

adrc 24

Australian Disaster
Resilience Conference

   #ADRC24



Australian Government
National Emergency Management Agency

Australian Institute for
Disaster Resilience 



Driving systemic change in land use planning policy - the Queensland Resilience Policy Maturity Framework for Land Use Planning

Anna Nottingham – Qld Department of Housing, Local Government, Planning and
Public Works

Stephen Dredge – Meridian Urban

Aligned
to the



afac24
powered by **INTERSCHUTZ**

CONFERENCE AND EXHIBITION

3 – 6 SEPTEMBER 2024

ICC Sydney



The Story so far

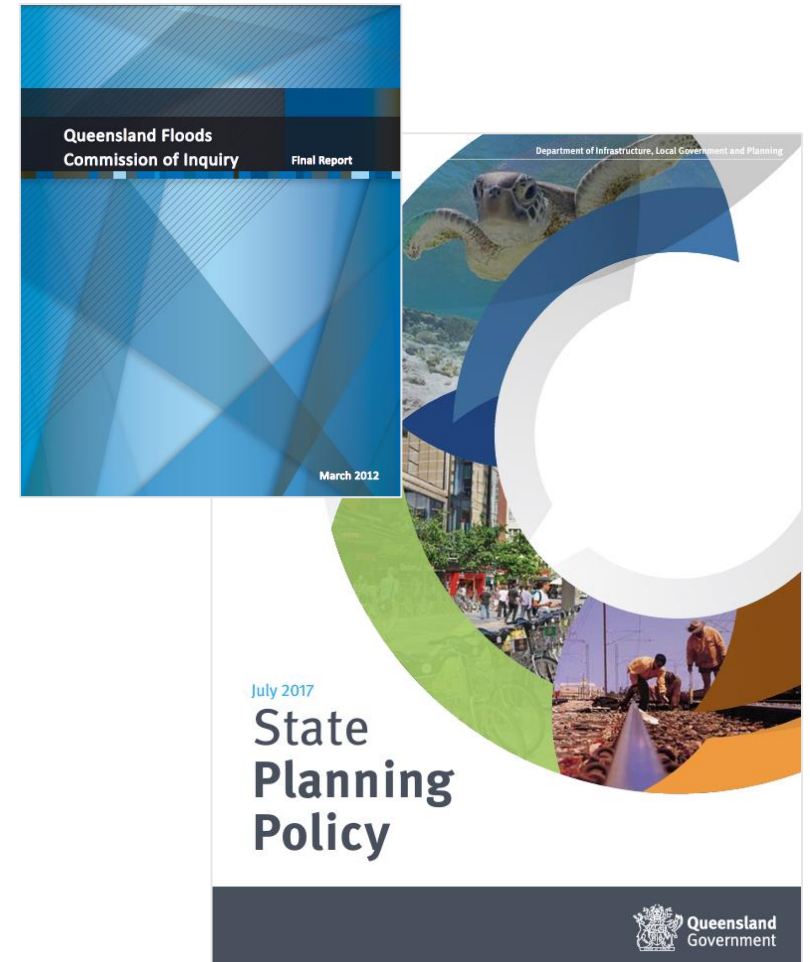
- Queensland has been subject to more than 100 disaster events since 2011
- Every major Qld town & city affected by natural hazard events in the past decade
- Queensland has been evolving its risk-based land use planning practices since 2011
- State Planning Policy in 2013 introduced the concepts of risk-based avoidance and mitigation into the land use planning system
- Challenges remain getting the policy settings and practice right in a highly evolving area





