

18 September 2015

Mr Michael Callaghan AM Chair Northern Australia Insurance Premiums Taskforce The Treasury Langton Crescent PARKES ACT 2600

Email: NorthernAustraliaInsurancePremiumsTaskforce@treasury.gov.au

Dear Mr Callaghan

Re: Northern Australia Insurance Premiums Taskforce Interim Report

The Insurance Council of Australia (ICA)¹ is pleased to provide this response to the Taskforce's Interim Report and appreciates its involvement in the Taskforce Reference Panel. The ICA looks forward to continuing to assist the Taskforce as it progresses its consideration of these important insurance issues.

The ICA also acknowledges the balanced way in which the Interim Report has dealt with the many complex policy issues it has been tasked by the Government to explore.

Given the significant consequences of potential government intervention in a functioning private market, the ICA believes it is critical to define the nature and quantum of the issue. Unfortunately the task of developing a response to insurance affordability has been made difficult through a lack of clear evidence that can be used to define, with precision, the nature of the perceived issue and as a consequence of that lack of definition, its precise quantum, drivers and the potential solutions.

Work carried out by the Australian Government Actuary (AGA) in 2012 and 2014 has provided a very firm basis for understanding insurance pricing, but has necessarily been based upon information aggregated at regional level, making the identification of the outliers a significant challenge. It is the outliers in terms of any extreme premiums that are the drivers of the debate. Understanding the size of these outliers, where they are occurring and most importantly what is driving an elevated premium, is necessary in order to value the current proposals for market intervention.

Insurance pricing is typically conducted at address level using high-resolution data where it is available. Analysing premium data at address level over an entire state, to help pinpoint issues, has not previously been possible. Likewise, public attitudes towards insurance affordability are likely to vary significantly. To date the affordability debate has only enjoyed input from highly motivated stakeholders who, it is has been assumed, are representative of the broader community in north Queensland.

The ICA has undertaken unique work to fill these gaps in the collective knowledge about insurance pricing using north Queensland as a proxy for northern Australia.

A detailed analysis of the live premiums that have been physically purchased by Queensland residents, over the past 12 months at an individual address level, should place both industry and government in a

www.insurancecouncil.com.au

¹ The ICA is the representative body of the general insurance industry in Australia. ICA members, both insurers and reinsurers, are a significant part of the Australian financial services system and global insurance market. The general insurance industry on average pays out \$107 million in claims each working day and employs around 60,000 people. The industry has a proud record of paying 97% of claims. ICA members provide insurance products ranging from those usually purchased by individuals (such as home and contents insurance, travel insurance, motor vehicle insurance) to those purchased by small businesses and larger organisations (such as professional indemnity and business interruption cover).



more informed position on the affordable or unaffordable nature of insurance products, than has previously been possible.

For example, for a normalised sum-insured of \$350,000 the median insurance premium share paid by strata unit owners in north Queensland is \$1,572 annually, with only 1.8% paying more than \$3,000. The median insurance premium paid for a home-building policy in north Queensland is \$1,697 annually with fewer than 2.2% paying more than \$3,000.

The most significant finding from the policy-in-force (PIF)² analysis are the choices made by north Queensland residents to lower premiums through the adoption of a higher excess payment. The data shows 93% of strata unit owners in north Queensland have a \$300 (or less) excess share for their building in the event of a cyclone; 50% have \$100 or less. Higher excess rates can have a significant impact on the annual premium; in home-buildings for example, some insurers offer a discount of more than 30% of the premium for an excess of \$3,000.

Additionally, data provided by international research firm Crosby Textor has captured community attitudes towards this issue. This may help the Taskforce understand how insurance pricing is impacting households and the likely responses from the community to proposed solutions.

This response

The ICA's submission seeks to assist by providing a response in three enclosures:

- Enclosure 1 New data to help identify the extent of affordability as an issue.
 - An analysis of detailed PIF data combined with the results of Crosby Textor polling to quantify with precision:
 - what insurance products north Queensland³ consumers continue to purchase;
 - what price they pay for these products;
 - what measures they take to avoid the perceived higher premiums;
 - what are the primary driving factors for those higher premiums where they occur, as a foundation to addressing sustainable solutions; and
 - what are the prevailing community attitudes towards insurance affordability as an issue.
- Enclosure 2 Feedback on the proposed government solutions.

Providing feedback, as far as possible given the limited detail/modelling of the options, on the issues raised in Part 2 of the Interim Report.

Enclosure 3 – Proposed alternative solutions.

Using the additional clarity provided by PIF data, an alternative option for the Taskforce's consideration has been developed. Specifically the option focuses on providing immediate targeted premium relief whilst addressing the root causes of high premiums, avoiding unnecessarily expensive, inefficient and (likely) permanent intervention in a financial market. This proposal is supported by complementary actions to be carried out by industry.

² PIF, Policy in Force Data. This new data is crucial evidence to understanding the nature of insurance pricing in Queensland and to designing a response where one may be needed. ICA members have provided ICA with address level policy data in Queensland for over 900,000 individual home building and residential strata buildings. Each record includes the address, the sum-insured and excess selected by the customer, the premium charged by the insurer and in the case of strata policies the exact number of units in the strata complex who jointly pay the strata premium. This data allows analysis of consumer behaviour and the direct relationship between localised risk, building standards and premiums. Previous studies, for example the work of the AGA, used data at Cresta zone level, representing averages of many hundreds of thousands of policies, denying the ability to identify the outliers where affordability issues can be said to exist.

³ In this response, north Queensland is used as a case study for northern Australia, however there are many factors that drive a higher loss profile in north Queensland than in other tropical areas, principally a higher level of exposure to damaging cyclones, a significant overlap with exposure to riverine flooding for many residents, the concentration of the built environment in exposed locations and most importantly a demonstrably lower standard of construction, that whilst compliant with necessary codes is obvious even to untrained eyes when visually comparing residential buildings from locations such as Broome, Darwin and Cairns.



Executive Summary

- 1. **Premiums are higher for a very small group of policyholders**. Address level PIF data confirms that premiums are higher, on a like-for-like basis, for some north Queensland buildings. These buildings are predominantly located near the coast and, based on year of construction data, are not compliant with the cyclone wind code. These few buildings could be assisted.
- 2. There are other factors that contribute significantly to premiums that are not being discussed. Other factors that contribute up to 60% to the cost of an insurance premium borne by residents in north Queensland have not been explored, but have clear solutions. These include the level of taxation applied to premiums by state and commonwealth governments, as well as an additional 20-30% in building costs experienced in tropical regions.
- 3. There is no market failure. Insurance continues to be available through more than a dozen insurers and is being purchased in north Queensland. Polling data from Crosby Textor combined with the PIF data provided by insurers indicates that almost all north Queensland residents have some form of building insurance in place, with no measurable difference in coverage compared with the rest of Australia. Consumer dissatisfaction driven by perceptions about insurance being too expensive does not equate to market failure. If this were the case there are any number of products, services and commodities with unwelcome price tags in the Australian market where market failure could arguably be instantly declared.
- 4. **Residents are not underinsuring to lower premiums**. Policyholders with these exposed and vulnerable buildings are taking out the same levels of sum-insured, on average, as residents across Queensland.
- 5. **Residents are not voluntarily adjusting their premiums down**. The median deductible/excess selected by home owners in these exposed areas is the same as in non-exposed areas, at \$500. This disparity is starker with strata unit owners, where the median excess is only \$100 and 93% of strata-unit owners have an excess lower than \$300. Residents are not selecting higher excesses that can significantly compress premiums, indicating that they are either accommodating the higher premium required and/or are aware that they have significant exposure to natural perils and understand that they may need to make more frequent claims.
- 6. **North Queenslanders understand the risks**. 82% of north Queenslanders polled believe that they have a high/medium chance of being impacted by a cyclone; 40% reported that they had experienced a past loss as a result of a cyclone; and 85% are aware that higher insurance premiums are due to the cyclone risk they face.
- 7. An overwhelming number of north Queensland residents are willing to take steps to cyclone proof in order to reduce premiums. 80% of north Queensland residents polled agreed with the statement "I would be willing to take measures to cyclone-proof my home if it resulted in a reduced premium".
- 8. The current Government proposals will not solve the root cause of the problem. The identified solutions from the Government will not reduce the risks faced by north Queenslanders. Detailed points regarding the Government's proposal are listed in Enclosure 2. However, in summary, without reducing the risks, government will need to maintain these solutions in perpetuity, yielding a long-term significant budgetary burden. Additionally, the quantum of this budget impact is also likely to be very high, and the actual impact able to be delivered (in terms of lowering premiums) is relatively low. These low impact solutions come at a high cost that would be borne by all Australian taxpayers and will also have clear impacts on a functioning private market.

Critically, the Government's proposals will not reduce the size of the problem, indeed overseas experience indicates that it may in fact encourage further risk inappropriate development to occur in high risk zones. The AGA found that normalised claims costs in north Queensland are **five times greater** than the claims costs incurred in Sydney, Brisbane and Melbourne. This is a significant difference given the number of addresses in north Queensland is only a small fraction of the



number of addresses in these large urban centres.⁴ Addressing the reasons behind why this relatively small population suffers such a disproportionate level of loss should be central to a long-term solution for insurance affordability in the north.

- 9. Better solutions exist. An alternative option has been developed by the industry to offer the opportunity to those in the most vulnerable cohort, to reduce their risk with government assistance, followed by a consequential and measurable response from industry with lower premiums. This option is described in Enclosure 3. In summary, the proposed Mitigation Assistance Scheme (MAS) offers government the opportunity to make a permanent difference for the most vulnerable in north Queensland and has a:
 - relatively small budgetary impact of \$361.2 million spread over 7 years, and
 - clear exit strategy for government as the scheme works towards diminishing the problem over a tight lifespan

It represents a fraction of the cost of the government-preferred proposals, whilst working to improve the safety of north Queensland residents. The alternative option is supported by a range of industry-led initiatives operating in a complementary fashion, including:

- Centralised coordination of a MAS database to ensure that all mitigation work completed can be reflected in premiums competitively and without delay.
- Deployment of a hazard awareness and resilience rating tool that provides north Queensland residents with feedback on the probable extent of hazards in their location as well key aspects of their building that might be considered vulnerable.
- Annual deployment of a community briefing team to 10 north Queensland regional centres to
 deliver community information sessions on insurance issues and to provide an open and frank
 opportunity for community members to raise concerns and to receive a response directly
 from industry representatives.
- An online service for consumers to provide evidence of what they perceive to be elevated premiums, directly to ICA, and to receive a response.
- An online and business hours call centre referral service designed to assist consumers to **find a** list of general insurers who offer particular products.

What's already been done about affordability?

Given the complexity of the issues and the need to work collaboratively across all levels of government, the ICA believes that considerable achievements have been made to date, but also acknowledges there is more to be done in terms of further explanation of issues such as how insurance works and how prices are set.

To date, the ICA, and its members, have spent considerable resources focusing on addressing insurance affordability issues in north Queensland and introduced measures including:

- **2011**: released a *10 Point Plan to Tackle Disasters* with policy and industry initiatives aimed at developing effective and sustainable responses to disasters, and developed a *Fact Sheet:* Residential Strata Insurance in Australia⁵ explaining premiums were in the process of being adjusted by many insurers to more sustainable levels;
- 2012: engaged James Cook University to analyse tropical strata building claims in order to determine why these buildings, despite often being built to modern standards, still suffer considerable claims during a cyclone and therefore are more expensive to insure;
- **2013**: signed a memorandum of understanding with the Queensland Government to work together to address insurance affordability, launched the *Understand Insurance* consumer financial literacy initiative; and

⁵ ICA, Fact sheet: Residential strata insurance in Australia, October 2011.

⁴ AGA Report 2014 para 4.1 and Interim Report, page 11.



2014: released the second phase of James Cook University research on engineering assessments
of strata title properties and supported the Federal Budget allocation of \$12.5 million (and awaits its
expenditure).

As well as being a participant on the Taskforce's Reference Panel, the ICA and its members have engaged closely with numerous policy consultations, parliamentary inquiries, the review of the General Insurance Code of Practice and the investigations of the AGA into home and strata insurance in north Queensland.

The ICA continues to work on a number of affordability projects including the National Flood Information Database, Data Globe and Property Resilience and Exposure Program. These activities, alongside a return to technically sustainable pricing in high-risk zones, have led to a softening of the market and a reduction in the rate of increase in premiums for many. In some instances, these initiatives have led directly to significant falls in premiums following the acquisition of improved hazard data or finalisation of mitigation efforts by local and state governments.

Conclusion

The Interim Report has a primary focus on two market intervention strategies, intended to create more affordable insurance products without addressing the root cause of the risk.

The ICA draws the Taskforce's attention to the following extracts of the ICA's submission to the Treasury Discussion Paper, *Addressing the high cost of home and strata title insurance in North Queensland* (2014):

- Insurance plays a critical role for society. It signals the existence and nature of specific risks to property owners, communities and governments, and helps to incentivise risk reduction measures. As recently identified by the Productivity Commission review of Barriers to Adaptation, intervention in insurance markets to alter pricing signals will suppress incentives for the community and governments to address the underlying risk. Governments have a role to play, particularly in ensuring that appropriate incentives are in place for reducing and mitigating risk. When public policy intersects and mandates a quick social policy response in private markets, there is potential for longer-term impacts and distortions that can lead to some insurers reducing or withdrawing their market presence, reduced competition and potentially market failure with risk pushed back to governments, and ultimately taxpayers.
- North Queensland properties face natural hazards at a greater frequency and intensity than other regions, yet are constructed using the same principles as buildings in other states, that is, to a level sufficient for the protection of life and not a standard where the property is protected. Insurers will price according to the risk, based on the latest information in their possession. Insurers are developing more sophisticated data and methodologies to understand risks at a more granular level. However, claims experience, technical pricing and the prudential regulatory regime demand that insurers price for such risks and hold appropriate capital. Finding measures that address the underlying risk factors faced by North Queensland properties is the only solution to sustainable price relief.

