16 May 2022

The Chairs
NSW Independent Flood Inquiry
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Attn: Mary O'Kane AC and Michael Fuller APM

PIA Submission to NSW Independent Flood Inquiry

1. INTRODUCTION

Thank you for the opportunity to offer a submission. The Planning Institute of Australia (PIA) has participated in a succession of natural hazard inquiries and policy reform exhibitions. PIA would like to reverse the pattern of natural hazards being treated as contingencies rather than as an inevitable and increasing influence on settlement exposed to a changing climate.

PIA has consistently advocated 'build back more resilient' for legacy risks - and plan to avoid and minimise risks to future development taking into account climate change.

PIA urges the Inquiry to recommend that all tiers of Government build capacity to plan and act across the full spectrum of flood hazard situations identified in a clear risk-based framework. This should extend from planning to avoid or minimise exposure to manageable flood hazards - through to establishing the governance and funding arrangements to guide 'planned retreat' at the extreme end of the hazard/risk spectrum where the hazard and its impact on human life cannot be mitigated.

> *"One of the basic principles of environmental management is: if you can't remove the risk, move people from the risk[1]"*

PIA urges the Inquiry to recommend the development of decision-making frameworks, budgets, planning tools and community leadership vital to build capacity for (voluntary) relocation of exposed settlement. PIA Working Groups from around Australia would be pleased to work with all tiers of

[1] Barbara Rugendyke, Jerry Vanclay, Angus Witherby (2022) On Higher Ground a Better Future for Lismore.

Government, industry and communities to help design these tools and frameworks - by applying the circumstances of Lismore floods.

The community and political realm would be more open to participate in broader conversations on the relocation or retreat of settlements exposed to any type of hazard when we have the frameworks in place. The relocation of Grantham in the Lockyer Valley (Qld) involved many professional planners and provided institutional responses and other lessons towards a larger scale model of planned retreat.

In addition to managing extreme exposure to natural hazards, PIA recommend planning reforms to embed resilience in strategic plans and avoid or minimise exposure. These plans are designed to strengthen the productive capacity of a region and its centres - and the wellbeing of current and future residents. PIA support a shift towards resourcing prevention and preparation as the most cost-effective approach.

> *"Land use planning is perhaps the most potent policy lever for influencing the level of future disaster risk"* (Productivity Commission Report into Natural Disaster Funding 2015).

In contrast reconstruction and recovery is very expensive and has historically taken up over 95% of state and national budget commitments with respect to natural hazards (Productivity Commission 2015).

We are acutely aware of the need to integrate climate change into all aspects of hazard planning as described in our climate series - and PIA submissions to the NSW Bushfire Inquiry, regional plans and flood prone land package.

2. TERMS OF REFERENCE

PIA's submission focuses on Inquiry term of reference 2f and 2e(ii):

2e. land use planning and management and building standards, including:
- *i. the instruments, policies and programs applying to existing development in flood prone locations across NSW; and*
- *ii. the instruments, policies and programs applying to proposed future developments in flood prone locations across NSW;*

2f. appropriate action to adapt to future flood risks to communities and ecosystems;

3. CONTEXT FOR PIA SUBMISSION

3.1 Background

The recent and repeated east coast floods have brought planning for natural hazards into sharp focus for future planning as well as for managing the increasingly costly legacy risk. As flood and other natural hazard risks become more frequent and severe alongside climate change, it is time to reset planning approaches to:

- **Prioritise the preservation of human life** – not only property, structures and business
- **Be more conservative in relation to planning future development** exposed to floods

- **Be systematic in decision making** – including being open to planned retreat options when managing legacy risks of existing development that are increasingly exposed.
- **Be more consistent** in how natural hazard planning parameters are applied in plans around the state and country
- **Use regional plans and associated resilience strategies** to inform place outcomes and protect strategic values of a region – including identifying what settlement is defensible – and adopting scenarios to deal with uncertainty.

The principles of the Landuse Planning for Disaster Resilient Communities Guide (AIDR 2020) remain valid and specifically principles 5, 7 and 11 are key to the PIA submission and our comments on the Lismore flood situation:

- **(5) Recognise that some land may be unsuitable for certain activities or development:** Planning decisions are to recognise that not all land is suitable for intensification of development and not all development types are viable at a particular location. Decision criteria and mechanisms to support decision-making based on hazard information are to be in place to ensure the intensification of development is compatible with the risk profiles of natural hazards to both existing and future development and its users.
- **(7) Consider how natural hazards vary with climate change for an appropriate planning horizon for development decisions:** Planning decisions need to build in consideration of how natural hazards vary with climate change within the planning horizon related to the development decision. Forward planning for the consideration of climate change impacts on natural hazards is the best approach to mitigate these risks on communities. The distinction between a planning horizon and the horizon of the hazard assessment needs to be considered in the decision-making processes.
- **(11) Use the full range of risk treatment mechanism options prioritising avoiding risks:** Land use planning is to use the full range of mechanisms available to treat disaster risk, emphasising forward and strategic planning. These include: avoidance or reduction of exposure and reduction of vulnerability. These measures can reduce impacts upon development and the impacts of new development upon natural systems, and impacts to the community.

3.2 Climate Change Adaptation Planning

PIA have published a national Climate Change Adaptation Discussion Paper, a Position Statement and advocate reforms in Climate Conscious Planning Systems. These positions stress that planning strategies should:

- Test **changing hazard and risk profiles in scenarios** to inform strategic plans and address uncertainty – noting that historical projections are not always relevant in a changing climate.
- Test the **relevance of planning strategies to more pervasive and gradual changes** impacting the human and natural environment.
- Identify the **settlement planning parameters** for scenarios in a coherent and consistent way e.g. National Settlement Strategy and in Regional Planning Frameworks and resilience strategies.
- Base planning parameters on **consistent assumptions for potential exposure** regarding:
    - population and community vulnerability
    - acceptable risks for bushfire, sea level rise, flood and urban heat

