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The House Standing Committee on the Environment and Energy

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Submission to the House Standing Committee on the Environment and Energy by the Australian National University (Climate Change Institute)

Dear Committee members,

Please find enclosed a submission from the Australian National University (ANU) Climate Change Institute to the review of the Climate Change (National Framework for Adaptation and Mitigation) Bill 2020.

This submission has been coordinated by the ANU Climate Change Institute and includes contributions from ANU scholars with expertise in climate science and plant responses to climate change.

We would also welcome the opportunity to participate in the public hearing day.

Yours sincerely,

Professor Mark Howden,
Director, ANU Climate Change Institute

The draft Bill is well-aligned with 1) the current understanding of climate science, 2) of current and future climate change impacts and the adaptation needed to respond to these impacts, and 3) of the emission-reductions needed to meet the Paris Agreement goals. In particular, the scientific community synthesizes the scientific understanding of these issues via the efforts of the Intergovernmental Panel on Climate Change (IPCC) and the draft Bill reflects closely not only the findings of the IPCC in relation to the science but also in relation to the current understanding of best practice in the institutional and policy responses required.

We have structured our submission around the four major sections of the Explanatory Memorandum for the Climate Change (National Framework for Adaptation and Mitigation) Bill 2020.

1. A positive response to the challenges of climate change

Accessing best available expertise

The draft Bill outlines a series of Guiding Principles. One of these is the *Principle of informed decision-making* (Section 11). This appropriately identifies accessing the best available information as a key element. However, in the subsequent paragraph (2) it identifies a series of preferred sources which includes the Bureau of Meteorology and CSIRO but does not mention Australian Universities. Australian Universities have much greater research capacity in climate adaptation, emission-reduction and climate change policy and publish many times more peer-reviewed studies in these domains than do either BoM or CSIRO. So the exclusion of Australian Universities is highly problematic from the point of view of the Guiding Principles, effectively breaching them in the same section of the legislation. Consequently, there is a need to include Australian Universities in the list in Section 11 paragraph 2. This inclusion needs to be carried through also to Section 18 (f).

Informed decision-making is critical for effective adaptation. Consequently, it would be appropriate to see this reflected in the 'Principle of informed decision-making' (Section 11, paragraph 1). So perhaps change the text on line 24 to read:'… on the contributing causes and potential impacts of climate change and on adaptation and mitigation responses to climate change'

Community engagement and self-determination

Another Guiding Principle (Section 14) is that of community engagement and self-determination both of which are critical for effective and sustainable transformation in Australia's move to net zero emissions. For example, Australia has great opportunities to transform agricultural practice—currently a major source of greenhouse gases—to an equally large net sink. This flip will provide additional benefits of enhanced food and ecosystem security[1]. It is essential to work with farmers to co-design, demonstrate and replicate best regenerative practices.

[1] Glover et al., Science 2010

2. National plans for adapting to our changing climate

The focus on climate adaptation is very appropriate due to 1) the emergence of climate impacts more rapidly than was earlier projected and 2) the growing evidence that future impacts and risks are likely to be worse that was earlier projected[2]. Australia used to be a world leader on climate change adaptation research and on translating that research to stakeholder action. However, since around 2012 there have been a range of changes in policies and programs at both State and Commonwealth levels which have resulted in major reductions in this research activity. A recent analysis indicated that this reduction was around 70% against trend. This is at the same time that climate changes are accelerating. A very problematic situation. The draft Bill could perhaps include specification of an institutional arrangement such as a National Climate Adaptation Centre to both provide ongoing effort in climate adaptation and to better coordinate adaptation research, implementation, monitoring and evaluation. The past model for such centres had a primarily research focus whereas a new Centre should have an adaptation-action focus with input from research, industry and community stakeholders, and policymakers. It should be established as an independent entity at arms-length from government, within the University sector.

It is important that there is a balance between climate adaptation and mitigation as there are risks that too strong a focus on adaptation can lead to moral hazard (in this case lack of progress on emission-reduction) or too strong a focus on mitigation can lead to unnecessary exposure to risks and missing adaptation opportunities. This element of balanced progress on both agendas may need to be raised somewhere in the draft Bill.

There needs to be better integration of the adaptation and the mitigation elements of the draft Bill. Whilst there is some mention of the need for mitigation activities to consider the ability to adapt to climate change (Section 28 2(b) vii and Section 30 3(b)) there appears to be no mandating of the need for adaptation responses to take into account GHG emissions and the contribution or otherwise that adaptation activities might make to achieving the net-zero Target. This interaction between adaptation and mitigation is a core area for opportunities and co-benefits and is a key focus of the IPCC in the 6th assessment cycle.

National climate risk assessment

A climate risk assessment is a sensible thing to do and the 5-yearly frequency is consistent with what other nations have done (e.g. the US). Section 17 (2a) outlines the scope of the national risk assessment, framing it in terms of the 'risks to Australia's economy, workers, society, agriculture, environment, and biodiversity'. Arguably this misses out being explicit on marine systems, transport, infrastructure, trade etc. There is always a challenge with providing a list as it inevitably won't be fully inclusive. But it can be used to flag particular priorities. So wording such as 'including but not limited to' could help.

Section 18 identifies factors to be taken into account. Risk assessments usually include a component of risk management, in this case climate adaptation and, arguably in the longer term, mitigation. Instead, in the draft Bill, adaptation is separate from the risk assessment. The automatic consequence of not including adaptation in the risk assessment is that there will be an a priori over-estimate of the risk. This could be addressed by including some elements of adaptation in the list of factors to be taken into account in Section 18.