Barriers to date in delivering on policy

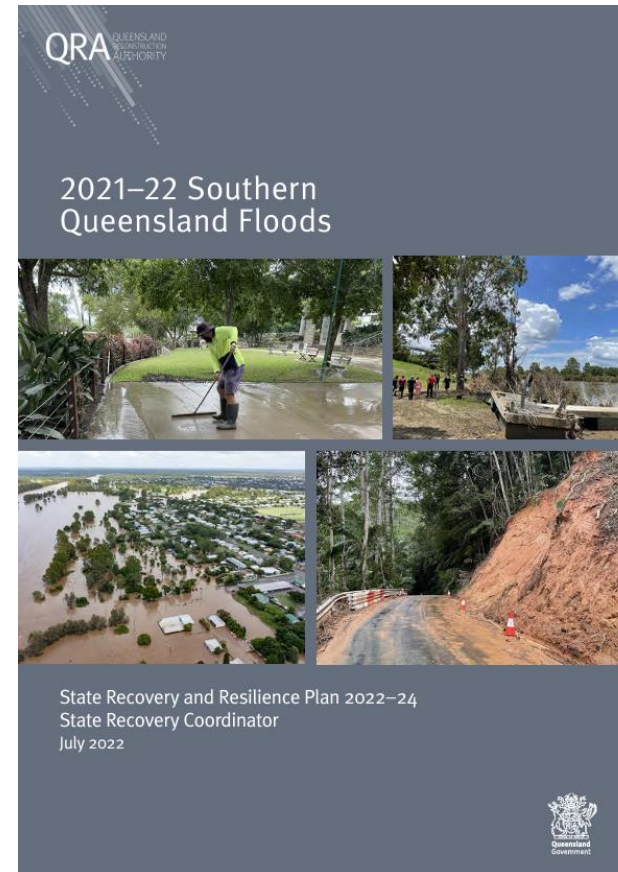
- Lack of data and risk assessment knowledge – studies are expensive and subject matter expertise limited
- Emerging natural hazard risk management capabilities – e.g. Queensland has only had a full flood risk management framework since 2021
- Local level decision making capacity and capability in natural hazard risk
- Adoption of risk-based planning principles and practices – which run counter to traditional forms of development
- Concepts of risk tolerance and guidance on balancing disaster risk vs urban growth remain under-developed





Recent drivers – practice enacting policy change

- The Southern Queensland Floods of 2021/2022 changed the game – scale of impact was unique in the events experienced to date
- Post-event Recovery & Resilience Plan included a priority action to advance resilience in regional planning
- Resilience was identified as a priority for the next update of the ShapingSEQ Regional Plan– to align with record investment in house buy-back, raising and retrofitting



Source: QRA 2024



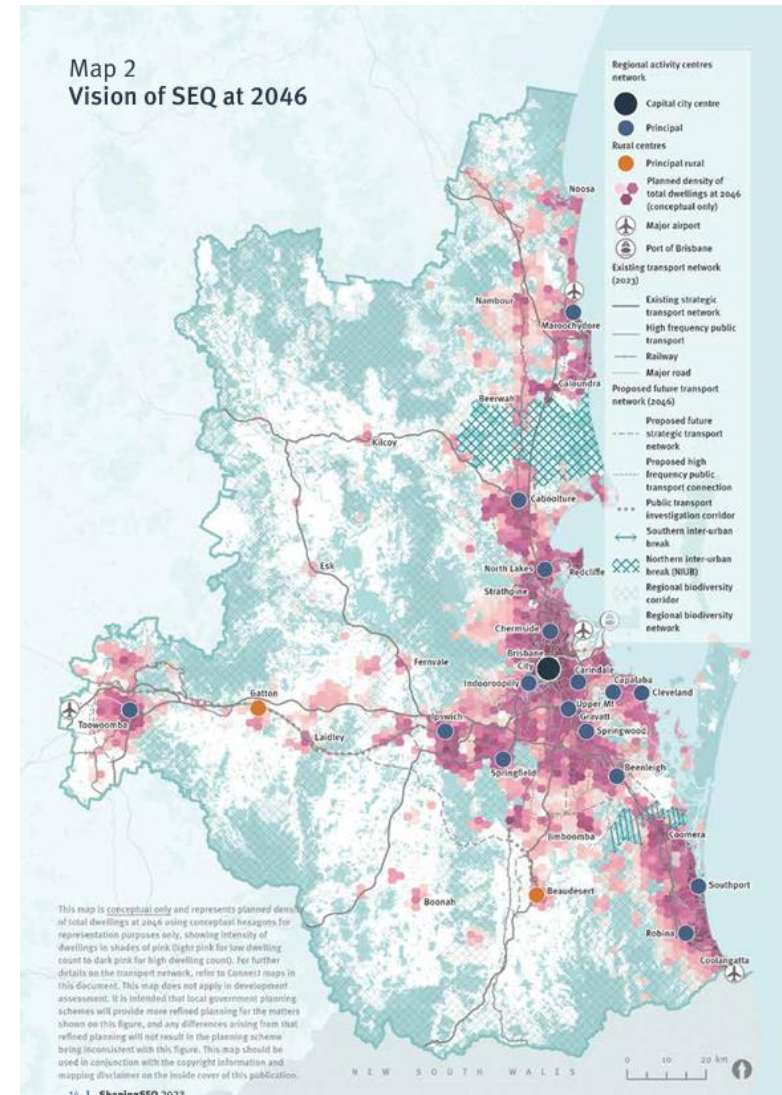
Advancing resilience in long term regional planning

- Re-calibrate land supply, growth projections and infrastructure planning in the SEQ Regional Plan based on outcomes from local floodplain management planning processes underway



What is a regional plan?