    - design life of housing, buildings and key infrastructure
    - infrastructure demand assumptions per capita.
- Set planning outcomes and supporting guidance at a **landscape scale** – and address the vulnerability of individual properties, buildings standards, access arrangements and infrastructure within this landscape context.
- Set strategic planning responses within **adaptive management plans** or pathways that are responsive to new information and threat reappraisal. Responses should not just be cost effective in achieving a single strategic planning outcome – but consider whether they promote a diversity of pathways that might assist adaption to evolving threats - or enable managed retreat/avoidance in the future
- **Move beyond the 'approve and forget' paradigm** and enable adaptive management. This includes promoting innovation in governance and collaboration among local communities, Indigenous peoples and across agencies to generate solutions that fall outside traditional silos – such as green infrastructure addressing flood and urban heat threats (including vegetation).
- **Ensure consideration of climate risk occurs at every level of Government** – and that adequate information and policy context (e.g. overlays) are available for the private sector and Government to manage risks accordingly and appreciate the dimensions of uncertainty.
- **Give statutory effect to key resilience strategies**, plans or guidelines.
- Integrate the management of **natural values and protection of biodiversity.**

Resilience to natural hazards exacerbated by climate changes should be deeply embedded in plan making and development decisions. **Attachment D** expands on the expectations for the next generation of 'resilient' regional plans.

3.3 Outline of Lismore Flood Situation

PIA recognises the seriousness of recent flooding throughout the Sydney Basin and across Eastern Australia. However, PIA are specifically focussing on Lismore to explore key planning issues relating to legacy risks and circumstances where planned retreat is a serious option. PIA understands that situations where catchment-wide flooding affects historic settlement will become more frequent and intense. The settlements affected will increasingly include major regional centres like Lismore. NSW will need to draw on case examples such as the relocation / reconstruction of Grantham (Lockyer Valley Qld) and apply this experience at scale.

Already Lismore Council has set out options for future settlement planning in their Discussion Paper on the growth and rebuilding of Lismore. Expert groups (including PIA Fellow Angus Witherby) are also contributing thought leadership 'Lismore – on higher ground'. Lismore is an important case study because of:

- The scale of harm and damage from successive major and prolonged floods – and the high human, social and economic cost of 'no change' to existing settlement
- The population, size and role of Lismore and its CBD as a strategically significant regional centre
- The legacy risk of settlement exposed to flood (notwithstanding levees and other mitigation measures

- Two of the three worst Lismore floods have happened this year – reaching 14.6m well over roof tops in many areas including parts of the CBD. Other relatively recent big floods were in 2003, 2011 and 2017
- Equity issues – with flood impacts falling on lower socio-economic communities including indigenous communities many of whom have already been displaced.
- The potential for insurance premiums to become unaffordable and other costs leading to low investment and decline of amenity in the town.(Insurance Council notes $3.35bn of claims from the recent East Coast floods (190,000 claims) many from Lismore)
- The availability of flood free land elsewhere in Lismore and the opportunity for relocation of parts of the centre.

Attachment A is Angus Witherby's appraisal of opportunities for a planned retreat for parts of Lismore. The scenario is plausible and is included among the options of Lismore Council's Discussion Paper (see **Attachment B** extract).

PIA urges the Inquiry to explore the opportunities and costs for 'planned retreat' at the scale of a major regional centre in order to recommend an effective and replicable decision-making framework, planning regime and governance and funding approach.

Section 4 below addresses the building blocks for 'planned retreat' that would need to be created and strengthened for the scale of Lismore - and made replicable for other centres exposed in the future.

Section 4.4 promotes good practice planning for avoiding, mapping and mitigating natural hazards with respect to future growth and development. These sections use material previously communicated via PIA submissions on the floodplain development manual and associated policy reform.

4 PIA SUBMISSION AND RECOMMENDATIONS

4.1 Establish an adaption spectrum structure and language

- Lack of a holistic framework which describes when to prevent, prepare, respond, recover or plan for retreat (of profoundly exposed settlement).
- There needs to be a shared basis on when to act and invest in major resilience initiatives such as: when to act on planned retreat for major centres exposed to unacceptable legacy flood risks.
- An example of such a spectrum is the proposed drought resilience framework by Angus Willoughby which describes what roles and actions (Local / State / Federal) Government should take (Direct action/ Advocacy / Facilitation) for different hazards situations at key stages (Immediate response / Recovery /and Building resilience). Attachment C includes an example of such an adaptation framework using drought as an example.
- We specifically lack a common language/approach to characterise different circumstances to plan or intervene on legacy risks – noting that that the majority of planning input to date has just been on the avoid / minimise end of the spectrum. The language / approach should distinguish between major riverine/ catchment floods and those related to more local stormwater drainage.
- There is a spectrum of circumstances requiring different planning responses from light touch avoiding a hazard - to potentially extreme retreat interventions.

Recommendation:

- A decision framework based on the concepts above should be adopted by NSW Government and applied by Resilience NSW in concert with Councils and State Agencies. It should inform Regional and Local Planning Strategy and be included in associated Resilience Strategies.

4.2 Include a risk management framework

- Strategic plans do not generally offer a natural hazard risked weighted framework to inform the priority to apply to potential interventions – nor acknowledge/empower different community appetites for risk (see example below from the AIDR Handbook).
- While exposure to natural hazards and their risks will vary – a community's appetite or ability to accept risks as tolerable will vary.
- Obviously where existing or proposed development is at the extreme end of the risk/ consequence spectrum – then greater planning or management intervention is necessary.
- Climate change will increase the likelihood of hazards and mean that more settlement is exposed to high / extreme risk.

Table 4: Risk matrix presented by the National Emergency Risk Assessment Guidelines (AIDR 2020)

	CONSEQUENCE LEVEL				
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
ALMOST CERTAIN	Medium	Medium	High	Extreme	Extreme
LIKELY	Low	Medium	High	Extreme	Extreme
UNLIKELY	Low	Low	Medium	High	Extreme
RARE	Very low	Low	Medium	High	High
VERY RARE	Very low	Very low	Low	Medium	High
EXTREMELY RARE	Very low	Very low	Low	Medium	High

- Resilience strategies prepared with community involvement should set the triggers for action in response to community risk appetites (If there is no early warning or flood free egress is restricted then the risk appetite may be lower). Resilience strategies would identify what risks the community regard as 'generally intolerable; and which require frisk treatment or even elimination (refer ALARP Principles, PIA 2015).
- For example, resilience strategies would consider the different implications of flood hazards (eg PMF v 1:100 - or Stormwater flow parameters) and enable the adoption of locally and relevant planning controls or management actions.
- It is noted that mixed use activity centres may have a greater consequences from hazard exposure than industrial sites and may have a lower risk appetite.

