Queensland Government Response

Productivity Commission Inquiry

Natural Disaster Funding Arrangements

Issues Paper

June 2014

Great state. Great opportunity.

Queensland Government

Contents

Introduction

1. The Queensland Government Submission to the Productivity Commission Inquiry into Natural Disaster Funding Arrangements (the Inquiry) is the government's formal response to the Inquiry and was compiled in accordance with the terms of reference that were made available 28 April 2014. In the absence of the detailed data and information requirements, later identified in the Issues Paper made available on 9 May 2014, the Queensland Government Submission addresses those topics presented as being within the scope of the Inquiry to analyse current Federal, state and territory expenditure on natural disaster mitigation, resilience and recovery.
2. The Queensland Government Submission clearly demonstrates that Queensland will always be exposed to major costly disaster events and that natural disasters have had devastating impacts on all sectors of the Queensland community. It also provides clear evidence that Queensland has undertaken substantial work to rebuild and recover the state, while building disaster resilience across all elements of infrastructure and community, to mitigate against future disaster events.
3. The Queensland Government Submission to the Inquiry has been submitted to the Productivity Commission, following its approval by Cabinet.
4. The Queensland Government Response to the Productivity Commission Inquiry into Natural Disaster Funding Arrangements Issues Paper (the Issues Paper) provides ancillary information to that submitted in the Queensland Government Submission to the Inquiry. The response to the Issues Paper does not repeat information previously submitted to the Productivity Commission through the Queensland Government Submission to the Inquiry. Where issues presented in the Issues Paper have been adequately addressed in the Queensland Government Submission, the relevant reference is provided.

Request for information from state and territory governments

5. The following information is provided in accordance with the request at ***Box 5 of the Issues Paper***, which sought data on expenditure during the period 2002-03 to 2012-13 (on a financial year cash basis) for natural disaster mitigation and resilience, natural disaster recovery, the cost of damage from natural disasters and information concerning insurance of State Government assets. Where available, budget forward estimates were also requested.

Natural disaster mitigation and resilience

6. The total expenditure on natural disaster mitigation and resilience activities in Queensland that have been funded through the National Partnership Agreement on Natural Disaster Resilience, Queensland Government schemes and grants and other funding programs is summarised in Table 1. Further details on this expenditure, including recipients of the funding, project title and type and the breakdown of funding between the State and Federal Governments is available at **Attachment 1**.

Table 1: Expenditure on natural disaster mitigation and resilience activities in Queensland, 2002-03 to 2012-13

Year	Queensland Funds Paid	Federal Funds Paid	Total Funds Paid
2002- 2003	$1,824,636.78	$1,799,676.54	$3,624,313.32
2003 - 2004	$2,867,104.12	$2,755,891.26	$5,622,995.38
2004 - 2005	$4,337,907.30	$4,323,642.31	$8,661,549.61
2005 - 2006	$9,373,351.78	$4,628,861.76	$14,002,213.54
2006 - 2007	$5,877,789.13	$7,706,888.81	$13,584,677.94
2007 - 2008	$7,007,631.34	$6,299,005.11	$13,306,636.45
2008 - 2009	$5,081,307.75	$4,183,965.93	$9,265,273.68
2009 - 2010	$6,263,247.51	$5,495,055.74	$11,758,303.25
2010 - 2011	$6,816,006.61	$8,781,660.23	$15,597,666.83
2011 - 2012	$10,325,215.04	$6,010,535.31	$16,335,750.35
2012 - 2013	$6,333,283.72	$3,935,542.23	$10,268,825.95
TOTAL	**$66,107,481.08**	**$55,920,725.23**	**$122,028,206.31**

7. Following the natural disaster events of January 2013, the Queensland Government sought a contribution of $100 million from the Australian Government, to be matched by the State, for a $200 million dollar fund to increase Queensland's resilience to natural disasters and provide a streamlined process for local governments to undertake betterment projects. The Australian Government approved funding of $40 million, which was matched by the State to create the current $80 million Betterment Fund. Detailed information on the Queensland Betterment Fund, including approved projects, the type of asset and a breakdown of each project's costs is provided at **Attachment 2**.

8. Further information on the Queensland Betterment Fund has been provided in section 6 of the Queensland Government Submission to the Inquiry.

Natural disaster recovery

9. A summary of the total damage estimate by Natural Disaster Relief and Recovery Arrangements (NDRRA) category and total actual expenditure on natural disaster recovery for the period 2002-03 to 2012-13, including reimbursements received from the Australian Government, is provided at Table 2. This table also provides the actual costs of damage incurred by natural disaster events during this period as well as a forecast of expenditure to 2015-16, to include recent NDRRA activations in Queensland.

Table 2: Total damage estimate by NDRRA category and expenditure breakdown between governments

Description	2002-03 to 2015-16 Forecast ($ millions)	2002-03 to 2012-13 Actuals ($ millions)
Damage incurred by events*	15,195	15,195
Recovery and reconstruction spend (Delivery agent basis)	15,195	10,047
Acquittal to Australian Government (Year federal claim submitted)	15,195	3,783
NDRRA funding received from Australian Government		
Payment due from Australian Government per Australian Government Claim	10,460	
Balance of Claim expenditure funded by State	4,735	
% Claim funded by Australian Government	69%	60%
% Claim funded by State	31%	40%
Breakdown of spend		
Category A	249	246
Category B	13,882	9,184
Category C	411	372
Category D	653	245
Total	**15,195**	**10,047**

*Includes damage estimates for 2014 events

10. Other natural disaster expenditure forecast for the period 2002-03 to 2015-16 are:
    - Ineligible expenditure on Restoration of Essential Public Assets (REPA) submissions processed by the Queensland Reconstruction Authority (QRA) - $2,098 million
    - Ineligible expenditure on close-outs processed by the QRA - $232 million.
11. A more detailed breakdown of the actual expenditure for the period 2002-03 to 2012-13 is at **Attachment 3**. Additionally, information on expenditure under NDRRA Category D for the events between November 2010 to February 2011 and ex-Tropical Cyclone Oswald in January 2013 and the composition of the NDRRA program managed by the QRA are at **Attachments 4** and **5** respectively.

