

Legal Tools and Measures for Adaptation and Managing Climate Risk in Victoria

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This VCCCAR report to the Victorian Government is a desktop analysis based on publicly available information. The Report presents general legal and related research. The Report does not constitute legal advice.

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Background to this report

This report has been written by a team of academic staff from the University of Melbourne, Latrobe University and RMIT as part of a Victorian Centre for Climate Change Adaptation Research (VCCCAR) project.

The project is designed to provide relevant research about the role of law and institutions in adaptation to extreme events for the Victorian Government and options to assist policy development around climate change adaptation and the impacts of extreme events and disasters.

This report aims to:

- Describe how legal and governance arrangements can enable more effective adaptation or pose barriers; and
- Outline the main legal measures and tools that can be used to adapt to climate change impacts and to assist in risk management for extreme events.

The report is a summary of ongoing research and the more detailed technical analysis of the issues identified in this report forms the basis of later reports.

I INTRODUCTION

Project overview

The project examines the way in which law and governance arrangements shape climate change adaptation in Victoria. This project focuses particularly on the legal, regulatory and institutional dimensions of managing the risks posed by extreme events such as floods and heatwaves (**climate risks**).

The *Victorian Climate Change Adaptation Plan* defines adaptation as being about ‘increasing public and private resilience to climate risks through better decisions about our built and natural environment and taking advantage of opportunities’.¹

The focus on law and **governance** enables the project to examine a wide range of drivers and mechanisms that influence adaptation around extreme events and draws attention to the many different actors involved in shaping how climate risk is managed in Victoria, including businesses, households, local and state governments.

Text Box 1. What are extreme events?

Extreme events are extreme weather or climate events of unusual intensity or duration.

The most serious impacts are felt when extreme events occur. For example a combination of drought and a heatwave can have devastating effects on agriculture.

Source: Climate Commission, *The Critical Decade: Extreme Weather* (April 2013), pp 10-11

Governance arrangements are the formal and informal mechanisms, processes and structures that influence the behaviour of those actors.² The term refers to the formal rules – law and regulation, both legislation as well as case law principles – and informal processes such as the relationships between different institutions, financial drivers and constraints. Governance arrangements influence adaptation and resilience to climate risk at all scales.³

Report overview

This report focuses specifically on the legal aspects of these arrangements. It aims to provide an overview of the ways in which different legal measures and tools work and their general relevance for adaptation and efforts to respond to climate risks.

Part II provides an overview of the legal system and the role that legal tools can play in climate change adaptation. **Part III** highlights the different legal tools and measures that each area of law can provide. **Part IV** considers the way in which legal tools can incorporate and communicate information about climate risks. Three case studies in **Part V** show the range and combination of legal tools and measures that can operate in a single context. The case study areas – Flood Risk Governance, Legal Tools for Reducing Bushfire Risk and Managing Climate Risks to Victoria’s Seaports – are the subject of more technical examination and analysis within the broader research project.

¹ Victorian Government, *Victorian Climate Change Adaptation Plan* (2012), p 2.

² See Catrien Termeer et al, ‘The Regional Governance of Climate Adaptation: A Framework for Developing Legitimate, Effective, and Resilient Governance Arrangements’ (2011) 2 *Climate Law* 159, p 161.

³ *Ibid*, 167-8. Heleen L P Mees, Peter P J Driessen and Hens A C Runhaar, ‘Exploring the Scope of Public and Private Responsibilities for Climate Adaptation’ (2012) 14 *Journal of Environmental Policy & Planning* 305, p 312.

Legal tools and measures

Legal tools range in form and function (see **Table 1**). Some are expressly tailored to the purpose of adaptation but most have general application, such as the environmental impact assessment requirements of development and planning approvals processes.

Climate change and climate risk in Victoria

Victoria has always experienced extreme weather and climate events such as floods, bushfires, heatwaves and drought. Climate change, however, is expected to influence the severity and frequency of these events. Climate change also introduces new hazards and risks like coastal inundation from sea level rise.