Recommendations:

- DPE and GCC (in collaboration with Resilience NSW) establish decision criteria for planning and response based on a risk weighted hazard framework embedded in spatial planning. Resilience Strategies (integrated with Regional Plans) are the best place for this work.
- DPE to enable locally tailored adoption of relevant planning controls for flood risk exposure (eg enabling control of development above the 100 year ARI) based on the framework – potentially via a Ministerial Direction.

4.3 Value of planning for adaptation – desired outcomes

- Flooding can compromise the long term economic and social role of strategic centres and disrupt the value embedded in a regions spatial structure and centres hierarchy.
- Regional plans and local planning strategies recognise and reinforce the economic and social role of major centres and other nodes. The effective operation of these centres for employment, business activity, access to services and housing is a key outcome of strategic planning.
- Planning for resilience is not only about protecting the individual safety and wellbeing of residents and businesses – but should be alert to the planned role and value of the centre and its assets to the regional economy.
- For example, there is a real risk that loss of investment in Lismore CBD and nearby housing could impact the economic geography of the North Coast by:
    - Reduced return on investment in major infrastructure and service delivery assets in Lismore (eg CBD, Hospital, Uni and other enterprises / hubs)
    - Reduced local / regional employment opportunities – and potentially reduced agglomeration economies
    - Greater disconnection / distances between the locations of housing, jobs and services
    - Greater activity in other centres that may not have the supporting housing settlement and amenity needed to take up the slack
    - Concerns that activity may relocate to areas that are also highly exposed to natural hazards (eg Ballina CBD)
    - Community dislocation and associated public and private costs of providing shelter (noting housing may not be available in the region), services and welfare.
- For future growth strategies to be credible they must plan and manage natural hazard exposure of key centres and other hubs/spatial elements. They must be specific on the place outcomes sought and the role and values of key centres – so that informed decisions can be made regarding future risk avoidance and the management of past legacy risks.

Recommendations:

- GCC and DPE to require Regional and City Plans and LSPS – to define values / help prioritisation of adaptation planning and more deeply embed resilience concepts.
- Resilience Strategies should be jointly funded by all tiers of Government to complement Regional, City and LSPS. This should be facilitated by Resilience NSW.
- National and State Settlement Strategies should identify the regional significance of centres for growth and priority infrastructure investment. A settlement strategy should require the use of common and coherent planning parameters for climate change / natural hazard exposure and infrastructure demand per capita. A NSW Settlement Strategy should be prepared by DPE and GCC according to a DPC framework.

4.4 Improved planning measures to avoid and minimise flood hazard and risks

There are a range of existing policies which regulate development in flood prone land. Many of these provisions are important in providing decision-makers, development proponents and planners with the information they need to assess and manage risk. However, the volume of regulation and sometimes competing purposes has created confusion in the planning sector.

Two optional local environmental plan provisions have been introduced since 2021 – the **Special Flood Consideration clause** and the **Natural Disaster clause**. Each provision can be added by local governments to their local environmental plans. PIA NSW supports the operation of the Special Flood Consideration clause in the current policy environment. It provides sensible decision-making criteria for local government for sensitive or hazardous development between the flood planning area and probable maximum flood. Conversely, the Natural Disaster Clause simply allows the rebuild of a dwelling house or secondary dwelling which was damaged or destroyed by natural disaster in any circumstance where it was lawfully erected. Understandably, communities seek to recover from a natural disaster and a core part of the recovery process is rebuilding. Recovery should incorporate risk-responsive planning principles, which the current Natural Disaster clause fails to offer. These clauses have different objectives and would operate contrary to each other in practice. PIA NSW does not support the simple 'build back' option made available by the Natural Disaster clause.

PIA NSW supports the update of the **Floodplain Development Manual** that was recently exhibited. In a submission to the exhibited of the updated manual, PIA NSW raised concerns that the very long and technical document did not easily integrate with existing planning process. It was considered that additional resources like a Planning Quick Reference Guide and model planning elements would assist planners in incorporating these technical elements into decision-making. For more detail and recommendations, PIA's submission can be accessed here.

Additional flooding considerations were also raised in the **Flood Prone Land Package** exhibited in 2020. PIA NSW raised a number of matters requiring further consideration in a submission at that time. Particularly relevant was the need for improved mapping for flood prone land. There is significant variation in how councils approach the task of flood mapping, with some providing it in the LEP or DCP and some simply providing a map on their website. Additionally, there is little consistency in what material is relied upon to prepare the mapping or what the map itself shows (eg. 1% AEP, 1 in 100 year floods, freeboards or probable maximum flood (PMF)). This information should be easily accessible and digitised to provide transparent information to communities, development proponents, planners and other interested parties. For more detail and recommendations, PIA's submission can be accessed here.

Further discussion of natural hazard management was located in the Strategic Planning Guideline for Natural Hazards exhibited in 2021. PIA NSW support the content and scope of these guidelines, however called for greater detail, clarity on what planning scenarios should be adopted and what legislative or other policy reform would be required to enforce the intent of the guidelines. For more detail and recommendations, PIA's submission can be accessed here.

The above discussion demonstrates how dispersed key considerations regarding flood planning are across the planning system. Understandably this creates confusion amongst non-technical practitioners and community members looking to understand risk, hazard avoidance and decision-making obligations. Consolidation and rationalisation of these processes would add significant clarity to these processes and improve outcomes for organisations and the community.

The burden of floodplain planning falls largely on Local Government. Councils usually do not have the resources or capacity for detailed evidence gathering around flooding resilience and mitigation, and importantly understanding changing frequency and severity of flooding as a result of climate change. Flood planning often relies on outdated modelling of complex systems. These organisations

are also burdened with meeting state-mandated outcomes such as housing targets, therefore requiring the release of potentially flood impacted land for development

Further assistance is required by the NSW State Government in the ongoing research and analysis of flood mitigation in response to a changing climate across the state. (State led research and/or funding available for local flooding and adaptation plans / resilience strategies in response to increasing number of episodic shocks.

