of emissions, but is more often expressed in terms of 'carbon intensity', measuring CO₂ equivalent emissions of the portfolio per \$m of market capitalization, or relative to revenue, EBITDA or other measures.

Exposure to green/brown assets: Green/brown metrics are sector-specific indicators distinguishing between climate solutions and carbon intensive activities that typically include exposure to different technologies or business lines, as well as sector-specific energy or emissions intensity/efficiency metrics.

Company engagement and voting: It is important for investors to send a strong and consistent message to companies about their expectations regarding their strategic and operational response to climate change. Information on an investor's engagement on climate change issues can be an important part of climate disclosure.

Ratings and specialist research providers: Investor climate disclosure can use ESG ratings and 'climate scoring' from specialist research providers.

Transition risk and scenario analysis: Transition risk and scenario analysis tools can be an important part of an investor’s reporting framework on climate change.

Adaptation impacts: Investor disclosure should include reporting on the physical impact risks associated with climate change, particularly in relation to ‘real’ assets such as property, infrastructure and agriculture – but also for corporations whose plant, equipment and operations might be at risk of extreme weather events

Each of these approaches have supporting factors and inherent limitations. Specific supporting metrics are set out below.

Climate Change Reporting Metrics	
Carbon Footprinting¹	
Absolute carbon footprint	t CO2e
Normalised by portfolio market value	t CO2e/USDm invested
Normalised by sales	t CO2e/USDm sales
Weighted average carbon intensity	t CO2e/USDm sales
Green/Brown metrics²	
Point in time	Share of green/brown products or services as % of earnings, revenue or profit
Forward looking	Future share of green/brown using proxies such as R&D, reserves, life of asset, capex
Impact metrics	
Avoided emissions	Emissions that are avoided outside a company’s Scope 1, 2 or 3 due to its products or services.
Renewable energy	MWh
Energy efficiency	MWh/output
Water	Water saved/treated (litres)
Materials/waste	Material recovered/waste treated (tonnes)
Company engagement metrics	
Strategy	Company develops a strategic plan/response to climate change
Reporting	Company reports GHG and completes CDP
Emissions	Company reduced GHG emissions
Energy efficiency	Company improves energy efficiency
Renewable energy	Company utilises RE sources
Water	Company reduces water usage
Materials/waste	Company reduces material usage/waste
Ratings and research metrics	

¹ Source: Kepler Cheuvreux (2015) Energy Transition and Climate Change report, Table 4, page 30.

² Taxonomy and definitions of green versus brown is still evolving, industry best practice tends to refer to the CBI Taxonomy, also used by the Low Carbon Investor Registry. Investors such as Kepler Cheuvreux are going further to develop additional metrics and definitions. See “Reporting on Impact” report by Samuel Mary.

Climate score	Improve average climate score across portfolio holdings over time
Scenario analysis³	
Climate scenarios	Regional, asset class, sector and stock level sensitivity to climate scenarios
Transition alignment	Sector and stock level portfolio alignment with 1.5-2 degree outcome
Adaptation metrics	
Asset specific analysis	Vulnerability of large and at risk assets to climate change physical impacts
Climate vulnerability scoring	Asset or company climate vulnerability ratings rolled up to a portfolio level and weighted average basis, or by hotspot analysis.

Q.12 Please describe your views on the feasibility of implementing the above recommendation.

Please provide your response in the box provided

Metrics and data-based approaches are also continuously evolving as the investment community seeks to better understand which numbers best capture the underlying risks and clearly articulate the role organisations are playing to support the transition to a net zero emission economy.

IGCC / AIGCC also notes that the feasibility of implementing the recommendations will depend on companies' effective disclosure in other parts of the economy. Without quality data and information being produced at investee company level, aggregate metrics at product/strategy level may prove cumbersome and inaccurate. This will be an ongoing challenge to be managed, while noting the risk that the use of proxies, opaque assumptions or privatised commercial methodologies for data calculations may result in incomparable reporting between financial entities.

While the Task Force guidance for asset owners focuses on relevant investment strategies (at a total fund or investment strategy or asset class level), for large asset managers who ought to respond to their clients' requests in turn, calculating data for all products and strategies may be complex given the volume of products and strategies. It will also be very challenging for smaller asset managers and asset owners who lack the resources to carry out such analyses. One option may be to include a threshold (e.g. AUM) for the application of metrics, or to provide additional guidance on methodologies for smaller funds on a phased-in basis.

