Response to APRA *Prudential Practice Guide: Draft CPG 229 Climate Change Financial Risks*

CSIRO Climate Resilient Enterprise Mission

30 July 2021

Background

APRA has invited feedback on its *Prudential Practice Guide (PPG): Draft CPG 229 Climate Change Financial Risks*. Below we provide feedback from the CSIRO Climate Resilient Enterprise (CRE) mission on this draft CPG 229.

The goal of the CRE mission is to better prepare and assist Australian industry and regional partners in the Asia-Pacific to manage impacts and risks from a changing climate, whilst identifying adaptation and transition options to inform their climate actions and investments. Through using our technical capability and expertise across both physical and transitional risks, we will develop and deliver science-based climate intelligence at scale, tailored to industry needs at an agreed, quality assured standard. The mission involves multiple CSIRO Business Units, including Oceans & Atmosphere, Land & Water, Agriculture & Food, Data61 and Business Development, together with several important external partners across the consultancy/SME and university sectors, and regional organisations. We are already working with APRA on a Climate Vulnerability Assessment of Australian Banks.

Below, we structure our feedback on three sections of the draft CPG 229: risk management, scenario analysis and disclosure, as well as liability risk. We also provide some summary information on the experience and key capabilities of CSIRO and key CRE mission partners relevant to the first two topics.

In addition to the individual climate change risk components of physical, transition and liability risks, we believe that it is important to consider the compound or combined effects of these three components, together with other existing risk factors and their interactions when evaluating climate change financial risks. This requires broad-based, multi-sector and multi-factor consideration drawing on related multi-disciplinary capabilities that the CSIRO CRE mission is able to provide.

Risk Management

We note that in the draft CPG 229, 'climate risks' refers to the financial risks arising from climate change, including physical climate risks, transition risks and liability risks, as illustrated in Figure 2

of the draft CPG 229. This is a somewhat broader definition of climate risks than covered in the guidance from TCFD, which focuses primarily on physical risks and transition risks.

We agree that it is critically important for businesses to understand the interaction between climate risks and their business activities. This is part of the rationale for the CRE mission.

It is also important to consider a global perspective, rather than only considering an Australian perspective on climate risks, as both physical risks and transition risks in other countries may impact financial risks for institutions in Australia, and vice versa within the broader region of Australia's national interest.

All businesses should seek to understand climate risks and how they may affect their business model, including being able to identify material climate risks and assess their potential impacts, both directly and indirectly via relevant counter-parties. It may be appropriate to consider the different types of risks; physical, transition and liability risks separately, as well as in combination, as they are likely to affect different aspects of a business in different ways. Depending on the business in question, these impacts may have broader implications for the economy more generally.

The criteria for risk identification should include a range of factors, such as: impacts, exposure and vulnerability to both incremental changes in the climate (chronic risk) and also extreme weather events (acute risk); the level of greenhouse gas emissions; potential exposure to changes in climate- related policy or technology; and the time period under consideration or the level of global warming at that time.

It is appropriate to use data from both publicly available and proprietary sources, and to seek assistance from external experts (including academics, specialist consultants and scientific bodies such as CSIRO (in particular via the CRE mission).

Scenario Analysis

Scenario analysis is a useful tool for informing the identification of both chronic and acute physical risks and transition risks, including in combination. However, scenario analysis can potentially be misinterpreted or used inappropriately unless applied by appropriately qualified experts and/or facilitated by expert guidance. Hence expertise and guidance to develop capabilities in climate risk scenario analysis and associated stress testing, or to have ready access to such support from external sources , is very relevant and appropriate.

In general, the advice and the scenarios in the draft CPG 229 are described well. However, for stress testing for physical climate risks at a given global warming level it is appropriate to consider an extreme regional climate projection, such as a hottest-driest scenario or a hottest-wettest scenario, rather than a median change scenario in order to capture the full range of uncertainty. Hence, it may be appropriate to consider physical climate risks separately from transition risks for some scenarios, and where appropriate to use standardised scenarios across the different risk analyses to ensure internal consistency of the outputs.

