IPWEA
INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA

IPWEA Joint Submission on the Productivity Commission Inquiry on Natural Disaster Funding Arrangements (Draft Report September 2014)

Institute of Public Works Engineering Australasia &

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Executive Summary

The Institute of Public Works Engineering Australasia and Institute of Public Works Engineering Australasia Queensland (referred to as IPWEA in this submission) have collaborated to provide a joint submission on the Productivity Commission's September 2014 Draft Report on Natural Disaster Funding Arrangements. The IPWEA is a not-for-profit organisation and the peak body for engineers and other public works professionals working in the Local Government sector across Australia and New Zealand. IPWEA provides representation to State and Commonwealth agencies on key issues affecting the public works sector as well as providing technical support, education programs and networking opportunities for our 3,500 members.

IPWEA is recognised as a global leader in the development of asset management technical publications and training programs for public works professionals. Our membership base is predominately made up of professional engineers and technical staff in local government and the consulting sector. Subsequently our members play a key front line role in the preparation and response to natural disaster events. These responsibilities include both the emergency response and recovery phases. In particular our members are directly responsible for the restoration of essential public assets and services following natural disasters.

The Productivity Commission has identified Option 2 as its preferred Option in the Draft Report as detailed in the table below.

Table 2 **The Commission's proposed funding reform options**

Option 1: Reformed NDRRA	*Option 2: Option 1 plus 'top-up' insurance*	*Option 3: Block grant model*
• Flat reimbursement rate of 50 per cent for expenditure above threshold • Increase small disaster criterion to $2 million • Double annual expenditure threshold for reimbursement to 0.45 per cent of state revenue • Streamline what is considered eligible expenditure • Funding for community recovery provided under a reimbursement model • Funding for reconstruction of essential public assets based on assessed damage and benchmark prices	• States have access to principal NDRRA support (under option 1), but can elect to purchase insurance for additional eligible expenditures (for example through lowering the small disaster criterion, lowering the threshold, or increasing the cost-share percentage) • The Australian Government charges an 'actuarially fair' risk premium for this additional coverage • The Australian Government could engage the services of reinsurers to price this insurance	• Funding determined on an event basis, rather than an annual expenditure threshold • Event trigger: 0.2 per cent of state revenue • Australian Government contribution of 50 per cent of eligible costs above trigger • Australian Government contribution paid upfront based on assessment of damage and benchmark prices of relief and recovery

IPWEA acknowledges the financial pressures placed on all levels of government by Natural Disasters through the increasing frequency and severity of events. In particular the period between 2009 and 2013 where there has been in the order of $14B in expendiutre in Queensland alone.

However, IPWEA strongly opposes the funding reform recommendations in the draft report. In particular the proposed reduction of the Australian Government marginal cost sharing contribution from 75% to 50%, and the increase of the trigger amounts (Rec 3.1). The funding reforms will only shift an increased portion of the cost of disaster events to State Government and Local Government and result in no savings or reductions in Natural Disaster costs. This is not a practical or sustainable approach as State and Local Governments to not have the capacity to absorb this additional funding burden, either directly or through "top up" insurance schemes. Such a significant cost shift would only be sustainable if the current vertical fiscal imbalance between the States and Australian Government was addressed through broader taxation reforms or alternate Australian Government funding programs to the States.

IPWEA believes the draft report does not address the obvious significant cost impacts on Local Government that would result if the Australian Government implements the proposed funding reductions. The report suggests the impact on local government will be left as a matter for each state with the statement (p 19) that "e*ach state would continue to have full autonomy on how it provides support to its local governments."* State Governments are already facing significant financial pressures and will be forced to increase the funding contributions from Local Government for disaster events. As neither Council nor the State Governments will have the resources or financial capacity to respond to significant disaster events the actual outcome achieved through the reforms will be that damaged infrastructure will not be reinstated, State and Regional economies will not recover, and the quality and resilience of our essential infrastructure will be eroded over time with potential irrecoverable consequences.

It is IPWEA's position that the focus of the report and reforms should not be on "cost shifting" and risk transfer to the State Government (and subsequently Local Government) but instead on improving outcomes from the current NDRRA such as improved methods of damage assessment and eligible funding amounts, increasing NDRRA program efficiencies and

increasing infrastructure network and community resilience to reduce overall program costs. We have outlined intiiatives in our submission which will support this approach.

IPWEA, through the "front line" experience and engineering expertise of its members in both disaster management and infrastructure asset management, recognises there are opportunites to significantly improve NDRRA outcomes and would welcome the opportunity to provide further input and collaboration across all three levels of government.