Insurance

12. Data on the cost of damage to Queensland from natural disasters over the past 10 years, based on insurance payments made by the Queensland Government Insurance Fund (QGIF) and information on insurance claims by government agencies triggered by natural disasters is provided in **Attachment 6**. It should be noted that amounts presented in this attachment are not presented in current values by inflation indexation or exposure adjustment and that

QGIF claims data does not include actuarial estimates for incurred but not reported (IBNR) costs.

13. With regard to the total value of state/territory and local government assets that are insured and uninsured, categorised by road and non-road assets, it should be noted that QGIF does not hold any asset value records prior to 2005. The total value of assets insured by QGIF for the last 10 years is shown in Table 3.

Table 3: Total value of assets insured by QGIF, 2005-06 to 2014-15

Year	Amount
2005-06	$28,970,443,256
2006-07	$32,796,100,967
2007-08	$38,178,736,170
2008-09	$42,591,275,096
2009-10	$45,278,002,717
2010-11	$48,274,467,993
2011-12	$50,736,372,213
2012-13	$56,073,517,914
2013-14	$58,228,162,422
2014-15	$58,580,517,479

14. The values in Table 3 exclude bridges and tunnels which are not insured by QGIF but are included in the reinsurance program effective 1 November 2011. The total value of bridges and tunnels is:

Year	Amount
2012-2013	$8,298,000,000
2013-2014	$10,394,000,000
2014-2015	Not available until Sep 2014

15. Information on insurance of the Queensland State controlled road network has also been provided in paragraphs 122 to 125 of the Queensland Government Submission to the Inquiry.

16. With respect to insurance premiums paid to external insurers and reinsurers, it is important to recognise that prior to 1 November 2011, the Queensland Government did not have external natural disaster insurance to cover its property assets. Rather, the State self-insured for catastrophic risks with the NDRRA cost sharing arrangements, resulting in the Federal Government funding around 75 per cent of all eligible costs. Consequently, prior to 1 November 2011, QGIF did not cover the cost of damage for which funding was available under the NDRRA. Since then, the State's reinsurance costs have been:

Year	Amount
2011-2012	$23,200,000 + GST
2012-2013	$23,200,000 + GST
2013-2014	$22,750,000 + GST

An imperative for reform

17. This section of the Issues Paper discussed the risks that natural disasters pose to community living standards and questioned whether natural disaster funding arrangements influence the way governments and the community manage those risks.

18. The issues concerning the costs of natural disasters in Queensland, the main factors driving the elevation in natural disaster impacts and the outlook for these drivers has been presented in detail in the Queensland Government Submission to the Inquiry, specifically paragraphs 8 and 11 to 25 and the diagram in the Executive Summary of the submission are relevant.

19. Measurement of the cost of natural disasters following a major event is based on a range of assessment methodologies and approaches which can often result in different estimates of the cost of disaster. While the cost of a disaster is usually estimated through the direct economic cost of what has been damaged or destroyed, this is not a complete indicator as it does not consider social impacts.

20. Queensland has developed and implemented systems and processes that enable data on direct losses to be estimated after a disaster based on rapid damage assessments and data collected through government consultation with business/industry in the regions impacted.

21. In the past, computable general equilibrium modelling (CGE) has been used to quantify the regional economic impacts of the flooding events in December 2010, January 2011 and the 2013 flooding event. This approach estimates the flow-on effects consequent from direct economic losses, namely production losses and infrastructure losses, economy-wide in the period a disaster occurs and the projected recovery path of the economy during the reconstruction phase. It provides the estimated impact on real regional gross product (and components) and industries output relative to a forecast baseline of the regional economy, excluding the impacts of the natural disaster event. This analysis has helped support policy responses and, in particular, the impacts of a specified schedule of reconstruction investment on the speed of economic recovery. This approach does not account for non-market losses and hence does not provide a complete measure of the effect on economic welfare.

22. The Queensland Government, through the Department of State Development, Infrastructure and Planning, is also using the Australian Emergency Manuals Series Part III Emergency Management Practice Volume 3—Guidelines Guide 11 Disaster Loss Assessment Guidelines (2002) in the Brisbane River Catchment Flood Studies to measure the costs of flooding disaster events.

23. Flood risks require quantitative estimates for tangible consequences, and also for intangible consequences where it is meaningful and practical to do so, on an annual average damages (AAD) monetary basis. Preparation of stage-damage curves relevant to each floodplain sub-area for a variety of building types should utilise data from the most recent floods where possible. An essential prerequisite for this task is the preparation of a data-base of all flood affected buildings/infrastructure. This is a key activity which necessitates surveys of building/infrastructure types and floor levels. While stage damage curves indicate the cost of damage for a given level of flooding for representative buildings, the underlying economic data is often out of date and leads to inaccuracies. Unfortunately, the insurance industry is reluctant to provide more accurate detailed data, which would assist in such assessments.

24. Meanwhile, Queensland's development of the Damage Assessment and Reconstruction Monitoring system (DARMsys™) has enabled rapid collection and dissemination of damage assessment data and subsequent monitoring of property reconstruction which helps to ensure that resources are directed to where they are needed most. Further information on DARMsys™ is provided at paragraphs 50 and 90 of the Queensland Government Submission to the Inquiry.

25. The issues that arise when attempting to measure the costs of natural disasters and the methodologies that exist to measure these costs are relevant and are also discussed in length in the Queensland Government Submission to the Inquiry; paragraphs 8 and 11 to 25.

26. Specific information on future natural disaster incidence and impacts in Australia is not available, however the Deloitte Access Economics Paper, which was provided by the Productivity Commission in March 2014, projected the cost of natural disasters to rise from $6 billion in 2012 to $12 billion by 2030 and $23 billion by 2050. It also estimated that increased Australian Government expenditure on pre-disaster resilience (of around $250 million per year) would reduce these costs by more than 50 per cent by 2050.

Natural Disaster Relief and Recovery Arrangements

27. This section of the Issues Paper presented issues concerning policy objectives of NDRRA and questioned the effectiveness of the eligibility criteria for NDRRA reimbursement in facilitating effective and sustainable natural disaster risk management. It also queried whether the NDRRA categories are defined sensibly and if the assistance provided under each of the four categories is set at an appropriate level.

