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Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600

By email: ec.sen@aph.gov.au

Dear Sir / Madam

Recent trends in and preparedness for extreme weather events

EDO Tasmania is a non-profit, community based legal service specialising in environmental and planning law. Our organisation provides legal advice and representation, community legal education services and engages in law reform and lobbying activities to support our efforts to ensure adequate regulation in respect of environmental issues.

The Australian Network of Environmental Defenders Offices (**ANEDO**) has made a range of submissions to federal inquiries regarding climate change issues¹, and we support all the comments made in those submissions. For the past few years, EDO Tasmania has also been actively involved in efforts to improve planning frameworks, with a particular emphasis on improving ecosystem resilience, strategic integration of planning and infrastructure issues, coastal management and adaptation to the impacts of climate change.

In this context, we would like to make some brief comments addressing the following terms of reference for this Inquiry:

- (c) *an assessment of the preparedness of key sectors for extreme weather events, including major infrastructure (electricity, water, transport, telecommunications), health, construction and property, and agriculture and forestry;*
- (e) *the current roles and effectiveness of the division of responsibilities between different levels of government (federal, state and local) to manage extreme weather events; and*
- (f) *progress in developing effective national coordination of climate change response and risk management, including legislative and regulatory reform, standards and codes, taxation arrangements and economic instruments;*

We are particularly concerned by the current lack of guidance in relation to coastal management, and urge the government to take a lead in developing consistent planning frameworks to facilitate more effective and efficient climate change adaptation in coastal areas.

¹ For example, the ANEDO submission to this inquiry, submission on the Productivity Commission's Draft Report on Barriers to Effective Climate Change Adaptation and submission to the House of Representatives Standing Committee on Climate Change, Environment and the Arts Inquiry into Australia's Biodiversity in a Changing Climate. All ANEDO submissions are available at www.edo.org.au

Extreme weather

Numerous recent scientific papers have confirmed the trend towards higher temperatures and more frequent and higher intensity extreme weather events. While the correlation between climate change and extreme weather events is complex and uncertain², it appears increasingly unarguable that the frequency and severity of extreme weather events are exacerbated by climate change.³

In Tasmania, the *Climate Futures for Tasmania: Extreme Events* report⁴ specifically examined extreme events to determine how climate change might alter the characteristics of these events in Tasmania. The report outlined expected changes to the frequency and severity of extreme events, including increased rainfall intensity and associated flooding, with longer dry periods in between heavy downpours. The frequency and extent of heatwaves throughout the State is also projected to increase progressively with rising temperatures.

The recent, tragic loss of life and property in the Queensland floods and Tasmanian bushfires provide a practical impetus for more action in ensuring that communities are better prepared for the impacts of more frequent extreme weather events. The emergency services, government agencies and infrastructure providers responded well in Tasmania, and must be commended. However, the experience has highlighted the massive burden that disaster recovery can place on services, staff and affected communities, and the economic impost on Federal and State governments to provide assistance. This emphasises the importance of more effective, proactive climate change adaptation actions to prepare communities for weather events that are more frequent, more intense, of longer duration and less predictable.

Preparedness

It is clear that climate change impacts involve complex interactions and will often be unpredictable. The outcome of the litigation resulting from the 2009 earthquake in L'Aquila⁵ highlights both the difficulty in predicting extreme events, and the importance of being upfront about the uncertainties inherent in any prediction.

It is therefore critical that any framework for adaptation and preparation for extreme weather events factors in uncertainty and the need for a precautionary approach to decision-making. The most effective methods for achieving this will be:

- building resilience of natural and human environments (for example, setting aside areas for colonisation by coast-dependent species as sea level rise forces habitats to retreat)⁶;
- clearer articulation of risks (including risk "bands" to indicate uncertainty);
- improving the adaptive capacity of communities and responsible agencies (for example, ensuring that policy frameworks are flexible and can respond to new information); and
- comprehensive strategic and regional planning.

² Peterson, T, Stott, P and Herring, S. 2012. 'Explaining extreme events of 2011 from a climate perspective' *Bulletin of the American Meteorological Society* 93(7), p1041

³ For example, the IPCC Special Report: *Managing the risks of extreme events and disasters to advance climate change adaptation: special report – summary for policy-makers*. 2012. www.ipcc-wg2.gov/SREX/ (viewed 30 January 2013); *Four Degrees or More? Australia in a Hot World*, Conference proceedings, July 2011; World Bank report, 2011. *Turn Down the Heat*; Climate Commission. 2013. *Off the Charts: Extreme Australian Summer Heat*, at <http://climatecommission.gov.au/report/off-charts-extreme-january-heat-2013/> (viewed 30 January 2013)

⁴ White, CJ, Sanabria, LA, Grose, MR, Comey, SP, Bennett, JC, Holz, GK, McInnes, KL, Cechet, RP, Gaynor, SM & Bindoff, NL. 2010. *Climate futures for Tasmania: extreme events technical report*, Antarctic Climate and Ecosystems Cooperative Research Centre.

⁵ For commentary on this decision, see www.theconversation.edu.au/scientists-found-guilty-for-laquila-earthquake-deaths-but-why-10292 (accessed 31 January 2013)

⁶ We commend the National Wildlife Corridor Plan for its efforts to identify and protect linked landscapes to improve species resilience.