IPWEA Responses to the Draft Report

The position of IPWEA with respect to the draft recommendations and key points in the draft report are detailed below for consideration by the Productivity Commission in developing the final report. The Draft Recommendations from the Commission's report that are of particular relevance to IPWEA have been included in the green shaded boxes for clarity.

1. Funding Arrangements for Disaster Recovery

DRAFT RECOMMENDATION 3.1

The Australian Government should:

- reduce its marginal cost sharing contribution rate to disaster recovery outlays to 50 per cent under the Natural Disaster Relief and Recovery Arrangements
- increase the triggers for Australian Government assistance (small disaster criterion and annual expenditure threshold).

In conjunction with this reduction in funding assistance, the Australian Government should provide state and territory governments with increased autonomy to manage relief and recovery expenditure in a way that reflects the preferences and characteristics of their communities.

a) ***IPWEA strongly objects to the proposed changes to funding arrangements detailed in Recommendation 3.1. IPWEA recommends that the current thresholds and assistance rates for NDRRA Category B support is maintained with the first threshold for 50% Australian Government reimbursement at 0.225% of state revenue and grants, and the second threshold for 75% reimbursement at 1.75 times the first threshold.***

The management of infrastructure remains a fundamental challenge for local government in Australia. Of the three levels of government, Local Government has the largest relative task in terms of asset management and the smallest relative revenue base. In 2011-12 Australian Governments collectively owned more than $1.65 trillion worth of assets of which just over $1.01 trillion were non-financial assets. Local

governments owned $350 billion (21.2%) of these total assets but importantly, more than 31.2% of non-financial assets (valued at $316 billion).

The Commonwealth had revenue of around $340 billion to maintain non-financial assets of $98 billion – a healthy ratio of more than $3.40 in revenue for every $1 in non-financial assets. The States had combined revenue of $210 billion to maintain, just under $562 billion worth of non-financial assets; around $0.37 in revenue for every $1 in non-financial assets. Local Government had revenue of just under $37 billion to maintain non-financial assets valued at $316 billion; about $0.12 in revenue for every $1 in non-financial assets.

As neither Local Government nor the State Governments will have the resources or financial capacity to respond to significant disaster events, the actual outcome achieved through the proposed reforms will be that damaged infrastructure will not be reinstated, State and Regional economies will not recover, and the quality and resilience of our essential infrastructure will be eroded over time with potential irrecoverable consequences.

b) *IPWEA strongly objects to the proposed increase in small disaster criterion in the draft report. IPWEA recommends the small disaster criterion (currently $240,000) be maintained but indexed to reflect price movements;*

The sugested increase in small disaster criterion from $240,000 to $2M will have significant impacts on small Councils, remote communities and Indigenous Councils. Often these communities are located in remote areas in Northern Australia which have signifcant risks from cyclones, severe weather and bushfire. Often these communities experience more than one cyclone event in a single year. The proposed cost shift to these communities is not viable or sustainable and would have a profound impact on their local economy, quality of life and result in the continued degradation of essential infrastructure.

c) *Prescriptive, input-based conditions including restrictions on the use of local government employees' labour (day labour) should be removed to ensure the most efficient and effective recovery arrangements using day labour and / or contract resources to meet program and community requirements in the most efficient and effective manner;*

The NDRRA guidelines place restrictions around the eligibility of costs for Council labour undertaking Cat B REPA works. Our understanding is the ineligibility of day labour has been incorporated into the guidelines on the basis that it was considered difficult to demonstrate value for money outcomes for Council labour costs due to the absence of competitive market tensions and due to the added complexity in demonstrating what labour costs are associated with the extra efforts for flood response and which are associated with the "business as usual" functions of Councils.

The IPWEA strongly supports the eligibility of Council labour costs where it can be demonstrated that an equivalent or better value for money (VfM) outcome can be achieved. We are aware of many cases where the costs to undertake REPA works using day labour have been less than external contractors. In the case of the Queensland floods special exemptions have been secured for the 2010/11 and 2013 events to enable Council day labour costs to be recovered under NDRRA arrangements provided VfM can be demonstrated through competitive pricing or utilising relevant benchmark rates. Benchmarking information has been prepared by the QldRA and previously submitted to the Australian Government and productivity commission, which demonstrates this fact. This approach has worked successfully and significant cost savings for all three levels of government achieved. The QldRA's interim report on day labour trials[1] found that "… *the use of day labour has enabled Queensland councils to deliver NDRRA reconstruction works at a cost below comparable market values, in an accelerated time period and a quality that is fit for purpose"*, and that "… *the use of day labour under the VfM Pricing Model will result in an estimated savings of $120 million saving, with $50 million already saved to date."*

