Premier

Tasmanian Government

- 6 AUG 2014

Presiding Commissioner
Inquiry into Natural Disaster Funding Arrangements
Productivity Commission
disaster.funding@pc.gov.au

Dear Sir/ Madam

Thank you for providing the opportunity to contribute to the Productivity Commission's Inquiry into Natural Disaster Funding Arrangements.

Please find enclosed the Tasmanian Government's submission. The submission advocates for the retention of the existing National Disaster Relief and Recovery Arrangements but identifies a need for an increased focus on natural disaster mitigation that would lessen the cost of disasters to all tiers of government. This could potentially be funded by reallocating funding from current arrangements with no overall increase in the level of funding provided.

The Tasmanian Government looks forward to considering the Productivity Commission's response to the submissions received during this process and any proposal or recommendations that may be presented in your draft report.

Yours faithfully

Will Hodgman MP
**Premier**

Attachment

14/48310/3

# Productivity Commission

## Inquiry into Natural Disaster Funding Arrangements

14/32932

# Contents

# 1. Background

Tasmania has a temperate maritime climate that is exposed to a range of natural hazards including bushfire, flooding and severe storms. While the impact of these hazards is usually minor and localised, Tasmania has experienced some of Australia's most catastrophic natural disasters, including the devastating fires that swept across the south of the State and killed 62 people on 'Black Tuesday' 7 February 1967, and the widespread flooding across Northern Tasmania during April 1929 that claimed 22 lives.

On 13 February 2011, the Council of Australian Governments (COAG) agreed to the *National Strategy for Disaster Resilience* (the Strategy) which outlined a new approach to risk management that focused on the community accepting a shared responsibility to prevent, prepare, respond to and recover from natural disasters.

The Strategy recognises that governments, at all levels, have a significant role in strengthening the nation's resilience to disasters by:

- developing and implementing effective risk-based land management and planning arrangements and other mitigation activities;
- having effective arrangements in place to inform people about how to assess risks and reduce their exposure and vulnerability to hazards;
- having clear and effective education systems so people understand what options are available and what the best course of action is in responding to a hazard as it approaches;
- supporting individuals and communities to prepare for extreme events;
- ensuring the most effective, well-coordinated response from our emergency services and volunteers when disaster hits; and
- working in a swift, compassionate and pragmatic way to help communities recover from devastation and to learn, innovate and adapt in the aftermath of disastrous events.

By understanding risks we can more effectively prepare for and mitigate the impacts of disasters. Risk assessment provides a basis upon which priorities can be determined and resources allocated. The Strategy reinforces the need for governments, industry and individuals to attribute the ownership of risk to those who are going to benefit from the asset. However, the Strategy also notes that the appropriate attribution of responsibility for risk will occur over time.

The *Tasmanian State Natural Disaster Risk Assessment* (TSNDRA) has been a significant step towards developing an understanding of the risk from natural hazards in Tasmania. The assessment focuses on strategic, state-level risks with the aim of providing key emergency management decision-makers with information to assist in determining state risk mitigation priorities and minimising the costs related to natural disasters.

The TSNDRA provides the State with an increased understanding and awareness of natural disasters that have the greatest potential to cause

significant impacts. It found that bushfire and flood are Tasmania's most significant hazards. Bushfires have the potential for the greatest impact in the South East of the State and flooding in the North and North West. The TSNDRA is available at http://www.ses.tas.gov.au.

## 1.1 Tasmanian Emergency Management – Profile of Emergency Incidents

The 2013 Productivity Commission (PC) Report on Government Services (RoGS) supports the findings of the TSNDRA. Table 1 outlines the reported number of bushfires attended by fire service organisations across Australia as reported in ROGS.

| | Number | | Fires per 100 000 people | | Fires per 100 000 hectares | |
|---|---|---|---|---|---|---|
| | 2012-13 | 2003-13 (yr.av.) | 2012-13 | 2003-13 (yr.av.) | 2012-13 | 2003-13 (yr.av.) |
| **Tasmania (% of Aus) (Ranking)** | 1 893 (3.9%) (6/8) | 1 964.2 (4.3%) (6/8) | 369 - (2/8) | 395.1 - (2/8) | 27.7 - (3/8) | 28.7 - (2/8) |
| **Australia** | 48 756 | 45 594 | 213 | 215.7 | 6.3 | 5.9 |

Table 1: Number of bushfires attended by fire service organisations

Table 1 demonstrates that Tasmania's rate of bushfires per 100 000 hectares is significantly higher than the national average. Further, the rate of bushfires per 100 000 people, is also significantly higher than then national average of 213.

Table 2 outlines the annual average of the number of recorded emergency incidents relating to flood, storm, hazardous conditions and other natural disasters, excluding fire, in Tasmania. Tasmania has the second lowest annual average for natural hazards other than bushfire.

| | Flood, storm and tempest and other natural disasters | | Hazardous conditions | |
|---|---|---|---|---|
| | 2012-13 | 2003-13 (yr.av.) | 2012-13 | 2003-33 (yr.av.) |
| **Tasmania (% of Aus) (Ranked)** | 304 (1.3%) (6/8) | 378.6 (1.9%) (7/8) | 244 (1.0%) (7/8) | 235.8 (0.9%) (7/8) |
| **Australia** | 23 040 | 19 558.6 | 24 918 | 25 314.7 |

Table 2: Annual average of the number of recorded emergency incidents

## 1.2 Tasmanian Risk Management Fund

The Tasmanian Risk Management Fund (TRMF) is the Tasmanian Government's self-insurance fund. It was established on 1 January 1999 and provides a whole-of-government approach to funding and managing specific identified insurable liabilities of participants.

All inner-Budget agencies are required to participate in the TRMF and are covered for identified risks to which they are exposed or for which they wish to accept responsibility and which the Fund agrees to cover. A number of other Government entities also participate in the Fund and may only be covered for specific risks. The risks covered by the Fund include loss of or damage to property caused by a natural hazard (excluding flooding).

The TRMF operates on a cost-recovery basis with contributions set to ensure adequate financial provision for the cost of risks now and into the future. All participants pay annual contributions to meet claim costs (for property risk, claims are capped at $5 million), administrative expenses and, where applicable, insurance premiums and reinsurance costs. The level of a participant's contribution is determined by an independent actuary and reflects their coverage, risk exposure, claims experience and nominated excess amounts.

Tasmania's objective is to have the flexibility to determine what, if any, insurance arrangements the State should enter into, taking into account, among other factors, the insurance offerings and the premiums charged as well as the risk profile and spread of State assets across the State. Existing arrangements are considered appropriate given the

- existing level of TRMF coverage;
- State's proven ability to post-fund events above the current TRMF pre-event funding cap for property risks;
- limited calls on the NDRRA by Tasmania;
- high cost of reinsurance which includes commission payments to brokers and profits to commercial insurers, all of which represent monies that could otherwise be applied directly to Government self-insurance provisions;
- mix, level and distribution of government assets across the State; and
- current budgetary priorities.

# 2. Cost of Natural Disasters

## 2.1 Economic Cost of Natural Disasters in Tasmania 1967-1999

The average annual cost to the State for the most significant hazards has been drawn from the Bureau of Transport & Economics Report 103: *Economic Costs of Natural Disasters in Australia* (2001). The Report highlighted that in the period 1967 and 1999, the average annual economic impact was estimated to be $18.9 million (bushfire $11.2 million, flood $6.7 million and severe storms $1.1 million).

## 2.2 Insured Losses from Natural Disasters in Tasmania 1983-2011

Between1983-2011 the average annual insured asset losses across bushfire, storm and flood as reported by the Insurance Council of Australia were:

- $2.94 million for bushfire;
- $540 000 for storms; and
- no insured losses for flood (likely due to both the unavailability of flood insurance and reporting thresholds not being reached).

The 2012-13 financial year resulted in $88.20 million of insured losses. These losses largely reflect the impact of the January 2013 bushfires that occurred across the State.

## 2.3 Cost of Natural Disasters in Tasmania 2003-2013 – Claims against the Tasmanian Risk Management Fund

In the period 2002 to 2013 claims to the TRMF for damage or repair to State assets caused by a natural disaster totalled $22 373 994 (Figure 1). The two significant hazards were bushfire and storm. Bushfires resulted in $6 104 168 of claims being paid. The claims relating to storms relate primarily to extreme weather events that result in significant, intense rainfall. These events resulted in $16 269 826 of claims being paid.

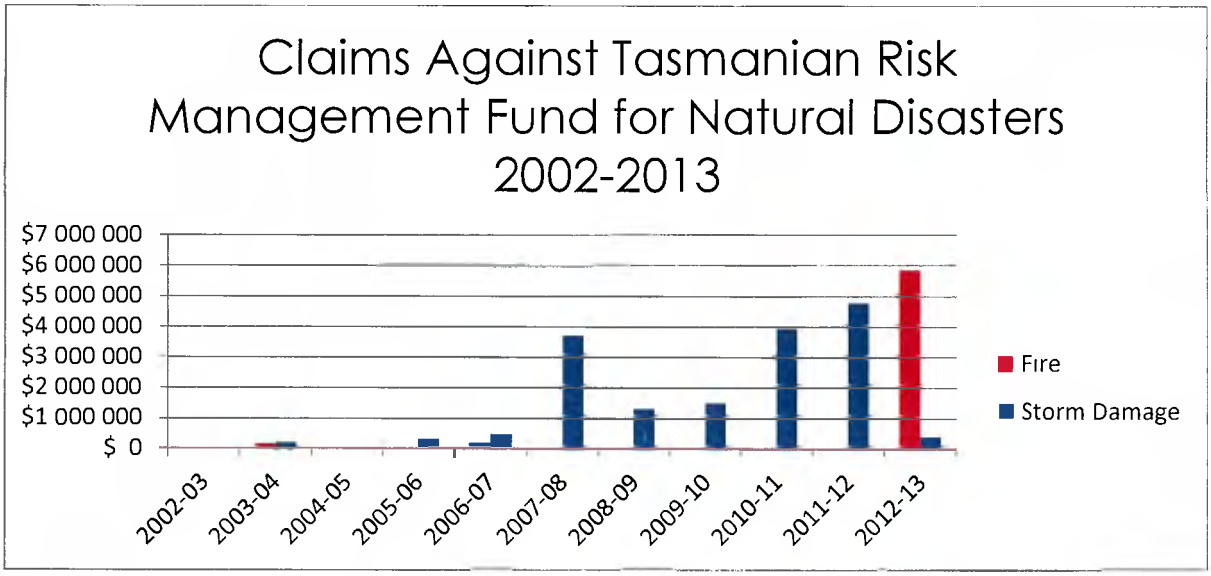


Figure 1: Claims against the TRMF for Natural Disasters 2003 to 2013

## 2.4 Cost of Natural Disasters in Tasmania 2003-2013 - NDRRA Eligible Events

In the period 2002 to 2013 Tasmania made one claim for NDRRA reimbursement relating to multiple storm/flooding events that occurred in the 2010-11 financial year for damage or repair to assets that were either not covered under the TRMF or were covered, but required an excess to be paid. Total State NDRRA eligible costs including excesses are outlined in Figure 2.