In 2012 the Victorian Government released its *Report on Climate Change Science and Greenhouse Gas Emissions in Victoria*. The report found that changes to Victoria's climate mean that it is likely that Victorians will experience

- more heatwaves (an increase in the number of consecutive days over 35°C)
- doubling of the length and frequency of droughts by 2050
- instances of heavy rainfall
- increased frequency of very high fire danger days
- sea-level rise.⁴

These climatic changes will affect extreme events.⁵

These events put at risk major infrastructure, property, communities, agricultural and business activities, ecosystems, and animal and plant species. This means it is very important to take steps now to ensure that Victoria can cope with the risks that climate change has already introduced and will introduce, and to ensure that Victoria can continue to address vulnerability and build resilience in a changing climate.

The Victorian Government's *Victorian Climate Change Adaptation Plan* recognises that adaptation involves understanding climate risks and being 'flexible to account for changes in Victoria's communities, economy and environment' to ensure the state's continued prosperity.⁶ The *Victorian Climate Change Adaptation Plan* sets out the Victorian Government's key strategies to build Victoria's climate resilience, including the measures in place to build resilience in key sectors and manage climate hazards (namely, bushfires, heatwaves, floods and storms, sea level rise and coastal inundation, and drought).⁷

⁴ Victorian Government, *Report on Climate Change Science and Greenhouse Gas Emissions in Victoria* (2012), p 23.

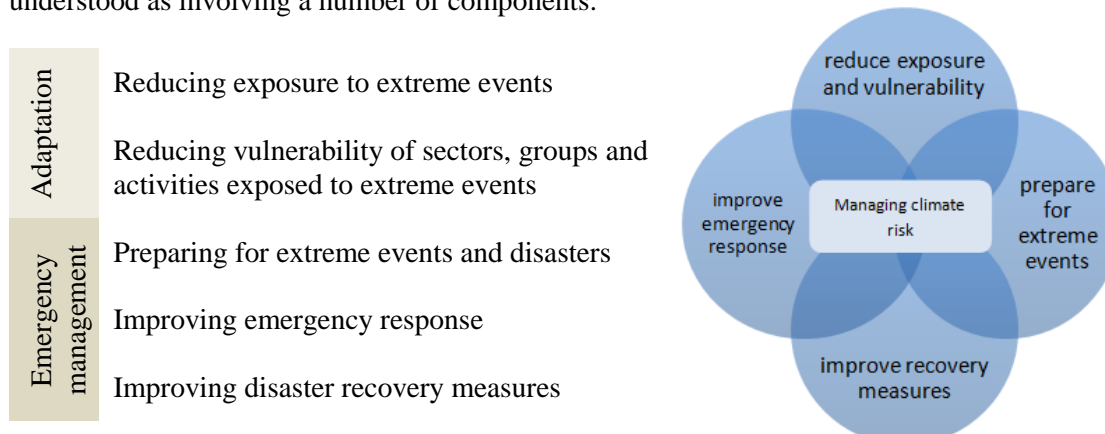
⁵ Climate Commission, *The Critical Decade: Extreme Weather* (2013), p 8.

⁶ Victorian Government, *Victorian Climate Change Adaptation Plan* (2012), p 6.

⁷ *Ibid*, Parts 4 and 5.

Adaptation and preparing for extreme events and disasters

A holistic approach to managing climate risk in the context of extreme events can be understood as involving a number of components:⁸



The main focus of this report is on legal tools to reduce exposure and vulnerability to extreme events. These are important elements of the Victorian Government's strategic priority of building community resilience to disasters.⁹

The components of preparation, emergency response and recovery are highly relevant to the management of climate risk and influenced by measures taken to reduce exposure and vulnerability. They require legal tools and models that can be used in the immediate context of an extreme event. However, they are better considered from the perspective of **disaster risk and emergency management**,¹⁰ and as such, they will not be dealt with in this report.