- A Regional Plan is a long-term strategic document that guides land use planning for state and local governments
- They exist in nearly every state jurisdiction in Australia
- ShapingSEQ sets:
 - The Urban Footprint – where urban growth is allowed to go across the region
 - Rural Living Area – where rural residential can go
 - Regional Landscape and Rural Production Area – non-urban areas for rural production and natural values
 - Potential Future Growth Areas - may be needed to accommodate long-term urban growth






Shaping the approach

- ShapingSEQ was an update to an existing Regional Plan – not a new one
- Condensed timeframes due to housing pressures
- Important to ensure that resilience and risk reduction was meaningfully addressed despite the timing
- Became obvious that there was a non-traditional solution that was required to meet the timeframes and set a forward policy direction that would make meaningful impact

In 50 years, SEQ will be recognised globally as a unique subtropical region where people love to live, learn, work, invest and play.



Residents of SEQ will enjoy a wide range of choices in their lifestyles, housing and jobs, and how they get around. This will make SEQ a leading subtropical, climate-resilient region where choice allows everyone to live productive and fulfilling lives.

Our global reputation will be built on our relationship with our First Nations culture and knowledge; enviable climate; exceptional natural assets and biodiversity; our strong and diversified economy; the quality of our buildings, places and events; our public transport system; and the many choices that our region offers.

SEQ will be recognised for its ability to consistently harness innovation and for its progressive society which celebrates Indigenous and modern culture, as well as social achievements.

SEQ will be Australia's eastern gateway to international markets. Globally visible and competitive, SEQ will grow its export share of the economy to create new activity and skills. More jobs will be located throughout the region with better and healthier options for accessing them.

Lifestyle and housing choices will be available to people of all ages and ability. Such choices will capitalise on our climate and environment, and shape the quality, affordability, design and renewal of our communities and places. A wide range of services, including health and education, will be readily available to all.

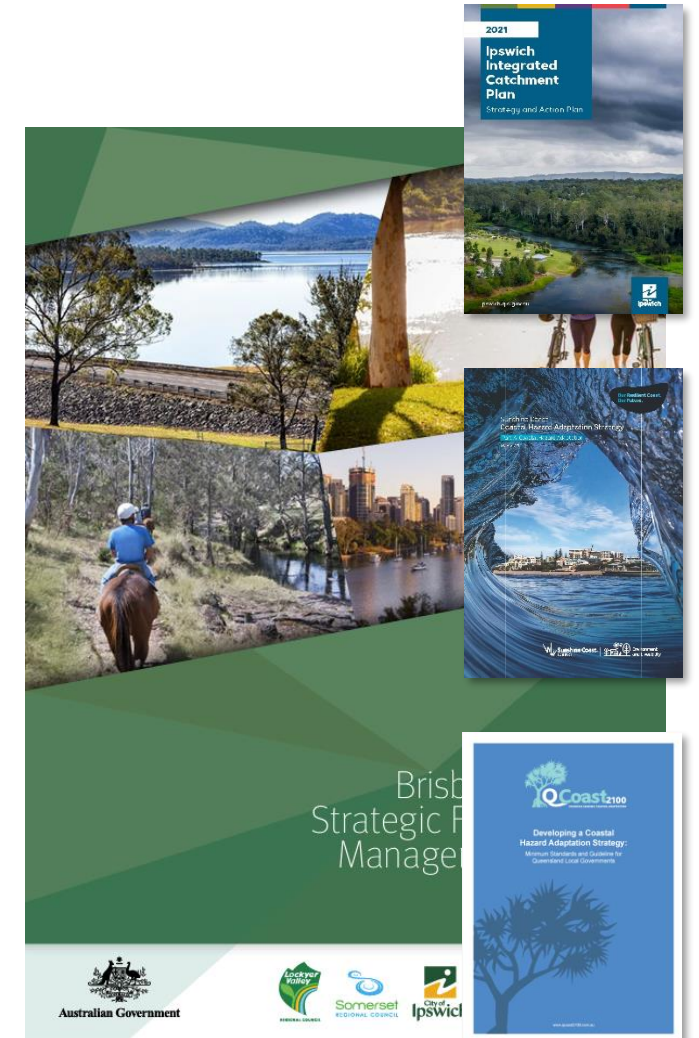
SEQ will be a smart region that embraces real-time data, new digital and other advanced technologies to improve our quality of life and reduce our ecological footprint.

