

Port Phillip Bay Coastal Adaptation Pathways Project

Association of Bayside Municipalities

Municipal Association of Victoria

Central Coastal Board

Port Phillip Bay Coastal Adaptation Pathways Project

Project objectives:

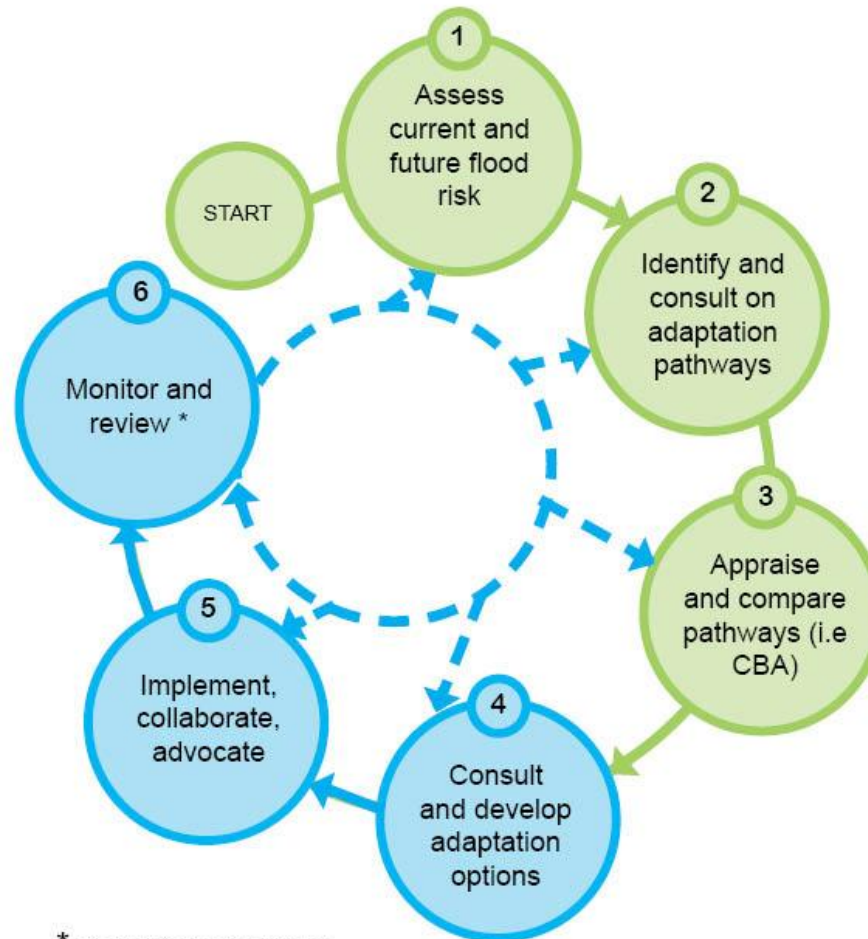
To develop and test a framework that helps identify and assess adaptation pathways for changing inundation risks in urbanised coastal areas.

Project partners:

Association of Bayside Municipalities, Central Coastal Board, Mornington Peninsula Shire Council, Kingston City Council, City of Port Phillip, City of Melbourne, Melbourne Water, Dept of Sustainability & Environment, Dept. of Planning & Community Development



A decision making framework to develop an adaptation pathway for changing flood risk



- * Reapply framework when:
- Factors influencing flood risk change (i.e updated climate change projections, new flood mapping etc)
 - Major funding opportunities become available
 - Risk appetite changes



Steps that have been undertaken for Port Phillip Bay Coastal Adaptation Pathways Project