[1] Interim Report, Local Government Value for Money Pricing Model (Day Labour) Trial, QRA September 2014

As Council staff work on their local infrastructure networks every day they have a better understanding of community impacts and expectations, local construction material availability, geological conditions etc. This skill set and knowledge is critical in the provision of efficient and effective responses to reinstate and make safe essential public assets in both the emergency works phase and restoration phase following a disaster event. Whilst the use of additional external resources will typically be required for major events, it is IPWEA's position that Council day labour costs should be 100% eligible for Emergency Works and Cat B funding provided VfM can be demonstrated. VfM assessments should not just include evaluation of construction costs but also the benefits of minimising consequential damage, more rapid reinstatement of assets to a safe standard, reinstating critical assets to minimise impacts on the local economy and mitigating potential environmental impacts through timely reinstatement of assets.

This approach will reduce NDRRA program costs, build Local Government capacity and provide additional benefits to local communities.

d) ***IPWEA supports a review of the current NDRRA arrangements to enable increased flexibility to State Government and Local Government and increased efficiency. The preparation of damage estimates is a critical function. At a national level there is currently inconsistent damage inspection and data collection processes and inconsistent design standards, specifications and cost estimation methods. There is potential to develop more consistent and robust data collection and cost estimation tools, which would enable more consistent and accurate determination of damage estimates, increased certainty on eligible funding amounts and subsequently improved cash flow (a key issue for Local Government under current arrangements) and reduce NDRRA administration costs.***

The Department of Transport and Main Roads Queensland (TMR) replacement and renewal estimation tool for road valuation was extended in 2009 to include local government roads across Queensland through the Queensland Roads and Transport Alliance in 2013. The methodology accommodates varying climatic, terrain and soil type data and has been accepted by the Queensland Audit Office. This methodology or a similar approach could be adopted and rolled out at a national level. The QldRA also has

an extensive database of actual cost information for flood restoration across Queensland for specific work activity types. The cost database would also be a valuable tool in the development of more robust cost estimation tools for flood damage. The damage inspection and cost estimation process can be significantly enhanced through the use of technology platforms which integrate photographic, attribute and geospatial data on damaged assets and linkages to cost estimate data. A number of such systems have been used very successfully for damage and asset attribute data collection post the Queensland floods and these have included QldRA, Local Government and private sector systems.

IPWEA suggests that the commission investigate further how the complexity and high administrative costs of NDRRA can be reduced. IPWEA suggests increase accountability, improved flexibility and reduced administration costs can be achieved through changes to the current frameworks. These initiatives should include:-

- A more consistent, equitable and effective national approach to evaluate damage to essential public assets, allocate REPA funding, and reduce the level of administration and oversight.
- Increased flexibility, through earned autonomy, for asset owners to allocate REPA funding based on a 'best for network" approach and using external or internal resources to the best advantage of the restoration program and community needs. Incorporation of some elements from other successful Federal funding models such as Roads to Recovery, Royalties for Regions to reduce costs and improve outcomes is worthy of consideration by the Commission.

e) ***It is IPWEA's position that improved guidance at a national level on suitable "current engineering standards" applicable to REPA is required. The current arrangements continue to cause confusion and are a source of contention between the Local, State and Australian Governments. IPWEA has participated in a review of current engineering standards with QldRA, and Co-Authored the report "BUILDING AND ENGINEERING STANDARDS DISCUSSION ON THE APPLICATION OF ENGINEERING STANDARDS FOR GOVERNMENT FUNDED GRANT SYSTEMS" which was completed in early 2014. The principles and findings in the***

report would assist in forming a nationally consistent, defendable and robust approach to the application of current engineering standards.

There continues to be uncertainty around what current engineering standards should be applied to REPA works and what criteria is applied by the State and Commonwealth Governments to determine eligibility of costs where the current engineering standards vary from the pre-event engineering standard of the asset. In some cases the application of current engineering standards for REPA works will result in a higher standard of asset being reinstated than that which existed pre-event. Whilst there may be no change to the "service level" of the asset there may be changes to material types used in construction, geometry (e.g. traffic lane width slightly increases) or introduction of new design elements (e.g., guardrail where there was none before). In some circumstances the cost increase resulting from the application of current engineering standards have been determined as betterment works and ineligible for Cat B funding.

Where the service standard or function of the asset has not significantly changed and the variance to the pre-event asset standard has resulted only from the application of current engineering standards, it is IPWEA's position that all restoration costs should be eligible.