28. Natural disasters have significant impacts on all sectors of communities across Australia - social, economic, natural and built infrastructure. Following disasters, governments must respond quickly and provide relief and recovery to the affected communities. Responding to these disasters can place substantial pressure on state budgets and on their ability to provide core services.

29. The NDRRA was established to provide established national policy and financial framework for disaster relief and recovery assistance. The policy has provided a longstanding process by which the Federal Government provides assistance to the states with the cost associated

with the provision of relief and recovery assistance to disaster affected communities. These objectives have remained consistent over a number of years.

30. The current arrangements under Category A, Category B, Category C and Category D broadly allow for the achievement of these objectives; with Categories A and B allowing for a structured approach to assistance, and Categories C and D enabling flexibility of support for events that require exceptional recovery assistance.

31. The types of assistance required following natural disasters can vary depending on a number of factors, including severity and location of the natural disaster event. The use of categories enables the states to identify the assistance available, and retain capacity to adapt the response to a specific natural disaster. The use of categories also enables the NDRRA Determination to remain a manageable size, while enabling states to fulfil their responsibility for emergency management. Work is currently underway to determine the appropriate level of Category C and D funding assistance through the National Impact Assessment Model (NIAM).

32. Category D provides the flexibility to take into account the unique issues arising from disasters. Following recent disasters, Category D funding has been vital to assist communities, small businesses and primary producers to recover from the devastating social and economic impacts of natural disaster events. For example, the relocation of Grantham could not have been possible without Category D funding, and the Queensland Betterment Fund was enabled through the provisions of this category. A summary of the Category D funding used after the 2010-11 Queensland Floods, Tropical Cyclone Yasi in 2011 and ex-Tropical Cyclone Oswald and the associated flooding and rainfall in 2013 is at **Attachment 4**.

33. With regard to the definition of the NDRRA categories, the ambiguity which exists in the relevant policy documents requires interpretation, and introduces risk to recipients. The level of assistance to states can vary, due to ambiguous and varied policy between natural disasters. For example, costs incurred on relief measures may be deemed ineligible should an alternate interpretation be adopted by a higher level of government. As funding applications may be reviewed by multiple levels of government, there is also a risk of the process becoming increasingly bureaucratic, increasing compliance costs within all three levels of government.

34. Natural disasters carry a substantial cost, both in terms of loss of life and property as well as the social and economic cost of recovery. While states bear responsibility for reconstruction following natural disasters, states require assistance to respond to natural disasters due to their high cost. The existing NDRRA Determination utilises a threshold mechanism which determines when states require such assistance. Thresholds are specific to each state and take account of a state's total general government sector revenue and grants. Where expenditure exceeds the first or second threshold, Federal Government assistance is increased in recognition of exhaustion of state resources.

35. Queensland has suffered a number of significant natural disaster events in recent years which have placed significant strain on the state. As a result, the NDRRA thresholds enable the states to access a higher level of assistance than would be available in smaller events.

36. Further comments on the NDRRA eligibility criteria from a Queensland perspective is provided at paragraphs 86 to 89, 91 to 92, 100 and 102 of the Queensland Government Submission to the Inquiry, while paragraphs 27, 29, 40, 41, 44 to 45 and 140 address issues concerning NDRRA thresholds.

National Partnership Agreement on Natural Disaster Resilience

37. This section of the Issues Paper questioned the effectiveness of the National Partnership Agreement on Natural Disaster Resilience (NPANDR) at promoting resilient communities and reducing the impacts and costs of natural disasters. It also sought comments on how the Australian Government should determine how much it contributes to disaster mitigation and resilience activities.

38. The NPANDR was established in 2009 and provides approximately $27 million per year to states and territories to enhance the resilience of communities against the impact of natural disasters. Since its introduction, NPANDR has been the cornerstone for many of Queensland's disaster mitigation and resilience building initiatives. Through this joint funding arrangement, Queensland expended nearly $20,400,000 from 2009 to 2013 on numerous projects such as community education programs to build community resilience in Indigenous communities and promote emergency volunteering, flood studies in flood-prone communities including Roma, Ipswich and the Lockyer Valley as well as the construction of numerous flood mitigation infrastructure assets.

39. In 2014-15, $24 million will be made available through the NPANDR in Queensland on a 50-50 cost share basis with the Federal Government, for flood mitigation and all hazards projects.

40. However, the amount of funding made available through the NPANDR, is inconsistent with that put towards resilience and/or mitigation in many other developed countries. It is suggested that this amount should be considerably higher in order to meet the key aim of the agreement to enhance "Australia's resilience to natural disasters through mitigation works, measures and related activities that contribute to safer, sustainable communities better able to withstand the effects of disasters."

41. The issue of the NPANDR is also discussed in the Executive Summary of the Queensland Government Submission to the Inquiry, while Recommendation 3 and paragraph 101 of the submission suggest that National Partnership Agreements should be revised to reduce the red tape and duplication through all phases of the funding arrangement process.

42. The Issues Paper also questioned the effectiveness of the National Emergency Management Projects (NEMP) program to contribute to sustainable natural disaster mitigation and resilience. The NEMP makes an important contribution to Queensland's natural disaster mitigation and resilience. With a focus on national capability and an ability to draw on national expertise, NEMP funded projects complement programs delivered by individual jurisdictions through the NPANDR.

43. Invariably, the NEMP is heavily over-subscribed with applications from jurisdictions, non-government organisations, universities and peak industry bodies concerned with disaster management. The selection process is managed by the Australia New Zealand Emergency Management Committee (ANZEMC) with specific regard to achieving sustainable benefits for natural disaster mitigation and resilience across Australia.

44. Funding through the NEMP has been confined to approximately $3.5 million per annum, with projects restricted to one year duration. These restrictions limit the scope of the program to modest (up to about $300,000) short-term initiatives; much more could be achieved through NEMP if the funding and timeframe envelopes were extended.

