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HAZARDSCRC

RISK OWNERSHIP OF NATURAL HAZARDS: ACROSS SYSTEMS AND ACROSS VALUES



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An Australian Government Initiative



THE TEAM

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End Users

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PROJECT OBJECTIVE

The project aims to develop:

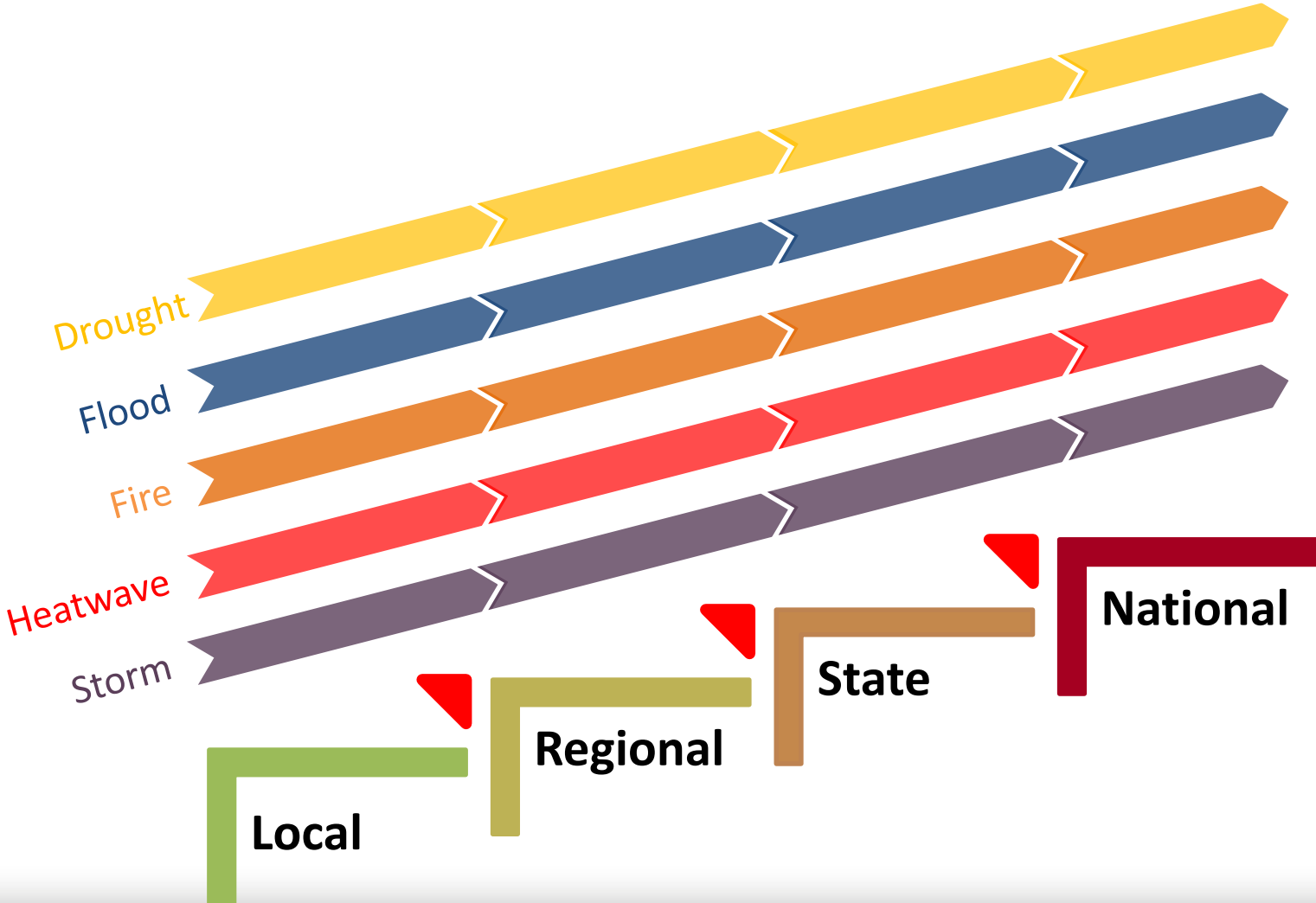
- 1) An economic geography of values at risk.
- 2) A framework to assist the development of governance around risk ownership of values at risk.

RISKS CROSSING DOMAINS

Domains: geographic, institutional, sectoral

- a) Exceeding local and regional capacity, propagating to state and national scales (e.g., disaster recovery and relief)
- b) Accumulated losses at household, small business can pass on to government (disaster, drought assistance)
- c) Damages to critical supply chains
- d) Severe or accumulated damages can lead to long-term social and environmental losses

DOMAIN CROSSING



RISK OWNERSHIP

Two traditions: economic and risk management

1. Whoever owns the assets owns the risk (economics)
2. person or entity with the accountability and authority to manage a risk (ISO 31000)

Strategic risk management before and after events

ASSET OWNERSHIP

Risk ownership — asset owners should be responsible for managing risks and funding risk management (PC 2014).