While market intervention by government to artificially lower premiums may have some popular appeal, the only sustainable approach to premium reduction is to mitigate the underlying risks.

The unintended consequences of intervention in insurance markets has been highlighted in a 1998 study⁷ of growing US natural disaster vulnerability:

⁶ Information on these programs available at <u>www.insurancecouncil.com.au/affordability.</u>

⁷ Van der Vink, G., R.M.Alen, J.Chapin, M.Crooks, M. Fraley, J.Krantz, A.M.Lavinge, L.LeCuyer, E.K.MacColl, W.J. Morgan, B.Ries, E.Robinson, K.Rodriguez, M.Smith and K.Sponberg, 1998. *Why the United States is becoming more vulnerable to natural disasters*. EOS, Transcations, American Geophysical Union, 79(44), 533-7, referred to ICA's submission to the Senate Standing Committees on Environment and Communications (2012).



"In many ways the trends (losses) seem paradoxical. After all, most natural disasters occur in areas of known high risk such as barrier islands, flood plains and fault lines. Over time, one would expect that the costs of natural disasters would create economic pressures to encourage responsible land use in such areas. ... The economic incentives for responsible land use have been stifled by legislated insurance rates and federal aid programs that effectively subsidize development in hazardous areas. And while there will always be great political pressure to provide economic relief after a disaster, there has been little political interest in pre-disaster mitigation."

The experience internationally of government intervention in insurance markets is also characterised by inefficient and expensive schemes that costs ever-increasing amounts of tax payer dollars with little impact on risk reduction or prevention. For example, New Zealand's Earthquake Commission (EQC) has reported maximum losses of \$NZ12.5 billion⁸ (with 1161 staff)⁹ and the United States' National Flood Insurance Program (NFIP) has been estimated by the Federal Emergency Management Agency as having a debt of \$US24 billion.¹⁰

In Enclosure 3 to this submission, the ICA proposes the MAS for both strata and individual homes, (developed by Economic Consulting firm, Urbis), as an alternative that is focused, limited in scope and impact on the Commonwealth's budget with a clear outcome and end-date. The ICA urges the Taskforce to consider further development of this alternative option. It is based strongly on the concept of means tested temporary relief for those with high vulnerability and little capacity to adapt.

The approach is matched with an inspection scheme and the provision of part funding for qualifying property owners to undertake mitigation work that would reduce their risk and place them back in a position to obtain less expensive insurance cover. The total cost of the MAS has been calculated at \$361.2 million over the life of the scheme (7 years and 2 months), which will be significantly lower than the permanent solution offered by the mutual or reinsurance pool options.

Mitigation of risks must be the primary response to these challenges. This principle has been explored in great depth by the Productivity Commission, 11 which concluded that Commonwealth mitigation funding to the States should increase significantly and be matched by the States. It was also noted that mitigation should not be limited to hard mitigation such as flood levees but should also consider other preparedness measures, where the change modifies behaviour and results in the avoidance of disaster risk

Critically, the Interim Report does acknowledge the importance of mitigation. The report notes that for mitigation to work as an option it would be critical to ensure that mitigation outcomes are taken into account by insurers in pricing individual premiums. This sentiment is strongly endorsed by the industry, having previously shown its willingness and capacity to do exactly this. For example, following flood mitigation works in Roma, premiums were revised in line with risk reduction and one insurer announced premium reductions averaging 45% and in some cases up to 90%.¹²

If government intervention is to occur, the focus should be to lower the underlying risk that results in higher premiums, not subsidising the cost of the damage in perpetuity. Introducing a regime that fails to reduce the risk and is a persistent burden to future taxpayers is poor public policy.

If a focused short-term solution, such as the proposed MAS, is implemented, vulnerable residents will be able to reduce their risks and the insurance industry will respond with lower risk-based pricing.

⁸ New Zealand Earthquake Commission Annual Report 2011-12, page 1.

⁹ New Zealand Earthquake Commission Annual Report 2013-14 page 7.

¹⁰ http://www.npr.org/2014/01/01/258706269/federal-flood-insurance-program-drowning-in-debt-who-will-pay.

¹¹ For example, the Productivity Commission's Natural Disaster Funding Arrangements review.

¹² Suncorp Group (25 July 2014) Media Release: Suncorp to act on improved Roma flood mitigation and reduce premiums.



The ICA proposes to complement the MAS with a targeted consumer education program focused on building property resilience, factors influencing insurance premiums in high-risk areas and steps consumers could consider to manage premiums.

If you would like to discuss the ICA submission, please do not hesitate to contact me.

Yours sincerely

Robert Whelan

Executive Director and CEO



ENCLOSURE 1

ANALYSIS OF THE AFFORDABILITY ISSUE

Background - Factors influencing insurance premiums

Insurance premiums in north Queensland, and in Queensland more broadly, are reflective of the underlying hazard profile, as well as the regulatory and capital conditions under which Australian licensed insurers are required to operate. In locations where hazard exposure and building vulnerability factors combine to create a higher risk of damage occurring, insurers need to charge premiums sufficient to address the assessed probability of damage occurring and a claim being paid.¹³

The premium charged for insurance cover provides a *canary in the coalmine* indicator of the acceptability of risk to the community. However where the built environment is exposed to high levels of risk due to poor land-use planning, inappropriate construction standards and development controls, as well as hazards that remain unmitigated, an insurance price signal can serve to motivate adaptive actions.

ICA and its members seek to continually improve their understanding of the relationship between these factors which in turn can have a strong influence on premiums. Many ICA members are also actively pursuing opportunities to improve insurance affordability for their policyholders, by adopting more accurate hazard information where it can be made available as well as deploying innovative insurance products.

The AGA reported in 2014 that insurers paid out more than \$1.40 in claims for every \$1 of premium that they collected in north Queensland over the eight-year period reviewed. This represents a significant loss.

Despite these persistent losses, the industry has remained in the market and has made continual efforts to innovate, improve underwriting performance and to assist governments to address the underlying factors that drive this loss profile. A dozen insurers now compete for market share and some have developed new products¹⁵ to further broaden the policy options available to north Queensland residents, demonstrating that the market is listening and responding to consumer needs.

The AGA concluded that the estimated cost of cyclone risk is likely to be the main reason why north Queensland premium rates are, on average, significantly higher than those in most other parts of Australia.¹⁶

Critically, the AGA also found that normalised **claims costs** in north Queensland **are five times greater** than the claims costs incurred in Sydney, Brisbane and Melbourne. This is stark given the number of addresses in north Queensland is a small fraction of the number of addresses in these large urban centre. ¹⁷ Addressing the reasons behind why this relatively small population suffers such a disproportionate level of loss should be central to a long-term solution for insurance affordability in the north.

APRA Prudential Standards first introduced in the post-HIH environment are very clear on the issue of insurers having appropriate processes and adequate capital with regard to managing their risks. Prudential Standard GPS110 provides an insight to the clarity with which government regulation operates in this respect in that insurers are required to maintain "an adequate level and quality of capital commensurate with the scale, nature and complexity of its business and risk profile, such that it is able to meet its obligations under a wide range of circumstances".

¹⁴ AGA Report 2014, para 4.8.

¹⁵ For example, <u>IAG Insure Lite product trial in North Queensland</u> and <u>Suncorp's Strata Insurance product</u>

¹⁶ AGA Report 2014 para 9.5.

¹⁷ AGA Report 2014 para 4.1 and Interim Report, page 11.



The Interim Report identifies a number of factors contributing to a growth in premiums in cyclone-affected regions such as:

- historical under-pricing of risk;
- cost of catastrophe reinsurance;
- improved data and modelling;
- · claims costs:
- increased development;
- introduction of flood cover;
- building code issues.

However, there are a number of significant premium input factors that the Interim Report has not explored, that are relevant to the current perceptions of higher premiums in north Queensland. These include the combined 20% per policy impact of insurance taxes levied by state and commonwealth governments on north Queensland residents, as well as significantly higher building and repair costs in the north (21-39% higher than Brisbane, Sydney, and Melbourne), both combining to add significantly to the cost of insurance premiums to households in the north.

Other factors that contribute up to 60% to the cost of an insurance premium borne by residents in north Queensland, have not been explored, but have clear solutions.

There are solutions to both of these cost impediments, which if developed could lead to premiums that are 20-40% less expensive. These are within the reach of government, but are currently being neglected in favour of more complex and expensive market interventions.

Identifying the issues with precision – What is the government trying to solve?

The Interim Report lacks clarity regarding the affordability target for northern Australia being pursued by government, relying instead on a generic sentiment that premiums are too high and that a mechanism must be found to bring them down.

Without first determining the desired outcomes of new government policy, especially one that involves significant intervention in a financial market, it will remain challenging to evaluate the different response options.

To fill this void, the ICA and its members have undertaken new research designed to more accurately define the current state of insurance premiums in the north, as well as the sentiments and behaviours of north Queensland residents who purchase insurance products. Through this, it is hoped that a better understanding of any actual challenges can be established, potentially leading to discussions about government policies that could sustainably treat the root causes of higher insurance premiums.

The ICA has previously written to the Taskforce to clarify some common misconceptions regarding insurers' pricing and postcodes. Insurers are developing more sophisticated data and methodologies to understand risks at a more granular level. Most insurers use address-specific hazard data to underwrite risks specific to the individual policyholder, which may include government sourced hazard datasets made available through the ICA's DataGlobe¹⁸.

Evidence on policies purchased in North Queensland and in force as at June 2015

¹⁸ The <u>ICA DataGlobe</u> is an industry resource that collates all available hazard and mitigation related information for the Australian continent in one location. The data collected is predominantly from local and state governments. Data collected can be visualised by approved users of the system, in order to form a view regarding the impacts of hazards in a particular location or to engage with local communities concerned about hazards, insurance premiums and managing those risks through mitigation. Hazard data can be visualised at scales ranging from state level to a singular address. The DataGlobe also provides access for approved users to the raw geospatial data supplied to ICA by governments, for absorption into their own underwriting systems and processes. Hazard information covered by the DataGlobe includes Earthquake, Cyclone, Extreme Rainfall, Flood, Overland Flow, Storm Surge and Bushfire. Further information is available at www.icadataglobe.com.



The ICA and members have collated and analysed over 903,000 individual policy records from Queensland, for home-building and residential strata complexes, that households have actually purchased this year. The policies come from all regions and each individual record included the following core information:

- location;
- sum-insured selected by the household or body corporate;
- premium charged by the insurer selected by the policyholder to hold the risk:
- excess or deductible selected by the policyholder in order to reduce the premium payable to a level they were willing to purchase.

Previously unavailable address-level premium data for 903,000 policies, enables a new understanding to be established regarding the actual price for insurance being paid by north Queensland residents.

The evidence produced from this comprehensive dataset is instructive to the definition of the problem and discussion about relevant solutions.

The observations that can be drawn from the evidence are best described through responses to the common questions and several myths presented about insurance affordability in north Queensland.

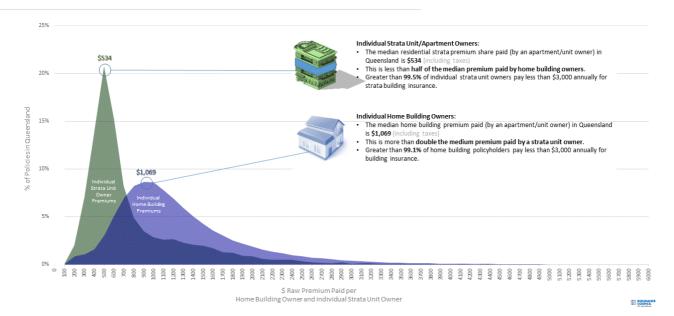
Question one: The media and concerned stakeholders frequently state that the majority of policyholders in north Queensland are paying extreme premiums for property insurance, typically \$5,000 to \$15,000 per policy and in some anecdotes even higher values. Is this accurate, what are policyholders actually paying for household and strata unit¹⁹ premiums in Queensland?

No evidence has been provided in the Taskforce's Interim Report or various actuarial studies that confirms this perception.

There are certainly premiums being quoted by insurance companies that are significantly higher than premiums in the south and even quotes for insurance cover that many would consider extreme. However, the PIF data demonstrates that premiums are higher in locations with higher exposures to risk (in this case cyclones). In reality very few households purchase insurance cover with premiums at the extreme levels that appear to be the motivation for government intervention.

¹⁹ **Strata Unit premiums vs Strata Building Premiums** – The ICA frequently hears shocking stories from stakeholders and media of strata premiums that might cost \$100,000 or much more. Put simply, no individual strata unit owner pays a premium of this magnitude. The body corporate may pay a premium of (for example) \$100,000, but the individual strata unit owner will only pay a share of the overall premium. If there are 50 strata units in a complex being insured with a premium of \$100,000, the cost to the individual strata owner would be \$2,000, a much more reasonable and less newsworthy expense. The analysis carried out with PIF data in this response calculates costs and other data using the number of units in the strata scheme in order to provide a realistic estimate for what a strata unit owner must contribute for insurance on their building, making it more comparable to the data for home-building insurance costs. Any challenge raised by a strata unit holder regarding a high insurance premium being charged for their building must be accompanied by information on how many units there are sharing the cost and therefore what the impact is on a single strata unit holder.