Recommendations:

- Remove the optional Natural Disaster Clause from the Standard Instrument LEP and work with the 32 councils that have already adopted the clause to find alternatives. Any appropriate alternative rebuild clause should incorporate risk-responsive planning principles.
- Run a second expression of interest round for the Special Flood Consideration clause.
- Support the updated Floodplain Development Manual with additional resources for planners, including a Planning Quick Reference Guide and model planning elements.
- Support local government in standardising and updating mapping of flood prone land to ensure it is readily available in a digitised format.
- Support a program of State funding of updating catchment flood modelling and mapping to assist Local government to keep information up to date and responsive to climate change scenarios. Catchments and LGAs should be prioritised based on a risk framework.
- Consolidate the wide-ranging set of flooding considerations across local environment plans, the floodplain development manual, flood prone land package and strategic planning guidelines for natural hazards.

4.5 Elements of a 'planned retreat' framework (based on Lismore flood situation)

Note: This section focusses narrowly on planning for long term resilience because policy development is weakest regarding long term 'planned retreat' at the scale of a major town like Lismore. The Council Discussion Paper addresses a combination of engineering measures, permanent and temporary levees and other management and recovery measures – all of which have merit, but are not discussed here.

Two of the three worst Lismore floods have happened this year – reaching 14.6m well over roof tops in many areas including parts of the CBD. Other relatively recent big floods were in 2003, 2011 and 2017. The loss of life, ongoing hardship and impact on livelihoods is traumatic.

The legacy risk and consequences of exposure to repeated significant floods is obvious. What is lacking is a scalable model to deliver the institutional capacity and funding to manage planned retreat for major centres. This model should be transferable and ready to be applied to different future hazards / places. The operation of the Queensland Reconstruction Authority relocating much of the village of Grantham is very relevant but nowhere near the scale of flood affected portions Lismore.

An endorsed decision-making framework is needed to determine where extreme interventions are warranted to address legacy risks (based on a risk management framework within a broader adaptation spectrum – see 4.1-4.2).

Lismore Council and Local Experts are showing the way 'planned retreat' options can be developed and communicated with the community.

Council and community options should be supported by institutional capacity and funds made available by State and Federal Government – acknowledging a shared framework for prioritising intervention.

PIA will be recommending initiatives to boost capacity to undertake planned retreat at all different scales / hazards into the future. Processes, actions and institutions applicable to Lismore flood reconstruction / relocation should be 'generalised' and made ready for roll out in the future.

PIA has previously noted that planned redundancy is one element of a resilient system (see **Attachment D**) – having hazard adaptation measures and institutions 'at the ready' is appropriate in an uncertain future affected by climate change. NSW Government has long retained previously dormant pandemic response capability for similar reasons.

There are prospects for Lismore, NSW and Australia to show global climate adaptation leadership by adopting a 'bounce forward' approach (Barbara Norman, Newman and Steffan , 2021[2]). Opportunities could evolve for a 'centre of excellence' - building on Lismore experience.

a. **Governance / institutional arrangements - for long term adaptation**
   - There are roles for two state entities that need to be clarified, established, resourced and maintained beyond individual natural hazard events. The entities could serve their roles for various natural hazards not only flooding. The roles of Resilience NSW and the new Northern Rivers Reconstruction Corporation could be untangled:
     - **'Adaptation Prioritisation Entity'** - An entity responsible to manage the State's risk management framework (see 4.1 & 4.2) and identify long term adaptation investment priorities and ensure long term adaptation is reflected in regional planning strategy (this could be Resilience NSW (or an alternative – in consultation with DPE/GCC/INSW). There would need to be a cabinet process to endorse priorities via DPC. There is also an opportunity for a chief resilience officer – analogous to NSW chief health officer to communicate the entity's mission.
     - **'Adaptation Action Implementation Entity'** - An entity responsible for the execution of adaptation strategies – managing reconstruction / relocation during and beyond recovery. The entity's mandate would be to build back more resilient – not exacerbate risk recognising a changing climate. This entity should not need to be recreated for every new disaster. The Queensland Reconstruction Authority (QRA) serves this role. The Northern Rivers Reconstruction Corporation (NRRC) is a supported - but lacks some of the capabilities of QRA due to its origin under the Growth Centres (Development Corporations) Act 1974 NSW. This entity would need to exist permanently, but and be able to be scaled up/down, it would benefit from the following capabilities:
       - Preparing and executing an 'adaptation implementation plan' (prepared in concert with Council) for scoped tasks identified by the 'Adaptation Prioritisation Entity'
       - Have a build back more resilient mandate – not exacerbate risk

[2] Apocalypse Now Barbara Norman.pdf

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- Capacity to collaborate and enable community leadership/involvement in partnership with council
- Streamlined contract management and procurement processes
- Land acquisition / land swaps and management
- Compulsory land acquisition powers - but only for an endorsed 'adaptation' purpose under its plan
- Land use planning powers – only where applied to promote reconstruction / relocation under its plan
- Infrastructure prioritisation, project development, procurement and delivery
- A strong balance sheet enabling sustained operation - and the capacity to disburse and receive funds
- Core funding budgeted on a program basis

Recommendations:

- Ensure that the role for an '**Adaptation Prioritisation Entity'** is clarified to manage NSW's natural hazard risk management framework – and identify where/when significant state intervention is required for risk avoidance/minimisation or reconstruction/relocation planned retreat.
- Ensure the '**Adaptation Action Implementation (Reconstruction) Entity'** is permanently established as a statutory authority under specific legislation and able to be scaled up/down in relation to multiple different hazards. It should have clear responsibility for execution and full suite of capabilities and funding for adopted 'adaption implementation plan' outcomes in step with Councils and the community.

b. **Inter-governmental roles**

- The subsidiarity principle for resilience notes that the least centralised body able to make effective decisions should guide community involvement and set out a plan for recovery and long-term adaptation. Lismore Council and its community have begun this process and set out options in their discussion paper. They should be supported with the capacity offered by State entities and funds and national adaptation framework from Federal Government.
- The section below appreciates that Council will need access to state funds and capacities for flood planning (eg funding flood model updates and preparation of Resilience Strategies) as well as large scale implementation of an adaptation strategy – and associated land acquisition, reconstruction, relocation and infrastructure works.
- There is a role for the Federal Government at every phase from immediate response (eg stimulus and concessions) – through recovery (eg funding regional assistance, loans, accelerated depreciation etc) - to long term adaptation actions (eg setting a National Settlement Strategy context, Climate Adaptation Plan, infrastructure prioritisation and funding and adaptation industry capacity building). The responsibility of the National Recovery and Resilience Agency would need to be clarified in relation to these roles.