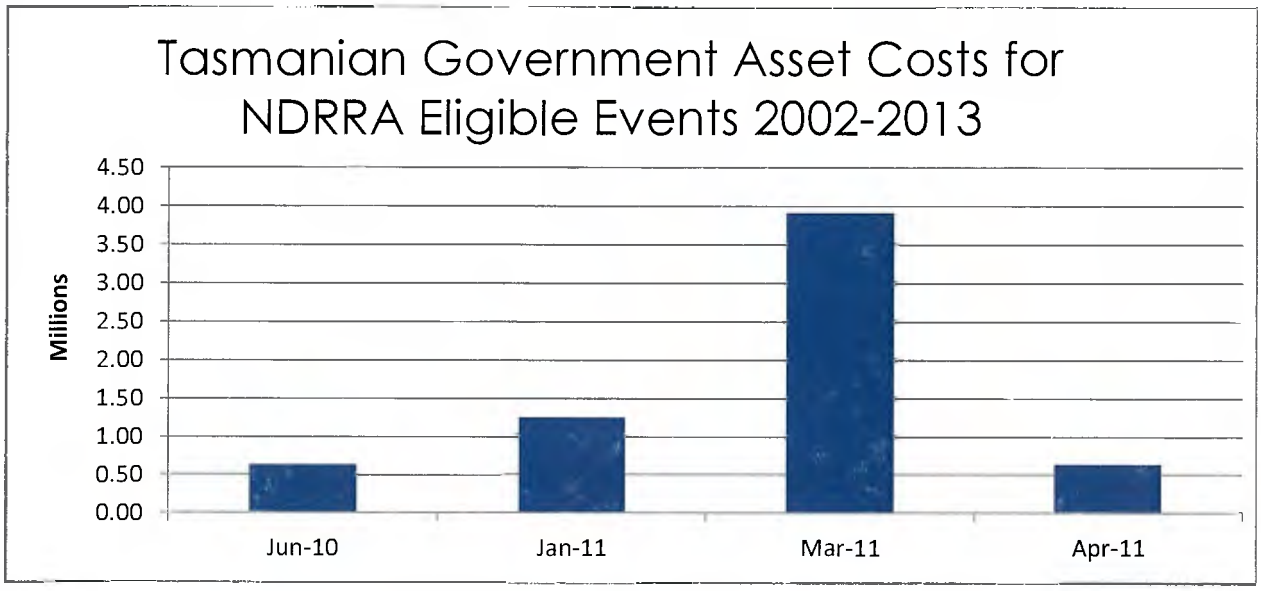


Figure 2: Tasmanian Government Asset Costs for NDDRA Eligible Events 2002-2013

Figure 2 relates to Tasmanian Government assets and does not include:

- $13.5 million of costs incurred by local government in the 2010-11 financial year;

- $4.6 million of personal hardship and clean up assistance incurred by the State in the 2010-11 financial year for the events; or
- $2.11 million incurred by local government in the 2011-12 financial year for the events (that is the works did not result in an outlay of cash until the 2011-12 financial year despite the events occurring in 2010-11).

For the 2010-11 financial year, the State received total NDRRA reimbursement of approximately $8.7 million. Total NDRRA eligible expenditure for the events was $26.21 million.

There were five other key NDRRA eligible events in this timeframe:

- the 2006 East Coast Bushfires that resulted in $400 000 of actual NDRRA reimbursement for category A and C costs (there was an additional $5.5 million of category B costs that were not included in the State's claim as their inclusion would have materially reduced the amount of NDRRA reimbursement received by the State);
- 2007 regional flooding that resulted in just over an estimated $1 million of costs across State and local governments being incurred that resulted in no NDRRA reimbursement;
- 2009 regional flooding that resulted in an estimated $1.47 million of costs to local governments being incurred that resulted in no NDRRA reimbursement;
- 2011-12 regional flooding that resulted in an estimated $2.19 million of costs to local government being incurred that resulted in no NDRRA reimbursement; and
- the 2012-13 bushfires that occurred across the State (discussed below).

The 2012-13 bushfires resulted in significant category A and C costs being incurred by the State. The majority of category B expenditure was incurred in relation to counter disaster operations with the asset losses being largely funded from the TRMF. The costs incurred across each eligible measure were:

- $16 122 684 for category A;
- $13 541 895 for category B not including those costs funded by the TRMF (being the capital cost for the replacement of the Dunalley Primary School); and
- $2 135 062 for category C.

The total NDRRA eligible costs for the bushfires was $36 799 641. The State received NDRRA reimbursement of $13.79 million.

## 2.5 Summary of Losses from Natural Disasters

Based on the evidence, bushfire is the most frequent natural hazard that impacts on the State but storm/flooding results in the greatest financial impact. However, such losses have been largely manageable within the context of the State's existing risk management framework.

While the State has experienced some significant natural disasters in recent years, there is not yet any identifiable trend towards an elevation in natural disaster impacts. To the extent that the costs of natural disasters have increased – there have been two drivers:

1. planning decisions made on the best available information at the time together with a seemingly adequate ex-ante investment in mitigation, may have proven to be ineffective in managing the changing nature of risk; and
2. increased community expectations in relation to the role of government in providing services following a natural disaster. For example, there is now an expectation that government will fund and manage the clean-up following a bushfire.

## 2.6 Measuring the Cost of Natural Disasters

Tasmania has well established processes for quantifying the direct costs associated with lost infrastructure and the delivery of recovery services.

Issues arise when attempts are made to measure indirect costs. This includes factors such as seasonal impacts on primary producers and small businesses. The report of the World Bank titled *The Economics of Natural Disasters: Concepts and Methods* recognises that direct economic cost is not a sufficient indicator of the seriousness of a natural disaster and why the use of indirect losses is crucial to forming a comprehensive view.

## 2.7 Projections of future natural disaster incidence and impacts in Australia

The Strategy acknowledges that climate change will likely result in an increased frequency and severity of extreme weather events, and the need to acknowledge these future hazards and risks as part of natural disaster planning.

The Climate Futures for Tasmania (CFT) project is the Tasmanian Government's most important source of climate change projections. A component of the project provided projections of future extreme events. The project was managed by the Antarctic Climate and Ecosystems Cooperative Research Centre, and provides fine-scale climate information for Tasmania by downscaling six global climate models with two emission scenarios (a high emissions scenario - A2 and a lower emissions scenario - B1) to generate climate information from 1961 to 2100.

The *Climate Futures for Tasmania Technical Report: Extreme Events* and *Climate Futures for Tasmania Technical Report – Extreme Tide and Sea Level Events* suggest that in the future the State will be subject to more frequent and extreme natural disaster events. Attachment A provides a summary of the results provided through the relevant CFT technical reports. This evidence should be considered together with the historical planning issues that have unintentionally exposed infrastructure to such events. Both technical reports

are available at
http://www.dpac.tas.gov.au/divisions/climatechange/adapting/climate_futures/climate_futures_for_tasmania_reports.

# 3. Current Natural Disaster Funding Arrangements

## 3.1 Natural Disaster Relief and Recovery Arrangements

### 3.1.1 What are the policy objectives of the NDRRA? Have these changed over time? Are current arrangements consistent with the achievement of these objectives?

The policy objective of the NDRRA as a whole is to act as a financial year safety net for jurisdictions affected by significant natural disasters that require a coordinated multi-agency and community response. This supports the principle of shared responsibility for the costs of natural disasters across all levels of government and that the resources of the national economy should be directed to relief and recovery of areas affected by a natural disaster. The current arrangements are largely consistent with these objectives.

Individual measures within the NDRRA are designed to deliver outcomes in accordance with social welfare policies or other government policies. A distinction must be drawn between policy outcomes that are sought to be advanced by the individual elements of the NDRRA and the objectives of the NDRRA as a whole (a financial safety net for significant natural disasters).

### 3.1.2 How effective are the eligibility criteria for NDRRA reimbursement in facilitating effective and sustainable natural disaster risk management, including mitigation of possible future disasters? How rigorously have these criteria been enforced? What level of oversight is provided?

The NDRRA requires a state to demonstrate and provide evidence of its natural disaster mitigation strategies in order to be eligible to receive NDRRA reimbursement. The experience of the State in regard to this requirement is that the Australian Government has adopted an approach that recognises both the inherent complexities in natural disaster risk management as it relate to assets (particularly that often the risks posed by natural disasters are due to historical issues relating to the level of understanding of risk) and the significant benefits that behavioural mitigation can have (see below).

**Structural Mitigation**

The PC's Issues Paper is primarily focused on the costs associated with infrastructure repair and replacement and the role of structural mitigation to reduce losses.

In 2006, the Tasmanian Government and the Launceston City Council commissioned a risk study to evaluate the risk that flooding of the Invermay area in Launceston would cause from a social, economic, infrastructure and environmental perspective. The study was undertaken due to the age of the levee system. In the absence of the levee, the Invermay area is susceptible to annual flooding.

The study required a cost benefit assessment to be undertaken to determine what action could be taken to mitigate the risk. In completing the study, an

examination of the various costs and benefits for a range of options from an engineering, social and economic perspective was undertaken. Following this, risk modelling of various options involving levee height, emergency management, planning controls and building controls was conducted. The outcomes of the risk and scenario modelling demonstrated that the costs of flooding over the forecast period of 50 years, if the current situation remained, would result in a damage bill of $90 million, comprising:

- $50 million to the residential sector,
- $35 million to the industrial and commercial sectors; and
- $5 million to the government sector for infrastructure costs.

The local economic impact on Launceston was estimated to be up to $140 million in total over the forecast period.

As a result of the study, the Tasmanian Government together with the Australian Government and the Launceston City Council invested over $70 million to upgrade levee infrastructure to withstand a 1:200 year event. A copy of the Report is available at http://www.stors.tas.gov.au/au-7-0092-00028.

**Non-Structural and Behavioural Modification Mitigation**

The State also considers that the role of mitigation and the benefits that it can provide is dependent upon the type of hazard and must not focus solely on structural mitigation. Australian Government reports, such as *Benefits of Flood Mitigation in Australia* produced by the Bureau of Transport and Regional Economics, highlight that non-structural and behaviour modification mitigation are equally important in terms of flood mitigation. Similarly, the Bushfire Cooperative Research Centre has found that community preparedness campaigns are extremely effective in reducing the potential for property losses from bushfire.

**Managing the Bushfire Risk in Tasmania**

As bushfire is Tasmania's most frequent hazard, the Tasmanian Government invests significant resources, time and effort in a range of mitigation measures that, collectively, reduce the potential for losses from bushfires. These measures include land use planning initiatives that deliver both structural and behavioural mitigation outcomes, emergency management response and planning and general risk awareness for communities at high risk.

Following the Victorian Bushfires, the Tasmanian Government reviewed the arrangements for development and use in bushfire prone areas. As a result new arrangements were introduced to ensure that appropriate standards are consistently applied to the construction of habitable buildings in bushfire prone areas in Tasmania. This included:

- the introduction of a definition of a 'bushfire prone area' for the purposes of applying the relevant national standard for construction; and

- a requirement that all new subdivisions incorporate bushfire mitigation measures, including appropriate separation distances between buildings and bushfire prone vegetation and a certified bushfire safety plan.

This approach balances the desire of people to live in bushfire prone areas with the recognition that a house must be capable of being defended by sending an appropriate price signal in the form of increased costs that will be incurred when building in an area deemed to be bushfire prone. The estimated additional cost to the construction of a home in a bushfire prone area is between $15 000 and $17 000.