Australian Government assistance to individuals

45. Through this section of the Issues Paper, the Productivity Commission posed questions concerning the objective of the Australian Government Disaster Recovery Payment (AGDRP), whether there were any unintended consequences from the payment and if it overlapped with state government assistance to individuals.

46. The AGDRP provides financial assistance to individuals and families that have been adversely affected by a major disaster; when activated in the disaster affected area, the scheme meets this objective. However, activation of AGDRP is at the discretion of the Federal Attorney-General, with criteria for activation varying between events. Consequently, there is minimal, if any, degree of congruency with the Queensland Personal Hardship Assistance Scheme triggers for activation.

47. Varying levels of confusion have been observed within the community concerning the differences between the Queensland Government and Federal payments that are made available to individuals and families impacted by a disaster. When activated, AGDRP payments are 5.5 times greater than the Queensland Government Immediate Hardship Assistance grant of $180 per adult. Previous activations have illustrated that members of the community are often unsure about the eligibility requirements for both payments. It could also be considered that those individuals receiving a AGDRP payment may no longer be suffering hardship or need and therefore do not require a hardship payment by the state. When both the AGDRP and the Queensland Personal Hardship Assistance Scheme are activated, an overlap of these financial assistance mechanisms is evident.

48. The other notable difference between the schemes is the period of availability. The Queensland Immediate Hardship Assistance Payment is available for seven days from date of activation (with possible extension) while the AGDRP is open for a period of six months. While both schemes aim to provide support to individuals and/or families who have been adversely affected by natural disasters, the Queensland Government, through the Department of Communities, Child Safety and Disability Services, also provides second and third level financial support through its Essential Household Contents Grant (EHCG) and Structural Assistance Grant (SAG). The EHCG and SAG are means tested in accord with the National Rental Affordability Scheme (NRAS) thresholds and contribute to the replacement

of household contents as well as assist with the repair of damaged homes. The EHCG and SAG are available to individuals and families for a period up to two years.

49. After ex-Tropical Cyclone Oswald in January 2013, Queensland introduced the Community Recovery Reforms, with guidelines that are stricter and more closely aligned with the principles of demonstrating hardship and need, thereby encouraging the development of resilience. Further information on these reforms is provided at paragraphs 71 and 72 of the Queensland Government Submission to the Inquiry.

State and local governments

50. This section of the Issues Paper raised questions concerning governance, institutional arrangements and policies relating to natural disaster mitigation, resilience and recovery. It also questioned whether Queensland has made any changes to the ways in which it funds these activities and how the state undertakes analysis and decision making when allocating funding across mitigation, resilience and recovery activities.

51. The governance arrangements for recovery after Severe Tropical Cyclone Ita are detailed in the Severe Tropical Cyclone Ita Recovery Plan at **Attachment 7**.

52. The Queensland Government, through its Inspector General of Emergency Management, is developing an Emergency Management Assurance Framework (the Framework) and a range of activities including self-assessments and audits designed to assess and continually improve disaster management, including disaster resilience and mitigation. The Framework is designed to be built on shared responsibilities for disaster management and provide for assurance activities and partnerships that will enable a statement of confidence in Queensland's disaster management and disaster resilience arrangements.

53. The Framework is strongly aligned to the eight goals of the Queensland Strategy for Disaster Resilience (the Strategy) to make Queensland the most disaster resilient State in Australia. A copy of the Strategy has been provided at **Attachment 8**.

54. The *Queensland Disaster Management Act*, *2003* sets legislative requirements to "help communities mitigate the potential adverse effects of an event, prepare for managing the effects of an event, and effectively respond to, and recover from, a disaster or an emergency situation. This Act can be found at https://www.legislation.qld.gov.au/LEGISLTN/ACTS/2003/03AC091.pdf

55. Other policies and plans that cover the State's natural disaster mitigation, resilience and recovery include, but are not limited to:

    - the State Disaster Management Plan references the Australian/ New Zealand Standard, AS/NZS ISO 31000: 2009 - Risk Management Principles and Guidelines.
    - the National Emergency Risk Assessment Guidelines and A Guide to Disaster Risk Management in Queensland Aboriginal and Torres Strait Islander Communities, available at www.disaster.qld.gov.au

- the State Planning Policy published in December 2013 which provides principles to guide local and state government in land use planning and development assessment, and makes provision for natural hazards mitigation.

56. The Queensland Government Submission to the Inquiry provides information on how Queensland has made changes to the ways in which natural disaster mitigation, resilience and recovery activities are funded and how analysis and decision making to allocate funding across these activities is undertaken; refer to paragraphs 34 to 35, 63 to 70 and the diagram at paragraph 142 of the submission.

57. With regard to State Government prioritisation and funding of infrastructure projects, the Queensland Government utilises a multi-criteria analysis to prioritise economic infrastructure projects on the basis of contribution to the economic development of the State. Direction setting based on Queensland's strategic economic objectives assists the government to leverage other sources of funding, including the Australian Government, as strategic objectives and priorities align.

58. The Queensland Government rejects the assumption that the collective requirements of the Australian Government under the NDRRA and the NPANDR provide disincentives to Queensland to effectively manage natural disaster risk. This is demonstrated in the substantial contribution the state has made to all NDRRA expenditure in Australia as well as the large amounts of funding provided for reconstruction work that is out of scope of NDRRA assistance. An approach that relies solely on funding to recover and reconstruct after a disaster and discounts the benefits of disaster resilience and mitigation initiatives would be self-defeating for the state.

59. The extensive program of works undertaken in the State Government funded Local Government Grants and Subsidies Program and Royalties for the Regions, the jointly funded Natural Disaster Resilience Program, the Queensland Betterment Fund, as well as the concerted State response to the Queensland Floods Commission of Inquiry readily illustrate the proactive approach Queensland has taken to disaster mitigation and resilience under the current natural disaster funding arrangements.

60. Further commentary from a Queensland perspective on the issues concerning the influence that Federal Government funding has on State prioritisation and funding of infrastructure projects and how this funding affects the mix of projects funded through other means is presented at paragraphs 27 to 38 of the Queensland Government Submission to the Inquiry. Information which addresses the coordination of natural disaster mitigation and recovery across governments and agencies at the federal, state/territory and local levels and whether there is evidence of duplication or overlap is provided at paragraphs 46 to 51, 90, 100 to 105 and 108 to 109 of the submission.