May not account for systemic risk – risk that has crossed domains: transferred risk, collapse of supply chains, essential services, uncertainty around shared risk.

WHO 'OWNS' THE RISK?

- 1) Who manages a risk in 'normal' circumstances?
- 2) What values are at risk and who values them (e.g., monetary, social, environmental)?
- 3) Who receives a risk that has crossed domains? Can they accept responsibility for managing it?
- 4) Whose role is it to plan and implement proactive risk management (planned adaptation)?

Adapted from Jones et al., 2013 NCCARF

INVISIBLE VALUES AND INSTITUTIONAL UNCERTAINTIES

- 1) Current risk and exposure to risk is uncertain because of changing baselines.
- 2) Unclear, partial or disputed ownership of risks as they cross domains.
- 3) Un-owned risks are undervalued, so can be psychologically remote.
- 4) The commons (atmosphere, nature) are everyone's care and no-one's responsibility.
- 5) Severe risks tend to be discounted by individuals.
- 6) For non-market values: what are the potential costs if left unmanaged?

THREE LEVELS OF VALUE (VALUES AT RISK)

1. Individual

a) Market-based values and individual preferences

2. Community/social

a) Shared values and community preferences

3. Institutional values

a) The rules and preferences of institutions within civil society (e.g., markets, the legal system, government, communities, professional groups, industry groups, cultural groups)

MAJOR ECONOMIC GROUPS IN USE

- 1) Market-dominated methods
- 2) Welfare-based methods & community valuation
- 3) Ecological & environmental economics

These strongly influence how assets are managed, values are expressed and risk treatment methods

VALUES FRAMEWORK FOR ASSET CLUSTERS

Cluster	Characteristics	Major values
Built assets & infrastructure	Hard assets (e.g., housing, business, roads, communications, energy and water infrastructure)	Economic (production, monetary) Intrinsic (heritage)
Social assets & infrastructure	Soft assets (e.g., health, education, social connectedness, wealth and knowledge, clubs, religious groups)	Economic (production, monetary, livelihoods) Welfare (individual, community, cultural) Intrinsic (human security)
Natural assets & infrastructure	The natural environment, sometimes modified (ecosystems, biodiversity, atmosphere, land and water)	Economic (monetary) Ecological health (production, resilience) Intrinsic (existence)

INSTITUTIONAL ANALYSIS

- 1) Institutional values: the formal and informal rules exercised by institutions in managing natural hazard risk.
- 2) How is risk ownership allocated at the institutional scale?
- 3) The methods and processes that institutions apply allocate and distribute values.

WHOSE RISK IS IT ANYWAY? DESKTOP REVIEW OF INSTITUTIONAL OWNERSHIP OF RISK ASSOCIATED WITH NATURAL HAZARDS AND DISASTERS



DEFINITIONS

“A person or entity that has been given authority to manage a particular risk and is accountable for doing so”
(ISO, 2009).

“Asset owners are generally best placed to manage risks to their property” (PC, 2014 p314).

SCOPE

Risk allocation through:

- Funding and finance.
- Accountability and management.

Using publically available documents only.

SCOPE

Institutions:

Federal, state/territory and local government, business and industry and civil society.

Values

Built, social and environmental, assets and infrastructure.

Hazards:

Fire, Flood, Severe storm (includes wind and hail), Cyclones, Heatwave.

WHAT RISKS?

External risk examples	Internal risk examples
Natural hazards; e.g., Fire, flood, extreme events, cyclones and heatwaves	Unclear communication
Lack of resilience in the surrounding natural, social and economic systems	Different levels of risk perception and awareness within institutions
Lack of clear accountability/responsibility in other institutions/organisations who are co-participants	Governance – lack of clear accountability/responsibility within the organisation
Abrupt changes in exposure via changing demography, economy or environment	Lack of adequate resources, capacity, organisational flexibility