**Community Risk Awareness and Emergency Planning**

The Tasmanian Government has provided $2.42 million over three years to develop community protection plans, with an initial focus on the development of bushfire protection plans for communities most at risk from bushfires. These plans are complemented by maps and other communication strategies to assist communities to understand their plan. The plans identify:

- where vulnerable people will gather during bushfires, including fire refuges, and identify measures to protect them;
- assets that the community values that will be prioritised for protection during bushfires; and
- egress routes during fires in the event evacuations are necessary.

This activity is ongoing and continues to deliver community safety outcomes.

**Strategic Fuel Management**

$28.5 million has been allocated by the Tasmanian Government to a four-year fuel management program across different land tenures. Concurrent with this, the State is also reviewing its regulatory process, including environmental legislation, to ensure that such processes do not overly restrict the ability of a private land owner to undertake fuel reduction activities.

**Adapting to Climate Change Impacts**

The CFT project relating to extreme tide and sea-level events together with recently undertaken coastal hazard mapping undertaken by the Tasmanian Government provide an indication of areas of the Tasmanian coastline that are particularly vulnerable to sea level rise (or inundation) and storm tide events. To understand the projected future scenarios and to ensure that Tasmanians are better placed to understand and evaluate their individual hazards, and make appropriate decisions about their future, the State initiated the Tasmanian Coastal Adaptation Panning Decisions Pathway project.

**Tasmanian Coastal Adaptation Project**

The Tasmanian Coastal Adaptation Decision Pathways (TCAP) project aims to improve the ability of Tasmanian communities and decision-makers to make

informed decisions and to adapt to climate change impacts. Work is undertaken with local councils and communities to identify and analyse potential coastal hazards and to explore the adaptation options available for vulnerable coastal areas. Councils nominate coastal areas that are vulnerable to climate change, as evidenced through present day coastal hazards, such as inundation and erosion or projected future coastal hazards, indicated in coastal hazard mapping.

The project uses a risk management approach, applying coastal hazard mapping, to identify and analyse the coastal risks for each of the coastal communities engaged in the project. Using a flexible planning pathway outlined in Figure 3 below, the project takes this analysis to the relevant local councils and communities for consideration of adaptation options and pathways.

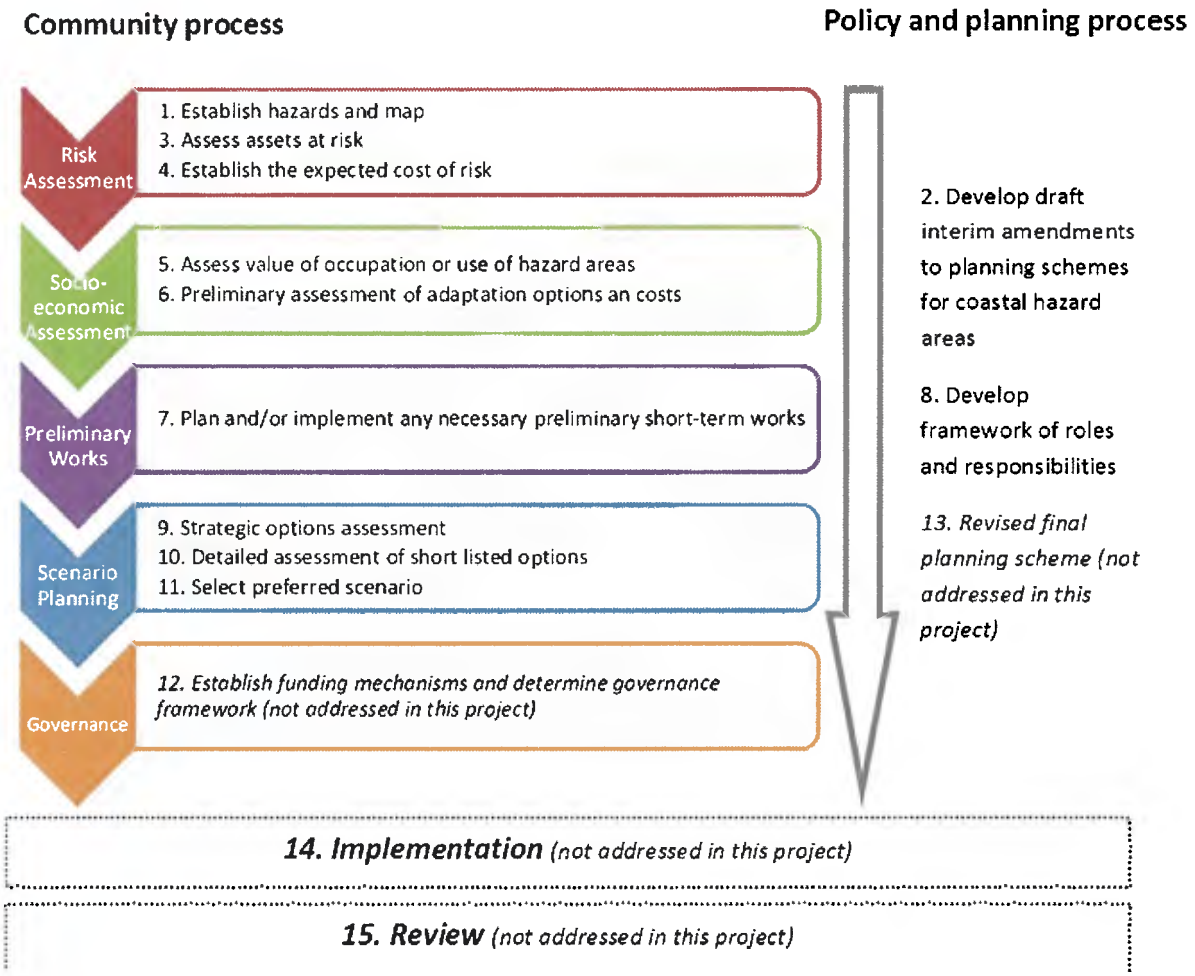


Figure 3: Flexible planning pathway

### 3.1.3 Are the thresholds for NDRRA reimbursement set at an appropriate level?

Tasmania's reimbursement thresholds are appropriate taking into account the current policy intent of the NDRRA as being a financial safety net for significant natural disaster events and in light of the:

- existing level of coverage by the TRMF;
- State's proven ability to post-fund events above the current TRMF pre-event funding cap for property risks; and
- limited calls on the NDRRA by Tasmania.

### 3.1.4 Is the approach of providing assistance under four categories the most appropriate way of administering Australian Government grants? Is the way the categories are defined sensible? Is the assistance provided under each of the four NDRRA categories set at an appropriate level?

The Tasmanian Government is satisfied that the current NDRRA measures are appropriately defined. The NDRRA is not a grant; it is a reimbursement of extraordinary expenditure that has already occurred.

### 3.1.5 Are the 'betterment' provisions in the NDRRA effective in encouraging recovery that develops resilience and reduces the costs of future disasters?

In the context of the NDRRA, 'betterment' means the restoration or replacement of the asset to a more disaster-resilient standard than its pre-disaster standard.

Despite provision for betterment of assets being eligible for reimbursement in the NDRRA, the lack of use of the NDRRA betterment provisions is of concern for Tasmania. Currently, the NDRRA provides for an asset to be repaired or replaced to current engineering standards. An improvement beyond this standard requires the State to obtain Australian Government approval. The Tasmanian Government has never sought to invoke the betterment provisions of the NDRRA. The PC should consider those factors that limit or restrict the ability of jurisdictions to effectively apply resources to improve longer-term financial impacts from natural disasters.

The current betterment provisions are not considered to be an effective mechanism for managing the risks and reducing costs from future natural disasters. Betterment of infrastructure is more appropriately classified as a mitigation activity rather than a recovery activity (even though the improvement of the asset may occur as part of the recovery process). The immediate aftermath of natural disaster is a time when the impacted community expects that its infrastructure will be restored quickly so that the community can return to a level of functioning. This clearly is at odds with the betterment of infrastructure that requires a methodical risk management based approach to be undertaken. Also, because the NDRRA is a financial year safety net and not related to the event, this may have the unintended consequence of discouraging a jurisdiction that has exceed its

reimbursement thresholds from adopting an approach to the betterment of the asset that is consistent with a risk management methodology to maximise its NDRRA reimbursement.

The challenge for betterment in the context of the NDRRA involves two interrelated issues. Firstly, despite seeking information about the cost/benefit of a betterment proposal, the interest of the Australian Government is ultimately about the cost effectiveness of the betterment in terms of reduced future impacts on the Federal Budget.

Secondly, the process does not support the consideration of the actual cause of the risk from a hazard to which the asset is exposed. It is not always the case that hardening or bettering an asset is the most appropriate mitigation measure. For example, a flood may be the event that leads to damage to a bridge but the proximate cause of the damage may be a logjam and/or debris flow. Rather than betterment of the bridge, the appropriate risk treatment option may be the construction of a debris dam, increased maintenance and removal of up-steam river debris or the construction of a flood retention basin.

In Tasmania, under the Tasmanian Relief and Recovery Arrangements Policy, councils are able to improve on essential public assets beyond its pre-disaster standard if they are able to improve the disaster resilience of such assets. Further details are provided in Section 4.2.

### 3.1.6 Are the payments to farmers and small businesses through NDRRA categories B and C justified? Are they set at appropriate levels?

The Tasmanian Government is satisfied that the grants provided to primary producers and small businesses are set at appropriate levels. In relation to primary producers, assistance that is provided is targeted at uninsurable losses. For example, it is the experience of the Tasmanian Government that assistance provided to primary producers has typically been used to clean up and partially reinstate damaged and/or destroyed fencing.

### 3.1.7 How frequently has Category D ('exceptional circumstances') assistance been used? What is this assistance used for and how have decisions been made?

Category D assistance has not been used in Tasmania.

### 3.1.8 Is the treatment of NDRRA expenditure in the Australian Government budget appropriate? Does it lead to effective risk management and efficient allocation of resources?

The treatment of NDRRA in the Federal Budget is a matter for the Australian Government. Regarding NDRRA as a contingent liability is appropriate from an accounting perspective. However, the historical costs of the NDRRA may provide the opportunity for the consideration of risk treatment options, such as re-insuring the potential cost to the Australian Government, to be considered.

## 3.2 National Partnership Agreement on Natural Disaster Resilience

### 3.2.1 How effective have NPANDR funded projects been at promoting resilient communities and reducing the impacts and costs of natural disasters? Is the focus appropriate? Have evaluations been undertaken of these projects and are these publicly available?

The Tasmanian Government considers that the National Partnership Agreement on Natural Disaster Resilience (NPANDR) has been effective at both promoting resilient communities and reducing the impacts and costs of natural disasters.

The State considers that NPANDR funding is an excellent way to identify long term solutions to infrastructure that is at risk from a natural hazard. For example, through the NPANDR, a project has been funded in the Break O'Day municipality that seeks to identify a long term plan to manage the impacts on the community from flash flooding that occurs due to constraints and issues in the current stormwater system. Importantly, it identifies the cause of the risk (such as the need for maintenance) and identifies options commensurate with the cause.

### 3.2.2 What limits have been placed on grant amounts by individual state or territory governments? What is the rationale for setting individual grant limits? What have been their consequences (e.g. have projects with large net benefits not received funding)?