In addition, it is important to note the different levels of confidence for changes in some climate variables, with much higher confidence for changes in temperature extremes, sea level extremes and heavy short-term (1-hour) rainfall extremes, than for changes in mean rainfall or changes in storms and wind.

It is important to note that a new comprehensive assessment of physical climate risks globally and relevant to Australia will be released very soon. The first volume of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis*,

scheduled to be released on 9 August, will be available from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/ .

Disclosure

There is increasing demand from investors, shareholders and by association directors, for disclosure on climate-related risks in all businesses and companies. In addition to the information on climate risks, it is important to disclose the datasets, scenarios and methods that have been used to assess these risks to ensure complete transparency and provenance of the technical specifications of the disclosure and associated analyses.

There will be uncertainties in both the climate projections and in the future climate impacts on a business, which should be disclosed. These uncertainties should not be used to avoid disclosure of these climate risks and their potential impacts. Indeed, providing clear guidance around the uncertainty and the associated spatial and temporal limitations of the data will likely need to be a minimum standard for best practice disclosure.

Liability Risk

We cannot provide legal advice on liability risk. However, it is important to note that there have been major scientific advances in the attribution of some recent observed extreme weather events, such as the extreme fire weather in the 2019-2020 Black Summer, that have been attributed to human-caused climate change. The impacts of some of these extreme events may then be able to be linked to sources of greenhouse gas emissions. The CRE mission has access to expertise on attribution of extreme events: https://nespclimate.com.au/science-update-understanding-the-role-of-climate-change-in-climate-extremes/

In context of liability risk, we also note previous reference to the need for agreed, quality-controlled standards and associated provenance to underpin the application of science-based climate risk assessments and disclosures.

Relevant Capabilities and Resources

As noted above, it is important to consider compound climate change risks when evaluating financial risks. In terms of relevant capabilities and resources developed by CSIRO and its partners, we draw your attention to two recent reports that are very relevant to these considerations:

- Australian Academy of Science report in 2021 *The risks to Australia of a 3C warmer world* https://www.science.org.au/supporting-science/science-policy-and-analysis/reports-and-publications/risks-australia-three-degrees-c-warmer-world
- ABARES assessment in 2021 of climate change impacts on the profitability of Australian farms https://www.agriculture.gov.au/abares/products/insights/climate-change-impacts-and-adaptation

Other relevant capabilities and resources include:

- Australian climate projections from the updated Climate Change in Australia web site https://www.climatechangeinaustralia.gov.au/en/

- Finance sector-led climate change risk assessment for Australian buildings and infrastructure from the Climate Measurement Standards Initiative https://nespclimate.com.au/climate-science-informs-australian-guidelines-for-climate-risk-assessments-and-disclosures/

- Energy sector-led climate change risk assessment through the Electricity Sector Climate Information (ESCI) project
  https://www.energy.gov.au/government-priorities/energy-security/electricity-sector-climate-information-esci-project and
  https://www.climatechangeinaustralia.gov.au/en/projects/esci/

- Plan for Australia's next generation of regional climate projections, prepared by the NESP Earth Systems and Climate Change Hub in 2021, for the National Climate Science Advisory Committee
  https://nespclimate.com.au/australias-next-generation-of-climate-change-projections/

- Plan for a national climate services capability; prepared by the NESP Earth Systems and Climate Change Hub in 2021, for the National Climate Science Advisory Committee
  https://nespclimate.com.au/towards-a-national-climate-services-capability/

- NESP Climate Services Hub, 2021-2027
  https://www.environment.gov.au/science/nesp/hub-climate-systems

- Australian Climate Service, established in 2021; a partnership of world leading science, information and expertise from the Bureau of Meteorology, Geoscience Australia, CSIRO and Australian Bureau of Statistics. www.acs.gov.au

- DAWE Climate Services for Agriculture digital platform
  https://www.agriculture.gov.au/ag-farm-food/drought/future-drought-fund/climate-services