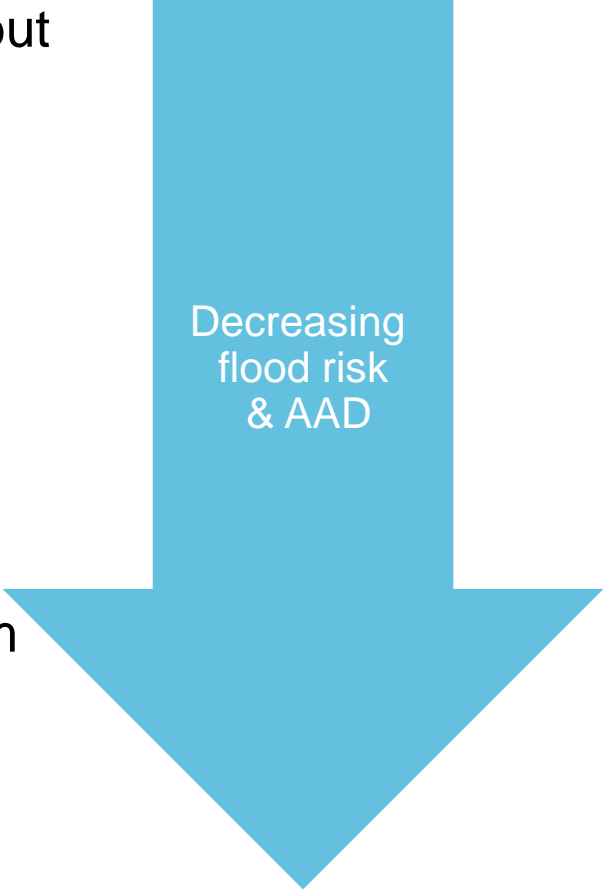
Additional steps needed to realise the adaptation pathway

Adaptation pathways used for the Port Phillip Bay sites

Accommodate Pathway – allow flooding to occur but minimise the impacts through behavioural responses

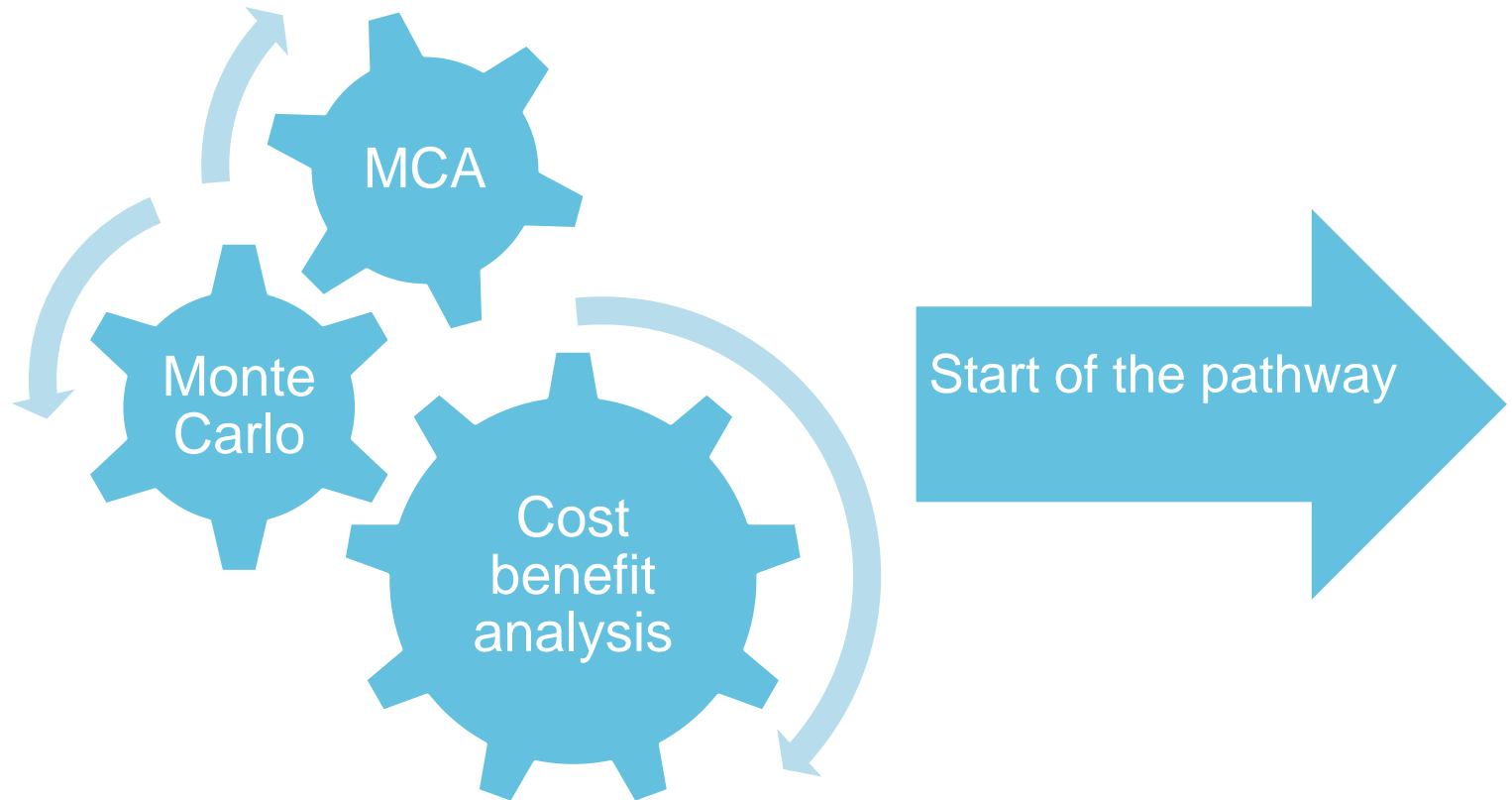
Moderate Protection Pathway – reduce flooding from current 100 year ARI events