The Tasmanian Government does not set individual grant limits for the NPANDR (except to the extent that the maximum funding under the NPANDR is capped). Instead the State uses a competitive application process.

### 3.2.3 What is the most efficient way of allocating funding - between states and within states - under this national partnership?

The Australian Government contributes $26.1 million per annum for mitigation activities under the NPANDR. States and territories match this funding with a National Partnership payment of $26.1 million. Tasmania is allocated 5 per cent of available Commonwealth NPANDR funding – equating to $1.3 million per annum.

All parties to the NPANDR have agreed that the allocation of funding is in accordance with the risk to states and territories from natural disasters. The Tasmanian Government is satisfied with the current process for allocating funding under the NPANDR.

### 3.2.4 Is the amount of funding under the NPANDR adequate? How should the Australian Government determine how much it contributes to disaster mitigation and resilience activities?

The Tasmanian Government does not propose a change to the overall quantum of funding provided under the NPANDR and NDRRA. However, if mitigation proposals are supported by a robust cost/benefit analysis that

demonstrates that the economic cost of natural disasters will be lessened; there should be scope for the Australian Government to join with jurisdictions to fund such projects – that is, to reallocate Australian Government expenditure from recovery to mitigation. This issue is addressed in more detail below.

### 3.2.5 Is the balance of Australian Government funding on mitigation and resilience activities relative to recovery activities appropriate? How should this assessment be made?

The information provided in the Issues Paper that compares and contrasts the expenditure of the Australian Government on mitigation activities relative to recovery, provides an accurate reflection of the relative contributions. The events that occurred in 2010-11 and subsequent years significantly distort the comparison on a national basis; however, in relation to Tasmania, the balance between Australian Government contributions to mitigation and recovery remains largely appropriate.

The PC review should consider those factors that restrict the ability of jurisdictions to effectively apply resources to improving longer term financial impacts from natural disasters. One option may be for a state to be able to seek an advance against possible future NDRRA reimbursement to fund resilience and mitigation activities. This would ensure that the overall contribution of the Australian Government did not increase but would result in a state assuming the responsibility for deciding the most appropriate balance between mitigation and recovery expenditure.

### 3.2.6 How effectively does the National Emergency Management Projects program contribute to sustainable natural disaster mitigation and resilience?

It is the experience of the Tasmanian Government that the National Emergency Management Projects program, as per its design and intent, focuses on the development of national capabilities that enhance resilience.

## 3.3 Australian Government Assistance to Individuals

### 3.3.1 What is the objective of the AGDRP? Does the scheme in its current form achieve those objectives? If not, what changes do you consider are needed?

The Tasmanian Government does not offer comment on the objectives of the Australian Government funded and administered Australian Government Disaster Relief Payment. However, the State welcomes the recent moves from the Australian Government to ensure the assistance goes to those most in need following a natural disaster.

### 3.3.2 Are there any unintended consequences from the AGDRP?

The Tasmanian Government does not offer comment on whether there are unintended consequences of the Australian Government funded and administered AGDRP.

### 3.3.3 Does the AGDRP overlap with state and territory government assistance to individuals?

The Tasmanian Government provides assistance to individuals or families of up to $750 to ensure that essential needs can be met. This assistance is limited to the first 48 hours after the impact of a natural disaster. Any assistance required after this timeframe is typically met by providing appropriate services.

Consideration of any overlap between state assistance and the AGDRP needs to take into account the policy framework that supports each measure.

### 3.3.4 What expenditure was made under the Disaster Income Recovery Subsidy over the past decade?

This is a matter for the Australian Government.

# 4. State, Territory and Local Government Arrangements

**4.1 What are the governance and institutional arrangements relating to natural disaster mitigation, resilience and recovery in each state and territory? What are your views on how these arrangements could be improved?**

The Tasmanian Government has plans and arrangements for dealing with a broad range of potential hazards. Taken together they form an all-hazards framework for emergency management. Within an all-hazards framework, emergency management is viewed as a continuum of:

- **Prevention & Mitigation**: Measures to eliminate or reduce the incidence or severity of crises by preventing events from occurring or, where this is not possible, by putting in place arrangements to mitigate their effects.
- **Preparedness**: Arrangements to ensure that, should an emergency occur, all those resources and services that are needed to cope with the effects can be efficiently mobilised and deployed.
- **Response**: Actions taken in anticipation of, during and immediately after, an emergency to ensure that its effects are minimised, and that people affected are given immediate relief and support.
- **Recovery**: The coordinated process of supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of psychological, social, economic, environmental and physical wellbeing.

A State Emergency Management Committee (SEMC) is established by section 7 of the Tasmanian *Emergency Management Act 2006*. It is chaired by the State Controller (Commissioner of Police) and may be convened to develop policy and broad strategy relating to the emergency. The SEMC is convened by the State Controller when the scope and resourcing of Government activity requires interdepartmental coordination at a senior level for the purpose of providing whole-of-government advice to the Tasmanian Government.

The Security and Emergency Management Advisory Group (SEMAG) is co-chaired by the Deputy Commissioner of Police and the Deputy Secretary of the Department of Premier and Cabinet and includes the Deputy Secretaries of all Tasmanian Government agencies. It sits under the SEMC, provides policy advice to the SEMC and coordinates the implementation of SEMC decisions and government policy relating to emergency management.

The role of the SEMC and SEMAG is one of coordination and does not extend to managing the deployment of resources or other activities of operational agencies. These operational command responsibilities continue to rest with the Response Management Authority.

In addition, there are three Regional Emergency Management Committees

that are responsible for implementing emergency management arrangements and managing emergencies at the regional level.

The Tasmanian Government is currently reviewing its emergency management arrangements pursuant to the recommendations of the *2013 Tasmanian Bushfires Inquiry*.

## 4.2 Which state, territory and local government policies cover natural disaster mitigation, resilience and recovery? What processes are used to manage natural disaster risks in government activities?

Tasmania has a comprehensive approach to emergency management as outlined in the *Tasmanian Emergency Management Plan* and State Special Plans for priority hazards. The State Special Plans include a range of resilience and recovery activities across the prevention, preparedness, response and recovery (PPRR) spectrum.

As discussed at section 1.2, the Tasmanian Government operates a self-insurance arrangement, the Tasmanian Risk Management Fund (TRMF). The level of a participant's contribution to the Fund is determined by an independent actuary and reflects its risk coverage, risk exposure, claims experience and nominated excess amounts. In setting contributions, the Fund aims to achieve an actuarially sound Fund that provides incentives for risk management, through recognition of claims history. It is in a participant's interests, in terms of its level of contribution to the Fund, to actively manage risks from natural disasters and hazards.

The TRMF covers all assets owned by a participating agency. The major exception is that the Fund does not cover roads with the responsible agency electing to take a 100 per cent 'excess'. State owned bridges are covered but with a $5 million excess retained by the relevant agency.

Importantly, the process of managing the risks from natural hazards is also incorporated into the Management Plan for assets owned by the State. This approach seeks to reduce potential costs and claims on the Fund.

### Financial Assistance to Local Government

The Tasmanian Government administers the *Tasmanian Relief and Recovery Arrangements* (TRRA) Policy that operates as a financial safety net for Tasmania's 29 councils to assist with the costs of responding to and recovering from natural disasters. The objectives of the policy are to:

- assist with the financial burden imposed upon councils as a result of extraordinary expenses incurred during and following eligible natural disaster events; and
- ensure financial assistance is delivered in a responsible, cost effective and timely manner.

Unlike the NDRRA, the Policy may be activated by the Premier where the impact of an eligible natural disaster is a serious disruption to a community. This will involve a consideration by the State of the capacity of a council to

fund the response to, and recovery from, the eligible natural disaster and an assessment of the impact on the local community. When activated, assistance is available once a council's expenditure on eligible relief and recovery measures exceeds its first threshold. More assistance is available if the council's second threshold is passed.

The thresholds are calculated as under the NDRRA. A council's first expenditure threshold is 0.225 per cent of its total general rates revenue and general purpose grants receipts two financial years prior and its second threshold is 1.75 times that amount. Unlike NDRRA, the expenditure thresholds are not activation thresholds.

When activated, the eligibility criteria for assistance under the Policy require a council to demonstrate that they have taken all reasonable steps to mitigate the potential impact of natural disasters in their municipality. This may include, but is not limited to councils:

- having appropriate planning controls in place to mitigate the potential impact of natural disasters;
- where available, taking out insurance for council assets where insurance terms are commercially acceptable to the council; and
- having emergency management plans in place to enable a council to effectively respond to a natural disaster.

Assistance is provided to councils to restore an asset to its pre-disaster standard, subject to current planning and developmental controls and building standards. However, with the approval of the State, a council may improve an essential public asset beyond this standard if it is to improve the disaster resilience of the essential public asset.

The State also has the option of considering the depreciated value of an asset owned by a local government. This option exists to recognise that, in accordance with effective risk management, appropriate capital should have been allocated in the budget of a local government to fund the replacement of the asset.

### 4.3 Have states and territories made any changes to the ways in which they fund natural disaster mitigation, resilience and recovery activities?

As noted above, the State may take into account the depreciated value of an asset when considering financial assistance to a council. This option was introduced in 2012 and was done to avoid the possibility of the State funding excessive infrastructure costs and encourage appropriate asset management planning by councils.

### 4.4 How do respective states and territories undertake analysis and decision making when allocating funding across mitigation, resilience and recovery of natural disaster risks?

Expenditure on mitigation is subject to a cost benefit analysis in accordance with Tasmanian Government policy. Such expenditure is in addition to the

recurrent allocations provided in the State Budget for asset management and emergency services.

**4.5 Do state and territory governments have the capacity to fund natural disaster risk management?**

Natural disaster risk management for essential public assets is a core responsibility of government. The Tasmanian Government has the capacity to conduct appropriate risk management but believes that, due to the important interrelationships that exist between jurisdictions in relation to the national economy and the nature of the federation, natural disaster risk management is a shared responsibility of all levels of government.

**4.6 What influence does Australian Government funding (such as through the NDRRA and NPANDR) have on state, territory and local government prioritisation and funding of infrastructure projects? How does this funding affect the mix of projects funded through other means?**

The experience of the Tasmanian Government is that the NDRRA has no influence on the prioritisation of infrastructure projects. However, the existence of the NDRRA as a financial safety net for significant natural disaster events, does impact on planned infrastructure works when a significant natural disaster occurs.

**4.7 How effective are each state and territory's natural disaster relief and recovery measures relating to individuals, businesses, primary producers and voluntary organisations (including those part-funded by the NDRRA)? Are these arrangements targeted sufficiently closely to those in the greatest need?**

The Tasmanian Government's arrangements for providing assistance to individuals, for example, is specifically targeted at members of the community most in need following an natural disaster where there has been widespread damage resulting in significant community disruption and dislocation. Households most in need are those who are unable to provide for their own recovery. For this reason, eligibility criteria are applied so that assistance is targeted to
low-income households with a modest asset base and no or inadequate insurance.

The maximum level of assistance available is $28 000. Any assistance provided is not intended as compensation or intended to act as default insurance against loss. Individuals and families should seek to manage personal losses through measures such as home and contents insurance.

**4.8 How well are natural disaster mitigation and recovery coordinated across governments and agencies at the Commonwealth, state/territory and local levels? Is there evidence of duplication or overlaps?**

The Tasmanian Government does not believe that there is any unnecessary duplication or overlap.