Recommendation:

- Establish a framework for intergovernmental agreement on natural hazard adaptation responsibilities – based on the subsidiarity principle.

c. **Funding and finance**

- Significant public investment in Lismore's social and economic infrastructure is inevitable to retain and strengthen Lismore's long term regional role. The scale and timing of funding to potentially relocate Lismore CBD or large areas of significantly flood affected housing is

beyond the capacity of local government to generate from the local rate base alone (see **Attachment A**).

- Significant unavoidable costs will still be imposed on private households (often not fully insured), council and state infrastructure and social service agencies - even if relocation does not occur. However, relocation and other management options have the potential to reduce future costs and exposure to flood hazards.
- Rapid analysis of the economic and financial costs and benefits – and their distribution should inform all adaption options including relocation / planned retreat.
- Ultimately a National / State / Local funding agreement should be established for economic options refined via the implementation plan developed through the NRRC. This could be under the context of a national/state adaption plan.
- State (and Federal) funding of significant long-term initiatives such as Lismore CBD should be drawn from budgeted programs to improve adaptation – rather than dealt with as contingent liabilities on the budget.
- The relocation of Grantham provided experience on cost sharing among different tiers of government and different agencies. Initial cost estimates of works were inaccurate. Arrangements should be made to share the liabilities of inevitable cost overruns rather than default to the purchaser. Mechanisms such as establishing a reference price for works should be adopted. The reference price can be indexed and funds distributed at intervals based on milestones.

*Recommendations***:**

- Establish an intergovernmental funding agreement for Lismore flood adaption works – and use this as a basis for future agreements.
- Treasury and INSW include priority adaptation works (including Lismore) as part of a budgeted program of long-term climate resilience building works – rather than just a contingent liability.
- Treasury and relevant agencies include cost sharing arrangements for budget overruns.

d. **Insurance**

- A functioning insurance market is essential to sustain investment in housing and businesses (and their mortgages) which underpins the regional role of Lismore.
- Insurers have a common interest in improving the flood security of their policy holders.
- Already some $3.35Bn in insurance claims have been received as a result of east coast floods in 2022.
- When natural hazard risks increase premiums out of reach of the local market then there may be a risk to future confidence in development and regional prospects.
- Insurers operate according to their contracts and an industry code of practice which requires that payment on claims be made within four months. Payments and/or works in kind typically are made at the same location as the claim – this poses difficulties is the insurers are implicitly committing to rebuilding a t location that is still exposed to flood hazard.
- Arrangements need to be negotiated with the insurance industry to facilitate fulfilling claims at different / safer locations for rebuilding. As it will take longer than four months to identify and secure alternative flood free sites – some flexibility will be required.

Recommendation:

- The Inquiry could recommend an insurance / mortgage finance industry / Government forum to:
    - identify the factors influencing the sensitivity of premiums to flood risks

- resolve impediments to insurance claims funding aspects of planned retreat – and
- avoid funding reconstruction that is exposed to hazards
- identify insurance products and ways of operating best suited to an increasing climate risk environment

e. **Strategic planning and assessment roles, building controls**

- The local planning regime enables landuses and development aligned with regional and local strategy – informed by resilience strategy / adaptation plans. Planning should promote resilience and not encourage extensive redevelopment that is continuously exposed to flood risk without consideration of alternatives.
- There are some areas and circumstances where building back in situ will risk human life as well as property. However, personal trauma and the need for shelter for flood survivors is a fundamental need to be respected.
- Planning requires consideration of the desired outcomes for an affected area outside of the flood event, at a time when the grief and recovery of the disaster cycle has passed. It requires collaboration between the community, State Government and local councils and for a clear vision to be established as to what an area may look like post-disaster (i.e. a change from what was, to what must be to ensure safety and reduced risk/costs.)
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Recommendations:

- A rapid assessment process that is responsive to short term recovery and shelter needs but reflects long term adaption strategy should be available to councils / reconstruction authority – potentially by way of a SEPP. This would ensure that the right suite of powers and controls are available 'off the shelf' and applied accordingly.
- Ensure a clear line of sight between strategic plans that may identify no further development in at-risk areas and development standards and controls in those areas.

f. **Infrastructure planning and delivery - for resilient infrastructure**

- Considerable progress on planning for infrastructure resilience is set out in NSW Treasury/INSW *Guidelines for Resilience in Infrastructure Planning* and Infrastructure Australia/INSW *A Pathway to Infrastructure Resilience*. These guides are based on prioritising investment in place outcomes, strategically aligned projects and alternatives that are tested using scenario planning.
- PIA supports the thrust of these guidelines in prioritising investment in projects that are aligned with a resilience strategy – potentially within a state program of climate adaption works.
- In Lismore, infrastructure reconstruction (or new infrastructure to support relocation) – should be delivered in a way that is not exposed to unmitigated hazards – nor exacerbate threats.
- Funding for infrastructure should not be costed as 'like for like' but specified to be resilient to future flood scenarios. New or replacement infrastructure should be able to be located in other planned retreat rebuilding locations.

Recommendation:

- The principle that infrastructure should be specified, located and funded in a manner that is resilient to flood threats should be embedded in state/national funding agreements.

g. **Land acquisition / swaps**

- Much development in Lismore is at risk of remaining (or becoming) uninhabitable or unusable for business. It is understood that many residents of flood affected portions of Lismore are already lower income earners and include a First Nations population that has already suffered dislocation.
- If owners or occupants have insufficient financial capacity to rebuild, insure and maintain premises - or are not permitted due to flood risks – they will be faced with an impasse and associated trauma.
- Relocation options for Lismore CBD and some affected residential areas (See Attachment A & B) could involve voluntary land acquisition of flood affected property and potential land swap arrangements in a new site (eg via ballot).
- The acquisition of flood free relocation sites may require some compulsory acquisition for key sites needed to link redevelopment to the existing town transport and infrastructure network.
- Valuation of flood affected land acquisition could test the valuation criteria of the Land Acquisition (Just Terms Compensation) Act.
- Grantham village relocation experience highlights the importance of community acceptance of a fair acquisition and land swap process.
- Any land acquisition and land swap process should take place with open engagement and community empowerment under an adopted adaption plan consistent with Council's Land Use Management Strategy / LSPS.