SEQ will grow sustainably, compete globally and offer high-quality living.



Shaping the approach

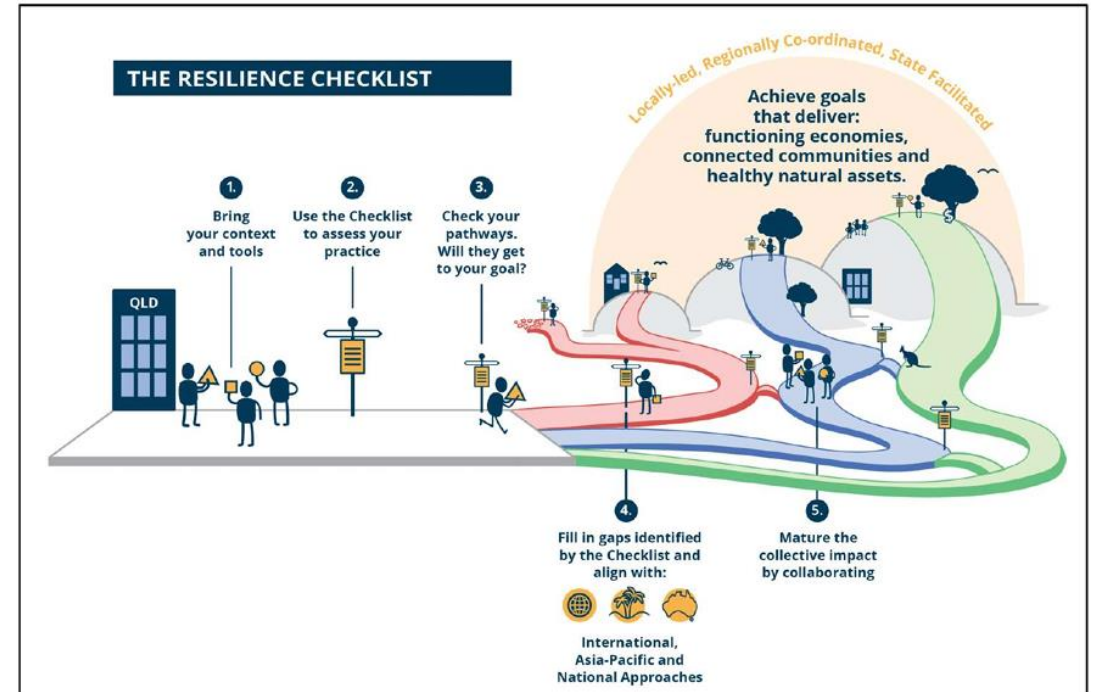
- Natural hazard risk management processes sit outside but related to the planning system
 - flood risk management plans such as the Brisbane River Strategic Floodplain Management Plan
 - QCoast2100 – Queensland’s Coastal Hazard Adaptation Strategy program
 - Bushfire and landslide studies – all at different stages / levels of maturity
- Local governments are also at differing levels of maturity across the region in practice, capacity and data/intelligence
- Land use policies and risk tolerances also differ across the SEQ region