**4.9 What progress have state and territory governments made in implementing the recommendations of past inquiries relating to natural disasters? Do any of the recommendations relate to funding arrangements? Are there major recommendations that remain to be implemented?**

The Tasmanian Government notes that there is a range of past inquiries into natural disasters. National level inquiries include the:

- 2002 Report to the Council of Australian Governments *Natural Disasters in Australia: Reforming Mitigation, Relief and Recovery Arrangements*; and
- 2004 Council of Australian Governments Inquiry on Bushfire Mitigation and Management;

Numerous State level inquiries in relation to natural disasters have also been undertaken. For example, the *Victorian Bushfires Royal Commission* in relation to which the Tasmanian Government accepted or accepted-in-principle 65 of the 67 recommendations.

Most recently the Tasmanian Government accepted 103 recommendations of the *2013 Tasmanian Bushfires Inquiry*. While there are no recommendations relating specifically to funding arrangements the Inquiry made a number of recommendations with resourcing implications (cf: recommendations 92 & 93 in relation to fuel management) as well as recommending a fundamental review of emergency management arrangements in Tasmania (recommendation 100).

**4.10 How do Australian, state and territory government expenditures on natural disaster mitigation, resilience and recovery spending interact with other Commonwealth–state financial arrangements?**

The Tasmanian Government notes that there is a wide range of Commonwealth-state financial arrangements.

Under the current system, the excess amount a jurisdiction expends on a natural disaster is funded through a reduction in the GST receipts of other jurisdictions. For example, Tasmania has, historically, had a per capita reduction in its GST receipts of $1.17 per capita to recognise the significant financial impacts of events such as the Victorian Bushfires and the Queensland Floods.

It is noted that in relation to the National Partnership Agreement (NPA) arrangements, the Commission of Audit has recommended that NPAs be replaced with non-tied grants that provide discretion to a state to set its priorities.

### 4.11 Do current horizontal fiscal equalisation arrangements have implications for incentives for natural disaster risk management by state and territory governments?

As the Issues Paper correctly points out, under current Horizontal Fiscal Equalisation (HFE) arrangements, the residual expenses incurred by a jurisdiction impacts all jurisdictions through a reduction in the GST distributed to other jurisdictions on a per capita basis.

It would be inappropriate to include HFE in considerations around relative state funding efforts at mitigating natural disasters as part of this inquiry when it will be extensively considered as part of the Australian Government's White Paper on Reform of the Federation.

### 4.12 Do all states adhere to the same policy on natural disaster risk management?

The Tasmanian Government does not offer comment on the approach taken by other jurisdictions in relation to natural disaster risk management except to note that all jurisdictions are moving towards best practice guided by initiatives of the Australia-New Zealand Emergency Management Committee and other national forums.

# 5. Assessing the Current Arrangements

## 5.1 What should be the objectives of the natural disaster funding arrangements?

As noted in the PC's Issues Paper, natural disaster funding arrangements must be effective, sustainable and coherent and contribute to effective risk management and increase the well-being of the Australian community. The intent of the NDRRA is, however, not as a risk management instrument; it is a financial safety net. Provided that appropriate risk mitigation measures (structural and behavioural) and emergency management measures are applied, it is appropriate that the resources of the national economy are directed to relief and recovery of areas affected by a natural disaster.

The national funding arrangements within the scope of the PC's Inquiry represent a small proportion of expenditure on risk management by all three levels of government.

### 5.1.1 What do 'coherent', 'effective' and 'sustainable' mean in the context of natural disaster funding arrangements?

The Tasmanian Government considers that 'sustainable' relates to fiscal sustainability; 'effective' means supported by comprehensive cost/benefit analyses; 'coherent' requires that the various mechanisms are interrelated and mutually supporting.

## 5.2 Roles and Responsibilities for Risk Management

### 5.2.1 Under current institutional arrangements, are roles and responsibilities for natural disaster risk management allocated appropriately?

Effective risk management requires the party that is best able to manage that risk being responsible for doing so and, in practice, this usually corresponds to the party that owns the asset. However, the issue is significantly more complex when considering the ownership of public goods such as roads and bridges and the contribution such assets make to productivity and economic growth.

The Tasmanian Government has recently endorsed a policy document *Principles for the Mitigation of Natural Hazards through Land Use Planning and Building Control*. The principles reflect that mitigating risks from natural hazards is not about avoiding or eliminating the risk. Natural hazards are a feature of our environment and, in many instances, the potential impacts of natural hazards can be managed.

Contemporary management of the impact of natural hazards should include the combination of emergency management arrangements (such as warnings and evacuations), building control or land use planning controls. Individuals, developers, communities and governments must

balance the costs associated with managing the impacts of natural hazards against the benefits arising from development.

The broad principles endorsed by the Tasmanian Government as part of the guidance on risk management for natural hazards provide that:

1. private risks associated with natural hazards are the responsibility of individuals and business;
2. governments should encourage public and private risks to be factored into investment decisions;
3. governments can support individuals and business to understand and manage private risks through the collection of evidence, provision of information, and facilitation of collective action;
4. governments should ensure that private investment minimises unacceptable public risk;
5. governments should minimise investment, regulation, or policy that give rise to unacceptable public or private risks; and
6. governments should have regard to, and support individuals and business to consider, how natural hazards may change in the future, including through climate change.

The Tasmanian Government is currently engaged in a project to better define the concept of 'public risk'.

### 5.2.2 What should be the role of the Australian Government in natural disaster risk management?

The Australian Government should partner with state and local governments in relation to natural disaster risk management. Optimal risk management can be achieved through both direct and indirect means, simultaneously and independently of each other.

#### Direct Assistance

The most direct form of assistance is financial support to manage the risks natural disasters pose to the national economy. Both the PC and the National Commission of Audit have highlighted the importance of infrastructure to drive productivity and economic growth. While state and territory jurisdictions are best placed to identify solutions, the has a role in directly investing where a cost/benefit analysis indicates that a project would provide substantial net benefits to the community and be an effective way to manage the broader risks from a natural disaster.

#### Indirect Assistance

In terms of indirect assistance, the Australian Government collects and holds significant amounts of data that can directly inform natural disaster risk management. This includes information regarding the socio-economic profile of an area, service demand trends and business information. This information is not always readily available to the State Government.

The Australian Government could also assist by working to remove or amend Commonwealth legislation that acts as an impediment to effective risk management. For example, under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* an action that causes significant impact to nationally threatened species and ecological communities can be penalised regardless of whether the likely impact was known or not. Under the Act, a landowner that seeks to actively manage the risks to their property from a bushfire could technically be in breach of the Act despite working within Tasmanian legislative requirements which already addresses issues related to threatened species and communities. The uncertainty surrounding this issue was highlighted as part of the Tasmanian Bushfires Inquiry undertaken in response to the January 2013 bushfires.

### 5.2.3 How can individuals, businesses, the community and different levels of government most effectively fund natural disaster risk management?

Managing risks associated with natural hazards has been historically viewed as part of local government's responsibility to promote sustainable development. Increasingly, however, the state and Commonwealth governments have found it beneficial to provide guidance on 'sustainability' in terms of defining the risk/threat from natural hazards, developing tools for promoting the management of risks at the local level and producing materials to increase awareness of natural hazards in communities

The responsibility for national disaster risk management rests primarily with state and territory governments. To the extent that a disaster may have consequences for the national economy, the Australian Government may provide assistance.

Innovative solutions that could be considered include public/private partnerships. For example, the insurance industry is well placed to communicate risk information to their policy holders and can encourage and support risk mitigating behaviour through incentives being provided to policy holders, such as reduced premiums and/or excesses.

### 5.2.4 What is the best way to ensure effective risk management when risk funding and financing are not fully aligned (due to vertical or horizontal fiscal inequity)?

As noted above, the best way to ensure effective risk management is by recognising that the traditional view of optimal risk management is not readily applied to public infrastructure. Acceptance of this will form the basis for future discussions about how Australia can best manage the risks from natural hazards.

Vertical fiscal imbalance and HFE is a much broader issue and will be extensively considered as part of the Australian Government's White Paper on reform of the Federation.

### 5.2.5 Are the prescriptive arrangements in the NDRRA Determination consistent with effective risk management? Do they impose a justified compliance burden on states and territories?

The Tasmanian Government is satisfied with the current arrangements for the NDRRA.

### 5.2.6 Are the provisions in the NDRRA Determination adequately enforced? Are there material consequences for governments that do not behave in a manner that is consistent with the provisions?

The experience of the Tasmanian Government is that the provisions of the NDRRA are appropriately enforced.

### 5.2.7 Do state and territory governments shift the costs of their own core asset and liability management activities to the Australian Government and other state and territory governments through the natural disaster funding arrangements coupled with HFE arrangements?

With the exception of two natural disasters, the State has borne the full cost of natural disasters in Tasmania. Accordingly, there has never been a cost shift to other jurisdictions through the NDRRA or HFE arrangements.

As noted in 5.24, it would be inappropriate to include HFE in considerations around relative state funding efforts at mitigating natural disasters as part of this review will be extensively considered as part of the Australian Government's White Paper on the federation.

HFE is rigorously assessed by the Commonwealth Grants Commission and a key principle used in its methodology is policy neutrality. That is, the States own policies or choices, in relation to the services they provide, or revenue they raise, does not influence the level of GST they receive.

## 5.3 Providing Incentives for Effective Risk Management

### 5.3.1 Do governments provide the right framework for effective risk management by private individuals and businesses? What could governments do differently?

As noted in section 5.2.1, the Tasmanian Government has recently endorsed a policy document *Principles for the Mitigation of Natural Hazards through Land Use Planning and Building Control*.

These principles reflect that mitigating risks from natural hazards is not about avoiding or eliminating the risk. Natural hazards are a feature of our environment and, in many instances, the potential impacts of natural hazards can be managed.

The Government is currently engaged in a project to better define the concept of 'public risk' so as to better delineate ownership of risk between government, individuals and business.

### 5.3.2 Is there evidence that natural disaster funding arrangements induce 'moral hazard' behaviour by governments, households and businesses?

As noted in section 5.2.7, with the exception of two natural disasters, the State has borne the full cost of natural disasters in Tasmania. There is no evidence to suggest that the funding arrangements have induced moral hazard behaviour from the State.

At the household level, the role of government is to act as a social safety net and this is entirely appropriate. While it is sometimes assumed that the recipients of government assistance actively make decisions on the basis that the government will act as their default insurer, the Tasmanian Government is not aware of any evidence that supports this position. Indeed, the level of government assistance that is available is small compared to the personal cost of natural disasters.

### 5.3.3 Does the fact that the states and territories do not bear the full costs of natural disaster reconstruction diminish their incentives for investment in risk management, including mitigation and insurance?

There is no evidence to suggest that the State underinvests in mitigation with the expectation that potential costs from a natural disaster will be eligible for NDRRA reimbursement.

The State has a well-planned strategy for managing its road and non-road assets. The approach takes into account the hazard exposure of an asset over its entire lifespan and considers long term replacement options. As assets reach the end of their life span and/or are seriously damaged or destroyed by a natural disaster, the opportunity is taken to apply current engineering and building standards to its replacement. In most cases, such activities are funded through capital works budgets, as they should be, and are considered a routine activity. The impact of the current engineering and building standards on this process is a matter that the PC should specifically consider in its deliberations. It is the Tasmanian Government's view that the current standards deliver mitigation outcomes that deliver excellent results for the community.