Recommendation:

- Legal authority and capability (funds) to undertake land acquisitions (including compulsory acquisition) should be allocated to the reconstruction authority according to the planning purposes endorsed in an adaption plan.
- The future use and sympathetic development of acquired flood prone sites should also be subject to the adaptation plan.
- NSW Government should consider the fitness for purpose of the valuation criteria of the Land Acquisition (Just Terms Compensation) Act for flood affected property.

h. **Community empowerment**

- Council has commenced the long-term discussion of relocation alternatives – together with the NRRC - they need to enable local community leadership to take the housing and economic development options forward.
- Community engagement and leadership in relation to flood impacts and desired outcomes is undertaken outside of the grief and recovery of the disaster cycle. It needs to create an ongoing understanding of the changing nature of the area, to ensure minimal shock and reactive policies/planning controls. A community that understands future changes that may take place is a more resilient community.
- There is an opportunity for the community to embrace a positive message that establishes Lismore as an exemplar of adaptive reconstruction at scale.
- Maintaining First Nation connection to country is a community priority.
- Grantham relocation experience maintaining consistent frequent open engagement and the Mallacoota community experience of leading their own solutions are important lessons.

Recommendation:

- Council and the NRRC should build community capacity to take a leadership role in developing and implementing relocation and redevelopment options (as part of an adaption plan).

5 CONCLUSION

PIA urges the Inquiry to recommend that planning systems be reset to adapt to increased natural hazard threats in a changing climate.

Resilience should be more deeply embedded in planning strategies and ensure that where there is threat to human life and property that is unable to be mitigated then development should not occur.

Planning and management decisions for natural hazards should be undertaken in the context of an adaptation spectrum and risk management framework.

Councils and State planning agencies should be funded and equipped with the data, mapping and updated modelling needed to inform risk management and planning. There is a role for Resilience Strategies to include regional risk management frameworks and inform regional and local land use plans.

Where existing development is deeply exposed to flooding or other hazards a range of future options should be openly considered - including planned retreat / relocation.

Affected councils should be supported by an ongoing reconstruction capability – a state authority with sufficient powers and access to program funding.

PIA support Lismore developing a community leadership model for reconstruction and potentially planned retreat based on building back more resilient.

Please contact myself or John Brockhoff for further information on our submission. PIA would welcome the opportunity to present to the inquiry.

Yours sincerely

Sharon Smith

PIA NSW President

ATTACHMENT A:

Relocate the Heart of Lismore? Let's talk about the Numbers

Angus Witherby mPIA (Fellow), Land Use Planner, Geographer and Economist (7 April 2022)

"There is a growing discussion about relocating the CBD of Lismore, and what to do about housing that needs to be replaced or rebuilt. For this discussion to develop further, we need to talk about the numbers. Others can and are talking about possible sites, mechanisms and the human issues.

The key question that we need to answer is "does it make economic sense to consider a new CBD and associated residential housing?". If we are to rebuild Lismore where it is, there are two major components, rebuilding the CBD, and repairing or replacing severely damaged dwellings.

Solid numbers are virtually impossible to come by. Every press release of the Insurance Council of Australia has a higher price tag on the SE Queensland and Northern NSW flood events of last month. From $900M to $1.4B the amount keeps climbing. Can, however, we develop some initial "broad brush" numbers to see if the economics of this are worth serious investigation? Yes, we can.

Rebuilding the CBD

Some starting assumptions are essential. While the overall CBD and periphery is some 60ha, the "core" CBD is closer to 20ha. There are, based on a recent retail census, some 330 businesses in the core CBD ignoring the arcades and the upper floor businesses. We can also estimate stock losses, equipment losses and clean-up/repair costs. Add in waste disposal, and public realm costs, a preliminary estimate to get the core CBD back on its feet is $440M. This does not take into account lost wages during the flood event, but does look at turnover losses. If we assume another (say) 5 floods over the next 20 years, total costs would be some $2.2B. This $2.2B are costs we avoid, if we put the CBD somewhere else. On this number alone, the potential cost savings are massive.

Residential

Damage is still being assessed, and this will take months. We can, however, look at some preliminary estimates. Potentially some 5000 dwellings have some form of damage, of which maybe 1000 have severe damage and 50 may need to be replaced altogether. The Insurance Council of Australia has estimated total costs and the number of claims. Although both are rising, the average cost per dwelling is around the $22,000 mark. If we look at a typical cost to replace a modest house, and make an assumption about major repair costs, we can come up with some estimates. Spreadsheets being what they are, these numbers can be refined as better data becomes available. My first estimate of residential rebuild costs is approximately $600M.

So, altogether, we are looking on these very general numbers at over $1B to rebuild where we are.

Costs of a new site

Let's look at the other side of the coin, what the costs might be to develop a 20ha new CBD plus residential housing on, say, a 60ha site. Development costs are also slippery, and depend very much on what is already there, the topography, and a range of other factors. There's a fairly well- developed literature in this area, from which we can derive a range of estimates. In rough terms "roads, pipes and wires" are likely to be in the order of $65,000 per lot, and we can get about 22 lots per hectare of land. Our 60ha site will therefore cost us about $85M for the basic infrastructure. If the land is in the public realm, and Government wants to facilitate this, then we can avoid some significant development costs. Add say 30% for improvements outside the site, and some other costs, we come up with $110M.

This, of course is before we actually start building any buildings. When it comes to having to replace buildings altogether, this is a "neutral" cost, as it will be roughly the same on a new site as for an existing site. It would certainly be more expensive to rebuild rather than repair in many instances, and this needs to be considered.

To build again in a new site, we would be looking at, say, $400M for the CBD component, and say $440M for the residential components. Round it up and include land development costs and we might be looking at $1B.

So, in very rough terms, go or stay would be about $1B. When, however, we look at the avoided costs, adding together the residential and commercial costs over the next 20 years give us $4.4B. On this basis, it's a no-brainer, even if some of the costs are considerably out of whack."