All engineering, including works delivered under the NDRRA, must be delivered to a defined, measurable and appropriate standard. With respect to REPA, eligible works must provide the same function and purpose but incorporate current design and construction techniques. This requirement must be balanced against the obligation to achieve Value for Money and deliver restoration works as cost effectively as possible within the finite resources available to Government.

Engineering solutions must be implemented in accordance with the prevailing laws and Acts. Following ex-tropical cyclone Oswald the Queensland and Commonwealth Governments signed a National Partnership Agreement (NPA) to facilitate Queensland's recovery. That agreement strengthened and complemented the existing Natural Disaster Relief and Recovery Arrangements (NDRRA) scheme.

A key component of the agreement is the development of a framework that seeks to ensure disaster damaged public infrastructure is rebuilt utilising current engineering standards. Engineering has evolved into a modern day profession that requires

formalised training, the adherence to complex standards and an understanding of contemporary construction practices within complex regulatory and fiscal environments.

The appropriate engineering standard for essential public assets is typically selected by a professional engineer after assessing various parameters such as the asset function, required service standard, asset life, risk of failure and consequence of failure, durability and resilience requirements. The application of current engineering standards is also critical to enable compliance with legislative requirements as well as professional and ethical obligations.

As every project is unique in some aspect, Engineers must use their judgement and experience to select the most appropriate design solution with consideration of factors such as available funds, geographic location, site constraints, construction materials, technology and available labour force.

It should be noted by the commission that engineers have the ability to design and construct public assets to a lower standard then that defined in the recognised industry standards and guidelines in particular circumstances. Historically design guidelines have tended to provide values of parameters that are suitable for the design of roads in Greenfield sites i.e. where minimal constraints exist. These are referred to as Normal Design Domain (NDD) values. Much of the work on roads is now concentrated on existing roads where a range of constraints exist and Normal Design Domain values cannot always be applied if an economical outcome is to be achieved. Over the last 10 years, the approach for designing in brownfield sites has been progressively introduced and changed design philosophy, including the concept of Extended Design Domain (EDD)

Where a competent and suitably experienced engineer has assessed the risks and function of a particular asset the adoption of a reduced design standard may be appropriate. This approach has particular merit on lower order assets without critical functions (e.g. rural roads which are not heavy vehicles routes, have low traffic volumes and are not the primary connection to communities or industry) and can result in more sustainable and “fit for purpose” design outcomes with lower capital and ongoing maintenance costs. There are recognised robust processes for evaluating proposed departures from industry recognised engineering standards such as the Queensland DTMR “Extended Design Domain” process.

The current NDRRA Determination does not provide a detailed explanation with regard to current engineering standards and betterment.

To address this shortfall, greater clarity was provided in 2012, in the Building it Back Better resource, a report prepared with input from Griffith University, the University of Queensland, the Attorney-General's Department (i.e. Emergency Management Australia), and Australian State and Territory Governments:

> *Already, in accordance with contemporary building standards, a restored asset will invariably attain a higher standard than that of the previous structure. In this report however, adherence to betterment principles means restoring an asset to a standard even higher than contemporary building standards, to make it more resilient to the types of natural disasters to which it is susceptible.*
>
> *(Building it Back Better, 2012)*

Engineering standards evolve over time and it is important that engineers remain current and are able to carry out engineering works to the appropriate standard. The process of achieving a value for money outcome is already integral to modern engineering practices. Under normal commercial pressures designers must achieve the appropriate design standard whilst reducing cost and time to construct to stay commercially competitive. The application of cost control principles to the NDRRA value for money strategy is therefore an application of existing engineering practice.

f) ***In conjunction with other suggested improvements in this submission, IPWEA would support an alternate approach to the allocation of restoration costs between the three levels of Government for major, discrete, non-linear assets (in particular large culverts and bridge structures) which have suffered significant damage. Currently the determination of eligible REPA funding is fundamentally based on reinstatement of damage to current engineering standards with minimal consideration of the remaining useful life an written down value of the asset. IPWEA suggests a more equitable, financially sustainable and robust approach would be to base eligible REPA contributions for this type of asset on the written down value of the asset at the time damage occurred from a declared event.***

IPWEA is recognised as a centre of excellence in asset management practice within the public works sector in ANZ and globally through our publications such as the International Infrastructure Management Manual (IIMM) and numerous Practice Notes and technical guidelines. IPWEA was heavily involved in the delivery of improved asset management practices for Local Governments across Australia under the Local Government Reform fund in 2011 and 2012.