The chart above shows the actual distribution of insurance premiums paid by Queenslanders (including government taxes) for over 903,000 policies that are currently in force with the private market.

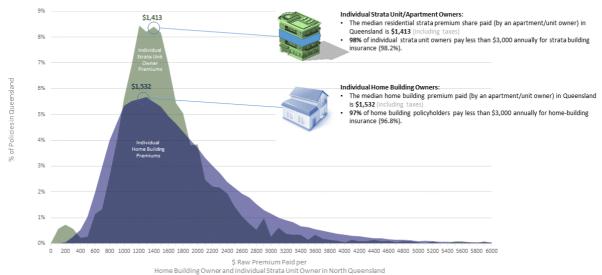
Whilst there are strata unit owners paying more than \$3,000 annually, they represent less than 0.25% of policies. Less than 0.01% of residential strata unit owners pay more than \$5,000 in insurance premiums annually. It is important to note that these premiums cover sum-insured values that are

In Queensland the median strata unit owner pays \$534. Less than 0.25% of strata unit policy holders pay more than \$3,000 annually for insurance cover.

not normalised and they cover everything from units insured for \$50,000 through to units insured for \$1 million. The median premium charged to strata unit owners in Queensland is \$534 annually.

For home-building premiums the situation is similar. Less than 0.9% pay more than \$3,000 and less than 0.05% pay more than \$5,000. The median premium charged for a home-building policy in Queensland is \$1,069 annually.

The situation in cyclone-exposed areas, taken in isolation is different. The chart below shows the distribution of the raw premiums selected by residents in cyclone prone areas of Queensland. Again, these are raw premiums charged for the sum-insured requested by the policyholder, covering homes and units insured for \$50,000 through to high value property with sum-insureds exceeding \$1 million.



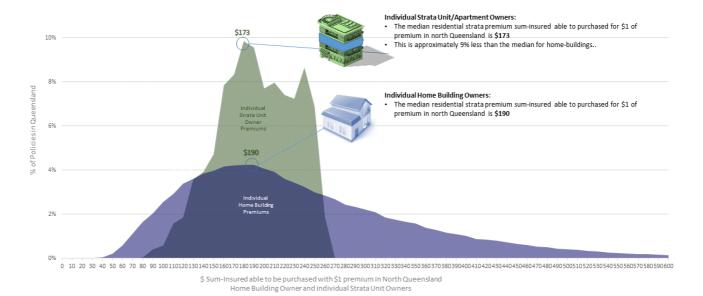


Whilst there are strata unit owners paying more than \$3,000 annually, they represent less than 2% of policies. Less than 0.03% of residential strata unit owners pay more \$5,000 in insurance premiums annually. The median premium charged to strata unit owners in north Queensland is only \$1,413 annually.

For home-building premiums the situation is similar. Less than 4% pay more than \$3,000 and less than 0.03% pay more than \$5,000. The median premium charged for a home-building policy in north Queensland is \$1,532 annually.

In cyclone exposed regions the median strata unit owner pays \$1,413. This is 2.6x higher than in the rest of the State reflecting the Australian Government Actuary findings that the claims costs in north Queensland are 5x higher.

To determine the actual value of insurance able to be purchased in north Queensland by both building categories, it is more relevant to examine the quantum of sum-insured able to be purchased for \$1 of premium. The chart below shows that the median value of sum-insured able to be purchased for a strata unit, for \$1 of premium, is 9% lower than the value for the same \$1 spent on a home-building.

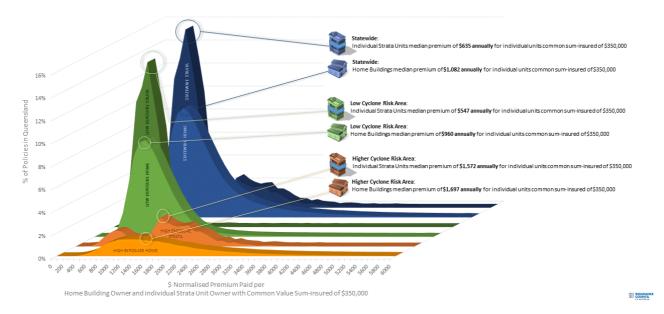


ICA submits that this is in fact close to parity in terms of value, as strata units have more complex covers than home-owners, extending to common areas, car parks and shared facilities such as pools, each of which have significant liability risks covered in a strata policy.

Whilst there are premium differences relative to hazard exposure, the size of the differences and the number of policyholders impacted in reality, is potentially not consistent with the magnitude of the interventions proposed by the Taskforce.

In order to compare the premium differentials in each class, and according to cyclone risk, it is useful to examine normalised premiums using a standard sum-insured of \$350,000.





The evidence shows that Queensland households are not paying the high rates for insurance cover to the extent that many have assumed.

However, the data above is based upon the raw premium charged for each of the 903,000 policies examined. If the cost of insuring in north Queensland is extreme then it is likely that north Queensland policyholders, both homebuilding and strata unit owners, may be taking steps to lower the premium that they are charged, either by:

- purchasing less insurance cover (lower suminsureds);
- taking out higher deductibles (excess arrangements) to lower the costs; or
- simply not taking out any insurance cover and leaving the insurance market.

Although there are some home-building policyholders and strata unit owners that pay higher rates for their insurance cover, when tested against records of what policies have been actually purchased, the evidence is that there are far fewer than the anecdotal commentary of widespread extreme premiums being the norm. Before considering significant market intervention at taxpayers expense, to address the perception of widespread 'unaffordable' premiums, more work should be considered by government to define and calibrate an understanding of the problem with empirical data.

The issues are considered in the next question.

Question two: Are residents of north Queensland not purchasing cover, purchasing less insurance cover or taking out higher excess payments (compared to the south) in order to manage the impacts of extreme insurance premiums on household budgets?

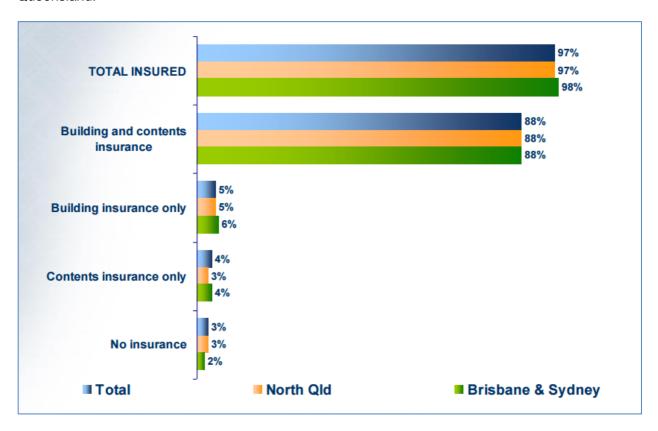
Again, whilst there are anecdotal claims that north Queenslanders are leaving the insurance market or being forced to underinsure in order to afford premiums, there has been no evidence provided to substantiate the claims or to assist with defining possible solutions.

PIF data as well as Crosby Textor polling on the issue provides an opportunity to test these positions and offer an evidence based view on what steps residents of north Queensland are implementing to manage the perceived extreme impact on household budgets.

Turning to non-insurance, whilst the Interim Report observes that insurance premiums do not appear to be causing a greater number of people in northern Australia to be non-insured, it is nonetheless an issue that is frequently raised by stakeholders as 'evidence' of there being market failure.



The ICA supports the Interim Report's observation on this point, noting that PIF data received from insurers shows that there are an estimated 6-7% of buildings in most locations that may not have a current insurance policy in force. This is entirely consistent with all other areas in Australia. This position is confirmed by results from Crosby Textor polling on the issue. Participants in the research were asked to indicate the types of insurance cover that they currently hold. The graph below shows that among owners, take-up of insurance does not vary significantly in Sydney, Brisbane or North Queensland.



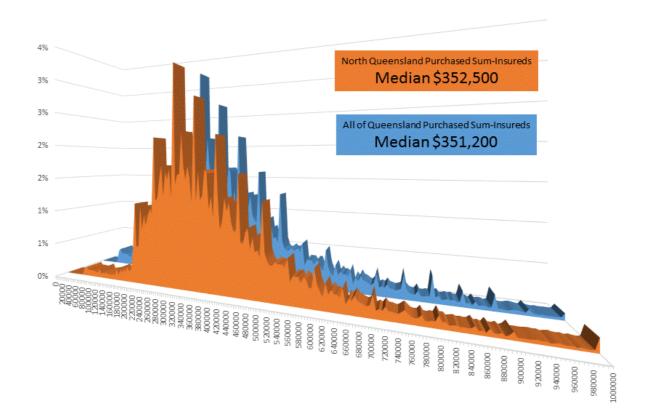
ICA submits that residents of north Queensland are not 'going bare' and leaving their assets uninsured in any greater proportion than the broader Australian community.

This leads to the next question, are north Queenslanders taking out less insurance cover in order to accommodate a perception of higher premiums in cyclone impacted areas?

To answer this ICA has analysed the distribution in the individual sum-insured purchased by home-building owners across the entire state and compared this to what is purchased by owners in cyclone impacted regions only. If there is a significant difference in the sum-insured being purchased in north Queensland (lower sum-insured) it would support the contention that north Queenslanders are finding higher risk-based premiums (in higher risk areas) unaffordable.

The graph below provides the distribution of the actual sum-insured purchased in north Queensland compared to the broader Queensland community.





In north Queensland the median sum-insured selected for home-buildings is \$352,500. This is very consistent with the median sum-insured purchased by the broader Queensland community and implies strongly that north Queensland residents are not sacrificing or lowering the amount of insurance they purchase in order to accommodate a perception of 'unaffordable' insurance premiums.

Following on from this, are north Queensland residents taking other measures to lower premiums that would confirm that they are finding insurance premiums unaffordable?

Excess arrangements provide policyholders with a mechanism to lower premiums by retaining additional risk (for smaller claims) within their own budgets. A policyholder who selects a high excess payment will typically see a significantly reduced premium compared to the policyholder who selects a very low excess payment.

The impact that taking out higher excess payments and shopping around is demonstrated in the table below that provides online premium quotes for the same house in the same address, for 4 different insurers using 4 different excess payments, which the ICA extracted from online quoting engines in August 2015.

	Online Premiums Offered for \$350k Sum-insured 2014 Construction Building in Highly Cyclone Exposed Coastal Address			
	\$500	\$1000	\$2,000	\$3,000
	Excess Payment Excess Paym		Excess Payment	Excess Payment
Insurer A	\$3,723	\$3,501 ₽6 %	\$2,922 \$\frac{1}{22}%	\$2,695 \$28%
Insurer B	\$2,808	\$2,360 ₽16%	\$2,000 \$19%	\$2,143 \Pi24%
Insurer C	\$2,447	\$2,153 ₽12 %	\$1,933 ₹21%	\$1,788 \$27%
Insurer D	\$2,360	\$2,174 ₹8%	\$1,957 ₹17%	\$1,557 ↓33%



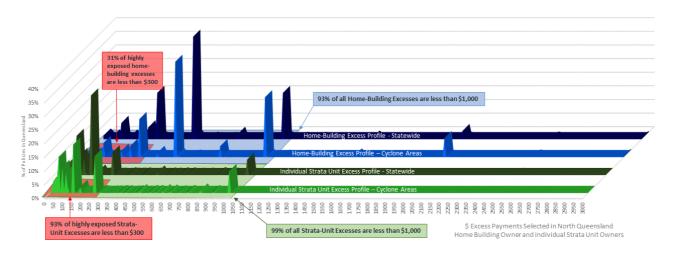
From the above, it can be seen that an excess arrangement is available from at least one insurer operating in this location that would offer the home-building owner the ability to reduce their annual premium by one third, a very significant compression. Insurers typically do not advocate policyholders taking out very high excess arrangements in order to reduce the premium that the insurer collects. Nonetheless, the option to do so is provided.

So, are policyholders exercising this choice to reduce their perceived extreme premiums by taking out higher excess payment arrangements?

The diagram below provides the distribution of actual excess arrangements selected by property owners in north Queensland. It shows that there are very few policyholders in north Queensland who are taking out large excess arrangements in order to reduce their premium. There are a number of potential reasons why an individual policyholder in this higher risk zone may elect to keep a low excess, including:

- Policyholders have an understanding that they live in a region with higher exposure to natural disasters and believe that they may need to make more frequent claims than a high excess would encourage.
- Policyholders are willing to accept the premiums offered by insurers and see no need to reduce the amount by retaining more of the risk themselves.
- Policyholders believe they could not afford to pay a higher excess at the time of making a claim and prefer to pay a higher annual premium upfront.

The chart below shows the excess arrangements in place for 903,000 polices across the state and in high cyclone exposed regions. The excess payment that a strata unit owner is liable for on this chart is a function of the buildings excess payment (for a cyclone event) divided by the number of units in the strata complex.



This analysis identifies that:

- On a state-wide basis 94% of home-building policyholders have selected an excess of \$1,000 or less (72% are \$500 or less, 32% are \$300 or less, 8% are \$100 or less).
- In areas with a high cyclone exposure the home-building profile is almost unaltered, with 92% of home-building policyholders having selected an excess of \$1,000 or less.
- On a state-wide basis 99% of strata unit owners have an excess payable of \$1,000 or less (93% are \$500 or less, 91% are \$300 or less, 51% are \$100 or less).
- In areas with a higher cyclone exposure the strata unit excess profile is almost identical to the profile of the state in general, with 99% paying an excess of less than \$1,000 or less, but a higher proportion of unit owners paying \$300 or less (93%).