### 5.3.4 To what extent is moral hazard a significant problem at the household and business level in Australia? Does it result in inefficient and ineffective natural disaster risk management?

The issue of moral hazard has been a consistent theme raised in relation to expenditure on natural disaster recovery. The argument is based on the belief that consumers are acting rationally by reducing their efforts to mitigate against potential losses when the burden is able to be shifted to another, in the case of natural disaster funding, the government.

Emergency assistance that is available in Tasmania acts as a social safety-net. It is means tested and, under the Tasmanian Relief and Recovery Arrangements (TRRA), the maximum amount that a household that has had its entire assets destroyed can receive is under $30 000. The circumstances

where the TRRA has been activated and even this modest amount has been provided have been rare.

In relation to businesses, modest amounts are available for clean-up and restoration.

The State is not aware of any evidence that would support this position that these amounts create any moral hazard in relation to disaster risk management.

While there is no evidence that supports the suggestion that the modest amounts provided creates moral hazard, the *Principles for the Mitigation of Natural Hazards through Land Use Planning and Building Control* that have been developed, and community engagement to build resilience to coastal hazards through the TCAP Project, emphasise that private risks associated with natural hazards are the responsibility of individuals and business. This messaging is aimed at reducing any perceived issues associated with moral hazards at the household and business level. More information about this Project is provided in section 3.1.2.

## 5.4 Providing Incentives to use Insurance

### 5.4.1 What are the current arrangements for insurance of essential public assets owned or managed by state and territory governments?

As discussed in section 1.2, the Tasmanian Government operates a self-insurance arrangement, the TRMF, which provides a whole of government approach to funding and managing the specific identified insurable liabilities of participants.

The Fund operates on a cost-recovery basis with contributions set to ensure adequate financial provision for the cost of risk now and into the future. All participants pay annual contributions to meet claim costs, administrative expenses and, where applicable, insurance premiums and reinsurance costs. The level of a participant's contribution is determined by an independent actuary and reflects their coverage, risk exposure, claims experience and nominated excess amounts. As at 30 June 2013, the Fund had reserves of $190.5 million to cover its liabilities.

The Tasmanian Government's self-insurance arrangement is considered cost-effective and appropriate having regard to Tasmania's risk profile and the likely benefits for the State. As such, the Tasmanian Government is strongly of the view that the judgments made by a state in relation to the financial management of risk associated with essential public assets should take into account the best arrangements for the State.

### 5.4.2 What explains the disparities in natural disaster insurance coverage by state and territory governments?

The Tasmanian Governments does not offer comment on the insurance arrangements of other state or territory governments.

### 5.4.3 What impacts do the structure and design of the NDRRA have on the incentives of state and territory governments to insure essential public assets?

It has been suggested that the partial reimbursement of expenditure on the restoration or replacement of essential public assets sends inappropriate risk management price signals to state and local governments. Specifically, that the existence of the NDRRA means that state and local governments are less likely to take appropriate risk mitigation measures such as insurance and building assets to an appropriate standard to withstand natural disasters.

However, based on the evidence available, the NDRRA has had no material impact on the way the risks from natural hazards are managed in Tasmania. This State's risk profile means that the State experiences infrequent small-medium scale natural disasters. As a consequence, there is no expectation that Tasmania will exceed its NDRRA thresholds in any given year.

### 5.4.4 What impacts do the structure and design of the NDRRA have on the incentives of households and business to insure their property?

Like governments, it has also been argued that the existence of the NDRRA results in households and businesses not engaging in appropriate risk management measures such as insurance. The limited assistance to individuals and families under the NDRRA is designed to assist those members of the community who are unable to provide for their own recovery following a natural disaster and reduce the need for other government services. It represents a social welfare policy and only represents a small proportion of the loss. It is acknowledged, however, that a person's level of experience with the impacts of a natural disaster and the assistance that may possibly be provided may have an impact on their decision in relation to insurance. This demonstrates the distinction between those areas of Australia that have frequent high impact events, like cyclones, and those that have low-medium frequency and impact events.

Similarly, assistance provided to businesses is only likely to cover a small proportion of their costs.

### 5.4.5 Do problems exist in insurance markets that prevent households and businesses from taking out insurance for natural disaster risks? What are the causes and consequences of these problems? What possible solutions might be available?

In its submission to the *Natural Disaster Insurance Review*, Tasmania highlighted several issues associated with the household and business insurance market, particularly the ability of insurers to understand and price risk.

The Insurance Council of Australia has stated that "the primary obstacle to achieving greater market availability of flood cover for the majority of households is the ability for insurers to understand and price the risk". In the Tasmanian context, however, there is anecdotal evidence that the existence of quality evidence may not always be the driving force behind insurers not

including flood cover in policies. For example, the suburb of Invermay in Launceston has had comprehensive flood mapping undertaken yet few insurers offer flood cover. This suggests that the availability of flood insurance is related to both pricing risk and commercial decision making by insurers.

While some information is required by insurers to adequately price premiums, there is a significant amount of historical information that can support an insurer's decision making process, particularly in those areas where the flood risk is known. Some Tasmanian councils and the Tasmanian Government have invested number of flood maps that are publicly available.

Due to their information requirements, some insurers have invested in their own flood mapping to meet their needs. The Tasmanian Government believes that such an approach enables the unique information requirements of the insurer to be met. It would be useful if those insurers who have undertaken their own flood studies or mapping made this information freely available to governments.

The insurance industry could also take a more innovative approach to insurance renewals. For example, insurers have opportunities and access to information that could be used to prompt individuals to reassess their insurance arrangements. Upon renewal, the insurer could provide information about recent policies taken out and a range of potential scenarios so an individual can make a relative assessment of their own arrangements. It is acknowledge that some, but not all insurers, upon offering to renew an insurance contract, identify the additional premium that would be incurred if a person elected to increase their insurance coverage.

### 5.5.5 Is non-insurance and underinsurance by households and businesses against natural disaster risks a significant problem?

The 2007 Report produced by the Insurance Council of Australia (*The Non-Insured: Who, Why and Trends*) estimated that:

- 7 200 owner-occupied households in Tasmania did not purchase any form of building insurance. This represents a non-insurance rate for buildings only of approximately five per cent;
- 47 000 of the households in Tasmania did not have contents insurance representing a non-insurance rate for contents only of approximately 24 per cent; and
- the majority of risk was carried by those classified as being on a low income[1].

The Report did not identify the type of insurance coverage held.

The largest insurance issue the Tasmanian Government faced in relation to the January 2013 bushfires was anecdotal evidence that the majority of people impacted were underinsured. This suggests that the issue of underinsurance is related to the understanding a person has of their

[1] Insurance Council of Australia (2007) "The Non Insured: Who, Why and Trends" prepared by Dr Richard Tooth and Dr George Barker from the Australian National University, Centre for Law & Economics.

particular risks and the extent of their financial exposure should a risk be realised.

### 5.5.6 Are high insurance premiums for households in some areas reflective of the risk in those areas, or are they reflective of information asymmetries or other problems in the insurance market?

The setting of insurance premiums is a matter for each insurer to consider in the context of their actuarial arrangements.

### 5.5.7 What impact is mitigation activity likely to have on insurance premiums? What evidence is available to assess this?

Launceston in Northern Tasmania has seen a significant investment in mitigation by the Australian, state and local governments. This provides a useful case study for how and why insurance companies in the same locality can in one case offer flood insurance as standard and, in the other, have flood as a stated exclusion. For example, the Invermay area in Launceston:

- is a known flood prone area and has had comprehensive flood mapping undertaken;
- has structural mitigation measures in place in the form of a levee system built to a once in two hundred year level and flood gates on the catchment;
- has an active Council that undertakes flood education activities for Invermay residents; and
- has comprehensive emergency management arrangements, including appropriate plans and behavioural controls such as a flood siren.

The inundation map for a 1:50 flooding event in Invermay is provided in Figure 4 below. This map provides information on predicted flood level, number and location of affected properties (2 300) and infrastructure at risk if the levee was to fail.

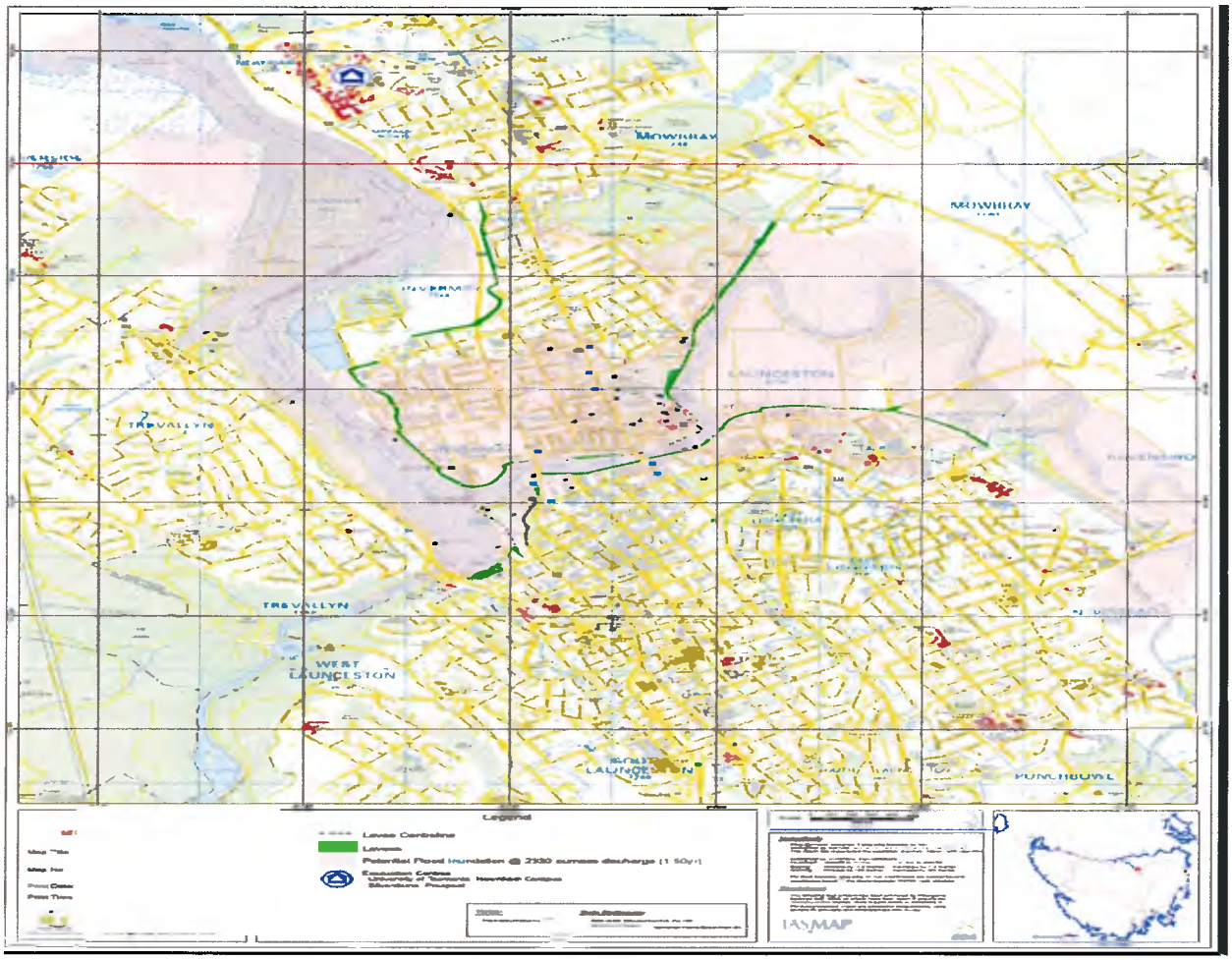


Figure 4: Inundation map for Invermay

Despite the availability of evidence to price risk, an illustrative survey of insurance availability indicates that there is significant variation in the approach to providing residential insurance to cover the risks from flooding. The outcome of the survey is outlined below[2].

