# Climate Risk, Local Government Response

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# NAGA

- Development and delivery of innovative and regional **projects**
- Advocacy on behalf of member councils
- Sharing best practice/information
  through effective **networking**
- **Research** emerging issues





#### **Victorian Greenhouse Alliances**





Central Victorian Greenhouse Alliance (CVGA)
 South East
 Eastern Alliance for Greenhouse Action (EAGA)
 Western Alli
 Gippsland Climate Change Network (GCCN)
 Wimmera N
 Goulburn Broken Greenhouse Alliance (GBGA)
 No alliance

Northern Alliance for Greenhouse Action (NAGA)

South East Councils Climate Change Alliance (SECCCA) Western Alliance for Greenhouse Action (WAGA) Wimmera Mallee Sustainability Alliance (WMSA)

# **Climate Risks and Local Government Activities**

- Infrastructure and Assets
- Human Health
- Sport and Recreation
- Natural Environment Management
- Land Use Development
- Council Operations



#### **Infrastructure and Assets**

- Are my assets exposed to new risks?
- Are they still fit for purpose?
- Will stormwater drainage be able to cope with flash flooding?
- What will be the impacts of extreme heat on road maintenance?
- Will some assets get greater use (e.g. pools)?





# **Human Health**

- What's the relationship between our most vulnerable and anticipated climatic impacts?
- How do we improve the resilience of vulnerable populations?
- How to cope with specific 'known' impacts such as heat waves?





# **Sport and Recreation**

- Is council conserving water for grounds?
- Are we considering impacts of drying grounds (e.g. injuries), and alternative surfaces?
- Is there adequate shading at sports grounds?





#### **Natural Environment Management**

- Are we planting street trees that will thrive in warmer conditions?
- Are we planting enough street trees (and shrubs etc) to reduce urban heat island effect?
- Does our weed management system recognise changing growing conditions (broader spread and longer)?





#### Land Use Development

- Are new developments in a forecast flood or fire risk zone?
- Do new developments protect residents in the face of projected threats?
- Are we promoting local renewable energy to ease grid pressure during heat events?





# **Council Operations**

- Can we operate if buildings are damaged?
- Wil our staff be exposed to harm delivering services during heat waves?
- How much capacity does council lose during events?





#### **Local Government Responses**

- Understanding Likely Impacts
- Assessing Climate Risk
- Measuring Exposure
- Asset and Natural Environment Management
- Embedding Climate Management



# **Understanding Likely Impacts**

- CSIRO's Victorian climate
  projections
- Localised impacts (5km sq) for heat, rainfall and humidity
- Data can be used for modelling responses





# **Assessing Climate Risk**

- Build climate change into internal risk register.
- Can be used for both climate mitigation and adaptation.
- Case studies: Yarra and Darebin

ANCE FOR

NAGA forming risk working group to share best practice

| REF ID | ACTIVITY | ASSOCIATED<br>HAZARDS / RISKS | PROBABILITY<br>1 – 5 | IMPACT<br>1 - 5 | PI SCORE<br>Prob x Impact | LEGISLATION / STANDARDS /<br>GUIDANCE | POLICIES AND REQUIREMENTS | CONTROLS | RESIDU/<br>RISK<br>RATING |
|--------|----------|-------------------------------|----------------------|-----------------|---------------------------|---------------------------------------|---------------------------|----------|---------------------------|
|        |          |                               | 1                    | 5               | 5                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 4               | 8                         |                                       |                           |          |                           |
|        |          |                               | 3                    | 3               | 9                         |                                       |                           |          |                           |
|        |          |                               | 4                    | 2               | 8                         |                                       |                           |          |                           |
|        |          |                               | 5                    | 1               | 5                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 1               | 1                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 3               | 6                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 1               | 1                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 2               | 2                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 3               | 3                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 4               | 4                         |                                       |                           |          |                           |
|        |          |                               | 1                    | 5               | 5                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 2               | 4                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 3               | 6                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 4               | 8                         |                                       |                           |          |                           |
|        |          |                               | 2                    | 5               | 10                        |                                       |                           |          |                           |
|        |          |                               | 3                    | 3               | 9                         |                                       |                           |          |                           |
|        |          |                               | 3                    | 4               | 12                        |                                       |                           |          |                           |
|        |          |                               | 3                    | 5               | 15                        |                                       |                           |          |                           |
|        |          |                               | 4                    | 4               | 16                        |                                       |                           |          |                           |
|        |          |                               | 4                    | 5               | 20                        |                                       |                           |          |                           |
|        |          |                               | 5                    | 5               | 25                        |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |
|        |          |                               |                      |                 | 0                         |                                       |                           |          |                           |

**OHS RISK REGISTER TEMPLATE** 



# **Measuring Exposure**

- How Well Are We Adapting?
- Measures adaptation progress through indicators that assess service capacity.





#### **Asset and Natural Environment Management**

- Building Vulnerability Framework
- Assessing future capitals works costs
- Urban forest strategies





#### **Embedding Climate Management**

- Needs to be recognised in council plans (not just sustainability or climate plans)
- Need for clear roles and responsibilities (applies to all)
- This is a major shift in governance





#### **Thank You**

David Meiklejohn **Executive Officer** 