61. In general, Queensland's natural disaster relief and recovery measures relating to individuals, businesses, primary producers and voluntary organisations are considered to be effective and well-targeted. However, Category B concessional loans tend to be self-limiting as most primary producers are reluctant to take on more debt unless it is absolutely necessary and QRAA applies a rigorous checking process including a business viability check

for these loans. Meanwhile, Category B freight subsidies appear to have limited utility for horticulture/grains producers and are only available for a set range of activities, such as the movement of materials or machinery used for recovery purposes, the movement of fodder to feed livestock or for the movement of livestock for restocking purposes.

62. Similarly, NDRRA small business support is complex and could be better targeted. Current assistance includes concessional loans for small businesses re-establishing viable operations, and clean up and recovery grants for small businesses in highly impacted regions to support recovery of the community. The uptake of concessional loans by small business has been limited, possibly as a result of impacted small businesses losing cash flow after a natural disaster and already having existing business loans, making it difficult for businesses to service an additional loan.

63. Information concerning the effectiveness of Queensland's natural disaster relief and recovery measures relating to individuals has been presented at paragraphs 71 and 72 of the Queensland Government Submission to the Inquiry.

64. The Queensland Government has made excellent progress in the implementation of past inquiries relating to natural disasters. Through the Department of State Development, Infrastructure and Planning, the Queensland Floods Commission of Inquiry recommendations (2.20, 2.21, 2.22, 4.1a, 4.4, 4.5, 5.1, 5.2, 5.4, 5.6, 7.1, 7.2, 7.4, 7.11, 7.16, 7.24, 8.3, 10.16 and 10.18) have, are or being, proactively addressed. This includes the repeal of State Planning Policy (SPP) 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide into the single State Planning Policy (December 2013), development of model flood planning controls, and the conduct of hazard mapping and associated risk assessments as necessary to protect life and property.

65. Queensland has also reviewed the recommendations of the Victorian Bushfire Royal Commission. It has undertaken to implement appropriate recommendations from that inquiry which includes increasing the accuracy of bushfire hazard mapping and related land use planning provisions.

Interactions with broader Federal–State financial arrangements

66. This section of the Issues Paper sought information on the interaction of federal, state and territory government expenditures on natural disaster mitigation, resilience and recovery with other Federal–State financial arrangements and questioned whether current horizontal fiscal equalisation arrangements have implications for incentives for natural disaster risk management by state and territory governments.

67. State expenditures on natural disasters interact with Australia's process of horizontal fiscal equalisation across states and territories. This process, administered by the Commonwealth Grants Commission (CGC), determines an allocation of GST revenue that equalises the capacities of states and territories to provide services to their communities. During this process, the CGC assesses the relative expenditure needs of state and territory governments, including in relation to natural disasters.

68. Currently, a state's net contribution to natural disaster recovery funding is assessed by the CGC on an actual per capita (APC) basis. That is, the CGC's assessment of state needs is based on what states actually spend. Under the Commission's current methodology, the financial burden of the state's contribution is effectively shared across all jurisdictions through the allocation of the GST pool. States with higher than average net NDRRA expenses are compensated through increased GST, while the GST shares of states with lower than average NDRRA expenses are commensurately reduced. States' contributions to NDRRA affect the GST pool over three years with a two year lag.

69. While the CGC does take reinsurance premiums into account in its NDRRA assessment, it does not currently assess states' expenditure needs for disaster mitigation (for example, building resilience into infrastructure). The CGC considered developing an assessment of natural hazard mitigation costs for infrastructure in the 2010 Review but was not able to do so because reliable and comparable data was not available. The level of natural hazard mitigation in states is also likely to be influenced by policy choices.

70. The CGC is currently reviewing its methodologies for determining the distribution of the GST and therefore this treatment of disaster recovery funding may be subject to change.

71. There are a number of reasons to suggest the existing horizontal fiscal equalisation (HFE) process, whereby GST is distributed among the states and territories to equalise state and territory governments' capacities to provide services, will not have a significant impact on state incentives for natural disaster risk management. These include:

- other considerations, such as the personal and financial impacts on a state's communities of not implementing appropriate natural disaster mitigation strategies, will generally take priority over considerations of the distribution of the financial burden through the HFE process.
- uncertainty of GST impacts – for a state to receive an increased share of GST as a result of its NDRRA expenditure, it must have higher than average NDRRA expenditure. There is therefore no guarantee that a state will receive additional GST to offset the NDRRA expenditure it has incurred if other states have also experienced disasters;
- lag of GST impacts – additional GST for states experiencing higher levels of natural disasters is provided over three years, beginning two years after the NDRRA claim is made.

72. It has been the conclusion of several recent reviews that there is no evidence that the current GST distribution process materially affects states' policies for natural disaster risk management in practice. As stated above, the CGC apply an APC assessment (that is, the CGC's assessment of state needs is based on what states actually spend) when "in the Commission's judgement, the policies of all states are the same and any differences in expenses or revenue per capita are due to differences in state circumstances".

73. For NDRRA net expenditures, in its most recent methodology review (2010), the CGC view was that "we considered all differences between the states in their per capita expenses were not subject to significant policy differences and could be attributed to the effect of

factors beyond the control of individual states." As part of this decision, the CGC noted that NDRRA guidelines require states to have made adequate progress with mitigation strategies before payments can be made.

74. More recently, the CGC has considered in greater detail the impact of potential differences in state risk management strategies on its ability to make an APC assessment. If differences in states' strategies were found to have a significant impact on their NDRRA expenditure, an APC assessment would not be appropriate under the CGC's current guidelines, as states' individual policies would affect their GST shares. In their 2013 Update Report on State Revenue Sharing Relativities, the CGC considered issues such as the appropriateness of insurance arrangements for road and non-road assets. The Commission based its conclusions on the findings of the review of insurance arrangements undertaken by the federal Department of Finance and Deregulation (DoFD), noting that the DoFD review:

- found that appropriate insurance arrangements are in place for all non-road assets in states other than the Northern Territory and Tasmania
- acknowledged that insuring for roads assets is not cost effective for many states, and/or there is no appetite in the commercial insurance market to underwrite such risks.