| | Is Flood Insurance Available as Standard? | Notes | Cost Per Annum |
|---|---|---|---|
| Insurer A | No | Insurer has withdrawn from the Tasmanian insurance market. | |
| Insurer B | Yes | Will not offer | Building $ 600 |

[2]In 2011 Insurers were contacted by telephone and provided with the following information:

- The dwelling is weatherboard and will be an owner occupier.
- No business use
- No national trust or heritage
- House value: $350 000
- Contents $100 000
- $100 excess

| | | | |
|---|---|---|---|
| Insurer C | No | insurance without flood coverage<br><br>Flood and storm surge noted as being too much of a high risk on residential properties. | pa<br>Contents $ 434 pa<br>Building $ 937.82 pa<br>Contents $ 608 pa<br><br>$250 excess |
| Insurer D | No | | Building $440 pa<br>Contents $256 pa |

## 5.6 Allocating resources to natural disaster risk management

### 5.6.1 Are the current natural disaster funding arrangements consistent with effective and sustainable allocation of resources to natural disaster mitigation, resilience and recovery?

The Tasmanian Government believes that the current natural disaster funding arrangements are appropriate.

### 5.6.2 What are the effects on risk management and resource allocation of treating natural disaster recovery as a contingent liability? Should the budget treatment of natural disaster funding be changed?

The Tasmania Government offers no comment on the treatment of natural disaster funding in the Federal Budget.

### 5.6.3 What information and skill sets are required for more effective budget management of natural disaster risk, at both the Commonwealth and state level?

The most effective way to inform the budgetary management of natural disaster risks is through appropriate asset management policies.

The Tasmanian Government is involved in a number of risk mitigation projects that will reduce the State's exposure to natural hazards and further lessen the likelihood of making NDRRA claims. These include:

- the development of statewide planning and building codes for bushfire prone areas and areas susceptible to landslide, coastal hazards (inundation and erosion) and riverine flooding;
- the identification of vulnerable communities and linear infrastructure for which the state will develop detailed risk management plans;
- planning for coastal hazards including strategic hardening of the coastline and possible phased withdrawal from area of high risk; and

- extensive community safety campaigns expressing the importance of individuals preparing for natural disasters (particularly bushfire safety).

### 5.6.4 Do current funding arrangements exacerbate the political economy incentive for governments to under-invest in natural disaster mitigation and/or over-invest in natural disaster recovery?

The existence of a political economy incentive to over-invest in recovery and under-invest in mitigation relies on the assumption that investment in infrastructure is the *only* mitigation activity that a government undertakes. Governments, however, invest in a range of activities that serve to directly mitigate the potential impacts of a natural disaster. Because such activities are seen as routine business they are often excluded from discussions about mitigation. This position distorts perceptions of the actual investment made by all governments in mitigation.

The benefit of the current arrangements is that all jurisdictions have the benefit of working under the same financial safety net that broadly describes the type of assistance that may, subject to the terms and conditions of the NDRRA being met, be eligible for reimbursement.

## 5.7 Getting the balance right between mitigation, resilience and recovery

### 5.7.1 How should the Commission assess the appropriateness of the level of mitigation, resilience and recovery expenditure?

The Tasmanian Government does not propose an increase in the overall level of natural disaster risk mitigation expenditure. In accordance with the principle of subsidiarity, the most appropriate bodies to assess how existing funding should be divided between mitigation, resilience and recovery expenditure are those that derive a benefit the asset. To the extent that events impact on the national economy that includes the Australian Government.

The PC should consider those factors that limit or restrict the ability of jurisdictions to effectively apply resources to reducing longer term financial impacts from natural disasters. One option may be for a state to be able to seek an advance against future NDRRA entitlements to fund resilience and mitigation activities. This would ensure that the overall contribution of the Australian Government did not increase but that states could assume the responsibility of deciding the balance between mitigation and recovery expenditure.

### 5.7.2 Is there evidence on the cost-effectiveness of mitigation expenditure (in terms of reducing future disaster costs)?

The Tasmanian Government is aware of evidence that demonstrates the cost/benefit of mitigation expenditure. Australian Government reports, such as *Benefits of Flood Mitigation in Australia* produced in 2002 by the then Bureau of Transport and Regional Economics, highlight mitigation measures

that include structural, non-structural and behaviour modification are equally important in terms of flood mitigation. In terms of future savings, the study found that for every $1 invested in mitigation, a future saving of $2.10 is made. It is noted that study is currently being updated.

The study conducted by Deloitte Access Economics into the costs of natural disasters to Australia is also relevant to the PC's considerations.

### 5.7.3 Are the current governance and institutional arrangements capable of achieving an effective and sustainable balance of mitigation, resilience and recovery expenditure?

The Tasmanian Government considers that, in the context of the NDRRA, the current arrangements are appropriate. Suggestions as to possible reform options are identified in the discussion below.

### 5.7.4 Are the level and balance of natural disaster mitigation, resilience and recovery activities appropriate? Is there a case for changing them, either in absolute or relative terms?

The Tasmanian Government considers that in the context of the NDRRA the current arrangements are appropriate. Suggestions as to possible reform options are identified in the discussion below.

### 5.7.5 In the absence of an alignment of asset ownership, risk incidence and risk funding, is it possible for parties to move towards optimal risk management?

Ideally, risks would be owned and managed by the relevant asset owner. However, for many assets, including privately owned assets such as key transport infrastructure, the benefits and risks extend well beyond the asset owner – to the local, state and national economy. Attributing responsibility for risk management in accordance with who benefits from an asset is problematic.

In this context the Tasmanian Government has adopted the policy document *Principles for the Mitigation of Natural Hazards through Land Use Planning and Building Control.* Further information about the principles is provided in section 5.2.1.

## 5.8 Allocating resources to the right mitigation, resilience and recovery options

### 5.8.1 What mechanisms and models are governments using to evaluate and prioritise natural disaster mitigation options? What mechanisms are used in other federations, such as the United States and Canada?

The Tasmanian Government prioritises natural disaster mitigation options based on a risk assessment and cost/benefits analysis as contained in strategic asset management plans.

### 5.8.2 What other approaches could be used to prioritise mitigation options?

The Tasmanian Government notes that fundamentally, mitigation should be based on an appropriate risk assessment.

### 5.8.3 Do local governments in particular have appropriate capabilities to undertake cost–benefit analysis of mitigation activities?

The Tasmanian Government notes that this is a matter for the consideration of each local government.

### 5.8.4 Do the current arrangements provide an incentive for excessive rebuilding?

Due to the financial year treatment of expenditure under the NDRRA, that is the correct accounting treatment of such expenditure being on a cash basis rather than an accrual basis, it is possible that the incentive for a jurisdiction to undertaken works to return infrastructure to current standards, precludes consideration of longer term options.

However, it is the experience of the Tasmanian Government that the issue of excessive rebuilding has not been a concern. Governments in Tasmania do not invest limited resources into rebuilding or replacing assets that are effectively surplus to actual needs.

### 5.8.5 Does the requirement for governments to show that 'betterment' options are 'cost-effective' reduce the likelihood of betterment projects being implemented?

Cost effectiveness is an essential requirement for betterment projects. The State does not believe, however, that the current betterment provisions are an effective mechanism for managing the risks from natural disasters for two reasons:

1. The immediate aftermath of natural disaster is a time when the impacted community expects that its infrastructure will be restored quickly so that the community can return to a level of functioning. The betterment of infrastructure requires a methodical risk management approach that is instituted well in advance of the occurrence of the disaster and included in the asset management plan.
2. The accounting treatment of NDRRA eligible expenditure is on a cash basis rather than an accrual basis - it is possible that there is an incentive for a jurisdiction to expedite the reinstalment of assets and return infrastructure to current standards, without contemplation of longer term considerations.

To the extent that the cost effectiveness of a betterment project is considered in relation to risks to the Federal Budget, the historical NDRRA reimbursement that a jurisdiction has received for an asset would be particularly relevant to this consideration.

#### 5.8.6 What mechanisms are available for businesses and communities to contribute to the costs of mitigation and recovery, where appropriate (for example, through the use of property-specific charges to fund some mitigation works)?

The position that those who own a risk should bear the cost of managing it assumes that risks have been identified and addressed in such a way so as to enable a person to make fully informed decisions.

Ideally, governments would have no role to play in assisting individuals to manage private risks. Complexities can arise, however, where individuals expose themselves or their communities to unaffordable risks through lack of knowledge or inefficient pricing of risk during the purchase of the property. The risk profile of property can also change over time.

The Tasmanian Government is undertaking a number of projects to:

1. delineate between public and private risk;
2. enhance the evidence base relating to natural hazards;
3. educate asset owners about risks and the mitigation of hazards through community awareness and education programs to key stakeholders; and
4. introduce planning and building controls to ensure that the government is not exposed to financial risk related to private risks.

## 5.9 Are land-use planning and infrastructure policies consistent with effective natural disaster risk management?

#### 5.9.1 What impacts do policies regarding land-use planning and infrastructure have for natural disaster risk management at the state and local government levels?

As stated in section 5.2.1, the Tasmanian Government has endorsed the policy document *Principles for the Mitigation of Natural Hazards through Land Use Planning and Building Control*. These principles reflect that mitigating risks from natural hazards is not about avoiding or eliminating the risk. Natural hazards are a feature of our environment and, in many instances, the potential impacts of natural hazards can be managed.

Contemporary management of the impact of natural hazards should include the use of emergency management arrangements (such as warnings and evacuations), building control or land use planning controls. Individuals, developers, communities and governments must balance the costs associated with managing the impacts of natural hazards against the benefits arising from development. In some cases, the costs (including the costs of mitigation) may outweigh the benefits and the community may determine that it is prudent to avoid development.

Communities and governments make judgments that inform an appropriate risk tolerance. Here, risk tolerance is the judgment regarding when the

combination of likelihood and consequence of a natural hazard becomes unacceptable in terms of potential costs to the community (ie public risks).

The Tasmanian Government is progressing a project to develop a State framework for ensuring that the appropriate consideration is given to the mitigation of the impact from natural hazards in the planning and building system. The primary objective of the project is to improve the clarity and consistency of advice and support to local government and others regarding mitigating the impact of natural hazards through appropriate strategic planning, planning and building controls and development decisions.