ATTACHMENT B:

Recommendations of Council discussion paper on growth and rebuilding of Lismore

Lismore Council (May 2022) Review of Lismore's Land Use Management Strategy

PIA supports consideration of the discussion paper recommendations and urges broader State and National collaboration to enable the actions quickly and to build institutional capacity for future comparable situations where planned retreat is an option.

Recommendations 1,3 and 4 focus on a planned retreat options from the legacy risk. Recommendation 2 explores flood protection options for the CBD. Other recommendations focus on enhancing the capacity of Lismore to accommodate dislocation and future growth in a socially and economically sustainable manner.

> ***"Council Recommendation 1**: A planned retreat of residential dwellings from the most high flood risk areas of North and South Lismore is identified as a strategic objective. Lismore City Council will advocate for a State and Federal Government funded land swap arrangement to allow residents to move to higher ground but remain close to existing social networks and jobs. Where landowners elect not to relocate, voluntary house raising and other flood adaptation work will be encouraged.*

Council Recommendation 2: *Protection of the CBD and land on the eastern side of the Wilsons River is identified as a strategic objective. Details of future flood mitigation measures will be determined in a new Floodplain Risk Management Plan and the CSIRO flood mitigation study for the Richmond and Wilsons catchments. Lismore City Council will advocate for a Federally funded reinsurance guarantee similar to that announced for North Queensland to provide additional certainty to CBD businesses.*

Council Recommendation 3: *Investigations into the expansion of the Goonellabah Industrial Precinct along Oliver Avenue as shown in Figure 4 will be undertaken. A new strategy for economic recovery and growth will be undertaken by Lismore City Council, along with a cost / benefit analysis for the relocation of existing industrial land.*

Council Recommendation 4: *Preliminary design and feasibility work is undertaken to establish whether a new commercial or mixed-use centre could be established in the location of the golf course at East Lismore in the longer term (20+-years).*

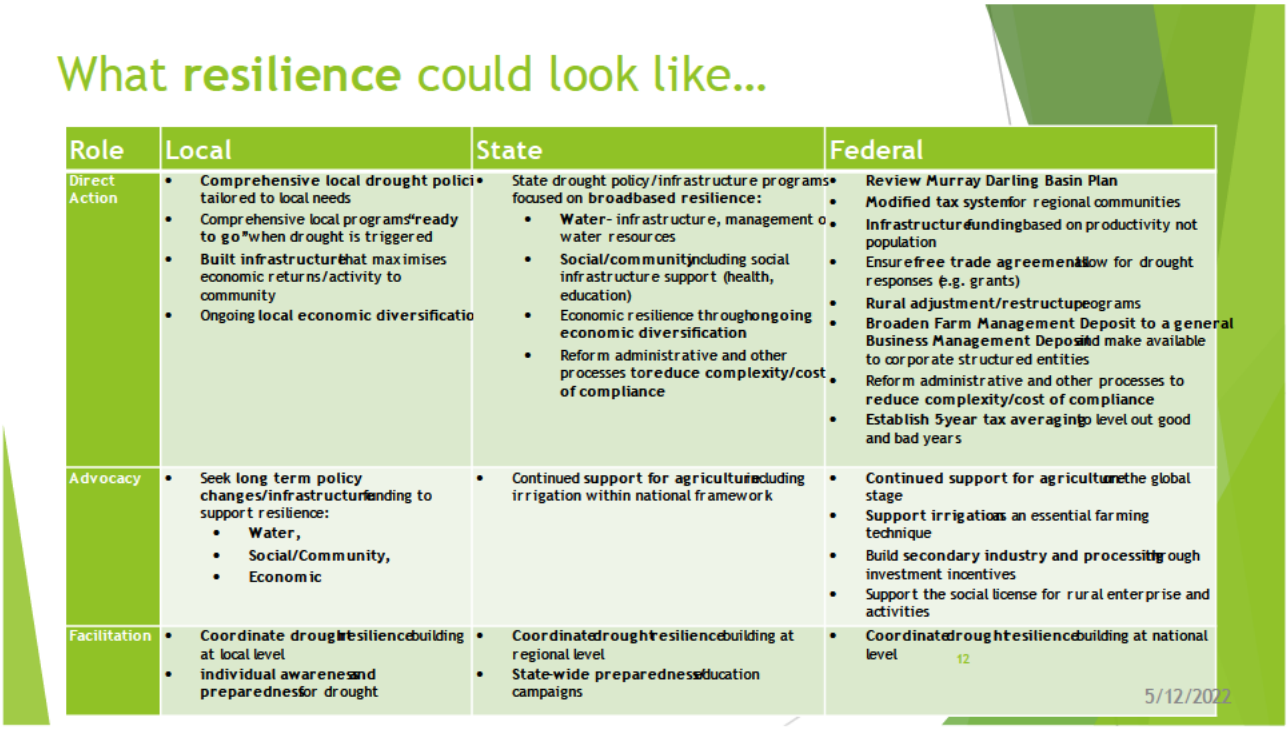
Council Recommendation 5: *New areas are zoned R3 for medium density residential use as shown in Figures 8 & 9, along with consideration for increased height limits for existing mixed use (B4) zoned land on Crawford Rd adjacent to the Northern Rivers Football Academy (Figure 10).*

Council Recommendation 6*: To ensure affordable housing is included as part of Lismore's growth, all land identified for future residential rezoning, (including village and large lot residential zoning) or a change in LEP controls to allow for greater density, will be included in Lismore's Affordable Housing Contribution Scheme and subject to a process of determining a viable rate.*

Council Recommendation 7: *In recognition that the delivery of water and sewer infrastructure is the key constraint to accelerating the delivery of new housing, Lismore City Council will undertake a review of the Infrastructure Delivery program to identify measures to fast-track infrastructure to new land releases outside of flood affected areas."*

ATTACHMENT C

An Example Adaptation Framework (A Witherby 2022 – Drought Example)



What resilience could look like...

