



CRC for
Water Sensitive Cities



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Project B4.2

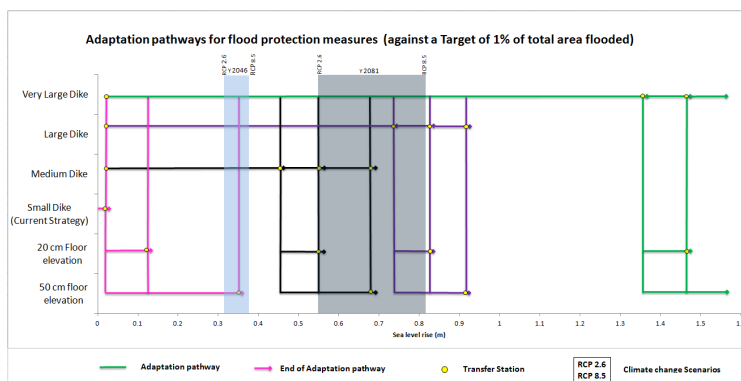
Socio-Technical Flood Resilience in
Water Sensitive Cities – Adaptation
across spatial and temporal scales

Climate adaptation pathways

Accounting for synergies between ongoing and future actions

Adapting to climate change

Climate change adaptation plans in Australia call for appropriate risk management strategies for assets and services via implementation of enhanced disaster resilience strategies and policies to facilitate climate resilience across the community. This can be seen translated into a number of action plans such as flood plain management plans, coastal adaptation pathways, city water plans and open space water management plans. A review of the range of plans for City of Port Phillip in Melbourne reveals a host of possible measures such as large scale storm water detention, property level storm water retention, improvements to drainage systems, building of sea walls, reintroduction of water into the urban landscape, changes to building design and opportunistic relocation or redesign of critical infrastructure. Individual households also resort to independent adaptation measures as the State is not responsible for reduction of impact - e.g. coastal hazard and sea level rise - on private properties.



Adaptation pathways

Adaptation pathways provide an analytical approach for exploring and sequencing a set of possible actions that may be optionally switched in response to various drivers such as climate, land use, demographic and socio economic changes over time. Integration of synergies between City wide adaptation options such as dikes and household adaptation options such as elevating floor board level is possible through adaptation pathways.

Adaptation pathways comprising synergies between adaptation measures for flood risk management systems in Can Tho, Vietnam

Accounting for synergies

Account for synergies between

- (i) disaster risk reduction and climate change adaptation;
- (ii) targeted adaptation interventions, opportunistic measures that arise out of periodic O&M of municipal and private assets.
- (iii) adaptation measures taken by the state and by the individual households;
- (iv) adaptation measures taken across various sectors such as storm water management, open space management and others.

There is scope for implementation of adaptation pathways in the City of Port Philip plans through integration and the many synergies. The exploratory adaptation pathways framework currently under development comprise synergies, generates adaptation pathways and helps to determine the value of the pathways based on costs and benefits.



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