Major Protection Pathway – eliminate flooding from 2100 100 year ARI events



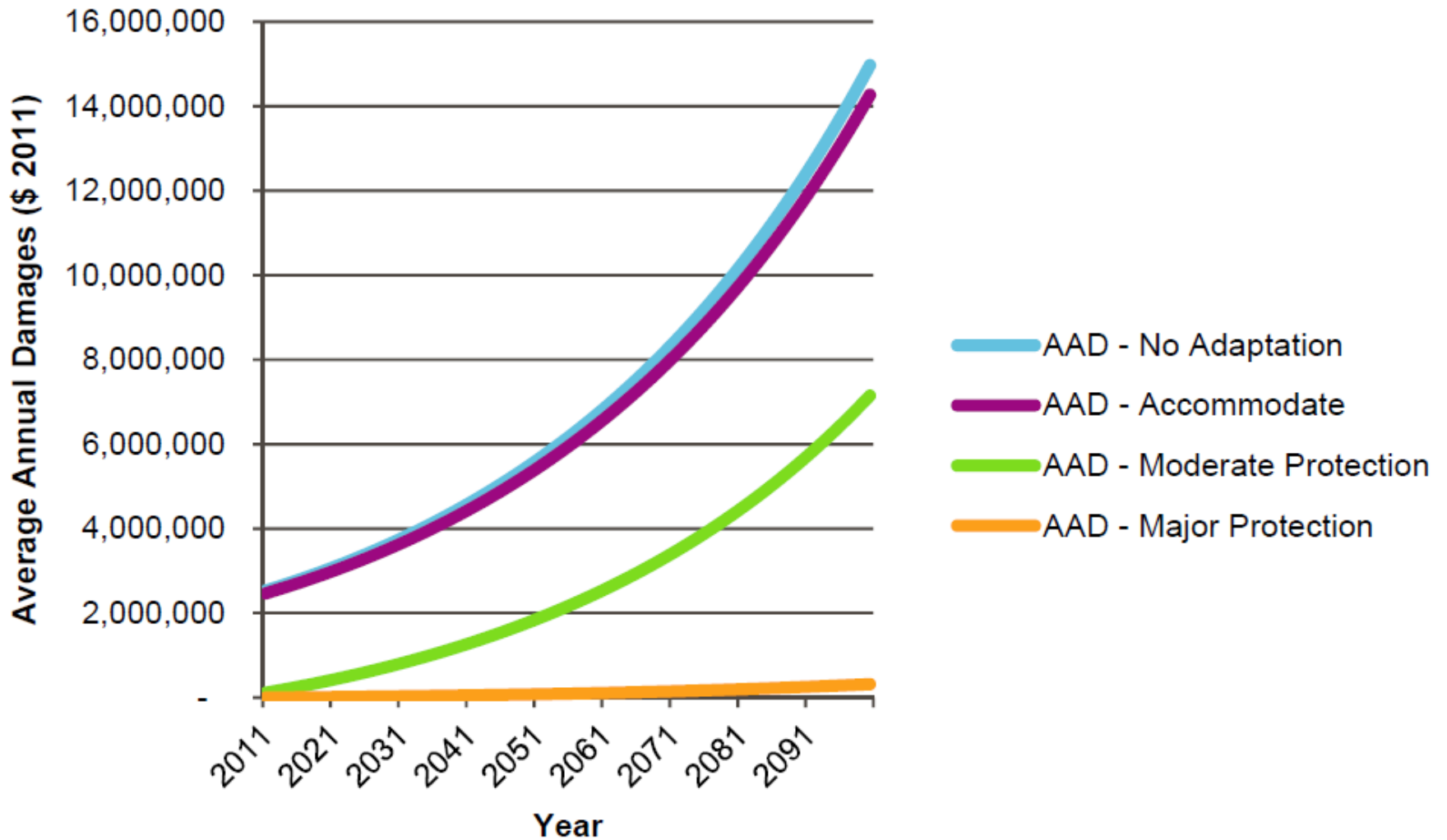
Decreasing
flood risk
& AAD

Appraise and compare adaptation pathways



The objective of this step is to help identify the ‘start’ of a pathway - the scale of investment and benefit, and timing for implementation

Port Phillip Bay Adaptation Pathways



Enablers

- **Steering Committee to make ‘policy ready’ results**
- **Action Learning Approach**
- **Public release of mapping**
- **Communication planning**
- **Accessible (non-technical) communication of results**



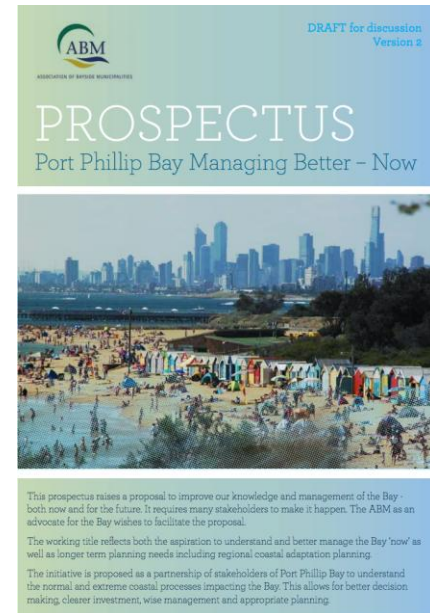
Recommendations and responses

1. Technical standards and supporting data for adaptation planning
2. Mechanisms for multi-agency collaboration and governance for urban inundation
3. Proactive communication and engagement with the community
4. Prioritise regional or catchment scale adaptation options
5. Integrate adaptation planning into urban renewal and development
6. Build capacity within responsible authorities
7. Funding mechanisms for regional adaptation options

ABM role and responses

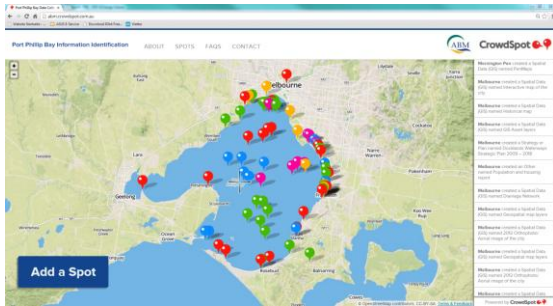
ABM initiated 3 responses to meet further adaptation outcomes.