A maturity approach

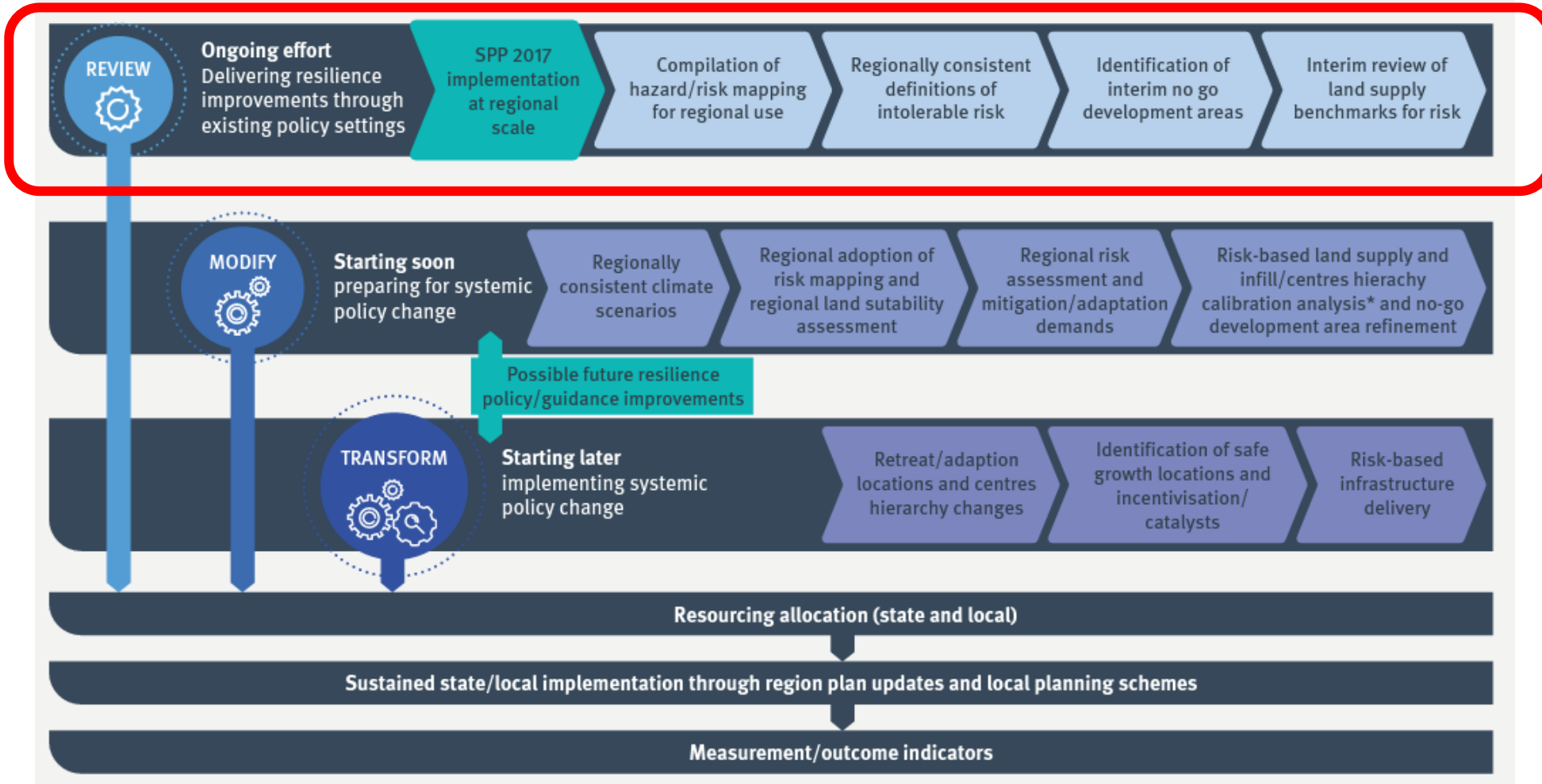
- Providing a common / consistent pathway for improvement and policy maturation despite these variations was a key challenge
- Helpfully, CSIRO's Resilience, Adaptation Pathways and Transformation Approach (RAPTA) provided the mechanism – doing same, doing better, doing different
- Q-RAPTA was developed by CSIRO for the Queensland Reconstruction Authority in 2020 for situations like this
- First time it was applied in Queensland





The policy maturity framework

Future regional plan reviews are to be undertaken in accordance with the Resilience Policy Maturity Framework.