Polling from Crosby Textor – 82% of north Queenslanders believe that they have a high/medium chance of being impacted by a cyclone – provides an explanation as to why higher excess levels are not selected. This observation is reinforced by other polling results, for example 40% of respondents indicated that they had lodged a claim for cyclone damage in the past. It is likely that the level of community awareness regarding the risk of damage from cyclone events is driving the selection of lower excesses and general acceptance of the higher premiums that result. The Crosby Textor research also provided that only 3% of respondents had suffered multiple cyclone related claims.

Several insurers have introduced adaptable higher excess arrangements for north Queensland policyholders. Despite this, north Queenslanders have not taken the opportunity to lower their premiums with this mechanism and the ICA submits that this is indicative of a much lower impact of perceived high premiums than has been suggested anecdotally. This a significant finding worthy of deeper examination.

There is an absence of evidence to demonstrate that insurance premiums being purchased are consistent with the anecdotes and speculative figures provided by the media and stakeholders. However, there is evidence that whilst there are a small percentage of outliers where insurance is significantly more expensive than in the south, north Queensland communities are continuing to purchase private market insurance without exercising choices that would lower their premiums. They are insuring for the same amounts as policyholders in the south and have consistently maintained the lowest possible deductible settings in the majority of cases. Given these observations the ICA suggests that a more detailed examination of insurance affordability is undertaken by government, so that evidence can be developed that supports the current government contention that market intervention at taxpayer expense is justifiable, in lieu of encouraging residents to manage their risks and options with existing mechanisms.

Question three: Stakeholders frequently refer to an inability to gain insurance cover in the north Queensland market, as well as complaints that insurers underwrite at postcode level, branding all policyholders with a common postcode with the same risk level. Is this true, do insurers use postcode level underwriting practices for natural perils and are there circumstances that fall outside the underwriting criteria of all insurers to reasonably offer a product? Does the latter constitute a market failure that should be addressed by government?

The overwhelming majority of insurers underwrite using address level information, rather than hazard data aggregated at postcode level. The table below demonstrates this by providing quotes from online insurers for the same residential property at five different addresses within the same postcode. The quotes, each for the same building and value, vary significantly because the insurer is applying a different set of hazard and pricing consideration at each address.

	Postcode 4825 Sum-Insured 400k 1980 Construction \$1,000 Excess Specific Address in suburb of Townview	Postcode 4825 Sum-Insured 400k 1980 Construction \$1,000 Excess Specific Address in suburb of Soldiers Hill	Postcode 4825 Sum-Insured 400k 1980 Construction \$1,000 Excess Specific Address in suburb of Mornington	Postcode 4825 Sum-Insured 400k 1980 Construction \$1,000 Excess Specific Address in suburb of Sunset	Postcode 4825 Sum-Insured 400k 1980 Construction \$1,000 Excess Specific Address in suburb of Breakaway
Insurer A	\$2,661	\$2,651	\$2,899	\$3,215	\$3,009
Insurer B	\$590	\$617	\$625	\$696	\$652
Insurer C	\$1,089	\$1,371	\$1,322	\$2,115	\$1,207
Insurer D	\$775	\$795	\$807	\$899	\$825
Insurer E	\$1,908	\$1,612	\$1,799	\$1,987	\$1,807



There is no evidence to support the contention that all insurers underwrite at postcode level, delivering the same outcomes for all policyholders within the same postcode without reference to local factors.

Are there circumstances beyond which a property owner may be unable to find an insurance product at any price and does this represent market failure? All insurers have underwriting conditions, establishing the criteria under which they will accept a policyholder's risk and be able to calculate a premium. This

The majority of insurers assess risks at an address level of resolution, rather than at postcode level.

is consistent with operating within Australia's mandatory prudential framework. Even the most broadminded of insurers will have a minimum set of circumstances that must be met in order to offer a product. This minimum criteria varies significantly from insurer to insurer and there is no analysis available to establish a precise floor below which a property's circumstances will prevent it from being able to find a product.

ICA has examined 22 online quote engines²⁰ over the period from June 2015 to August 2015, to determine the approximate limits of Australian private market underwriting for residential properties. Whilst not definitive, and certainly warranting further investigation should a market failure argument be pressed, it is apparent that property owners may face a challenge to obtain an insurance premium quote on their property if it is non-heritage listed, constructed before 1962 and in a location highly exposed to flood, bushfire or cyclone. Additionally, if a property is located in a remote location where services are extremely limited or property is predominantly government managed, the owner may not be able to easily locate an insurance product. For example, residents of the Cocos Keeling Islands²¹, being highly exposed to cyclones and very remote in terms of services that insurers could reasonably deliver in the event of a claim, currently have limited choices in the Australian market.

Is this market failure, or is there a logical point beyond which the community can accept that some property has become too old, too vulnerable and too exposed to be covered by an insurance policy? If this is market failure, should the Australian taxpayer be expected to provide the funds for an insurance solution, while individual households are not taking action themselves to reduce the risk?

The vast majority of insurers underwrite at address level in all circumstances where address level data can be determined. Premiums will vary according to many factors, often uniquely weighted by each individual insurer. In high risk circumstances premiums will typically be higher than for policyholders who are in low risk circumstances either by design or default. Whilst some premiums may be higher than others, even much higher, this does not meet the definition of market failure, given a product is available. Consumer dissatisfaction driven by perceptions about insurance being too expensive, does not equate to market failure. If this were the case there are any number of products, services and commodities in the Australian market where market failure could arguably be instantly declared. Indeed it is a struggle to identify any commodity where it would not be possible to form a group of stakeholders who would prefer it to be more available for less outlay. However, in some circumstances some property will inevitably fall below the risk appetite of even the most open minded property insurer and an insurance product may not be able to be located at any price. In these rare circumstances, and before market failure and market interventions are declared and implemented respectively, ICA recommends that government consider the precise nature of the uninsurable assets and determine if taxpayer consensus truly exists to subsidise the ongoing or unmodified operation of those assets.

²⁰ A total of 1,412 quotes were undertaken, varying different aspects of a building's design, age and location.

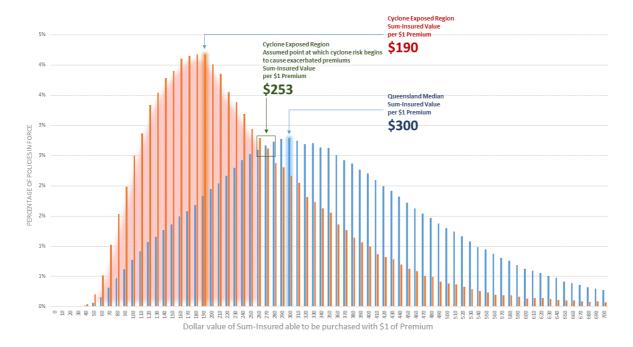
²¹ Cocos Keeling Islands, Australian Indian Ocean Territory, approximately 3000km offshore from Perth.



Question four: Where premiums are higher there appears to be little justification for it. What is driving higher premiums for some, but not others?

The PIF data collected has allowed ICA and its members to demonstrate the key differentials between regions where higher premiums exist in Queensland and the rest of the state.

The chart below provides the distribution of the purchasing value of \$1 of premium in terms of sum-insured, for policies that have been purchased in Queensland. This is a simplified proxy for the cost of insurance cover. For example, if \$1 of premium purchases \$500 of cover (sum-insured) then that premium is at the less expensive end of the cost spectrum for the state; if \$1 of premium only purchases \$50 of cover it could be considered to be considerably more expensive.



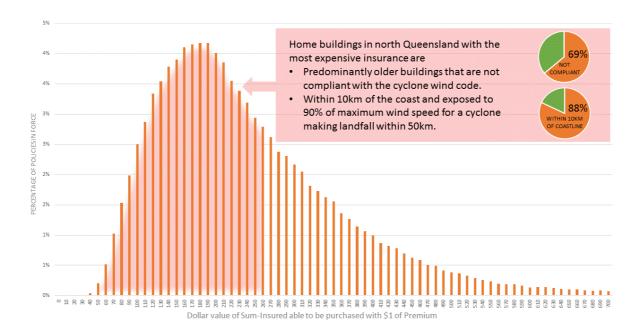
The chart above shows that the median value of \$1 of premium in Queensland is \$300 of sum-insured. In the region exposed to cyclones the median value of the \$1 of premium falls significantly to \$190 of sum-insured. The point at which these cross over has been assumed, for the purposes of further analysis, to be the point at which cyclone risk starts to become the dominant natural peril for policies in the high cyclone exposure region. This point occurs at \$253 dollars of sum-insured.

What are the characteristics of the home-building policies in the high cyclone exposure region where the value of \$1 of premium is less than \$253 – the most expensive of the exposed home-building policies?

The chart below provides an overview of the nature of the home-buildings in the most expensive region of the chart. It is apparent that home-building policies that are the most costly to purchase are predominantly older properties constructed before the introduction of the cyclone wind code. 88% of these very expensive policies are also for home-buildings that are within 10km of the coastline and are therefore typically exposed to $90\%^{22}$ of the wind speed value of a cyclone when it makes landfall within 50km.

²² The windspeed of a tropical cyclone drops rapidly once the cyclone makes landfall and frictional forces generated overland start to slow the system down (and turn it south). Properties within 10km of the coastline are typically exposed to close to the full wind speed impact, with properties further inland being exposed to lower windspeeds as a function of distance from the point of landfall.





It is also significant to note the previous analysis of the distribution of how excess payments are selected by policyholders in this group. The median excess selected by highly exposed policyholders in this cohort is only \$500, demonstrating that consumers are not exercising available options to reduce their higher premiums.

The most expensive home-building premiums in Queensland are, not surprisingly, able to be identified by their proximity to cyclone exposure and the age of the property as a measure of its potential vulnerability. This knowledge provides a clear pointer towards a solution that is sustainable, will reduce the problem over time, is less expensive to implement than currently contemplated government interventions, and will directly assist residents of north Queensland to manage their own risk. The ICA encourages the Taskforce to analyse the alternative option described by ICA in this response, noting the data from the PIF analysis that identifies a targeted and limited pool of policyholders where cover is more expensive.



ENCLOSURE 2

ICA FEEDBACK ON GOVERNMENT PROPOSALS

The options

In the absence of modelling from the Taskforce, to estimate the potential costs and likely reduction in premiums stemming from alternative scheme designs, it is difficult for the ICA to address the detail of the focus questions. The ICA notes the Taskforce is consulting with APRA on the feasibility of options and also awaits legal advice on relevant constitutional limitations. The ICA has, however, sought to highlight below key issues and concerns raised by its members in relation to each of the two options more broadly. The ICA submits, to maintain competitive neutrality, the government should not endorse any form of mutual or reinsurance pool that does not meet prudential requirements.

ICA does not support market intervention. The options of a Pool or Mutual have several common weaknesses including high costs to government evidenced by international experience, failure to address the root cause of the issue, creation of a complex consumer claims experience, with additional frictional and administrative costs into the system.

It is also important to note, with regard to both options preferred by government that the Crosby Textor research indicates that 80% of north Queenslanders agreed with the statement "I would be willing to take measures to cyclone proof my home, if it resulted in a reduced premium". Crosby Textor also noted through regression analysis of messaging credibility that north Queensland residents believe in personal responsibility with regard to taking preventative measures to decrease their premiums.

OPTION 1: A mutual insurance company offering cyclone cover to households

The Interim Report envisages a mutual, either discretionary or a statutory corporation, which offers cyclone insurance policies at premiums (set by the entity) below the cost of existing insurance policies. It lists some of the potential impacts on the market raised by stakeholders including crowding out of private insurers and brokers, possible exit of insurers based on risk appetite for any lower value risks, while others may enter the market.

For the reasons set out in this submission, the ICA does not support this option. Having regard to the focus questions, the ICA has identified the following issues - divided into consumer impact, cost to the government, effect on the insurance industry and exit strategy - for the Taskforce's consideration:

Consumer impact

- If the Mutual were to be discretionary in nature, there is a risk of non-payment of claims to members in the event of a catastrophic loss. There may be uncertainty for members of a Mutual given the potential retention/multiple losses and consequent impact on funding/premiums.
- An option canvassed in the Interim Report to contain the risk to the Government's balance sheet is
 to limit the maximum amount payable under each policy with claims above an amount topped up by
 insurance sold in the private market. Under this arrangement, consumers may need to buy two
 insurance policies. This could lead to unintended non-insurance, or under-insurance, due to
 confusion as to process or coverage of policies. Consumers could be exposed to risk unless it is
 mandatory to buy through the Mutual.
- The Mutual could also result in a complex consumer claims experience, for example as seen in the aftermath of the Christchurch earthquake where disaster victims had to deal with multiple claims managed by government and then private insurers. It is likely a consumer will not want to interact with multiple parties for what they will consider to be damage flowing from one event.
- There is potentially no benefit to small business, depending on whether the Mutual covers commercial strata and commercial freehold.



• This scheme is paid for either directly or indirectly by people living in areas outside of northern Australia. Southern Australia could look at this form of assistance unfavourably given the extent and range of other cost of living pressures in other parts of the country.