³ Mercer (2011; 2015) Climate Change Asset Allocation Implications, various reports

Finally, some asset managers are business units of larger groups (e.g. asset managers as part of insurance companies or banks). The disclosure recommendations should indicate whether reporting should take place at entity level or business unit level for those investors.

Greenhouse Gas Emissions (GHG) Associated with Investments

Q13A. How useful would the disclosure of GHG emissions associated with investments be for economic decision- making purposes (e.g., investing decisions)?

Please select ONE only

- Very useful
- **Quite useful**
- Neither/nor
- Not very useful
- Not useful at all
- Don't know

Q13b Please provide more detail on your response in the box below

There area range of supporting considerations and limitations associated with the attribution of greenhouse gas emissions to investments.

Factors that support carbon footprinting:

- It is based on a long history of corporate carbon footprinting and there is a reasonably established group of data providers⁴.
- It has gained attention and traction amongst some investors following the PRI's Montreal Pledge⁵, with over 120 investors representing over US\$10 trillion in assets under management signing up to the pledge.
- It can be quite simple and easy to report to a wide group of stakeholders.
- There is a reasonable history of Scope 1 (direct) emissions and Scope 2 (e.g. emissions associated with generation of electricity they use) emissions data to enable investors to undertake current, historical as well as forward projections.
- It provides the possibility to measure and report GHG emissions and carbon intensity in absolute terms and relative terms against a benchmark, typically the benchmark that the portfolio is being measured against.
- It provides the ability to isolate the contribution to an investment portfolio's carbon exposure at the stock and sector level (and for asset owners at the asset manager level), which could be used to help inform an investment organisation's response to reduce GHG emissions – such as considerations around divestment and reinvestment in lower carbon assets, engagement with the high carbon

⁴ Some of the carbon footprinting data providers include Ecofys, MSCI, South Pole, Carbon 4, Grizzly RI, EIRIS, Cross Asset Footprint,

⁵ <http://montrealpledge.org>

companies/issuers and/or engagement with asset managers about the exposure to the high carbon contributors within the portfolio.

- It provides the possibility to set targets to reduce GHG emissions and to measure and report outcomes over time, such as the Portfolio Decarbonization Coalition (PDC)⁶ which has made efforts to advance an action-based network of knowledge sharing and stakeholder dialogue to foster the process of decarbonizing investment portfolios.

The limitations of carbon footprinting:

- Strategy - On its own, footprinting does not provide information about a company's strategy on climate change and should therefore be viewed as an input into evaluating a company's position (as an input into engagement and other investment decisions) rather than an end in itself.
- No direct link to materiality – The carbon footprint does not by itself provide an indication of the potential investment performance of assets in the portfolio, this would require additional analysis around future carbon price scenarios, the strategic response of the management of the underlying asset, assumptions around commodity and asset prices, impacts on asset values and cash flow predictions, analysis of a company's position versus its competitors, the policy environment that it operates in, the impact of technological developments, and so on.
- Intensity metric can mask actual carbon efficiency – Carbon intensity can be calculated in a number of ways, eg carbon emissions per unit of revenue or per total market capitalisation. CO2 emissions can also be priced based on offsetting cost. Each approach introduces biases which mask the actual carbon efficiency of some types of companies/sectors depending on profit margins, commodity prices, and other factors.
- Company data incomplete – Only 83% of the Global 500 (FTSE Global Equity Index Series) reported their carbon emissions to CDP in the last survey conducted. While different providers draw from a variety of data sources, companies who do not report their data have to be estimated and different providers will have different sources of data and risk tolerance in extrapolating them. Reported data may itself be unreliable. Scope 3 emissions which include emissions associated with a company's products or supply chain are also still largely unreported and methodologies for calculation and allocation are still developing.
- Key transition risks not captured - Indirect emission which may result in transition or stranded asset risks are not captured.
- Does not currently take into account 'avoided emissions' (meaning 'green' products can appear highly carbon intensive (e.g. manufacture of glass and polysilicon for PV solar), while playing a positive role in supporting economic transition.

⁶ <http://unepefi.org/pdc/>. PDC now convenes 25 investors overseeing the decarbonization of \$600bn in commitments out of \$3.2 trillion in assets under management.