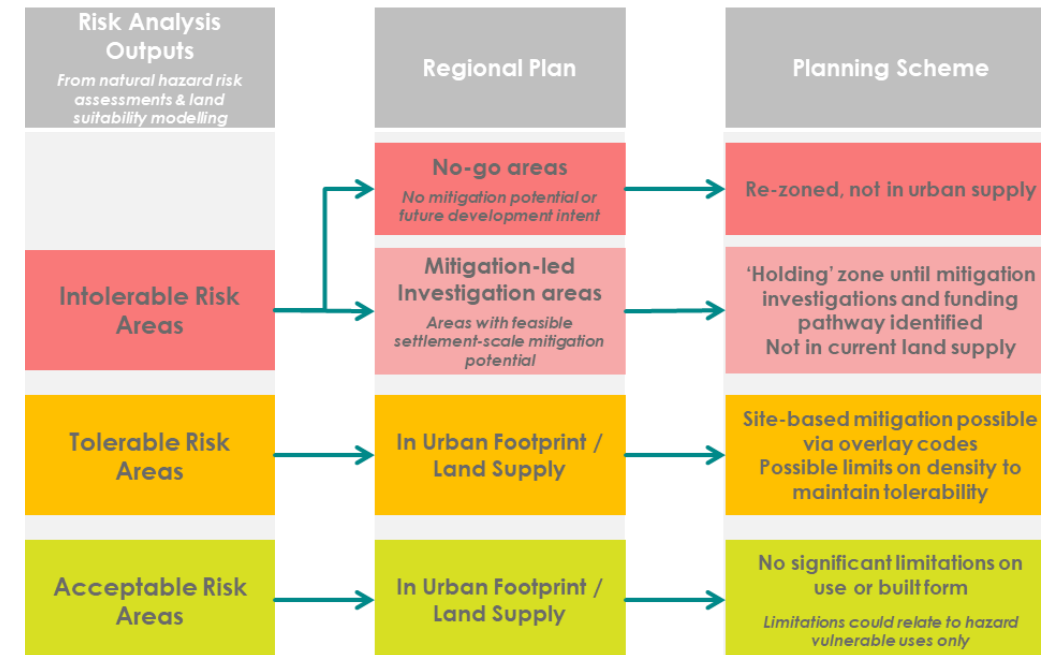


ShapingSEQ
Priority
Action 9



Innovation 1 – ‘No-go’ development areas

- Key concepts:
 - The Qld State Planning Policy articulates risk avoidance in preference to risk mitigation
 - ‘No-go’ areas are those completely unsuitable for urban development should be identified – to refine the Urban Footprint
- Areas considered:
 - Currently vacant / non-urban areas of high natural hazard exposure or intolerable natural hazard risk
 - Other unsuitable areas identified through existing or future local natural hazard risk management planning processes.
 - Centres at intolerable risk where there is an unfavourable cost benefit ratio of mitigation relative to the development at long-term risk of repeated impact





Innovation 2 – Risk-responsive future growth

- Key concepts:
 - Creating links to systemic risks like the role of natural hazard events in housing affordability, insurability & financing
 - Future housing and urban growth in safe places ensures that households and businesses can thrive, even when severe weather might strike
 - Short term focus on Priority Future Growth Areas and strategic infill locations like transport nodes
 - Developing consistent definitions of intolerable risk to drive land use planning interventions

Outcomes	Strategies
<p>Outcome 8 Resilience</p> <p>Climate and natural hazard risk avoidance, reduction and adaptation are core drivers of the region’s sustainable growth pattern and resilient built form needed to maintain our future capacity to cope and prosper.</p>	<p>8.1 Deliver resilience policy improvements in accordance with the Resilience Policy Maturity Framework in Figure 7.</p> <p>8.2 Integrate risk-based planning investigations and benchmarks (as per the Resilience Policy Maturity Framework) into strategic planning, zoning and development decisions so that:</p> <ul style="list-style-type: none"> a. strategic infill sites are only considered where they can achieve a tolerable (or preferably acceptable) level of natural hazard risk and where any mitigation accounts for climate change b. existing urban areas subject to intolerable risk are identified and examined over time to develop coordinated mitigation or adaptation solutions with clear funding pathways to address risk at the community scale or to plan for transition over time. <p>8.3 Incorporate heatwave and urban heat considerations in land use planning and urban design.</p> <p>8.4 Ensure future regional plan reviews are undertaken in accordance with the Resilience Policy Maturity Framework.</p> <p>8.5 Work towards adopting regionally consistent climate scenarios to inform risk-mapping and regional land suitability assessment as part of future stages of the Resilience Policy Maturity Framework.</p>



Innovation 3 – Preparing for future adaptation

- ShapingSEQ also foreshadows the need to prepare for future built environment adaptation
- While Queensland has coastal adaptation strategies in place, integration of adaptation directions into land use plans is the next step
- ShapingSEQ and the Resilience Policy Maturity Framework anticipate these and signal the need to change the urban form

Later stages of the Resilience Policy Maturity Framework – preparing for future adaptation

Now is the time to start preparing for the adaptation of the parts of SEQ that are, or will be, at intolerable natural hazard risk in the future. These are locations that have been severely impacted by events in the past and are very likely to be severely or extremely impacted again, possibly repeatedly, into the future.