- 1 Continue to build the partnership between State and Local Government for adaptation planning
- 2 Develop a Prospectus, *Managing Better Now* to fill known gaps and strategic directions
- 3 Develop a framework and establish a *Futures Plan* for the Port Phillip Bay region



1. Technical standards and supporting data

Crowdspot Survey



Research data availability



Develop a GIS portal



1. Technical standards and supporting data

Coastal erosion processes dynamics

Natural and artificial coastline – urban context

Assets, addresses, zones, infrastructure within 100m

Volume of sand and buffer of beaches/coastline

Establish 1% AEP wave heights, 1% sea level,

1% Storm bite / coastal erosion

Look at predictive methods to prepare for coastal impacts

Consistency with Bellarine LCHA

2. multi-agency collaboration for urban inundation
3. proactive communication and engagement
4. regional or catchment scale adaptation
5. Integrate adaptation planning

The *Plan for Port Phillip Bay* -successful VASP submission

-transformational not business as usual

- based on plausible future scenarios looking at climate and non climate impacts in a regional and local context

- has a strong focus on partnership ,engagement and communication

- regional scale integrated planning

6. Build capacity within responsible authorities

Plan for Port Phillip Bay and overall ABM directions

ensure skills are provided in context

approaches are consistent & embedded

understand and harmonise roles and responsibilities

examines and improve decision making processes

shares information with the community

7. Funding mechanisms for regional adaptation

Plan for Port Phillip Bay

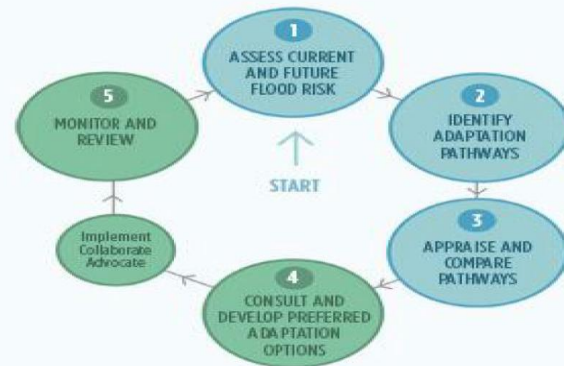
Cost benefit approaches, funding options, beneficiary contributions, statewide financing, multi agency approaches, and private sector involvement.

NB. The draft VCS suggest an examination of financing options



OVER THE PAST TWO YEARS, FOUR PORT PHILLIP BAY MUNICIPALITIES HAVE BEEN INVOLVED IN A PIECE OF APPLIED RESEARCH TO FIND OUT IF ECONOMIC MODELLING CAN HELP DECISION MAKING IN RESPONSE TO COASTAL FLOODING.

THE ANSWER IS YES



COST BENEFIT ANALYSIS CAN INDEED HELP DECISION-MAKERS DETERMINE WHAT RESPONSES ARE APPROPRIATE AND WHEN BEST TO IMPLEMENT SPECIFIC WORKS.



But the project equally found that, without the correct inputs, the results would be less robust.

One of the major learnings to emerge from the research is that it is limited value looking at a small, specific area of a single municipality in isolation from the region or, at least, the waterways catchment in question.

FLOOD WATERS DON'T RESPECT ARBITRARY LINES ON MAPS, AND DAMAGE AND ECONOMIC BENEFITS NEED TO BE ANALYSED WITHIN A WIDER CONTEXT OF REGIONAL, STATE AND EVEN NATIONAL ECONOMIES.

While this website celebrates the achievement of a "road-tested" series of economic modelling tools, please understand that the formulas need far better inputs before we can truly claim meaningful results.



PROJECT MANAGERS



PARTICIPATING PARTNERS



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