Cost to the Commonwealth

- This option only addresses the funding of the risk and does not address the underlying risk. If the
 price signal is masked appropriate incentives/disincentives for future development in at-risk areas
 may be compromised.
- There are indirect economic and social costs to government. The existence of the Mutual does not
 protect north Queenslanders from cyclone events and in turn does not prevent the economic cost
 (work absences due to home damage, unmitigated homes doing damage to public infrastructure)
 and personal disaster payments that occur after a cyclonic event.
- The Interim Report suggests premium income collected by the mutual entity would build a pool to pay claims. However, it also describes the international experience with government-supported insurance schemes which often impose substantial costs on governments.
- If the cost of the premium is not enough to cover the loss of the scheme, the Government may need to consider increasing the premium rather than absorb loss on Commonwealth balance sheet. For example, with the NFIP, FEMA estimates large loss properties represent 1% of insured structures but account for 30% of all claims.
- The undiversified nature of the Mutual could have extremely volatile financial results (and solvency).
 The solvency of the Mutual may become an issue after a catastrophe event unless it has an unlimited guarantee from the Government.
- In addition to start-up capital and vast new operational infrastructure, ongoing operational costs need to be funded by the Mutual.
- The ICA also understands that reinsurance costs will be higher than the sum of the reinsurance spend purchased by insurers under the current system, which benefit from holding diversified portfolios. If the government were to provide free reinsurance to the Mutual, the Government is effectively crystallising a multibillion dollar liability on its own balance sheet.
- The Mutual will not reduce the cost of risk to the Australian economy, but will increase the amount spent on risk transfer insurers will be likely to need to buy as much reinsurance as before, and the Pool or Mutual will be likely to need to buy new reinsurance.
- The Mutual arrangement could lead to calls to expand cover to other events such as flood (which increases costs).
- It is unclear whether take-up would need to be enforced through regulation, at a cost.
- If providing an 'insurance product' the Mutual will need to comply with greater regulation which will increase costs.
- Some options under consideration by the Taskforce may deliver benefits to parts of the community in Northern Australia however this is achieved directly via a reciprocal cost to others plus introduces incremental costs to the economy as a whole. The Productivity Commission's Report has identified the inequity of the Natural Disaster Relief and Recovery Arrangements (NDRRA) system in subsidising the higher risk states at the cost of lower risk states - the proposed Mutual arrangement would in effect compound this subsidy.

The Productivity Commission's Report has identified the inequity of the NDRRA system in subsidising the higher risk states at the cost of lower risk states - the proposed Mutual arrangement would in effect compound this subsidy.



Effect on insurance industry

duration is calculated.

- Depending on the scope of cover provided, this option is likely to crowd out private sector insurance.
- Due to a number of complexities, it is expected that it would be very difficult to define a cyclone policy to fit neatly with a non-cyclone policy from an insurer so there are no gaps in coverage. For example, the parameters of coverage and what would constitute "damage" flowing from a "cyclone"; how "home occupiers" would be interpreted (tenants, owner occupiers, boarders, farm workers etc); when the cover is triggered and how the event

Legal and prudential uncertainties arise from both the Mutual and Pool options.

- One option raised in the Interim Report is for insurers to act as an agent for the Mutual, selling its
 policies and managing its claims. There would be administrative impacts if any agency relationship
 is compulsory for insurers for example, amend systems, provide claims services, update documents
 (PDSs), and procedures.
- It may be that frictional and claims costs cannot reduce by the same proportion as the premium resulting in a higher retained cost ratio.
- Frictional costs could arise from:
 - delineation and handling of claims between Government loss and industry loss
 - review and revision of policy coverage/wording distinctions (PDS issues)
 - complexity in relation to deductible applications
 - implications for risk pricing
 - system changes to flag government involvement and new scheme/reinsurance arrangements
 - marketing, distribution
 - reinsurance savings not equal to removal of cyclone cover due to residual risk/definition issues.
- The potential effect on the insurance industry will be to:
 - reduce the overall diversification of the insurers' portfolios
 - increase the cost of reinsurance per unit of risk due to reduced diversification of portfolios.
- Depending on the Government's decision to purchase private reinsurance or not, this solution may:
 - reduce the total premiums earned by the reinsurance industry from northern Australia and the diversification of their portfolios
 - alternatively, reinsurers may be the net beneficiaries. If global reinsurers provide reinsurance to government, reinsurers will however be required to charge higher premiums for an undiversified portfolio, which only covers one peril such as cyclone.
- There remains uncertainty as to how prudential regulations apply. There could be multiple
 catastrophe retentions by insurers for example, one for cyclone and one for normal reinsurance
 coverage for residual exposure, with APRA capital implications.
- Reinsurance costs will still be largely beholden to the extent of global weather events. Major catastrophes in other countries such as the U.S. could have knock-on effects around the world.

Government exit strategy

 The Interim Report notes the more the private sector is crowded out of a market, the more difficult it will be for the Government to exit. Establishment of a Mutual embeds the Government legislatively long-term in the private insurance market potentially with no clear exit strategy.



 Rating agencies are increasingly taking into account the impact climate risk has on the finances of sovereigns and sub sovereigns. Supporting the financial solvency of the Mutual post a catastrophic event could put a strain on the AAA credit rating of the Commonwealth.

OPTION 2: Reinsurance Pool for cyclone risk

The ICA does not support²³ this option for the reasons set out below.

Consumer impact

 As is the case for the Mutual above, the ICA is concerned that this option may remove a price signal allowing risks to grow, increasing vulnerability of the built environment to catastrophe events without resolving by mitigation the root cause of the issue. A Pool option has led to poor outcomes in some jurisdictions, with exposures continuing to grow, mitigation spending reduced and ongoing budget implications for government.

- Under a Pool arrangement, disputes may still arise between the
 insurance company and the Pool, affecting the consumer claims
 experience. For example, disputes over whether damage was caused by a cyclone (the Pool's
 responsibility) or by a storm (the insurer's responsibility). The Interim Report notes that government
 intervention in the insurance market may result in a sub-optimal claims management experience for
 consumers. For instance, in response to claims problems, the New Zealand Government is
 investigating changing arrangements so that all claims are managed by insurers.
- There is also a potential direct cross subsidisation with taxpayers in low risk areas paying for high
 risk taxpayers and indirect subsidisation with taxpayers in low risk areas paying for a weakened
 fiscal position and government aversion to deliver insurance tax relief.

Cost to government

- Examples of Pools which have created additional solvency problems for governments include:
 - NFIP recently expecting \$US12 billion in claims due to Hurricane Sandy, Congress was required to approve additional borrowings of \$US9.7billion to cover losses. This scheme is now reportedly \$23 billion (USD) in debt.
 - EQC and the earthquake events in Christchurch premiums collected annually prior to the loss (\$50 for the first \$100k of cover) barely covered the scheme's reinsurance costs. Post loss, the EQC premium tripled to address the sustainability of the scheme in line with the risk.

Effect on insurance industry

- There is a risk of displacement/crowd-out effect for the existing reinsurance market in Australia.
- The ICA is concerned that the expectations that government may have of insurers, may not equate to the cost of operating the scheme. Segregation of cyclone risks from other natural perils could reduce the scope of premium relief. As the Taskforce is aware, flood is a significant singular risk.
- Complexities of coverage, frictional and administrative costs are also likely to be introduced. It is
 envisioned that due to the complexity, definitions and industry agreement on risk transfer terms
 would likely take many months to agree.
- Some uncertainty remains around whether participation in a Pool would be compulsory and whether there would be industry involvement via industry retention
- There may be an adverse impact arising from multiple losses in any one year or across a number of

²³ This is the majority view of ICA members. However, one ICA member supports a reinsurance pool arrangement unless a viable alternative to address insurance affordability can be found.



years, without sufficient time to allow for a build-up of funds for a large event.

- There is likely to be a capital impact to industry arising from APRA requirements ICRC impact arising from dual retentions (due to definitional issues in stripping out cyclone).
- The ICA foreshadows there would also be an impact to industry should regulatory oversight be implemented to monitor premiums following establishment of a reinsurance facility.

Government exit strategy

 Any intervention creates a political responsibility for premiums and could make an exit strategy for government problematic. It may also be difficult to limit the facility to cyclone risk alone, should there be future calls to expand the facility to other hazards such as flood.





ICA ALTERNATIVE SOLUTIONS

Reducing risks and premiums for exposed and vulnerable north Queensland residents

Building on the need to assist north Queensland residents to reduce their vulnerability and noting that the Crosby Textor research indicated that 80% of north Queenslanders agreed with the statement "I would be willing to take measures to cyclone proof my home, if it resulted in a reduced premium" – it is clear that an accessible and targeted mitigation scheme would be viable. Crosby Textor has noted, through regression analysis of key messaging, that north Queensland residents believe in personal responsibility with regard to taking preventative measures to decrease their premiums.

The ICA engaged Urbis to develop the attached framework for a Mitigation Assessment Scheme (MAS) for high risk areas of Queensland.

The MAS is a draft policy framework which can be further refined and developed. The ICA envisages MAS would sit alongside a number of complementary industry funded initiatives.

In summary, the MAS is a two pronged approach to address insurance affordability in high risk areas for eligible participants. The first element is immediate premium relief to assist with affordability, with a concurrent program to reduce building vulnerability through government assisted mitigation works.

It is proposed the MAS be available to eligible dwellings, defined as:

- households located in high risk areas of Queensland, equating to 105 postcodes; and
- for strata, only those postcodes out of the 105 high risk postcodes that have three or more strata policies, equating to 53 postcodes.

Eligible dwellings would also meet the following criteria:

- houses or strata are not built to the required cyclone resistant building standards;
- insurance premiums are a recognised level above the state norm;
- dwellings are owner occupied, and are the primary place of business;
- income eligibility criteria.

At \$361.2 million, as well as a fraction of the likely cost of a Mutual or Reinsurance Pool, the ICA notes the MAS framework will reduce the impact of cyclones on communities. Urbis highlights the mitigation option will deliver lower policy costs, additional economic benefits and also prevent other costs and impacts such as those on physical and mental health, disruptions to business, displacement from home, work and education.

Industry contribution to MAS

The ICA also sees potential for the industry to offer assistance in other ways such as administering a MAS insurer portal/database. To enable insurers to take completed mitigation works into account in premium calculations, it will be essential that a portal/database of mitigated dwellings is accessible to insurers. This database will facilitate policyholders being able to simply obtain recognition of MAS works should they change insurance companies and/or buy a mitigated dwelling. The ICA would also be willing to explore being involved in the MAS assessment or administration process, for example, tapping into the industry's extensive network of builders who might assist with MAS assessments.

Consumer awareness regarding premiums and hazards

The ICA sees potential for the industry to assist consumers and the Government, with greater understanding about the risks they face, how this impacts premiums and measures that can be taken to be safer. A number of key activities are available for development and deployment by industry in a complementary manner with adoption of the MAS by government:



- Consumer hazard awareness and resilience rating tool. A web-based portal for consumers
 to interact with that would, after inputting information such as address and details of the insured,
 building's age, materials, condition etc, provide the consumer with general feedback on the
 probable extent of hazards in that location that might be considered by any insurer as relevant,
 as well as any key aspect of their building (as described) that might be considered vulnerable.
 This tool provides an opportunity for a consumer to develop a basic understanding of hazards in
 their area, directs them to authoritative government agencies for detailed hazard information
 and potentially motivates them to address issues with their property making them more
 vulnerable to damage.
- Consumer regional briefing teams. Annual deployment of a community briefing team to 10 north Queensland regional centres to deliver a community information session on insurance issues and to provide an open and frank opportunity for community members to raise challenges and to receive a response directly from industry representatives.
- **Consumer premium question service**. An online service for consumers to provide evidence of what they perceive to be elevated premiums, directly to ICA, and to receive a response.
- **Find an Insurer Service**. An online and business hours call centre referral service designed to assist consumers to find a list of general insurers who offer particular products.
- Understand Insurance Website. This website contains downloadable information on factors
 affecting premiums, how to manage premiums as well as cyclone checklists, information on
 preparing for and recovering from cyclones. The ICA is developing information focussing on
 high-risk households and the importance of property resilience and community mitigation,
 especially in the North Queensland context. As well as potentially providing information on
 MAS, the website could highlight low-cost ways consumers could improve resilience, as
 identified in James Cook University (JCU) reports and which may sit outside of the proposed
 MAS eligibility criteria.



16 September 2015



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Job Code NEA18815 Report Number Final

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Executive Summary

In March 2015 the Australian Government established the Northern Australia Insurance Premiums Taskforce (the Taskforce), which is

charged with exploring the feasibility of options that use the Commonwealth balance sheet to reduce home, contents and strata insurance premiums in those regions of Northern Australia that are experiencing insurance affordability concerns due to cyclone risk. (Josh Frydenberg MP, 2015)

While the Taskforce has initially been focussed on options for either a mutual cyclone insurer or a cyclone reinsurance pool, it has also advised that it will consider other options.

In determining the optimal policy response from Government to address premium affordability, there are a number of reasons why the two core options proposed may not represent the optimal choice for the Federal Government.

- For the majority of households in at risk areas, higher household insurance premiums are the direct result of damage claims and in fact a number of insurers report that they make a loss on cyclone insurance. Premium levels in cyclone-prone regions are not the result of insurance market pricing power.
- A mutual insurer or reinsurance pool is likely to add significantly to Government liabilities over time, as has been demonstrated through, for example, the US National Flood Insurance Program (NFIP), which currently holds US\$23 billion in debt.
 - Given fiscal constraints currently faced by all levels of Government, options that can reduce premiums at the lowest cost to Government should be given the highest priority.
- Neither option mitigates against the damage inflicted by cyclones on people, properties, communities and the broader economy.

In this context, Urbis was engaged by the Insurance Council of Australia to put forward the framework for a potential third option: a program to support the take-up of cyclone mitigation initiatives by vulnerable housing, including strata units, that does not meet current (post-1981).building standards for cyclone regions.

James Cook University's Cyclone testing Station has identified roof loss as causing the greatest amount of both direct and collateral damage from cyclones and that a low-cost mitigation option is available to retrofit roofing for approximately \$12,000 (Urbis has conservatively assumed up to \$15,000 for modelling purposes, to allow for contingencies), using an over-batten system. Options for strata units will more likely include a range of possible upgrades to external surfaces.