These are locations that currently and likely will in the future:

- » Present a high risk to life safety
- » Are repeatedly subject to events – either frequently or due to the severity of impact
- » Have homes or built form that cannot withstand the impact
- » Cannot be feasibly mitigated through settlement-scale solutions like levees, sea walls or bushfire mitigation
- » Are or are very likely to be unable to secure property insurance and/or financing
- » May be socially or economically vulnerable



Innovation 4 - Heatwave and urban heat

- The state interest of natural hazards, risk and resilience in the SPP does not currently have state interest policies relating to heatwave
- Much work is required to develop a heat hazard risk management framework beyond the response-driven Heatwave Sub-plan within Queensland’s disaster management arrangements
- ShapingSEQ begins this journey – provides impetus for regional and local scale assessments
- Also built form responses – greening and cooling strategies and increasing tree canopy cover for example

Heatwave and urban heat considerations

The state interest of natural hazards, risk and resilience in the SPP does not currently have state interest policies relating to heatwave.

Heatwaves are Australia’s deadliest natural hazard, estimated to have caused more deaths in Australia than all other natural hazards combined. A changing climate is likely to see heatwaves and extreme heat events become more frequent with all natural, rural and urban environments within SEQ likely to experience higher average temperatures as a result.

These impacts will be greater within urban areas and cities due to the urban heat island effect.

While the urban heat island effect will always be inextricably associated with urban development and density, mitigation and resilience measures will be key to reducing urban heat island impacts and tie in with broader urban

greening strategies, supporting blue and green infrastructure, heat-sensitive land use planning and urban design, and climate change adaptation measures to enhance the liveability of urban communities.

Priority Action 10 – Heat hazard mitigation

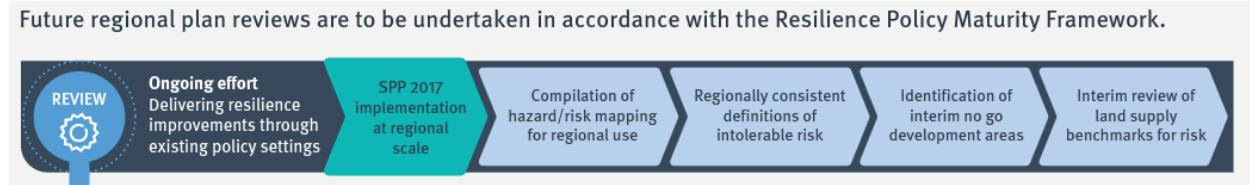
Stakeholders: State and local governments **Timeframe:** 2025–2026

Local governments undertake local-scale heat hazard risk assessments, local microclimate assessment and built form investigations to guide land use planning, urban design and greening and cooling strategies.





The review pathway



- Focuses on continuing to deliver on existing policy settings to the fullest extent
- 2-year implementation timeframe to deliver:
 - Compilation of all available risk information held across local and state stakeholders
 - Development of regionally consistent definition of intolerable risk
 - Undertaking integrated risk assessments and land suitability assessments
 - Identification of no-go areas
 - Alignment of those no-go areas into land supply models

Stage 1 (the Review Pathway) has been funded already

A great example of cross agency collaboration and commitment to policy implementation, driven by sustained investment in resilience and mitigation as intended by the Commonwealth government



Benefits and outcomes

- Through efforts like this, disaster risk reduction and resilience are no longer just ‘buzz-words’ in strategic land use plans
- It is a structured implementation framework for making sustained land use policy and practice change over time
- Funding commitment of government makes this a possibility
- An innovative model for other regions around Australia to make the methodical and planned step-changes to land use policy and settlement pattern required by our state and national resilience and adaptation policy documents