It is IPWEA's position that current replacement costs (subject to VfM) to current engineering standards and service level should continue to be adopted for linear assets such as roads, underground stormwater drainage, open channels etc. For linear assets the determination of the contribution under NDRRA is based on an assessment of the "damage" and not the fair value of the asset. This approach is reflected in the current NDRRA arrangements and is appropriate due to the variability in the type and extent of damage on linear assets and the variability in the asset condition along the length of linear assets. It is not cost effective or practical to require Local & State Governments to undertake frequent condition assessments of linear assets (for example annually) due to the size and scale of these networks, the high variability in asset condition and standards which requires "blocking" of linear assets into much smaller segments with uniform attributes and the high costs and high resource demand to undertake these assessments. For these reasons network level assessments are typically undertaken by Local Government on a 3 – 5 year cycle.

IPWEA is of the opinion that this approach is not equitable when applied to discrete major assets such as major drainage culverts and bridges. Take the example of a timber bridge nearing the end of its useful life which is severely damaged or destroyed by a declared event. Under the current REPA arrangements the cost to repair or replace the structure to current engineering standards, and to the same level of service, is then determined. Under current engineering standards a new concrete bridge will typically be required to replace the damaged timber structure. Whilst funding contributions may be required from the State of Local Government for elements such as new guard rail, extra scour protection or specific "improvements", REPA funds effectively cover the cost of the new bridge structure. This is of significant benefit to the asset owner however the demand on Australian Government REPA funds can be significant.

In line with good asset management practice, and on equity principles, IPWEA would support an alternate approach for discrete assets such as bridges and major drainage structure where the eligible Cat B amount is based on an assessment of the written down value of the structure and not the current replacement costs of the asset to current engineering standards. The NDRRA funding contribution amounts based on written down value would remain at 75% Australian Government and 25% State. In order to repair or reconstruct the asset to current engineering standards, State Governments and Local Governments would then be responsible for funding the additional costs above the written down value of the asset. Where the States and Local Governments are implementing effective asset management practices, long term asset management plans and long term financial plans will be in place. Local governments are required by legislation to value infrastructure assets to meet the requirements of the Australian Accounting standards. Revaluations are required where there has been a material change (typically 5%) in "fair value". In Queensland, up to date asset registers are required to be able to undertake these calculations and these are audited by the Queensland Audit Office (QAO) as part of the valuation process. Asset registers are typically updated annually based on improvement and renewal works performed in the previous 12 month period. The asset register is established in Council's financial/asset management system. The asset register is used to capture life cycle costs of road assets and to facilitate work.

Subsequently, a reasonable assessment of written down value and planned replacement year for bridge assets and major drainage structures will be available from these Councils.

2. Funding Arrangements for Disaster Mitigation

DRAFT RECOMMENDATION 3.2

If the Australian Government reduces the relief and recovery funding it provides to state and territory governments, it should increase annual mitigation expenditure gradually to $200 million, distributed to the states and territories on a per capita basis. The amount of mitigation spending could be adjusted over time to reflect the imputed 'savings' from reduced relief and recovery funding.

Increased mitigation funding should be conditional on matched funding contributions from the states and territories and best-practice institutional and governance arrangements for identifying and selecting mitigation projects. These would include:

- project proposals that are supported by robust and transparent evaluations (including cost–benefit analysis and assessment of non-quantifiable impacts), consistent with National Emergency Risk Assessment Guidelines risk assessments and long-term asset management plans, and subject to public consultation and public disclosure of analysis and decisions
- considering all alternative or complementary mitigation options (including both structural and non-structural measures)
- using private funding sources where it is feasible and efficient to do so (including charging beneficiaries)
- partnering with insurers to encourage take-up of adequate private insurance and private mitigation through measures such as improved information sharing and reduced premiums.

g) ***IPWEA strongly supports the introduction of Australian Government funding for disaster mitigation, however to be effective we recommend that the funding be significantly increased from the $200M annual allocation recommended in the draft report to $500M per annum and supplemented by State and Local Government funding contributions.***

Given State & Local Governments are responsible for around 90% of the total $1 trillion of essential public assets that are exposed to natural disaster risks and the increasing severity and frequency of disaster events, a substantial increase in mitigation funding and focus is required. IPWEA would support a mitigation funding program based on 50/50 funding allocations from the Commonwealth and State. To access this funding pool it is suggested Local Governments be required to make an additional funding contribution for projects submitted for funding consideration and demonstrate projects will achieve significant mitigation benefits. Mitigation funding should be distributed

between the states and local government based on an assessment of disaster risk and benefits of mitigation (financial, social & environmental) to maximise outcomes from each dollar spent. In addition to specific mitigation infrastructure projects (betterment projects), IPWEA strongly recommends that mitigation funding be accessible to implement improved and consistent modelling, risk assessment, asset management, planning and mitigation measures across each State and Local Government.

