Suggested Actions for environmental practitioners, Divisions & Chapters and Special Interest Sections

Delivering Environmental Practice and Natural Disaster Resilience

These suggested actions support the EIANZ Position Statement "Environmental Practice and Natural Disaster Resilience".

Given the current status and likely increase in the effects of natural disasters much more coordinated planning, mitigation and recovery is required to build resilience to natural disasters both now and into the future.

Environmental practitioners, EIANZ Divisions & Chapters and Special Interest Sections have a key role in facilitating targeted action across the full range of policy and implementation arrangements at all jurisdictions to improve natural disaster resilience. This includes using natural assets to reduce the impacts of natural disasters on the environment itself, our communities and infrastructure, to understand environmental impacts of new development and to manage environmental assets and values within the context of natural disaster resilience.

The Special Interest Sections provide specific support on climate change, heritage, contaminated land, ecology, and impact assessment. All of these have a role to play in delivering natural disaster resilience.

Guidance is provided under the following three themes and related actions. These are targeted at activities across the full range of policy and implementation arrangements relevant to all jurisdictions.

1. Ensuring that the right data and information is available in a useable format

To provide transparent data and information to determine natural disaster hazard (from bushfires, storms, earthquakes, tsunamis, cyclones and floods), and understand the exposure, vulnerabilities and post impact assessment of communities, infrastructure, habitats and natural assets:

- Present climate change data and information in a readily usable format for determining / reassessing natural hazards especially in relating to downscaled climate projections and agreed climate trajectories.
- Promote and engage with the systematic collection of impact data from natural disasters recognising the need for comprehensive pre-disaster baseline data in order to conduct post- disaster impact assessments, along with subsequent monitoring.
- Use understanding of ecological processes to support natural hazard and exposure mapping including environmental hazards and exposure for air and water quality, biodiversity values, the identification of vulnerable natural assets and habitat recovery barriers to support subsequent enhancement strategies.

- Lead the coordination of actions relating to air and water quality impacts of natural disasters, recognising the potential for cascading and cumulative impacts, particularly water quality in water supply catchments (e.g. significant rain runoff following bushfires).
- Ensure environmental and ecosystem definitions are appropriate for input to planning process and the assessment of appropriate building materials.
- Share data and lead the development of improved consistency in environmental data collection, including the innovative use of mapping and technology to identify ecologically significant areas.

2. Collaboration with others

To collaborate with other disciplines, while learning from our past, to guide the way we deliver natural disaster resilience using a "convergence of solutions" philosophy, and applying multidisciplinary approaches to delivering multi objective outcomes:

- Develop strategic alliances and working relationships (potentially joint "Communities of Practice") with other professional bodies as appropriate at national, state, regional and local levels.
- Lead and support collaborative multi-disciplinary and holistic approaches to:
  o develop and implement integrated strategies that incorporate climate change and address cumulative effects of natural hazards, social issues and economic viability, and
  o to develop transition strategies and pathways to deliver sustainable and disaster resilient communities.
- Adopt a multi-objective planning and convergence of ideas philosophy to include environmental and landscape management objectives that support disaster resilience in planning processes for land use, management and rehabilitation, infrastructure, emergency management and hazard reduction.
- Engage in the development of locally based fire management strategies recognising that ecosystems and land management units do not respect land ownership (either public or private) or administrative boundaries.
- Support and engage in the development of natural disaster resilience strategies (e.g. Bushfire Management Strategies) that incorporate indigenous knowledge and techniques, and consider indigenous cultural heritage to restore and maintain cultural and ecological integrity in addition to providing community safety.
- Work closely with land use planners to ensure environmental considerations, such as any potential natural hazards and the design of conservation reserve systems including wildlife corridors for mobile species to withdraw from bushfires and other disasters are considered in the development of planning documents and the consideration of development applications.
- Engage with emergency planning and response agencies to establish national standards and training for wildlife response and recovery and to ensure

appropriate development and integration of effective wildlife response and recovery capabilities are considered and in place.

- Engage with architects and building control regulators to ensure ecosystem and vegetation mapping suits the needs of residents deciding on building materials.
- Engage with waste and recycling industry groups to develop guidelines for post impact "unwanted material" collection to maximise recycling and minimise demand for land fill.
- Engage with the Australian Institute for Disaster Resilience to support its work to enhance disaster resilience through innovative thought leadership, professional development and knowledge sharing. This will support its work with government, community, research, education, and the private sector to share extensive knowledge and experience in Australia and abroad.

3. Improved understanding and management of natural assets for enhanced disaster resilience

To improve management of natural resources and the way environment and landscape management are considered in preparing for, preventing, responding to and recovering from natural disasters:

- Support the research, development and deployment of new and improved nature-based resilience strategies and technologies for environmental assessment and management of natural assets to reduce natural hazards and impact on communities and infrastructure.
- Work collaboratively and support investment in long-term ecosystem and land management, modelling, forecasting, research and evaluation to promote natural disaster resilience and adaptation, particularly as a result of climate change.
- Develop strategic alliances to support and provide environmental science expertise with jurisdictional risk reduction and resilience agencies to ensure climate change, environment and natural asset management are appropriately considered in resilience and recovery activities.
- Develop marketing and communication strategies including targeted storytelling to increase the understanding of the benefits of managing natural assets (green infrastructure) to improve community and economic resilience.
- Develop industry best practice guidelines for social – ecological impact assessments to ensure consistent coverage of appropriate considerations for new developments.
- Develop strategic alliances for improving wildlife management and species conservation particularly when recovering from bushfires.
- Engage with jurisdictions to support environmental resilience and recovery and in particular assist with the development of fit for purpose business cases identifying resilience opportunities and the related economic benefits.
- Engage with government agencies to ensure greater consistency and collaboration in the collation, storage, access and provision of data on the distribution and conservation status of Australian and New Zealand flora and fauna.