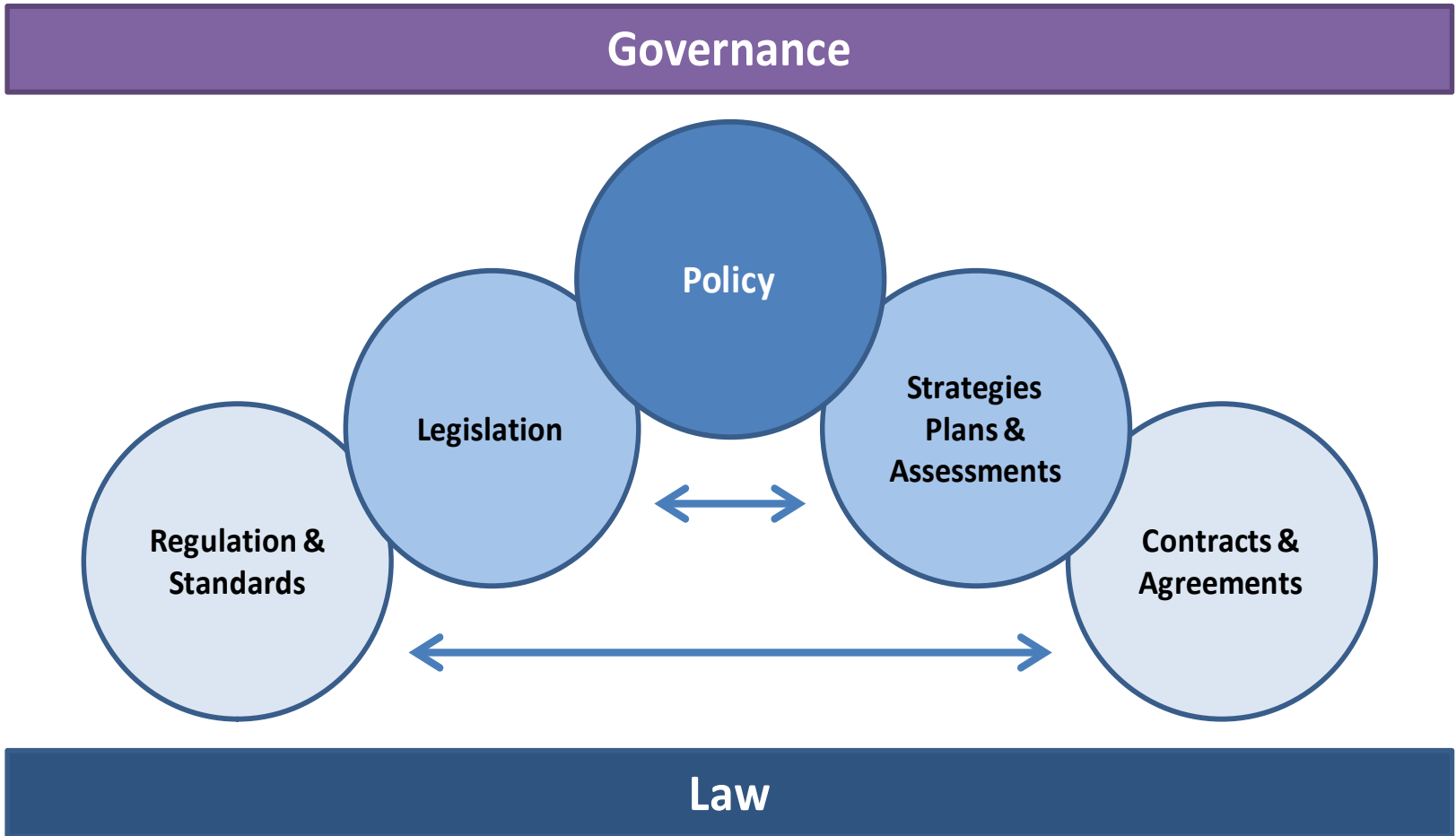
CHALLENGES

- Lack of consistency and cohesion between the different value groups (social, environmental and built) in terms of evaluation mechanisms and agenda priority.
- Fluid operational and policy environments.
- The systemic and dynamic nature of both risks and their management.
- Variable interpretations of the risks and a lack of clarity of governance, particularly across areas of multiple ownership.
- Different ways of identifying risk ownership.