h) ***IPWEA recommends that REPA funding received through NDRRA for damage to a specific essential public asset should not be tied to that specific asset. REPA funding should be allocated on a "best for network approach" to maximise network resilience and efficiencies rather than an asset specific approach.***

The draft report (p23) suggests that NDRRA funding should be conditional on institutional and governance arrangements that require states to demonstrate 'earned autonomy' including *"local governments having asset registers and asset management plans that incorporate natural disaster risk planning, consistent with their long term financial plans."*

The current NDRRA require eligible funding for the restoration of essential public assets (REPA) funds to be spent on the specific asset damaged by the declared event. This results in the damaged asset being repaired to its pre-event standard under REPA. This effectively discourages Local Government to not expending the full REPA funds available on the asset regardless of its importance and function within the asset network.

With the application of current engineering standards this can in some instances also result in "improvements" to the pre-event asset to meet the minimum current design requirements. The approach is not a "best for network" approach and can result in over investment in non-critical assets and lower order assets within the asset network. IPWEA suggests that significant improvement to network resilience could be achieved if the eligible Cat B funding received through NDRRA for a specific essential public asset was not tied to that specific asset. This would have significant advantages for Local Governments in particular by allowing allocation of REPA funds on a "best for network

approach" rather than asset specific approach. Under this approach funds could only be reallocated to essential public assets within the network. Reallocation would only occur where Councils are prepared to reinstate the subject asset to a lower standard and reallocate balance funds to the upgrade of more critical essential public assets. This approach would provide superior value for money and network resilience outcomes, which are supported by the Council's asset management plans, risk management plans and long-term financial plan. Under this approach pooling of REPA funds with Council funds to complete "planned" infrastructure network upgrades and mitigation works would be permitted and result in more efficient program delivery, improved mitigation and increased network resilience.

i) ***IPWEA does not support any concurrent reduction in the Australian Government marginal cost sharing contribution rate as a consequence of increased mitigation funding over the next three years as proposed in the Draft report. The current NDRRA funding contribution rates should be maintained over the next 3 years and a review completed to quantify the benefits of increased mitigation funding and other suggested network resilience improvements and efficiency measures outlined in our submission.***

It is IPWEA's position that mitigation funding should be increased and the current funding contribution arrangement retained. Mitigation programs and projects will result in reductions in the cost of disasters, however these benefits will not be realised immediately. IPWEA recommends that the Commission significantly strengthen the mitigation funding and policy elements in the final report and undertake a review of the benefits and costs of the mitigation measures 3 years after implementation of new arrangements. No transition to alternative contribution arrangements should be considered until the benefits of the increased investment in mitigation measures is evaluated at the end of the three-year period.

3. Information

DRAFT RECOMMENDATION 4.1

When collecting new natural hazard data or undertaking modelling, all levels of governments should:

- make information publicly available where it is used for their own risk management and/or there are significant public benefits from doing so
- use private sector providers where cost effective, and use licencing arrangements that allow for public dissemination. Where there are costs involved in obtaining intellectual property rights for existing data, governments should weigh up these costs against the public benefits of making the data freely accessible
- apply cost recovery where governments are best placed to collect or analyse specialist data for which the benefits accrue mostly to private sector users.

j) IPWEA recommends that a coordinated national approach to flood modelling and hazard mapping be progressed by the Australian Government with support and input from State Governments, Local Government and the private sector. The approach should integrate existing reliable flood model data and target catchments with deficient existing flood model data on a prioritised risk based approach. The flood model can build upon the National Flood Information Database and will provide data to inform State & Local Government Land Use Planning, Disaster Mitigation Strategies, Infrastructure Planning and better define flood risk for Insurers and the community.

Flood mapping at a National Level has improved with the introduction of the National Flood Information Database. The Draft Report states "*The database includes flood hazard information at the street-address level for communities across Australia. It is derived from flood mapping, digital terrain models and address location data. The database is licenced to the Insurance Council of Australia and is available to relevant stakeholders (ICA 2014a). Insurers have used this database to better price flood risks (Suncorp Group, sub. 71). The database is continually being updated until at least 2017.*

The latest version has flood risk data for over 6 million addresses (Risk Frontiers, pers. comm., 15 August 2014).

Overall, improvements in information are enabling insurance companies to better price risks, improving the price signal sent to policyholders. Further cooperation between parties to strengthen the knowledge base, and avoid duplication of information gathering, should be encouraged."