However, recognising that low income households in cyclone prone regions will typically not have access to \$15,000, and that the benefits generated via lower premiums resulting from mitigation will take many years to pay back the investment, it is likely that these households will require assistance with mitigation investment costs.

The proposed approach presented in this report involves two key components.

- A grant for mitigation households would receive support of 75% of the cost of the mitigation, up to a maximum value of \$11,250. The grant would be paid directly to the authorised contractor on completion and approval of the works.
- A premium subsidy 20% of insurance premiums would be rebated, from receipt of approval until completion of installation, up to a maximum period of 24 months. Insurance rebates would be processed as part of the householder's annual tax return.

It is recognised that, while many low-income households have limited access to savings to pay for substantial capital works, there will be a greater incentive to ensure value for money works are carried out if some financial responsibility remains directly with households and if there is a cap on grants.

The small contribution required by households for the grant will be repaid over time through reduced premiums. This includes through the immediate subsidy available from the Government prior to completion of works, which will also address short term premium affordability issues.

This report:

- assesses the rationale for the proposed policy option to provide support for mitigation through a Mitigation Assistance Scheme (MAS),
- provides a framework for eligibility selection for housing, strata units and homeowners
- discusses MAS implementation, operation and review
- estimates the expected costs of the scheme.

The MAS, as presented in this report, is recommended over other potential options being considered by the Taskforce, for a number of reasons.

- It is temporary, timely and targeted, reflecting best practice policies.
- The cost of the scheme, at a total of \$361.2 million in Net Present Value terms over the life of the MAS, is likely to be well below the cost of a mutual pool or reinsurance option.
- Mitigation will deliver both lower policy costs and also additional economic benefits in the form of:
 - reduced property damage bills from cyclonic events
 - reduced community costs from cyclonic events, including physical and mental health, disruptions to business, displacement from home, work and education etc.
 - increased resilience in an area of increasing economic importance for the Australian economy
 - the opportunity to develop expertise and become a global market leader in mitigation.

Introduction

The Australian Government Actuary has observed that property insurance prices in North Queensland are significantly higher than elsewhere in Australia (Martin, 2014).

A detailed analysis of insurance data by the Insurance Council of Australia (ICA) shows that approximately 57% of policy holders in cyclone-prone regions of North Queensland – representing around 72,000 houses and 22,500 strata units – pay above a normalised mean¹ of \$1,400 for cyclone insurance, with the majority of premiums concentrated between \$1,400 and \$2,400.

To address this issue, in March 2015 the Australian Government established the Northern Australia Insurance Premiums Taskforce (the Taskforce), which is:

charged with exploring the feasibility of options that use the Commonwealth balance sheet to reduce home, contents and strata insurance premiums in those regions of Northern Australia that are experiencing insurance affordability concerns due to cyclone risk. (Josh Frydenberg MP, 2015)

While the Taskforce has initially been focussed on options for either a mutual cyclone insurer or a cyclone reinsurance pool, the Taskforce has also advised that it will consider other options.

In determining the optimal policy response from Government to address premium affordability, there are a number of reasons why the two core options proposed may not represent the optimal choice for the Federal Government.

- For the majority of households in at risk areas, higher household insurance premiums are the direct result of damage claims and in fact a number of insurers report that they make a loss on cyclone insurance (Martin, 2014). Premium levels in cyclone-prone regions are not the result of insurance market pricing power.
- A mutual insurer or reinsurance pool is likely to add significantly to Government liabilities over time, as has been demonstrated through, for example, the US National Flood Insurance Program (NFIP), which currently holds US\$23 billion in debt (U.S. Government Accountability Office, 2015).
 - Given fiscal constraints currently faced by all levels of Government, options that can reduce premiums at the lowest cost to Government should be given the highest priority.
- Neither option mitigates against the damage inflicted by cyclones on people, properties, communities and the broader economy.

In this context, Urbis was engaged by the Insurance Council of Australia to put forward the framework for a potential third option: a program to support the take-up of cyclone mitigation initiatives by vulnerable housing that does not meet current (post-1981) building standards for cyclone regions.

The James Cook University (JCU) Cyclone Testing Station identified three key mitigation strategies to significantly reduce cyclone damage (James Cook University, 2011). Examination of Suncorp claims data by JCU found that housing constructed before 1981 performed particularly poorly in terms of cyclone damage against those built after the introduction of stricter building codes in 1981.

Analysis undertaken by Urbis on behalf of the Suncorp Group (Urbis, 2015) demonstrated that low-cost mitigation options for both opening protection and roofing upgrades delivered Benefit Cost Ratios (BCRs) above one.

The benefits of mitigation included not only reduced premiums as a result of a reduction in damage to properties, but also lower costs to governments, communities and individuals due to the wider impacts of

-

¹ The normalised mean represents the average premium for a standard house type of average value. Across all households, the average premium paid is one dollar for each \$253 of coverage. The normalised mean allows for comparison of premiums across different value dwellings.

household damage including collateral property damage, physical and mental health, absenteeism and presenteeism, displacement and so on. These additional costs are estimated to account for as much as 200% of direct property damage (Walker, GR, Mason, MS, Crompton, RP & Musulin Rt, 2015).

Options assessed were:

- 1. a community preparedness and awareness campaign, to be undertaken by relevant government authorities with a focus on reducing the large quantity of small claims that result from untied shade cloths, loose debris in garden, water ingress through unsealed windows, etc.
- 2. protection for doors, windows and other openings
 - low-cost options for protection of openings that demonstrated a BCR above one² were estimated by JCU to cost on average \$1,660 and were self-installed; higher cost options at \$3,500 demonstrated BCRs of greater than one only in some regions and only under the highest level of cyclone exposure (as measured by Australia New Zealand Wind Loading Standard)

3. structural roof upgrading

a \$15,000 roof replacement and strapping upgrades using an over-batten system is considered a
realistic (conservative) costing option; a full roof upgrade is estimated to cost \$27,000 to \$30,000
and also demonstrated BCRs of greater than one only in some regions and only under the
highest level of cyclone exposure.

Roof loss causes the greatest amount of both direct and collateral damage (Smith & Henderson, 2015). However, recognising that low income households in cyclone prone regions will typically not have access to \$15,000, and that the benefits generated via lower premiums resulting from mitigation will take many years to pay back the investment, it is likely that these households will require assistance with mitigation.

Furthermore, by stimulating the market for mitigation through such assistance, it is likely that other households will be encouraged to implement similar measures and that the market itself will innovate and develop lower-cost options over time, as has been seen in a number of markets such as for solar panels.

This report discusses the rationale for the proposed policy option to provide support for mitigation, a framework for eligibility selection for housing and homeowners, implementation and operation, and the expected costs of the scheme.

-

² That is, the benefits (avoided costs) resulting from the investment exceeded the cost of the mitigation.

1 The problem

1.1 CYCLONE RISK AND COSTS

Coastal regions across Northern Australia have a long history of cyclones. North Queensland, as the region with the greatest population and housing stock density in Northern Australia, is particularly exposed to the risk of significant damage from cyclones. Across the east coast of Australia there have been 207 known impacts of cyclones dating back to 1858, with the majority falling in North Queensland (BOM, 2015).

The area of coastline stretching from Mackay to Cape York has a one in five year risk of a cyclone occurring. Areas of this coastline, including the major regional centres Cairns and Townsville, are exposed to a one in three year risk of cyclones (see Image 1-1) (Insurance Council of Australia, 2015a).

TIMOR-LESTE (EAST TIMOR)

HIGH EXPOSURE

Cyclone Occurs
1 in 5 years

Cyclone Occurs
1 in 5 years

Cyclone Occurs
1 in 3 years

Cyclone Occurs
1 in 3 years

NEW OCCUPATION

AUSTRALIA

AUSTRALIA

AUSTRALIA

AUSTRALIA

AUSTRALIA

AUSTRALIA

Insurance Council of Austrolia-Cyclone resecurrence head map, 50km damage rodius, category 1 or greater, based on 86M cyclone tracks: 1912-2013

IMAGE 1-1 - CYCLONE RISK, AUSTRALIA

Source: (Insurance Council of Australia, 2015a)

Many of the cyclones that make landfall in North Queensland require substantial payouts from insurers, governments and individuals. The four largest cyclone events, measured by insured losses, have occurred since 1970. Insured losses for each of these events are presented in Table 1-1; results have been adjusted for factors such as demographics, housing stock and inflation, as if each event had occurred in 2011, to enable a like for like comparison of the impact.

TABLE 1-1 – IMPACT OF TROPICAL CYCLONES

CYCLONE	YEAR	CATEGORY	INSURED LOSSES	GOVERNMENT DAMAGE BILL
Ada	1970	4	\$1,001m	N/A
Althea	1971	4	\$648m	N/A
Larry	2006	4	\$609m	\$500m*
Yasi	2011	5	\$1,405m	\$800m

Note: 2011 prices.

*includes damage from Cyclone Monica

Source: (QDCS, 2012), (Queensland Government, 2011), (BOM, 2006)

Changing demographics in cyclone prone regions, such as the expansion and increasing density of town centres, and further development of the built environment can influence the scale of impacts from cyclones. With the scale of housing stock in North Queensland increasing, the scale for insured losses to households increases.

The risk of cyclone damage to any one building depends not only on frequency of cyclone events, but on building construction and design. Changes to the Queensland Home Building Code in 1981 introduced significant structural improvements for houses, designed to resist strong winds. Evidence from Cyclone Yasi found that, in the worst hit areas, less than 3% of post-80s houses (those built under the updated building code) experienced significant roof damage while more than 12% of pre-80s houses had significant roof damage – rising to more than 20% in some areas (James Cook University, 2011). Buildings constructed before the changes to the building code in 1981 are more at risk to damage from cyclones. This has implications for insurance premiums.

1.2 INSURANCE AFFORDABILITY

The financial cost of cyclones has had a measurable impact on insurance premium affordability for homeowners in cyclone-prone regions. In 2012-13, Australian premium rates were, on average, around 50% of North Queensland premiums (Martin, 2014).

Home and contents insurance premium prices in North Queensland depend on a number of factors, including the construction and design of the building, and exposure to cyclonic events. Higher cyclone risk in North Queensland has been found to be a major driver of higher insurance prices in the region (Martin, 2014).

Given a standard insured value of \$354,400 and an excess of \$500, the median premium for households in higher cyclone exposed regions of Queensland is \$1,509 compared to \$830 for households in lower cyclone exposure regions – an 82% increase (Insurance Council of Australia, 2015a).

Average insurance premium quotes from major insurers at Mission Beach (located on the North Queensland coast between Cairns and Townsville) show the reduction in premiums that cyclone compliance can provide (Table 1-2). When compared to cyclone compliant houses, non-cyclone compliant houses can face up to a 75% increase in insurance premiums.

TABLE 1-2 – INSURANCE PREMIUMS, MISSION BEACH 2014

	CYCLONE COMPLIANT			NON-CYCLONE COMPLIANT		
EXCESS	\$500	\$1,000	\$2,000	\$500	\$1,000	\$2,000
Insurer A	\$3,723	\$3,501	\$2,922	\$4,470	\$4,202	\$3,507
Insurer B	\$2,808	\$2,360	\$2,000	\$4,935	\$4,125	\$3,765
Insurer C	\$2,447	\$1,994	\$1,441	\$3,300	\$2,622	\$1,792
Insurer D	\$2,360	\$2,174	\$1,957	\$2,997	\$2,754	\$2,474

Source: Insurance Council of Australia internal documentation 2015

Cyclone compliance can reduce premiums significantly; however cyclone risk still plays a significant role in insurance premiums. For example, Insurer D offers a premium of \$1,594 with a \$500 excess for the same building and sum insured in non-cyclone exposed areas of Brisbane, a 33% discount on the cyclone compliant building.

2 The policy framework

2.1 OBJECTIVES OF GOVERNMENT ACTION

The Northern Australian Insurance Taskforce has been established to assess ways to reduce the cost of cyclone insurance.

The Taskforce is giving consideration to options for a mutual insurance pool or a reinsurer; both these options would spread the cost of cyclone claims across a broader base (i.e. all Australian taxpayers) and so lower the premiums paid by at risk households. However, neither would reduce the actual impact of cyclones that causes higher premiums and which are a regular climactic feature of North Queensland.

Mitigation options for households, however, have the potential to reduce both home insurance premiums in cyclone prone regions as well as actual physical damage – both direct and collateral. A number of insurance companies such as Suncorp have already announced a significant reduction in premiums will be available to households that implement approved mitigation measures.

This paper considers options to assist low income/low economic resource households to invest in cyclone mitigation which will reduce damage from cyclones to both households and the community and economy more broadly.

2.2 RATIONALE FOR PROVISION OF ASSISTANCE

Low income households are significantly more likely to have inadequate or no levels of house and contents insurance than other segments of the community. A study undertaken by the Brotherhood of St Lawrence identified that approximately 32% of low-income Australians did not have home contents insurance and 9% had no insurance (Collins, 2011). This is not to suggest that low-income Australians are not aware of the role insurance plays in protecting assets. Most low-income households desire greater levels of insurance cover. Affordability is the greatest barrier to holding desirable levels of insurance cover (Collins, 2011).

As outlined in the Australian Bureau of Statistics (ABS) 2009-10 Australian Household Expenditure Survey, households spend an average of \$7.81 or 1.4% of total weekly household expenditure (lowest income quintile) and \$8.82 or 1.1% of expenditure (second lowest income quintile) on house and contents insurance. By contrast, the top income quintile spends an average of \$16.61, or 0.8% of total household expenditure, per week.