There are four secondary objectives for the project. These are:

- provide a clear framework for identifying and classifying the best available information on hazards for consideration in zoning and planning decisions, including information to support judgements regarding whether information is of appropriate scientific rigour, is expressed in an appropriate form and is of adequate detail to inform local decision-making;
- provide a clear framework for the provision of advice to local government on the appropriate processes for assessing 'acceptable risk' and an agreed state-wide approach on interpreting future scenario-based risk or hazard modelling;
- identify an effective 'single point of authority' in hazard specific statements as a tool to deliver information to Local Government on hazards and ensure that Local Government has confidence that the information presented is the best available information on the hazard and/or risk; and
- agree a process for considering the consequence of new information made available with regard to hazards or risks that impacts on existing development and or planning decisions.

### 5.9.2 Is there a need for greater information provision and disclosure in planning decisions?

Yes. This is why the Tasmanian Government are progressing the project described above.

### 5.9.3 What impact do the current natural disaster funding arrangements have on land-use planning, risk reflective asset pricing and infrastructure investment decisions at the state and local levels?

The Tasmanian Government does not believe that, in the Tasmanian context, the current natural disaster funding arrangements has any impact on land-use planning, risk reflective asset pricing and infrastructure investment decisions at the state and local levels.

### 5.9.4 What reforms to land-use planning and infrastructure investment would best support cost-effective risk management and understanding of the changes to the risk profile?

The Tasmanian Government believes that the initiative identified in this submission relating to construction in bushfire prone areas and mitigating the impacts of natural hazards in the planning and building system are both appropriate and cost effective reforms that best factor risk into investment decisions.

# 6. What reform options are available?

## 6.1 Substantial changes to the system

### 6.1.1 Do you have proposals for substantial reform options to natural disaster funding arrangements for the Australian and state and territory governments?

The Tasmanian Government does not support any significant changes to the current NDRRA. The current arrangements deliver the benefit of all jurisdictions working under the same financial safety net that broadly describes the type of assistance that may, subject to the terms and conditions of the NDRRA being met, be eligible for reimbursement following a significant natural disaster. This reduces the possibility for, as the Issues Paper states, political economy considerations influencing the allocation of funding.

The Tasmanian Government believes that any consideration of proposed reforms should be based on an assessment of the efficiency and effectiveness of the proposed intervention with the application of the following policy principles:

- provide for private risks to be allocated to the broader community (through government) to be reduced over time to an individual ownership of risk (a time limited solution);
- risk from natural disasters should be factored into investment decisions;
- the ongoing costs of mitigation should be allocated to the likely beneficiaries; and
- include reasonable incentives for reasonable decision-making.

The State would consider supporting reforms that addressed the issue of mitigating the impacts of natural disasters on infrastructure as a as a pre and post event risk management tool. This could be delivered in two ways as outlined below.

**Option 1: Pre-Event Mitigation Costs Offset Against Future NDRRA Claims**

Under this proposal, any request for assistance to meet the additional cost of betterment would be:

- based on a risk assessment undertaken in accordance with the relevant Australian Standard; and
- consider the full cost/benefit of the betterment proposal, including options other than replacement.

The state and/or local governments would fund the cost of the replacement of an asset and the Australian Government would contribute a percentage of the betterment component. This approach recognises the responsibility of asset owners to plan for the capital replacement of an asset while at the same time recognising that a contribution of the Australian Government to

better the asset would reduce the potential future exposure to the Federal Budget.

Funding for the program could be offset against future potential NDRRA liabilities that the asset may present to the Australian Government. In this sense, the state would carry the risks associated with the asset in question.

**Option 2: Post-Event Strategic Infrastructure Planning**

The option focuses on providing for greater consideration of alternatives to rebuilding or replacing an asset damaged or destroyed by a natural disaster. For example, the realignment of a road susceptible to inundation or replacement of a number of bridges (assuming all assets are essential public assets) destroyed with a single more robust bridge in a less hazard prone area may delivered more cost effective outcomes.

The approach is not specifically provided for in the NDRRA, as it is the creation of a new asset not repair or replacement of an existing essential public asset. In circumstances where a jurisdiction can demonstrate that the long term savings from replacing multiple assets with a single, more robust asset provides a more optimal solution, this should be supported. This option would need to recognise the responsibility of asset owners to plan for the capital replacement of an asset.

As above, funding for the program could be offset against future potential NDRRA liabilities that the asset may present to the Australian Government. In this sense, the state would carry the risks associated with the asset in question.

Both options would rely on a robust risk assessment being undertaken. It is this requirement that the Tasmanian Government believes would result in improved outcomes as the actual hazard exposure and vulnerability would be able to be considered. Once risks are known and quantifiable, for example, by identification on hazard maps like the one below, this would provide the opportunity for the exposure of the asset to be taken into account when considering options. For example, the map provided in Figure 5 below represents a combination of high, medium and low exposure to a hazard.

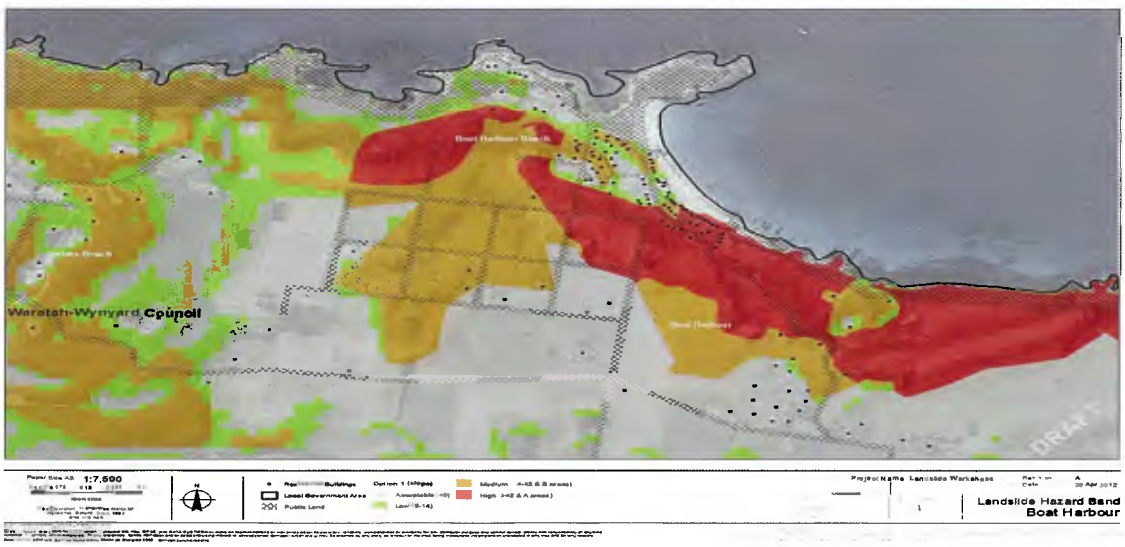

Figure 5: Map showing various exposure levels to a hazard

The benefit of this approach is that, while it may result in the bettering of assets, it may also serve to communicate the level of risk to the community. This may assist in changing the community's perception of the level of risk by, for example, demonstrating that the hazard exposure is too high to justify even replacing the asset and instead focus the attention of the community on the most cost effective and long term solutions to maintain access to an area

### 6.1.2 What impact would each option have on the incentives of each level of government to make good risk management decisions?

The Tasmanian Government is satisfied that it currently makes good risk management decisions. The two options identified above would provide an incentive for governments to expedite existing projects to develop a comprehensive risk assessment for its assets.

### 6.1.3 What impact would each option have on the costs and incentives of individuals, businesses and non-government organisations to manage natural disaster risks?

The options identified above would likely reduce the fiscal risk to the State, Commonwealth and local governments related to natural disasters and create incentives for disaster mitigation for individuals, businesses and non-government organisations

They would also likely encourage the community to consider the best outcome from a risk management perspective.

### 6.1.4 How would they impact on the Australian economy and each level of government, relative to current arrangements?

The answer to this question is subject to the quantum of the project itself. However, the Tasmanian Government notes that having reliable and functional infrastructure is integral to the national economy.

### 6.1.5 Should conditions be attached to Australian Government financial assistance to other levels of government? Should funding be linked to particular reforms by state or territory governments?

Under the options discussed above, the requirement for a jurisdiction to undertake an appropriate risk assessment is the main condition that should apply. Additional conditions could include that the ongoing maintenance of the asset resides with the asset owner (to the extent that the asset is not part of the national transport network in which case, the role of the Australian Government should continue).

### 6.1.6 What would be the advantages and disadvantages of making substantial changes to the natural disaster recovery funding arrangements (such as recommended by the National Commission of Audit)?

The Tasmanian Government does not support any substantial changes to the NDRRA or NPANDR. Instead we support consideration of a new approach to managing the risks from natural disasters that has risk assessment at its core.

**National Commission of Audit**

The Tasmanian Government notes that the Commission of Audit (the Commission) focused on the costs associated with infrastructure repair and restoration and did not explicitly consider all areas of expenditure eligible for reimbursement under the NDRRA. It, like the commentary in the Issues paper, expressed concern that the high share of Australian Government contribution in this area has created perverse incentives for state and local governments to minimise their investment in mitigation measures such as planning and development, capital investment and insuring assets.

In its report, the Commission proposes two options to reform the NDRRA, relating to arrangements for replacing essential public assets. The position in relation to other eligible expenditure measures such as assistance to individuals or clean up grants for primary producers/small businesses is not stated.

The first option is to replace the NDRRA with a direct grant in the event of a significant natural disaster with the contribution of the Australian Government limited to 25-33 per cent for infrastructure repair and reconstruction costs provided that State expenditure exceeds $50 million for New South Wales, Queensland and Victoria, $20 million for South Australia and Western Australia and $5 million for Tasmania and the Territories.

This option is proposed on the basis that it would provide for greater flexibility for the Australian Government in providing assistance and require less administrative oversight. The Tasmanian Government notes that introducing greater flexibility would not necessarily deliver improved outcomes. Instead it would likely increase the 'political economy' problem as described in the Issues Paper.

The second option is to amend the NDRRA to retain the basic structure and processes, but amend thresholds and Commonwealth contribution rates. This option proposes that:

1. Commonwealth NDRRA contributions be capped to between 25-33 per cent;
2. the financial threshold at which the Australian Government provide NDRRA assistance be doubled; and
3. civic assets that are capable of being commercially insured, such as buildings, be ineligible for NDRRA assistance.

A doubling of the threshold at which Tasmania received assistance to $20 million would be grossly inequitable and would, in all likelihood, see the continuation of the issues that the PC is currently considering.

If either option was in place for the January 2013 bushfires, and Commonwealth assistance was limited to infrastructure repair and replacement, the State would have received no financial assistance from the Australian Government.

### 6.1.7 What would be the advantages and disadvantages of retaining the current NDRRA, but with reforms to the thresholds and contribution levels?

The Tasmanian Government does not support any fundamental changes to the NDRRA.

### 6.1.8 What lessons have been learnt in other countries that may be applicable for Australia? Are there natural disaster funding or governance models used elsewhere that may be suitable for Australia?

In regards to the role of insurance, Australia should consider carefully the issues that have arisen in relation to government intervention in this area overseas. The typical experience has been that where a government seeks to intervene, the model is not actuarially sound to build sufficient reserves to cover losses that exceed historical averages. It is not clear how any proposed scheme, if established in Australia, would avoid similar failures.

# 7. Implementing Reforms

The Tasmanian Government would need to carefully consider the nature and content of any proposed reforms prior to considering issues associated with implementation.