75. While the CGC noted that, conceptually, adjustments could be made for different insurance arrangements in some instances, it decided not to do so as it was not clear that such adjustments would have a material impact on states' expenditure.

76. More generally, the Australian Government's recent Review of the GST Distribution also considered the issue of whether current HFE arrangements distorted public policy making. The Review considered a diverse range of policy areas including taxation, promotion of economic development, service delivery and grant dependency. While the Review was of the view that the system can theoretically create perverse incentives in some instances, it found there is little evidence they have any impact in the real world.

Assessing the current arrangements

77. This section of the Issues Paper questioned the objectives of the natural disaster funding arrangements and sought definitions for the terms 'coherent', 'effective' and 'sustainable' in the context of natural disaster funding arrangements.

78. The objectives of the natural disaster funding arrangements are discussed in length throughout the Queensland Government Submission to the Inquiry; paragraphs 40 to 48 specifically refer.

79. In summary, Natural Disaster funding arrangements should exist to assist in the relief of communities that have been severely affected by a disaster event to enable them to return to their pre-disaster level of functioning as quickly as possible. Inclusive in this is providing financial arrangements to assist in the immediate response, recovery and reconstruction, above which a council and or state could be reasonably able to fund solely to alleviate the financial burden on states and territories. It should also ensure that it is used effectively to improve the ability of communities to respond and recover from events and to reduce the

future potential impacts of events through appropriate reconstruction of damaged communities.

80. Funding is provided for the response to, and reconstruction following, the event through a shared funding arrangement that is financially equitable and allows a sustainable response that is reliable and consistent over time. This includes approaches that rebuild assets utilising methodologies based upon sound expert advice which will lead to an improved financial outcome that minimises future pressures and ensure sustainability of the asset through improved economic, social and environmental aspects relating to recovery and reconstruction. This should be sustained through a consistent and unambiguous policy platform that is supported by and interpreted consistently across federal government agencies.

Roles and responsibilities for risk management

81. This section of the Issues Paper sought information concerning appropriate allocation of roles and responsibilities for natural disaster risk management and how individuals, businesses, the community and different levels of government can most effectively fund natural disaster risk management. It also questioned whether the provisions in the NDRRA Determination are adequately enforced, are there material consequences for governments that do not behave in a manner that is consistent with the provisions and asked if 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.

82. Effective risk management begins with risk assessment in order to prioritise natural hazards and inform decisions on the applications of controls to manage risk. Assessment of natural hazard risks can be difficult and is not well-covered in existing risk assessment methodologies. Queensland has successfully applied a quantitative approach based upon historical and modelled data, capitalising on work already undertaken for the insurance industry. The resulting state-level assessment clearly identifies cyclone and flood as Queensland's predominant natural hazards – enabling risk control efforts (ie risk mitigation) to be channelled accordingly. This risk management process underpins the new state planning policy for flood, bushfire and landslide.

83. Through the Queensland Floodplain Mapping Project Queensland has developed and implemented a body of work to provide a better understanding of our floodplains and to better inform and influence land use planning. Since its commencement in August 2012, this project has completed the mapping of over 100 high-risk flood towns in 40 local government areas across the State. The NDRP funded Queensland Flood Mapping Program currently being undertaken will also deliver a range of mapping products for up to a further 60 high to medium flood risk towns.

84. Further information on these projects and Queensland's two-part Guideline, entitled *Planning for stronger, more resilient floodplains*, is provided at paragraphs 61 and 62 of the Queensland Government Submission to the Inquiry.

85. Future work will support councils to develop local risk registers. The bottom-up quantitative approach being developed by Queensland is specifically intended to facilitate risk assessment at the local government level using an online tool to match existing risk mapping (eg from flood studies) and local knowledge to community vulnerability data such as is available from GeoScience Australia's NEXIS program. Outputs from local risk registers will then be compared and scaled up to regional and state level in order to improve the granularity of the state level risk assessment and so optimise geographical targeting of mitigation effort. These initiatives are being undertaken by Queensland using NPANDR funding – ie joint Federal–State funding.

86. Queensland is concerned that an alternative approach to risk assessment proposed under the National Emergency Risk Assessment Guidelines (NERAG) will be less accurate, is unwieldy to implement, and would impose an excessive burden upon local governments. The NERAG methodology uses a workshop based risk matrix approach that, in the view of an international handbook on risk assessment techniques, "is very subjective and there tends to be significant variation between [risk] ratings" (SA/SNZ HB 89:2013 – Risk Management – Guidelines on risk assessment techniques, page 49). The overheads to achieve comparability between NERAG-based risk assessments would be considerable and would be unlikely to be justified by the accuracy inherent in such subjectively based qualitative assessments. NERAG has been designed top-down, with emphasis on state level techniques that will be too onerous for medium/small local governments to implement. Further, given the subjectivity inherent in the methodology, Queensland does not believe comparison can be made between individual jurisdictional risk assessments based upon NERAG.

87. Traditionally, the Australian Government has led national single-hazard risk assessments (eg through GeoScience Australia for tsunami) and guidelines (eg National Flood Risk Assessment Guidelines). These have avoided duplication of effort by individual jurisdictions. GeoScience Australia is also developing a potentially crucial database (National Exposure Information System - NEXIS) to inform risk management decisions across Australia.

88. Individuals, businesses, the community and different levels of government can most effectively fund and manage natural disaster risks by acknowledging that it is a shared responsibility. In Queensland, provision of resources for risk management is already shared across the three tiers of government.

89. Section 10 of the Queensland Government Submission to the Inquiry provides further information on issues concerning natural disaster risk management.

90. The Queensland Government disputes the assertion that the current arrangements diminish incentives for risk management and disaster mitigation. This issue, along with the matters of adequate enforcement of the NDRRA Determination and whether 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, have been adequately addressed in paragraphs 27 to 37, 56 to 59 and 86 to 92 of the Queensland Government Submission to the Inquiry.