Unfortunately, not every flood-prone area in Australia is covered by the NFID, as some local governments and floodplain management authorities responsible for this information have yet to release adequate digital flood mapping. The quality of flood data in the NFID is also highly variable.

IPWEA suggests that stronger Federal Government direction on National flood modelling is required. The development of a more robust and consistent flood modelling and mapping data would have significant benefits on a number fronts to mitigate flood risks and costs impacts of flood events including more accurate flood level prediction, improved flood mapping, improved land use planning, improved asset management and infrastructure planning and more transparent articulation of flood risks to the community and the insurance sector. In coastal areas these models will incorporate sea level rise and storm surge parameters. Sophisticated, two-dimensional numerical computer models are commonly being used to provide baseline data describing flood levels, depths and velocities in flood prone areas. Statistically analysed, these data can be used by planners and managers to define the risk and relative hazard (safety) of flood prone areas. The data can be used to determine a wide range of planning outcomes from safe evacuation routes out of flooded regions to whether areas are suitable for rebuilding or future development. With an increased focus on insurance schemes by the Australian Government and the Productivity Commission, robust and consistent flood risk data will be essential to define risks and enable pricing of such risk.

IPWEA notes there is also significant variability within the approach and outputs from 1 dimensional and 2 dimensional models applied by individual local government and state governments. Increased guidance at a national level on minimum flood model attribute data and a risk-based approach would also be beneficial and improve the ability to share data and understand the accuracy and reliability of the model data.

4. Regulating the Built Environment

DRAFT RECOMMENDATION 4.4

State governments should:

- clearly articulate the statewide natural hazard risk appetite in land use planning policy frameworks
- provide local governments with guidance on how to prioritise competing objectives within land use planning
- provide local government with guidance on how to integrate land use planning and building standards. Consideration should be given to Victoria's *Integrated Planning and Building Framework for Bushfire* in this regard.

Furthermore, local governments should publish the reasoning behind development assessment decisions.

DRAFT RECOMMENDATION 4.6

State governments should provide additional support and guidance to local governments that addresses the extent of local governments' legal liability when releasing natural hazard information and making changes to land use planning regulations.

DRAFT RECOMMENDATION 4.7

The provisions in the Queensland *Sustainable Planning Act 2009* for injurious affection should be repealed.

DRAFT RECOMMENDATION 4.10

All governments should put in place best-practice institutional and governance arrangements for the provision of public infrastructure, including road infrastructure. These should include:

- stronger processes for project selection that incorporate requirements for cost–benefit analyses that are independently scrutinised and publicly released
- consideration of natural disaster risk in project selection
- a clearer link between road-user preferences and maintenance and investment decisions.

k) *IPWEA supports State and Territory Governments providing local governments with a statutory exemption from liability for natural hazard management for reasonably based decision-making and actions. IPWEA supports the repeal of the provisions in the Queensland Sustainable Planning Act 2009 for injurious affection.*

Legislative provisions act as a deterrent to Local Government to include more significant hazard mitigation and controls in their land use planning schemes specifically in the context of compensation and statutory immunity. For example under current legislation in Queensland Local Governments have limited protection from claims for damages arising from planning and development decisions or through the issue of advice relating to hazard affected land. Subsequently, use of planning provisions and development conditions to mitigate disaster impacts are diluted or avoided due to the risk of legal action.

This issue was highlighted in the Queensland Floods Commission of Inquiry and in its Final Report (March 2012). As outlined in the Final Flood Commission Report (Section 5.5.1 statutory immunity), councils in Queensland have no specific statutory protections in relation to the provision of flood information or decisions concerning development of flood-affected land.

The introduction of legislative exemption similar to that in NSW across all states and territories improve disaster mitigation outcomes achieved through more effective land use planning. IPWEA understands that NSW legislation provides an emption from liability for reasonably based local government decision-making such as that outlined in section 733 of the New South Wales Local Government Act 1993.

l) *IPWEA recognises the need for Local Government to improve asset management practices by fully integrating disaster management within asset management practices and placing a greater focus on network resilience.*

The draft report (p23) suggests that NDRRA funding should be conditional on institutional and governance arrangements that require states to demonstrate 'earned autonomy' including "local governments having asset registers and asset management plans that incorporate natural disaster risk planning, consistent with their long term financial plans."

Draft recommendation 3.4 also requires that "…local governments should compile and publish detailed registers of road asset condition and maintenance for all roads over which they have jurisdiction (and have these registers independently audited)".