Arguably other key factors which are not included in that Section 18 list are 1) the need to build on the previous risk assessments (rather than starting from a blank sheet) and 2) to

[2] Zommers et al., Nature Reviews Earth & Environment 2020; IPCC Special Reports on 1.5C (2018), on Land (2019) and on Oceans and Cryosphere (2019)

assess the effectiveness of climate adaptation responses from the prior period so that this can be included in risk assessment.

Sections 17 and 18 (and the draft Bill broadly) tends to focus on the negative aspects of climate change and does not address the opportunities arising except where it is in relation to mitigation. The usual framing of risks is that it is not limited to negative outcomes – for example, we talk about 'upside risk'. However, in climate change dialogues, the IPCC have defined risk in terms of negative impacts and it may be best to run with that. To compensate for this truncated approach, it is important to be straightforward about the possibilities of some opportunities arising (e.g. increasing rainfall in the north-west with consequent increasing grazing profitability, or warmer temperatures increasing forest growth potential in Tasmania). One option is to include an additional component in Section 17 (2) which assesses opportunities in the same way that Section 17 (2b) addresses negative impacts. A similar approach may need to be used for emissions budgets – for example including 'opportunities' in Section 28 (2) a (ii).

3. National plans for reducing greenhouse gas emissions

The framing of the draft Bill in terms of the net-zero target and the timing of that target (2050 or earlier) is broadly consistent with the IPCC reports and other science analysis. This trajectory is however, dependent on rapid action to reduce emissions. The longer the delay in starting significant emission reductions, the less time we have to meet net zero. Hence, it is important for ambitious near-term emission-reductions if we are to meet the Paris Agreement goals. Consequently, in Section 26 should there be a clause added which specifies that the emissions budgets have to be consistent with progressive tracking towards the Target.

In terms of scope, the draft Bill has Section 25 on emissions relating to fossil fuel exports but is silent on bunker fuels for aviation and shipping which collectively contribute about 4.5% of global GHG emissions. Whilst Australia reports on the emissions from these sources, similar to emissions from our exports, we are not 'responsible' for them under international accounting practice (they fall between the cracks). For consistency, should bunker fuels be considered in Section 25?

In the Definitions, the entry for gross emissions (page 6 lines 9-11) is potentially flawed as it does not include critical sectors such as transport or fugitive emissions both of which have rapidly growing emissions profiles. Given the intent of this definition (in relation to other definitions as provided in the draft Bill), perhaps a better definition may be to simply have gross emissions as being all national emissions except those related to landuse and landuse change. For example, this may read: '*gross emissions* means Australia's total emissions as reported in the National Greenhouse Gas Inventory except those reported under the landuse and landuse change sector'

Also in Definitions, the reference to reservoir (page 7 line 24) may need changing as the reference to 'climate' may be interpreted as being only related to the atmosphere whereas the most significant reservoirs tend to be in the terrestrial or marine systems. So perhaps change to: '*reservoir* means a component or components of the atmospheric, terrestrial or marine systems where a greenhouse gas or a precursor of a greenhouse gas is stored'.

A minor point but in the Outline of the Act on Page 4 line 14 perhaps the phrase 'The target day can be changed by the Minister …' could be altered to 'The target day can be brought forward by the Minister…' to better reflect the intent of the legislation.

Finally, rapidly reducing ongoing emissions and avoiding new sources is necessary, but not

sufficient to halt climate change and recover a safe and stable earth system. A clear path for emissions reductions is to further invest in renewable energy, electrification and efficiency as costs have declined. Australia's low population and large area also provides a unique opportunity to go beyond emissions reduction and actually increase CO_2 draw down into its large land mass. This drawdown pathway has only recently been recognised as essential to achieving a safe climate this century, and in support, the Australian government has demonstrated their commitment by encouraging the development of many specific new drawdown methods[3]. Regenerative agricultural practices are one means of achieving carbon drawdown.

4. Transparent monitoring, reporting and accountability

The Climate Change Commission

International experience shows that the creation of an independent body to oversee and report on progress in implementation can improve effectiveness and transparency if it has the appropriate make-up and principles of conduct. The draft Bill appears to draw on two existing, successful international models which are particularly relevant to the Australian form of government:

a) The independent Climate Change Commission set up under New Zealand's Climate Change Response (Zero Carbon) Amendment Act 2019.

b) The UK's Climate Change Committee, an independent, statutory body established under the Climate Change Act 2008.

These two entities demonstrate that appropriate expertise in the Commission will be crucial in enabling it to function effectively. The draft Bill specifies expertise in Section 37 (2) including c) climate science. Climate science is usually considered to refer to the science dealing with the dynamics of the linked atmosphere system. Whereas this draft Bill focuses on climate adaptation and emission reduction. Consequently, the specification for the science expertise should follow this focus. So perhaps change the specification to be 'Climate adaptation science' and add an additional category 'Mitigation science' (or 'Emission-reduction science'). This change also needs to be subsequently implemented in Section 37 5(a)

In relation to the periods of appointments of Commissioners (Section 39) should this also be something to be considered by the Committee. It is normal for such roles to be shorter than 10 years to allow for evolution of the committee and to limit possibilities for stacking and gridlocking. For example, terms of 2 to 3 years with an option for a single extension are regularly seen in such institutions.

For the Commission to do its job effectively, it will need to access information produced under this Act and for this Act by other bodies. However, it does not appear to have the mandate to require provision of this information from those bodies. For example, in Section 21 the Commission must provide the Minister with an annual progress report, but there seems to be no element of the draft Bill that enables access to the information to do so.

[3] King 2020

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