The level of house and contents insurance taken out by low income earners is also likely to be the minimum or most basic cover offered. The Centre for Social Impact has estimated that the annual cost of basic contents insurance (excluding house insurance costs), in which only key assets are protected from basic risks, was \$344 in 2013 (or \$6.62 per week) (Centre for Social Impact, 2014). Basic coverage may not enable the restoration of all belongings, further disadvantaging low income earners.

As recognised in the recent Natural Disaster Insurance Review (Trowbridge, 2011), while low income households are less likely to take-up insurance generally, they can have a greater need for insurance if they do not have the financial resources to restore any assets or belongings that were damaged or destroyed as a result of a cyclone or natural disaster. This is not restricted to low-income households who own their own homes. For low incomes earners, and tenants in particular, the contents can be their primary assets - without the financial resources to replace these assets in the event of a natural disaster, they could face serious financial hardship akin to that faced by homeowners who have lost their homes (Trowbridge, 2011). This can also prevent low-income earners from confidently accumulating assets as they are least able to absorb losses or readily replace lost assets (Good Shepherd Microfinance, 2013).

In addition to the issue of insurance coverage and insurance affordability, household mitigation activities are rarely affordable for people living in poverty. As recognised by the Australian national, state and territory Councils of Social Service, low income and disadvantaged groups are more likely to live in poorer quality housing, and have less capacity to adequately prepare their homes against disaster (Australian Councils of Social Services, 2014).

According to the ABS 2009-10 Household Expenditure Survey, 32.5% of low income households³ could not raise \$2,000 for an emergency within a week. This figure rises to 40.8% for low wealth households and 43.3% for low economic resource households. Less than 20% of low economic resource households are able to regularly save money.

Of those able to raise \$2,000, less than half of low resource households (47.7%) would rely on own savings; one third (30.3%) would raise a loan from family or friends, with the remainder borrowing (bank or credit card) or selling something.

2.3 POLICY FRAMEWORK

The proposed Mitigation Assistance Scheme (MAS) would provide assistance to low income households to invest in mitigation covering roofing upgrades.

Addressing mitigation requires a different approach for houses and multi-unit strata dwellings, with the latter involving a greater degree of complexity. While the overarching framework is similar for all classes of building, there are some important differences, and so these are discussed separately here.

2.3.1 MAS - HOUSES

Household Eligibility

To be eligible to apply for assistance, households must:

- live in an approved cyclone-risk postcode
- be the owner of the home
- live in the home (primary place of residence)
- have the home approved as suitable for mitigation (see below)
- meet the income test (see below).

Mitigation options covered by the scheme

The scheme will cover roofing upgrades for suitable houses. JCU has identified potential roof upgrades, using an over-batten system as a cost-effective option. The estimated cost for this option is approximately \$12,000, however, Urbis has conservatively modelled an average cost of up to \$15,000, to allow for contingencies. A complete roof replacement and strapping upgrade is estimated to cost \$30,000.

Houses must have been constructed prior to 1984 (post-1984 houses are generally compliant with stricter building codes) and be deemed suitable for a roofing upgrade by an accredited assessor.

Income Eligibility

Eligibility would also be determined on the basis of household income. As income is typically correlated with home prices (SA Centre for Economic Studies, 2004), this will also serve to remove from eligibility those with high value properties, where higher premiums are likely to be driven more by the value of the home than the impact of cyclone coverage.

The income eligibility caps, which are based on the levels set for similar schemes, such as the National Rental Assistance Scheme (NRAS) and the Queensland Structural Assistance and Essential Household Contents Grants, are:

Individual \$909 (\$47,289 per year)

³ Persons in the lowest two quintiles of both equivalised adjusted disposable household income (adjusted to include imputed rent) and equivalised household net worth

- Couple: \$1,257 (\$65,378 per year)
- Sole parent, one child: \$1,258 (\$65,423 per year)
- Couple, one child \$1,559 (\$81,063 per year)
- For each additional child add a further \$302 per week

Value of Assistance

Eligible households would receive:

- Grant for mitigation households would receive support of 75% of the cost of the mitigation, up to a
 maximum value of \$11,250. The grant would be paid directly to the authorised contractor on
 completion and approval of the works.
- a premium subsidy 20% of insurance premiums would be rebated, from receipt of approval until
 completion of installation, up to a maximum period of 24 months. Insurance rebates would be
 processed as part of the householder's annual tax return.

It is recognised that, while many low-income households have limited access to savings to pay for substantial capital works, there will be a greater incentive to ensure value for money works are carried out if some financial responsibility remains directly with households and if there is a cap on grants.

The small contribution required by households for the grant will be repaid over time through reduced premiums. This includes through the immediate subsidy available from the Government prior to completion of works, which will also address short term premium affordability issues.

HOUSEHOLDS COVERED BY THE SCHEME

The ICA estimated the number of households paying above a benchmark premium considered affordable to be 102,420, or 57% of total households in high risk cyclone areas of Queensland.

The benchmark was set at \$1 of premium purchases less than \$253 in cover, which represents the average cost of insurance irrespective of the value of the house.

Of these houses, 70.7%, or approximately 72,000 houses, were deemed to be non-compliant with current cyclone building standards.

Applying the eligibility criteria above, a total of 29,363 houses would be covered by the scheme.

2.3.2 MAS – STRATA UNITS

The multiple ownership structure of strata units places additional complexity on the MAS scheme. Not all residents within a strata building will meet eligibility criteria, and it is not possible to state how many strata buildings will comply and be able to gain support from all unitholders.

Further, JCU reports that mitigation options and costs for buildings will vary widely, depending on the size and structure of buildings; many large strata buildings would not be suitable for household-style roofing mitigation, but would suit other upgrades to the building.

To overcome these issues, it is proposed that grants would be made available for strata building upgrades where a minimum of 50% of owners qualify for assistance. The premium subsidy, however, will only be available to eligible households within the strata building.

Strata Size definitions:

- Small strata complex: a strata building with three or fewer storeys
- Large strata complex: a strata building with four or more storeys

Strata Eligibility

To be eligible to apply for assistance, the body corporate must:

- be in an approved cyclone-risk postcode
- have the building approved as suitable for mitigation
- be able to demonstrate that 50% or more of owners meet the income test.

Mitigation options covered by the scheme

The scheme will cover roofing and external upgrades for suitable buildings.

For eligibility, buildings must have been constructed prior to 1984 and be deemed suitable for upgrade by an accredited assessor.

For small strata complexes, mitigation options are likely to be similar to housing options but may also include some other external upgrades.

Small strata complexes include:

- Semi-detached, row or terrace house, townhouse etc. with one storey
- Semi-detached, row or terrace house, townhouse etc. with two or more storeys
- Flat, unit or apartment in a one or two storey block
- Flat, unit or apartment in a three storey block

While there is no standardised costing data available to be modelled, Urbis has assumed a pro-rata cost of up to \$10,000 per unit. So, for example, the cost of roofing mitigation for a six-unit dwelling is estimated to be \$60,000.

Large strata complexes include all other buildings of four storeys or higher.

Again, there is no standardised cost, and Urbis has assumed a maximum cost of \$5,000 per unit, reflecting the higher density of taller buildings.

Whilst these figures represent the upper limit of assistance, Urbis modelling has assumed this will be paid

This aspect of the scheme would require greater consideration before finalisation, including detailed discussion with industry experts including JCU.

Income Eligibility

Income caps are as for houses.

Where 50% or more of unit holders meet the income criteria, the building will be eligible for the 75% rebate on mitigation. However, only unit holders who meet income criteria will also be eligible for the premium subsidy.

Value of Assistance

Eligible households would receive:

- **Grant for mitigation** households would receive support of 75% of the per unit cost of the mitigation, up to a maximum value of \$7,500 (small complexes) and \$4,000 (large complexes). The grant would be paid directly to the authorised contractor on completion and approval of the works.
- a premium subsidy 20% of insurance premiums would be rebated to eligible households only, from receipt of approval until completion of installation, up to a maximum period of 24 months.
 Insurance rebates would be processed as part of the householder's annual tax return.

STRATA HOUSEHOLDS COVERED BY THE SCHEME

The ICA estimated the number of strata units paying above a benchmark premium considered affordable to be 18,073

Strata units in buildings of similar design to households (i.e. three storeys or fewer) made up 92% of total strata units.

It was assumed that the ratio of strata units deemed to be non-compliant with current cyclone building standards is the same as for houses, at 70.7%.

Applying the eligibility criteria above, a total of 5,127 strata units would be covered by the scheme.

2.4 LOCAL GOVERNMENT COMPLIANCE

Significant works would typically require compliance with local government building approval regulations. In order to minimise red tape and compliance costs, it is recommended that:

- the Queensland Government, on behalf of the Federal Government, negotiate a framework with affected councils such that approval by the MAS constitutes approval by the relevant local authority
 - MAS approval would require approval by an accredited assessor both prior to and on completion of works
- the MAS would issue quarterly reports to councils notifying them of households that had been granted approval to proceed and those that had completed works and had these assessed and certified as compliant

2.5 ACCREDITATION AND RESOURCING

Establishment of an appropriate accreditation system will require additional resources. There are already many contractors capable of undertaking this work, as we see post-disasters such as Yasi and Marcia. However, it is essential to ensure that demand is met by suitably qualified professionals who can demonstrate this expertise, or who undertake a short training program. Details of such a program would need to be worked through, but could be done in consultation with a range of industry experts as long as additional resourcing was provided where required.

In conjunction with accreditation, it is expected that a broad public education campaign would be undertaken and maintained throughout the open application period (five years) to alert households to the scheme and its requirements and benefits.

This aspect of the program has not been costed, but it is expected that the outcomes could be achieved with a budget of \$1 million per annum.

2.6 INSURANCE INDUSTRY DATABASE

Householders can apply to the insurance industry for a rebate on receipt of the assessor's approval. Over time, however, households may choose to switch companies or houses will change ownership. A centralised database will ensure accurate record keeping so that mitigation can be reflected in premium pricing.

A detailed database will also assist Government to understand how and where mitigation is being taken up over time; this will support any auxiliary actions required to ensure the scheme reaches its full potential to drive take up of mitigation.

It is therefore recommended that the MAS work with the insurance industry to build a database of rectified properties, to be made available to both policy makers and insurance companies. Once the MAS is wound up, the database would be managed by a third party such as the ICA.

Examples of mitigation assistance 3

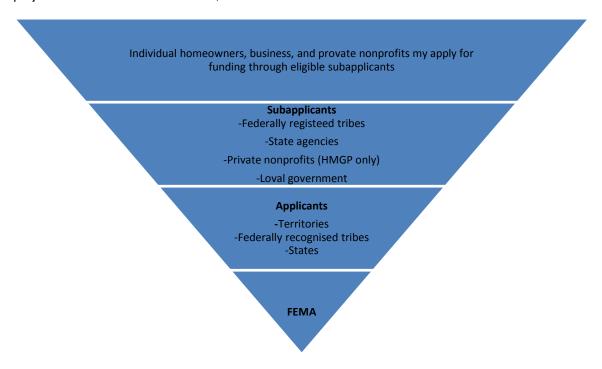
This section provides examples of assistance programs in the US, both grant paying and non-grant paving. Such programs offer guidance for an Australian assistance program.

3.1 THE HAZARD MITIGATION GRANT PROGRAM (HMGP)

The US Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) was set-up to help communities implement hazard mitigation measures. Under the HMGP, FEMA pays 75% of the cost of improvements to a structure while the remaining 25% may be covered by the state. non-profit organisations or households.

Private non-profits play an important role in this program. This is due to the fact that individual households are unable to apply for funding to the state government alone. Instead, households apply to private nonprofits who gather a cohort of houses seeking to access mitigation funding. Non-profits then apply to state governments who forward applications to FEMA.

Non-profit organisations such as Rebuild Northwest Florida started as a grass roots effort, but eventually became a public-private partnership that exists to coordinate recovery initiatives and home mitigation projects. It has so far retrofitted 10,000 homes.



PROPERTY-ASSESSED CLEAN ENERGY PROGRAMS (PACE) 3.2

The US property-assessed clean energy (PACE) model is a mechanism for financing energy efficiency and renewable energy improvements on private property. The PACE program allows local governments, state government and other inter-jurisdictional authorities to fund the up-front cost of energy improvements on commercial and residential properties, which are paid back over time by the property owners.

Property owners voluntarily choose to participate in a PACE program and then repay their improvements costs over a set time period - typically 10 to 20 years - through property assessments, which are secured by the property itself and paid as an addition to the owners' property tax bills. Non-payment generally results in the same set of repercussions as the failure to pay any other portion of a property tax bill.

This means that debt is tied to the property rather than the property owners, so the repayment obligation may transfer with property ownership. The benefit of this model is the elimination of disincentive to

investing in energy improvements, since many owners are hesitant to make property improvements if they think they may not stay in the property long enough for the resulting savings to cover the upfront costs.

City or county creates a landsecured financing district Property owners sign up for financing and install energy projects

Lender provides fund to property owner to pay for energy project Property owner repays bond through property tax bill (up to 20 years)

3.3 RESILIENCE STAR

The US Department of Homeland Security (DHS) designed a program to build and retrofit homes that have greater disaster resilience. The first phase is focusing on single-family homes in hurricane prone communities.

The pilot program is tasked with conferring a standardised and objective designation of resilience on homes in select high-risk communities. With supervision provided by the Insurance Institute for Business and Home Safety (IBHS), third-party evaluators will inspect homes to ensure they meet the resilience standards.

While this program does not offer grants to participating households, the DHS argue that individual insurance companies have shown a willingness to offer reduced premium and other incentives to home owners who take specific measures to make their homes more disaster-resistant.