- Time horizons – Carbon footprint methodologies are designed to capture the carbon intensity of a portfolio at a given point in time. Significant changes can be expected as a result of changing sector and company exposure, market movements, and companies disposing their holdings of high-carbon assets.
- Limited asset classes: As it currently stands, the GHG emissions data is limited to listed market entities, with the carbon footprint analysis typically conducted on an investor's listed equity holdings at a point in time. Depending on the asset mix of an investor (which varies a lot by country) this could mean that more than 50% of the assets are not currently captured by carbon footprinting.

Overall, IGCC / AIGCC recommends that a balance of metrics and disclosure approaches to emission associated with investment are maintained.

Remuneration

Q14. Which types of organizations should describe how performance and remuneration take climate-related issues into consideration?

Please select ALL that apply.

- **The Energy Group as recommended by the Task Force**
- **Other non-financial sector organizations (please specify) ... ALL non-financial sector organizations**
- Financial sector organizations (please specify)
- Financial sector organizations (please specify)
- None

Adoption and Implementation

Q15. What do you view as the potential difficulties to implementing the disclosures?

Please select ALL that apply.

- **The information requested could be commercially sensitive**
- **The time and cost of collecting the information**
- **Climate-related disclosure is not part of our current regulatory requirements**
- **Lack of experience with concepts and methodology**
- Multiple climate-related reporting frameworks currently exist
- Other (please specify)
- We do not anticipate any difficulties related to implementing the disclosures

Q16. What drivers, if any, do you think would encourage you to adopt the recommendations?

Please select ALL that apply.

- Requests from investors to disclose
- Requests from clients or beneficiaries
- Reputational benefits and goodwill from adoption
- **Inquiries or requests from debt or equity analysts**

- **Adoption by industry peers**
- Other (please specify)
- None of the above

Q17. What support or actions would be helpful to you in implementing the disclosures within the next two years?

The number one driver for asset owners and managers to implement the disclosures would be to have complete, meaningful, reliable and consistent data across companies and sectors. The G20 could and should play a key role in making solid and comparable data available, but stock exchanges and central banks could really contribute to advance climate-disclosures.

Further development, refinement and standardised adoption of methodologies and metrics for developing, for instance, scenario analysis would be very helpful.

The following support would be helpful to companies in implementing the disclosures:

- The Task Force could provide examples of what complete disclosures by companies in several key industries might look like in financial filings in particular jurisdictions.⁷
- After companies have used the TCFD recommendations, the Task Force could release case studies demonstrating how companies have practically applied the recommendations in both voluntary disclosure and financial filings.

Q18. The Task Force's recommendations are focused on disclosure in financial filings; within what timeframe would your organization be willing to implement the recommendations in financial filings?

Please select ONE only.

- We already report these disclosures in financial filings
- In the next one to two years
- In three to five years
- We do not intend to implement the recommendations
- **Don't know (please explain)**

IGCC and AIGCC are industry associations not a corporate reporter.

⁷ See, for example, the 2009 PwC report, "Typico plc: Greenhouse Gas Emissions Report".
<http://www.pwc.com/gx/en/services/audit-assurance/corporate-reporting/sustainability-reporting/carbon-reporting-the-future-for-climate-change-and-greenhouse-gas-emissions-reporting.html>

Additional Feedback

Q19. What additional feedback you would like to provide the Task Force on the recommendations?

The leadership of the G20 is crucial to improving climate-disclosure and advancing the climate agenda.

We encourage the G20, and the FSB, to continue leading in the implementation phase of the recommendations as well as in the evolution of climate-disclosures. The G20 could designate a body – for example the Task Force, the Green Finance working group or an equivalent existing or newly developed body - to oversee and monitor implementation.

We note that AIGCC recently reviewed disclosure developments in the Asia Pacific region as part of its research report 'Investing for the Climate in Asia'. This found that a growing number of jurisdictions in the Asia Pacific region are currently focused on developing finance initiatives and stewardship codes to promote greater disclosure. We note that in the region, four have stewardship codes and a further three have draft codes to promote active ownership at investors, while five markets include sustainability disclosure within the listing rules of their stock exchanges.

The domestic support is particularly important as Asian financial institutions have a relatively low representation in international initiatives to support sustainable finance. We would encourage the TCFD to work with financial regulators in these jurisdictions to encourage broad adoption of climate change disclosure and the TCFD recommendations.

The report does not endorse specific metrics. Whilst we understand that in some cases more work needs to be done in order to obtain the necessary degree of consensus and standardisation for specific metrics to be agreed and adopted, we would welcome a G20-designated body (backed by the FSB) to focus on developing further the recommendations as methodologies, metrics and practices evolve.