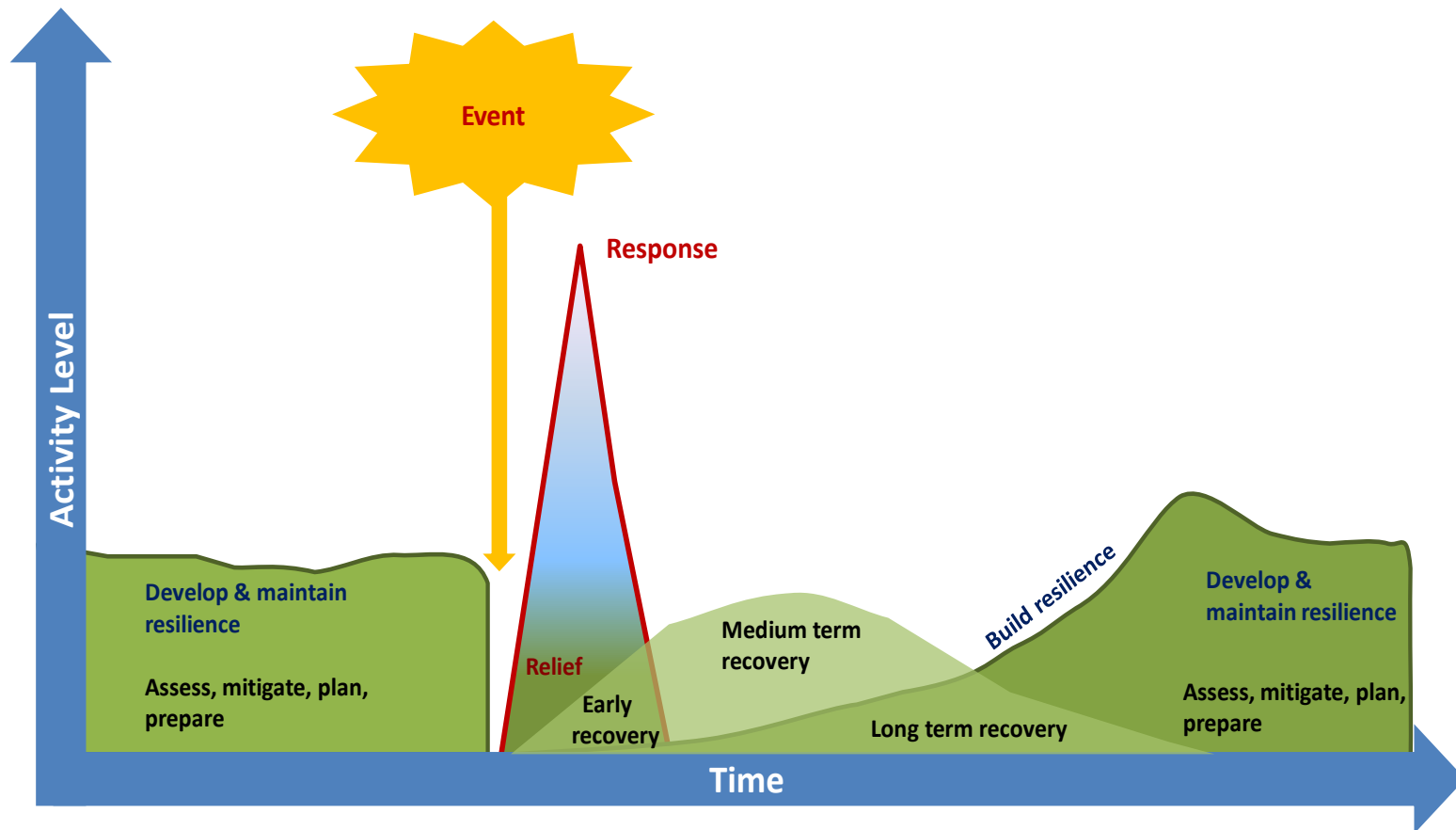
WAYS RISK OWNERSHIP WAS ALLOCATED

- The process of managing of risk (including natural hazard, emergency management and some operational risk management).
- Ownership of the asset at risk.
- Hazard-based allocations of risk; e.g., bushfire or flood activities.
- Responsibility through legislation, policy and regulation and legal requirements.

INSTRUMENTS



THE PROCESS



Activity integrating natural hazard risk management tasks across time scales.

Adapted from ([AEMI, 2011 p29](#))

KEY FINDINGS

- Well-developed early and medium-term recovery plans for impacts on built assets and infrastructure, to a lesser extent on social assets and infrastructure.
- The majority of government recovery funds are currently spent on roads and other transport infrastructure.
- Growing allocation of ownership in risk planning and preparation in designated high-risk areas. Also in other areas of policy such as adaptation.
- Lack of integration and cohesion between different institutions, particularly between high-level policy, on-ground implementation needs, and different but related policy areas.

KEY FINDINGS

- Broad ownership by civil society of overall hazard risk via insurance coverage, although growing exposure increases the risk of under-insurance.
- Social and environmental assets have delegated ownership for protection, but it is unclear who is responsible for their long-term recovery if they are severely damaged.
- It is important to provide positive incentives to change from current practices.
- Ownership of risk associated with resilience is still being developed and is unclear particularly in relation to implementation.
- Accountabilities and responsibilities may exceed the resources and capacity of some organisations and groups.

WHERE TO NEXT?

- 1) Consolidate findings to date and start risk ownership mapping.
- 2) Develop process-based governance framework in collaboration with our key end users.

QUESTIONS

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