Figure 1 Reducing exposure and vulnerability¹¹

Reducing exposure involves		Reducing vulnerability involves	
Identifying areas that are highly exposed to different hazards > data collection and modelling > hazard mapping	Taking steps to reduce exposure > mitigation works > reinforcing infrastructure and property > relocation	Identifying groups and activities that are likely to be significantly impacted by extreme events: > such as the elderly, sick, disabled, those from a low socio-economic background	Taking steps to reduce vulnerability > build capacity > provide technical and financial support > consider distributional effects of decisions

The focus in this report on reducing exposure and vulnerability draws attention to the ways in which climate risk can be addressed proactively and to the range of actors that need to take on responsibility. The Victorian Government recognises that 'risk management is generally best undertaken by those who are directly affected, and who are in a position to manage the risk.'¹² Individuals can do a number of things to reduce their exposure and vulnerability, including purchasing insurance. The Victorian Government has committed to providing information and helping build the 'adaptive capacity' of individuals, businesses and groups to manage the risks they face as a result of climate change.¹³

⁸ Intergovernmental Panel on Climate Change (IPCC), *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* (Cambridge University Press, 2012), p 34 ('SREX Report').

⁹ Victorian Government, above n 1, Part 3.3 and *Victorian Emergency Management Reform: White Paper* (December 2012), p 6.

¹⁰ Victoria is in the process of reforming its emergency management processes and institutions through a range of initiatives, including those contained in the *Victorian Emergency Management Reform: White Paper* (December 2012).

¹¹ See generally, IPCC, *SREX Report*, ch 2, pp 65-108.

¹² Victorian Government, above n 1, 9.

¹³ For specific strategies refer to Parts 3.5 of the *Victorian Climate Change Adaptation Plan*.

II ROLE OF LEGAL TOOLS IN ADAPTATION AND FOR MANAGING CLIMATE RISK

A range of tools and mechanisms can be used to reduce vulnerability and exposure to climate change risk. Legal tools have a central role to play.

Law is critical to shaping and controlling behaviour to achieve certain outcomes. It exerts influence to promote particular values, principles and goals and sets standards and requirements for behaviour and action.¹⁴

Embedded within legal frameworks are various concepts that deal with the formulation of risk, the assignment of risk between parties, causation in relation to hazardous events and measures that seek to deal with risk proactively. Law also comprises measures for dispute resolution; as well as for assigning liability or compensating individuals or groups in certain instances.

Governments, individuals and businesses can use legal measures to manage the risks they face from climate change. A broader range of legal tools and mechanisms is available to government to enable them to play a coordinating role to manage climate risks to society as a whole. While both government and individuals, for example, can enter into contracts that specify the level of acceptable risk in circumstances relating to extreme events, only governments can prescribe legally enforceable planning and development controls to give effect to strategic planning policy goals in respect of adaptation relating to land use and development.

Areas of Law

Historically, the different areas of law have been understood to fall into the category of either public law or private law. Public law typically refers to the standards, rules and regulations set by the government (state) to govern the behaviour of individuals. This area of law also governs interactions between the state and individuals through the setting of procedures and standards to support state decision making. Private law is the law that governs interactions between individuals (and those entities deemed to have legal personality).¹⁵ **Table 1** indicates some of the areas of law that are conventionally classified as falling into each category.

Table 1 Areas of law

Public law <i>Governing state behaviour and interactions between the state and individuals</i>	Private law <i>Governing interactions between individuals</i>
Legislation Constitutional law Administrative law Criminal law	Contract law Tort law (e.g. negligence law) Property law

In reality, there is more of a spectrum than a clear division between the realms of public and private law. For example, governments enter into contracts and are subject to the rules of negligence. Similarly, individuals and private actors rely on governments to enact laws to regulate private legal arrangements. For example, to avoid confusion among consumers about the coverage of their private home and contents insurance, the Commonwealth amended the

¹⁴ Christine Parker et al, 'Introduction' in Christie Parker et al (eds) *Regulating Law* (Oxford University Press 2004).