Asset management is an essential part of effective business planning in both the Government and Private sectors. Local Government services, and communities, are highly dependent on the reliability, resilience and cost of infrastructure. IPWEA has supported numerous Local Governments in Australia, New Zealand, Canada and the USA to implement asset management practices which considers a range of factors including:

- Risks and criticality
- Future demands
- Levels of service
- Forecast financial performance
- Key objectives and goals of activities that the assets support.

IPWEA recognises the increasing risk of natural disasters and climate change on critical infrastructure. There are strong synergies between the principles of good practice asset, financial and emergency management. Asset managers need to understand the impact of multiple extreme climate or disaster event scenarios, and to establish proactive management plans for the long term in the post emergency response phases of recovery, reconstruction and improvement. Whilst many Local Governments across Australia have well established asset management plans and asset registers with linkages to financial plans, there is an opportunity to provide a more consistent and effective approach to the integration of natural disaster risk planning in asset management practices.

Such an approach would be integrated with land use planning, development controls, hazard mapping, risk models, community plans and financial plans and include:

- Scenario Modelling to determine the impacts of disasters and combinations of events on infrastructure
- Identification of critical assets within existing and planned infrastructure networks
- Understanding the current risk and resilience of critical assets
- Preparation of asset hierarchies
- Reviewing Service Levels to ensure a sustainable and resilient asset network from both a financial, community expectation and disaster resilience perspective
- Adoption of engineering design standards which meet appropriate technical, financial, functionality and resilience criteria
- Asset rationalisation, including abandoning, upgrading, downgrading and optimising assets.
- Integration of asset management plans with the Strategic Financial Plan, likely resulting in increased investment in critical infrastructure and reduced investment on non-critical assets
- Implementation of prioritised capital works and maintenance programs that cost effectively mitigates disaster risk to infrastructure networks and communities.

5. Government Insurance

DRAFT RECOMMENDATION 3.4

State, territory and local governments should further investigate non-traditional insurance products for roads. Where they do not already do so, state, territory and local governments should compile and publish detailed registers of road asset condition and maintenance for all roads over which they have jurisdiction (and have these registers independently audited). This may help insurance markets to understand and price the risk. Consideration should be given to the Victorian model in this regard.

DRAFT RECOMMENDATION 4.2

State and territory governments, local governments and insurers should explore opportunities for collaboration and partnerships. Partnerships, for example, could be formed through the Insurance Council of Australia and state-based local government associations (or regional organisations of councils). Consideration could be given to the Trusted Information Sharing Network model, and involve:

- governments sharing natural hazard data that they already hold and undertaking land use planning and mitigation to reduce risk exposure and vulnerability
- insurers sharing expertise and information (for example, claims data) to inform land use planning and mitigation
- collaboration to inform households of the risks that they face and adequacy of their insurance to fully cover rebuilding costs, and to encourage private funding of mitigation through incentives such as reduced premiums.

DRAFT RECOMMENDATION 4.8

State and territory taxes and levies on general insurance should be phased out and replaced with less distortionary taxes.

m) *There is insufficient information provided to fully evaluate the feasibility and affordability of Australian Government Insurance 'top up" scheme as outlined in the preferred Option 2 of the draft report proposed by the commission. Given the scheme is based on an "actuarially" fair risk approach, IPWEA considers it would heavily disadvantage States which have, and will continue to experience, significant disaster events and will be required to pay significant premiums to the Australian Government for any additional support purchased.*

For example the Queensland Reconstruction Authority's regular review process in September 2013 found the program of works for events actively managed by the Authority (2009 to 2013) was estimated to be $13.96 billion distributed relatively evenly across Queensland Department of Transport & Main Roads and LGs (QldRA Monthly Report 2014). All 73 Local Governments across Queensland were activated for NDRRA following the flooding events that occurred in late 2010 and early 2011. This equates to around $2.8 billion per annum over the 5-year period. Under the proposed new arrangements more than $1.4 billion per annum would be met directly by the

Queensland Government (and Local Government) or through the top up insurance scheme. Neither option is sustainable or feasible, as State nor Local Governments have the capacity to absorb such a significant cost.

Insurance for road and drainage assets is an issue that requires detailed investigation and evaluation of the practicality and affordability of insurance. Commercial insurance is widely available for buildings and contents but there is no detailed assessment of the effectiveness and cost of insurance for State and Local Road networks. Given that the QldRA has advised that around 80% of the total restoration expenditure for the Queensland flood events between 2009 and 2013 was on road assets this is a significant issue.

We note that the Draft Report suggests the removal of State levies and taxes on Insurance due to their inflationary effect on household insurance premiums. Given the proposed significant cost shift from the Australian Government to the States, IPWEA suggests that these taxes and levies will only increase.