Implementation and review

FIGURE 4-1: MITIGATION ASSESSMENT SCHEME (MAS) - PROCESS

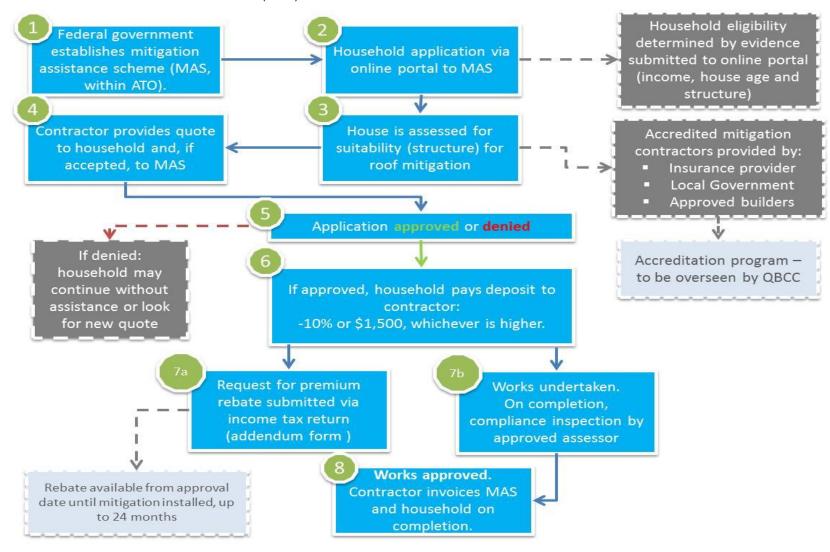


Figure 4-1 above outlines the framework for the MAS. Key considerations are discussed below.

ESTABLISHMENT OF SCHEME 4.1

The scheme is assumed to begin in January 2016 with a six-month implementation phase. No households will be able to access the scheme during this period.

To minimise implementation and administration costs, it is recommended that both the subsidy and the grants be administered by a single Government unit. As the subsidy will be returned via the income tax assessment process, the most suitable scheme administrator would be the Australian Taxation Office (ATO).

It is estimated that a team of 20 full time personnel would administer the scheme over its lifetime. However, on commencement, a temporary taskforce would need to be established to set up relevant IT systems and design and rollout a web portal and relevant online and printed forms (for those without access to a computer and/or the internet).

Simultaneously, this initial six-month period would be used to educate contractors and to provide accreditation to those wishing to act as assessors and as building contractors carrying out mitigation works. For maximum effectiveness, Government should engage with relevant organisations, such as the Master Builders' Association (MBA), and organisations such as the Queensland Building and Construction Commission (QBCC).

It is envisaged that the scheme would be open for applications for assistance for a period of five years from July 2016. Implementation would continue for a period of two years and two months following closure of applications, subject to a post-implementation review (see below).

4.2 ASSESSMENT AND APPROVAL

Once the scheme is ready for commencement in July 2016, households would apply either through an on-line portal or through a paper-based application from available from the ATO.

Initial confirmation of household eligibility would be received if the household meets key criteria (see Section 2.3).

In the case of strata units, the body corporate would need to gain a vote of support by all members to proceed and provide evidence of this to the MAS unit. If agreement is reached as a body corporate, assistance for either subsidies or grants will only be provided on evidence of income for all unit holders. Unit owners unwilling to disclose this evidence to the body corporate would be liable for their full share of the cost of mitigation.

The householder/body corporate would then apply for an assessment of suitability for mitigation by an accredited assessor. A list of accredited assessors could be provided by the MAS portal, insurance companies, local government authorities, and, for example the MBA and QCBB.

Once the dwelling is assessed as suitable, the householder would apply to an accredited contractor to provide a quote for the mitigation option. If acceptable to the household/body corporate, the quote would then be provided to the MAS unit for final approval.

On receipt of approval, the household would pay a deposit of 10% of \$1,500 to the contractor, whichever is the higher. In the case of a body corporate, the deposit would be 15%.

On completion of the work, a compliance inspection is undertaken by the approved assessor. On receipt of a certificate of compliance, the contractor directly invoices:

- the household/body corporate for the remainder of their share of the costs
- the MAS for the balance owing.

Application for premium subsidy

Once approval for works is received, households and unit holders may apply for insurance assistance for a period of up to 24 months or until works are completed, whichever is the shorter. Once works are complete, the compliance certificate is to be presented to the insurance company which will adjust premiums accordingly.

A period of 24 months has been set to acknowledge that there may be delays in undertaking work once approval is received. Urbis acknowledges that this is a nascent market and that in its initial stages the number of accredited providers may be insufficient to meet demand.

If demand for the scheme is strong, contractors are likely to take on additional workers to assist on mitigation, but each contractor will need to be accredited and compliant.

4.3 REVIEW

As with all new policies and programs, a period of review post-implementation is required.

It is recommended that, following a period of two years, that is, in January 2018, an evaluation of the scheme be undertaken to understand how well it is functioning and where adjustments – for example, to timelines – might be required.

5 Cost of scheme

This section details the methodology behind costing the proposed scheme, and the resulting outcomes.

5.1 METHODOLOGY

5.1.1 TIMEFRAME

The scheme is planned to begin rollout at the beginning of 2016 with a six-month planning and mobilisation period from this point until the beginning of July 2016. No households will be able to access the scheme during this period.

From July 2016, households will be able to sign-up for the scheme, which will run for five years from this date. It is assumed that there will be an even and constant take-up by households over the five year period and that households are eligible to sign-up to the scheme at any point over the five years. Premium and mitigation rebates will be paid out to existing households up to two years and two months after the end of the sign-up period.

For each household, it is assumed that it will take two months from sign-up up to arrange an inspection and acceptable quote and agree to undertake mitigation. The cost of inspection and subsequent quote is paid in the same month as the household signs up. After this two month period, households receive two years of premium discounts before they need to install mitigation. It is assumed that all households will take two years to install mitigation. Upon installation of the mitigation at the end of these two years, the mitigation rebate will be paid. The total period for each dwelling from signing up to scheme to installation of mitigation is two years and two months.

Planning and mobilisation period

Six months

Five years

Rebate payout period

Seven years and two months

2016 2017 2018 2019 2020 2021 2022 2023

FIGURE 5-1 - SCHEME TIMEFRAME

Note: Total length of scheme is from January 2016 to September 2023

5.1.2 ELIGIBLE DWELLINGS

Eligible dwellings are households located in high risk areas of Queensland, equating to 105 postcodes in Queensland. For strata, only those postcodes out of the 105 high risk postcodes that have three or more strata policies are included – a total of 53 postcodes.

Eligible dwellings must also meet the following criteria:

houses or strata are not built to the required cyclone resistant building standards

- insurance premiums are a recognised level above the state norm
- dwellings are owner/occupied, and are the primary place of residence
- meet income eligibility criteria.

The group of eligible dwellings includes 29,636 houses and 5,675 strata units, of which 5,127 are in small strata complexes and 548 in large complexes.

Where 50% or more of unit holders meet the income criteria, the building will be eligible for the 75% rebate on mitigation. However, only unit holders who meet income criteria will also be eligible for the premium subsidy. It is assumed that eligible unit holders are spread across strata complexes in such a way that they constitute 50% of unit holders in as many buildings as possible. In essence a total of 11,349 units, or double the 5,675 eligible strata units, will receive the 75% rebate on mitigation. This assumption allows the most possible strata units to receive the mitigation rebate, and as such is the upper estimate of the cost to strata. The engineering quote only applies to those 5,675 units that meet the income criteria.

See Section 2.3 for a more detailed outline of eligible dwellings.

Data collected by ICA undercounts total houses by approximately 6% and total strata units by approximately 25%. Total dwellings included in the modelling have been adjusted to take into account undercounting.

5.1.3 SCHEME COSTS

All costs of the scheme are assumed to be constant across all postcodes and dwellings. Scheme costs are outlined in Table 5-1 below.

TABLE 5-1 - SCHEME COSTS

ITEM	COST PER DWELLING
House mitigation	\$15,000
House mitigation rebate	\$11,250 (75% of house mitigation cost)
Small strata complex mitigation	\$10,000
Small strata complex mitigation rebate	\$7,500 (75% of mitigation cost)
Large strata complex mitigation	\$5,000
Large strata complex mitigation rebate	\$3,750 (75% of mitigation cost)
Engineering inspection cost	\$1,000
Average insurance premium houses	\$1,700
Premium rebate houses	\$340 (20% of premium)
Average insurance premium strata*	\$1,970
Premium rebate strata	\$394 (20% of premium)
Administrative cost**	10% of total costs

^{*} The average insurance premium for strata is taken as the weighted average of median premiums across the eligible postcodes ** Based on Victorian government recommendations (Victorian Government, 2015)
Source: Urbis modelling, industry estimates

5.1.4 DATA COLLECTION AND ASSUMPTIONS

Total number of at risk dwellings not compliant with required cyclone resistant building standards was provided by ICA at a postcode level.

To obtain the eligible households (houses and strata) from the ICA dataset, postcode-level dwelling and household characteristics from the 2011 Census were used. The Census at a postcode level was able to provide the following data:

- family size (number of children) by family type (i.e. sole parent and two parent families)
- number of occupied and unoccupied private dwellings
- number of households by income brackets by household type (i.e. lone person, couple, sole parent family, two parent family)
- home ownership by income bracket.

The above data specifically addressed eligibility criteria for income, dwelling ownership and dwelling occupancy. A number of assumptions were made for the data, including:

- ratio of occupied to unoccupied private dwellings is the same across all income levels, family types and for at risk households only
- income of family is unaffected by number of children
- there is an even distribution of incomes across any one income bracket
- family type and size has no effect on dwelling ownership rates.

For each whole postcode, the proportion of eligible households was identified. The characteristics of the group of non-compliant households for each specific postcode are assumed to be the same as the entire postcode (e.g. if 25% of all households were two parent families with one child then it is assumed 25% of non-compliant households were two parent families with one child). The characteristics gathered at a postcode level are applied to the group of non-compliant households for each postcode, resulting in a final count of eligible households.

It was assumed that across the final count of eligible dwellings there would be a 95% take up rate for the scheme.

Strata

Not all at risk non-compliant strata units, despite meeting income and ownership criteria, are able to receive the same mitigation options, as some are located in small strata complexes while others are located in large apartment complexes that require unique mitigation solutions.

Units in small strata complexes – those in buildings such as townhouses of three or fewer storeys, which represent more than 90% of strata buildings in at risk postcodes – were considered suitable for similar types of mitigation to that offered to houses. It is assumed that these smaller buildings units would require similar mitigation options to houses for roofing potentially alongside some additional external upgrades.

Large strata complexes, those with four or more storeys, are eligible for the scheme, yet are likely to require unique mitigation solutions.

Census data from 2011 at a postcode level was used to provide data on dwelling structure enabling the proportion of strata units in buildings of three storeys or fewer and in buildings with four or more storeys to be identified. These two proportions were applied across the total at risk non-compliant strata units in each postcode to produce the final number of strata units in buildings with three or fewer storeys, and the final number of strata units in buildings with four or more storeys.

5.2 OUTCOMES

Using the above methodology, a total of 29,363 houses, 5,127 small strata units and 548 large strata units were eligible. Of these, it is assumed that 95% – or 27,895 houses, 4,870 small strata units and 521 large strata units – will elect to participate in the scheme.

Outcomes for the scheme are listed in Table 5-2 and Table 5-3 below. Net Present Value (NPV) of the scheme was calculated using a 2.5% inflation rate, and real discount rate of 9.5%. NPVs are presented in 2015 dollars.

TABLE 5-2 - BREAKDOWN OF SCHEME OUTCOMES - HOUSES

OUTCOME	VALUE
Houses in the scheme	27,895
Total house inspection quote costs (NPV)	\$23.0 million
Total house mitigation rebate costs (NPV)	\$224.7 million
Total house premium rebate costs (NPV)	\$14.6 million
Total houses costs (NPV)	\$262.3 million

Source: Urbis modelling

TABLE 5-3 - BREAKDOWN OF SCHEME OUTCOMES - STRATA

OUTCOME	VALUE
Small strata units in the scheme	4,870
Small strata units receiving mitigation rebate	9,740
Total small strata complex inspection quote costs (NPV)	\$4.0 million
Total small strata complex mitigation rebate costs (NPV)	\$52.3 million
Total small strata complex premium rebate costs (NPV)	\$2.5 million
Total small strata complex costs (NPV)	\$58.9 million
Large strata units in the scheme	521
Large strata units receiving mitigation rebate	1,041
Total large strata complex inspection quote costs (NPV)	\$430,000
Total large strata complex mitigation rebate costs (NPV)	\$2.8 million
Total large strata complex premium rebate costs (NPV)	\$272,000
Total large strata complex costs (NPV)	\$3.5 million

Source: Urbis modelling

The NPV of the cost of the scheme over the life of the MAS is \$361.2 million, including an administrative cost of \$36.5 million.

6 Conclusions

A Mitigation Assistance Scheme (MAS), as presented in this report, is recommended over other potential options being considered by the Government, for a number of reasons.

- It is temporary, timely and targeted, reflecting best practice policies.
- The cost of the scheme, at a total of \$361.2 million in Net present Value terms over the life of the scheme (seven years, two months), is likely to be well below the cost of a mutual pool or reinsurance option.
- Mitigation will deliver both lower policy costs and also additional economic benefits in the form of:
 - reduced property damage bills from cyclonic events
 - reduced community costs from cyclonic events, including physical and mental health, disruptions to business, displacement from home, work and education etc.
 - increased resilience in an area of increasing economic importance for the Australian economy
 - the opportunity to develop expertise and become a global market leader in mitigation.

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