Providing incentives for effective risk management

91. This section of the Issues Paper discussed the right framework for effective risk management and questioned whether there is evidence that natural disaster funding arrangements induce 'moral hazard' behaviour by governments, households and businesses. It also queried that if states and territories do not bear the full costs of natural disaster reconstruction, does this diminish their incentives for investment in risk management, including mitigation and insurance.

92. The Queensland Government has a role to play in educating businesses on risk management to encourage reduced economic and social costs. To build and enhance risk management, the Queensland Government has introduced the Get Ready Queensland campaign (http://getready.qld.gov.au/) as well as webinars and information on the Business and Industry Portal.

93. While the Queensland Government has not undertaken direct research on the matter of 'moral hazard' associated with natural disaster funding arrangements, it is aware that small businesses are particularly concerned with increased insurance premiums.

94. The North Queensland Members of Parliament released an Insurance Action Plan in November 2013 because of major increases in insurance premium. The most recent Chamber of Commerce and Industry Queensland (CCIQ) Westpac Group Pulse Survey of Business Conditions, the survey for the December Quarter 2013, released in March 2014, found that rising insurance premiums were considered by business to be the third biggest constraint on Queensland business growth. Further, the CCIQ has expressed concerns that some businesses may now be inadequately protecting their assets due to high insurance premiums.

95. However, Queensland small business, having experienced several disasters recently, are aware of the high costs to business from natural disaster and that governments only provide limited support. Consequently, it is most likely high insurance premiums, rather than "moral" hazard behaviour, based on an expectation of public funding, may lead to underinsurance.

96. The Community Recovery Reforms discussed at paragraphs 71 and 72 of the Queensland Government Submission to the Inquiry acknowledge that natural disaster funding arrangements have induced a level of 'moral hazard' behaviour within the community. Further information concerning this 'moral hazard' and whether this funding diminishes incentives for investment in risk management is provided at paragraphs 56 to 70 and section 10 of the submission.

Providing incentives to use insurance

97. This section of the Issues Paper sought information on current arrangements for insurance of essential public assets owned or managed by the Queensland Government and the impacts that the structure and design of the NDRRA have on the incentives of the state government, households and business to insure assets and properties.

98. The current arrangements for insurance of essential public assets owned or managed by the Queensland Government and the impact mitigation activity is likely to have on insurance premiums have been addressed extensively in the Queensland Government Submission to the Inquiry; section 10 of the submission refers.

99. There are a variety of reasons for the disparities in natural insurance coverage by state and territory governments. The following factors need to be considered:

- Size of the reinsured portfolio;
- Nature and type of assets reinsured;
- Geographic location of the assets;
- Quality of the underwriting information;
- Frequency and severity of the perils covered by the program;
- Loss experience/claims history;
- Level of retention (excess/deductibles)
- Limit of cover purchased;
- Any exclusions;
- Reinsurer Panel (including level of security)
- Relationship with reinsurers;
- Market interest and capacity at the time of going to market.

100. Unlike Victoria and the ACT, Queensland is unable to insure its roads; this is because traditional commercial insurance for Queensland's extensive road network (some 33,000km) is not available in the marketplace at this time.

101. The NDRRA provides an important safety net for the protection of essential public assets that either cannot be insured or cannot be cost-effectively insured in the commercial insurance market. A range of Queensland's essential public assets are operated by Government Owned Corporations and are insured in the commercial insurance market.

102. NDRRA assistance does not cover restitution of assets and is not an alternative to insurance. It is likely that the NDRRA assistance measures are not as significant an influence on the business operators' decisions for insurance of their property, as is the cost of insurance premiums. The decision on insurance is expected to be reliant on considering the cost of insurance premiums versus the likelihood of the property being damaged or destroyed. Likewise, homeowners are advised that financial assistance after a disaster is provided as a contribution to self-recovery, not an alternative to property insurance.

103. There are however, likely to be a number of reasons influencing property owners and business operators on whether to take out insurance cover. For example:

- Low-income households with limited financial reserves are less likely to take out insurance;

- Certain types of cover may not be widely available in the market, and where cover is available, premiums may be significant especially where the risk of loss is high. Affordability is therefore a key consideration.
- Strong competition in the market generally places downward pressure on premiums, conversely a lack of competition in certain sectors of the market can impact premium levels.

104. Affordability of insurance remains a significant community issue in Queensland, particularly for those homeowners whose properties are located in flood prone areas or have a high exposure to cyclones.

105. In some areas insurance premiums are reflective of the risks in those areas. Insurance premiums are set by insurers based on their assessment of risk; the higher the risk exposure, the higher the premiums. Some insurers have sophisticated systems for assessment having regard to the physical location of the insured property and use detailed flood-mapping systems at a street address level to help calculate risk and determine the appropriate premium. Some insurers calculate premiums having regard to the postcode assigned to the insured property.

106. Representations have been made to government from concerned residents who have received significant increases in their household insurance premiums simply because they share the same postcode as a coastal region but are not exposed to the same high risk factors.

Allocating resources to natural disaster risk management

107. This section of the Issues Paper sought information about the consistency of current natural disaster funding arrangements effective and sustainable allocation of resources to natural disaster mitigation, resilience and recovery and asked whether funding arrangements exacerbate the political economy incentive for governments to under invest in natural disaster mitigation and/or over invest in natural disaster recovery.

108. All issues raised in this section of the Issues Paper have been discussed throughout the Queensland Government Submission to the Inquiry; specifically paragraphs 11 to 21, 27 to 33, 56 to 60 and 139 to 144 refer.

Getting the balance right between mitigation, resilience and recovery

109. This section of the Issues Paper included questions about how the Commission should assess the appropriateness of the level of mitigation, resilience and recovery expenditure and whether there is evidence on the cost-effectiveness of mitigation expenditure (in terms of reducing future disaster costs).

110. All issues raised in this section of the Issues Paper have also been addressed in the Queensland Government Submission to the Inquiry; paragraphs 53 to 58, 68, 79 to 81 and the diagram at paragraph 142 refer.