Responsibilities and coordination

EDO Tasmania strongly believes that improved planning frameworks are essential to climate change adaptation and preparedness for extreme events. Planning systems can regulate use and development in vulnerable areas, mandate minimum considerations and impose minimum standards, require vegetation management and provision for emergency vehicle access, and facilitate strategic retreat from high risk locations.

The COAG National Strategy for Disaster Resilience also highlights the need to develop and implement effective risk-based land use planning arrangements as a way of strengthening Australia's resilience to disasters and the impacts of climate change.

In Tasmania, reform of the planning system has been ongoing for a number of years, but the system remains inadequate to give planning authorities both the direction and the powers necessary to respond effectively to climate change impacts and associated extreme events.

Coordination of information

At a recent climate change adaptation forum in Hobart, numerous council representatives expressed frustration at the volume of conflicting information regarding climate change impacts and the difficulty in obtaining credible, consistent advice to guide their policy decisions. Poor coordination between relevant State and local government agencies in relation to resource management information has resulted poor regional integration, little recognition of cumulative impacts and inconsistent decisions.

We would therefore support greater efforts to improve information sharing between Federal and State government agencies and councils. At a minimum, Councils must have access to up-to-date spatial and mapping information and clear criteria against which to assess developments. To facilitate this, we would support the establishment of an independent government agency with responsibility for providing authoritative information on issues such as predicted impacts, hazard risk management, strategic planning, economic and case studies of actions that have (and have not) worked in other areas.

At an individual level, it is also clear that people do not necessarily understand information that is currently available (or, at least, are not responding rationally to that information). There is a need for clearer articulation of the responsibilities of various agencies, and also individual responsibilities and actions. For example, it should be made clear where individuals will not be subsidised or protected from the impacts of climate change where they choose to live in a hazardous location. Government needs to provide clearer advice to make people aware of the risks they face, but also to help individuals or small businesses appreciate what they need to do to adapt to, or cope with, those risks.

It is also important to ensure that individuals, communities and government agencies do not become complacent regarding continuing adaptation actions. Government must clearly communicate that adaptation is an ongoing, iterative process rather than a one-off change.

Consistent approach to climate change adaptation

In addition to difficulties accessing information, councils have also criticised the lack of a cohesive statewide coastal management framework in Tasmania for hampering efforts to effectively plan for and adapt to climate change impacts. Without statewide guidance, responsibility for planning, investigation and assessment of development in coastal areas to councils that frequently lack resources, expertise and information.

Lack of statewide guidance on planning standards for coastal management and climate change adaptation has led to poor planning outcomes and facilitated ongoing development in risky areas. This situation also creates a danger that councils will be reluctant to make bold restrictions for fear of losing development investment to other, more lenient municipalities.

It is critical that clear, consistent criteria are developed on which decision-makers can base their assessments of proposed, future developments.⁷ It is equally critical that consistent advice be provided to guide strategic decisions on protecting existing developments and improving the robustness of natural areas, such as planned retreat from vulnerable areas, emergency response plans and building ecosystem resilience through maintaining buffer zones, dune re-vegetation and reservation of retreat habitat.

Ideally, a national body should be charged with developing this guidance. However, if no national body is established, it is imperative that state governments take the lead on providing guidance to local authorities on climate change adaptation and disaster preparedness, and providing access to resources and further advice where necessary.

This is consistent with advice provided to Minister Combet by the Coasts and Climate Change Council in December 2011, which recommended that the Federal government:

- Develop a coastal risk based standard to guide developers and asset managers on managing climate change risk, where Australian Government investment and funding is involved.
- Progress a national approach to the development and application of the coastal risk based standard for major investment decisions with states and local government.
- Conduct a five yearly national audit to assess how climate change risks are being incorporated in major investment decisions in order to minimise future risk.⁸

Articulation of responsibilities and liability

One of the significant stumbling blocks for local councils in Tasmania in planning for natural hazards (including coastal inundation and erosion, bushfire risk and flood events) remains uncertainty regarding liability. In Tasmania, this has been particularly obvious in the context of coastal management, where lack of clarity regarding liability for maintaining coastal landscapes or infrastructure has led to reluctance to undertake any work at all. Without a provision similar to s.733 of the *Local Government Act 1993* (NSW) to clarify that indemnity can be secured through good faith action, there is a perverse situation where councils who give only perfunctory consideration to climate change impacts have an advantage over those councils who have made considerable efforts to understand and identify the climate risks to which their municipality is exposed.

EDO Tasmania is an advocate for the development of a nationally consistent approach to determining local government liability in relation to hazard management. Such an approach was recommended by the House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts in its 2010 Report, *Managing our coastal zone in a changing climate: the time to act is now*, and elaborated in the Australian Local Government Association report, *Local Council Risk of Liability in the Face of Climate Change – Resolving Uncertainties*.⁹ Any attempt to clarify liability must encourage councils to manage their liability through gathering, and communicating, information about risks and ensuring transparent, science-based assessment processes.

Thank you for the opportunity to make these brief comments. If you wish to discuss any issue raised in this submission in greater detail, please do not hesitate to contact Jess Feehely on (03) 6223 2770.

Yours sincerely,

Environmental Defenders Office

Jess Feehely
Principal Lawyer

⁷ The ANEDO submission to this inquiry, and the Inquiry into Biodiversity in a Changing Climate, set out some of the mandatory considerations to be addressed by such criteria.

⁸ Coasts and Climate Change Council. 2011. Summary Of Council Recommendations To The Australian Government

⁹ Report available at www.alga.asn.au