Role	Local	State	Federal

Direct Action	• Comprehensive local drought policies tailored to local needs
	• Comprehensive local programs "ready to go" when drought is triggered
	• Built infrastructure that maximises economic returns/activity to community
	• Ongoing local economic diversification
		• State drought policy/infrastructure programs focused on broadbased resilience:
		  • Water- infrastructure, management of water resources
		  • Social/community including social infrastructure support (health, education)
		  • Economic resilience through ongoing economic diversification
		  • Reform administrative and other processes to reduce complexity/cost of compliance
			• Review Murray Darling Basin Plan
			• Modified tax system for regional communities
			• Infrastructure funding based on productivity not population
			• Ensure free trade agreements allow for drought responses (e.g. grants)
			• Rural adjustment/restructure programs
			• Broaden Farm Management Deposit to a general Business Management Deposit and make available to corporate structured entities
			• Reform administrative and other processes to reduce complexity/cost of compliance
			• Establish 5-year tax averaging to level out good and bad years

Advocacy	• Seek long term policy changes/infrastructure funding to support resilience:
	  • Water,
	  • Social/Community,
	  • Economic
		• Continued support for agriculture including irrigation within national framework	• Continued support for agriculture on the global stage
			• Support irrigation as an essential farming technique
			• Build secondary industry and processing through investment incentives
			• Support the social license for rural enterprise and activities

Facilitation	• Coordinate drought resilience building at local level • individual awareness and preparedness for drought	• Coordinated drought resilience building at regional level • State-wide preparedness education campaigns	• Coordinated drought resilience building at national level

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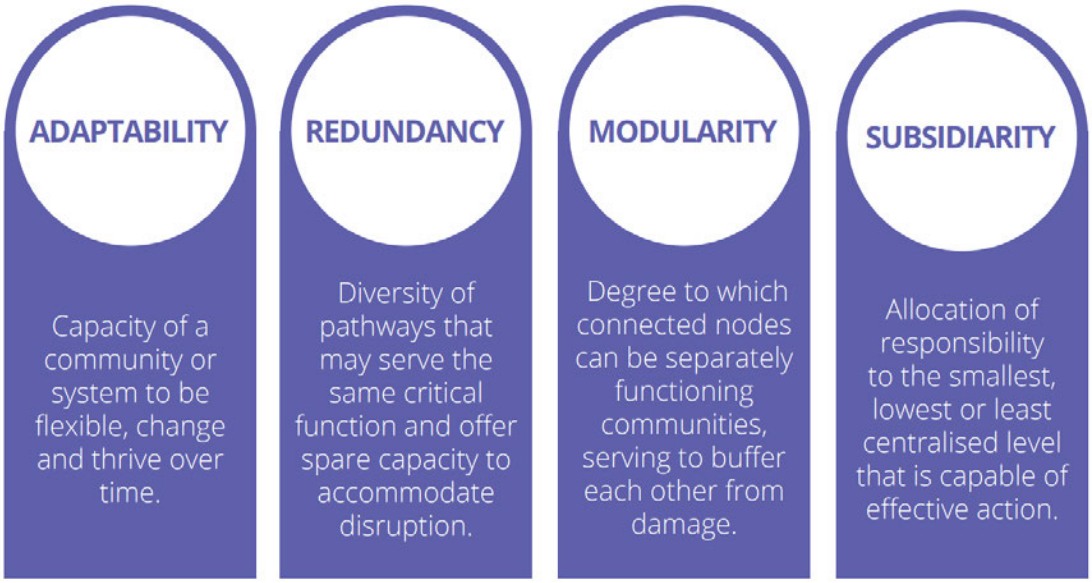
5/12/2022

Additional slides cover what 'immediate response' and 'recovery' roles involve. They could form part of a national resilience framework which:

- Allows federal, state and local polices to co-exist
- Guides key elements that policies should address
- Contains common definitions, agreements and responses
- Coordinates responsibility, resourcing and delivery of short and long term actions
- Provides for state and local flexibility and variation

ATTACHMENT D

Elements of Resilient Systems (PIA 2020)



ATTACHMENT E

Resilience in Regional Plans (PIA Advocacy 2022)

NSW regional plans could be strengthened to adopt clearer place-based outcomes – and ensure that they respond to the environmental shifts that have unfolded following the black summer fires and 2022 East Coast Floods. This would mean improving their treatment of 'resilience' and acknowledging its implications for planning and adaptive management systems.

Future plans should be informed by a resilience strategy, however, 'resilience' as a planning concept can be more deeply embedded throughout future regional plans. Future regional strategies should aim to:

- Test changing hazard and risk profiles in scenarios to inform strategic plans and address uncertainty – noting that historical projections are not always relevant in a changing climate.
- Test the relevance of planning strategies to more pervasive and gradual changes impacting the human and natural environment – especially climate change.
- Identify the settlement planning parameters for scenarios in a coherent and consistent way e.g. National Settlement Strategy and in State and Territory Regional Planning Frameworks and resilience strategies.
- Base planning parameters on consistent assumptions for potential exposure regarding:
    - population and community vulnerability
    - acceptable risks for bushfire, sea level rise, flood and urban heat
    - design life of housing, buildings and key infrastructure
    - infrastructure demand assumptions per capita.
- Set planning outcomes and supporting guidance at a landscape scale – and address the vulnerability of individual properties, buildings standards, access arrangements and infrastructure within this landscape context.
- Set strategic planning responses within adaptive management plans or pathways that are responsive to new information and threat reappraisal. Responses should not just be cost effective in achieving a single strategic planning outcome – but consider whether they promote a diversity of pathways that might assist adaption to evolving threats - or enable managed retreat/avoidance in the future (NB. characteristics of resilient systems include 'adaptability, redundancy, modularity and subsidiarity).
- Move beyond the 'approve and forget' paradigm and enable adaptive management. This includes promoting innovation in governance and collaboration among local communities, Indigenous peoples and across agencies to generate solutions that fall outside traditional silos – such as green infrastructure addressing flood and urban heat threats (including vegetation).
- Ensure consideration of climate risk occurs at every level of Government – and that adequate information and policy context (e.g. overlays) are available for the private sector and Government to manage risks accordingly and appreciate the dimensions of uncertainty.
- Give statutory effect to key resilience strategies, plans or guidelines.
- Integrate the management of natural values and protection of biodiversity

(See full article: Brockhoff J (2022) Expectations for the next generation of regional plans, New Planner Issue 130 March 2022)