Allocating resources to the right mitigation, resilience and recovery options

111. This section of the Issues Paper discussed the benefits and costs of mitigation, resilience and recovery projects as well as arrangements that should provide incentives and lead governments to identify and implement the options that have the largest benefit-cost ratios. The Commission raised questions to gain an understanding of the mechanisms and models that governments are using to evaluate and prioritise natural disaster mitigation, whether local governments have appropriate capabilities to undertake cost–benefit analysis of mitigation activities and whether the requirement for governments to show that 'betterment' options are 'cost-effective' reduce the likelihood of betterment projects being implemented.

112. The Queensland Government has developed and implemented a variety of mechanisms and models to identify options that will deliver substantial benefit to the community. For example, TMR has invested in developing a list of projects which could be undertaken to improve the resilience of the network at locations which have been damaged over multiple natural disaster events. This list is prioritised based on traffic volumes, economic benefit of the road (eg major freight route), return on investment (cost of making road more resilient versus ongoing costs of replacing to existing standard following natural disasters) and extent of damage over previous years. This list of projects is then considered as part of TMR's annual program prioritisation of the Queensland Transport and Roads Investment Program (QTRIP).

113. The use of an Integrated Assessment Framework (IAF) for economic cost-benefit analysis of mitigation options is also being employed in the Brisbane River Catchment Flood Study to prioritise mitigation options. By measuring benefits and costs in monetary terms, different options can be ranked in relation to their net benefit (net present value – NPV) or the ratio of benefits to costs (Benefit Cost Ratio - BCR). The NPV and BCR are the two criteria commonly used in the decision making process. The NPV of each option is an essential tool as it represents the project's overall benefit to the community. The option with the highest NPV should ideally be selected as it will maximise society's wealth.

114. While local governments may not have the appropriate capabilities to undertake cost–benefit analysis of mitigation activities, the Queensland Betterment Framework, detailed at paragraph 77 and attachment 3 of the Queensland Government Submission to the Inquiry, is an effective mechanism to assess projects without placing an onerous burden on local governments. The requirement for governments to show that 'betterment' options are 'cost-effective' is discussed further at paragraphs 74 to 85 of the submission.

115. The co-contribution of funds by local governments to disaster resilience and mitigation projects is the most obvious mechanisms available for communities to contribute to the costs of mitigation and recovery. As evidenced in **Attachment 2**, local governments have committed in excess of $11.5 million to approved betterment projects.

Land use planning and infrastructure policies

116. This section of the Issues Paper considered options for urban planning, land use policy and infrastructure investment that support cost-effective risk management. It sought information on the impacts that land-use planning and infrastructure policies have on natural disaster risk management and what effect current natural disaster funding arrangements have on land-use planning, risk reflective asset pricing and infrastructure investment decisions at the state government level.

117. Land use planning and infrastructure policies have the opportunity to avoid, mitigate or, at a minimum, understand the risks associated with a natural hazard and the expected impacts on the community.

118. The Queensland government believes that there is a need for greater information provision and disclosure in planning decisions and that the provision of higher quality information to achieve appropriate planning decisions should be a governing principle in land use planning.

119. Indemnity and compensation of governments altering property rights to protect life and property continues to be an issue identified as a barrier to stronger risk management measures. Greater information provision and disclosure of planning decisions would also enable greater consistency and integration with other risk management measures including building regulation, insurance, structural and infrastructure works and emergency responses.

120. Further information on land use planning and infrastructure policies is provided at paragraphs 61 and 62 of the Queensland Government Submission to the Inquiry.

Substantial changes to the system

121. This section of the Issues Paper indicated that "If the Commission's analysis indicates that the quantum, coherence, effectiveness and sustainability of the current funding arrangements cannot be made consistent with effective risk management the Commission may recommend a significant overhaul of the system." Consequently, the Commission sought proposals for substantial reform options to natural disaster funding arrangements for the federal and state and territory governments and questioned the impact that each option would have on the incentives of each level of government to make good risk management decisions and on the costs and incentives of individuals, businesses and non-government organisations to manage natural disaster risks.

122. Since 2011, the Queensland Government has implemented several reforms to better manage natural disaster funding. These reforms have been presented in detail at paragraphs 74 to 104 of the Queensland Government Submission to the Inquiry.

123. The impact of any reduction of financial support to those most in need will have significant impacts on individuals' and families' quality of life and will, therefore, potentially lead some of the affected families into public housing due to their inability to be supported in recovery. The reduction of expenditure in NDRRA personal hardship assistance (Category

A) will result in an increase in expenditure downstream within other social services programs. The inability to provide Category C funding to communities that have been impacted severely may have demonstrable social dysfunction through depression, domestic violence, child protection and lessening social cohesion.

124. The advantages and disadvantages of making substantial changes to the natural disaster recovery funding arrangements (such as recommended by the National Commission of Audit) and the advantages and disadvantages of retaining the current NDRRA, but with reforms to the thresholds and contribution levels are discussed in paragraphs 52 to 55 of the Queensland Government Submission to the Inquiry, while paragraphs 46 to 49 and attachment 1 of the submission account for lessons that have been learnt in other countries with regard to natural disaster funding arrangements.

Implementing reforms

125. In this final section of the Issues Paper, the Productivity Commission indicated that reforms to natural disaster funding arrangements could have material effects on some members of the community, notably on assets. The Commission sought comment on the impact and timing of reforms and on transitional arrangements.

126. Noting that any reforms to natural disaster funding arrangements as a result of the Inquiry have yet to be determined, it is difficult, if not impossible to provide comments on this matter. However, it is recommended that the following principles are considered:

- Allow current NDRRA program to be completed under current rules
- No disadvantage to Queensland
- No retrospectivity of assessment.

List of Attachments

1. Natural Disaster Resilience and Mitigation Expenditure
2. Approved Betterment Projects (Not for public release)
3. Queensland NDRRA Spend and Funding Profile – 2002 to 2013 Summary (Not for public release)
4. Category D Measures
5. NDRRA Program Managed by the QRA (Not for public release)
6. Insurance and Damage Information
7. Severe Tropical Cyclone Ita Recovery Plan
8. Queensland Strategy for Disaster Resilience