¹⁵ Nathalie Des Rosiers, 'Introduction' in Law Commission of Canada (ed), *New Perspectives on the Public-Private Divide* (UBC Press, 2003) p vii.

Insurance Contracts Act 1984 to require insurance companies to use a standard definition of flood in their insurance contracts.¹⁶

Similarly, new, hybrid arrangements which involve non-government parties performing public functions (such as electricity suppliers), and government agencies or corporate government-owned entities engaging in commercial enterprises (such as the Port of Melbourne Corporation) mean that there is no bright line division between public and private law and both areas of law in both of these categories may apply to a range of actors.

Legal tools

Each of these areas of law offers legal tools that are highly relevant to adaptation and efforts to manage climate risk (see **Table 2**). To this list of conventional areas of law we can add a suite of other legal measures such as voluntary industry-based codes, market mechanisms and information-based tools. Rather than prescribing what can or must be done and how, these tools regulate behaviour using a lighter touch.¹⁷

All of these areas of law influence or ‘regulate’ behaviour in one way or another.

Table 2 Examples of legal tools for adaptation

Type of legal tool	Details	Examples	
Conventional legal tools	Legislation (Acts, regulations and delegated legislation)	<ul style="list-style-type: none"> Targeted legislation setting up a framework for climate change adaptation Legal tools specifically requiring consideration of climate change impacts Legal tools related to matters that will be directly impacted by climate change (e.g. managing the risks of extreme events) 	<ul style="list-style-type: none"> <i>Climate Change Act 2010</i>, Parts 2 and 3 <i>Climate Change Act 2010</i>, s 14 Planning instruments contained in Victorian Planning Provisions (VPP) cl 13.01. VPP 13.02-1 Floodplain management Amendment of Part 6 of the <i>Terrorism (Community Protection) Act 2003</i> to embed an ‘all hazards’ approach to critical infrastructure resilience.
	Judge-made law ¹⁸	<ul style="list-style-type: none"> Allocating risks and responsibility Setting out guiding principles Incorporating scientific information 	<ul style="list-style-type: none"> Negligence (what risks should those taking action consider?). Contract (how are risks assigned between parties e.g. in construction and insurance contracts).
Other legal measures	Information – based tools	<ul style="list-style-type: none"> May be mandated by law Designed to inform consumer / community behaviour or improve transparency around government decisions. 	<ul style="list-style-type: none"> Vendor disclosure requirements for the sale of properties in bushfire prone areas: <i>Sale of Land Act 1962</i> (Vic) s 32.

¹⁶ *Insurance Contracts Amendment Act 2012* (Cth).

¹⁷ For examples, see **Part III**.

¹⁸ This area of law is sometimes called the ‘common law’. This term also refers to the type of legal system in Australia.

Other legal measures	Market and financial mechanisms	<p>May be mandated by law</p> <p>Terms of scheme are legally binding</p> <p>Provides a flexible, and incentive oriented approach to regulation</p>	<ul style="list-style-type: none"> • <i>Ecotender</i> a voluntary, market-based scheme that creates incentives for landholders to manage and conserve native vegetation on their properties.
	Voluntary schemes	<p>Framework for these schemes is generally provided for by law</p>	<ul style="list-style-type: none"> • Sustainability Covenants under the <i>Environment Protection Act 1970</i> (Vic).
	Community participation tools	<p>May be mandated by law or emerge as a ‘bottom up’, partnership process</p> <p>To build community resilience</p> <p>To enhance transparency around government decisions</p>	<ul style="list-style-type: none"> • <i>Victorian Local Sustainability and Adaptation Accord</i> - to support councils to work with their communities to become more sustainable and resilient to climate change.

In this report we focus on legislation, contract and negligence law as well as new legal models that seek to encourage behaviour change as these are the areas of law and policy with the most significance for adaptation and managing the risks of extreme events.

Legal tools as enablers, barriers and ‘shapers’

This report shows how an understanding of the law is necessary for effective adaptation planning and policy. It is useful to consider which legal tools could be used to **enable** or assist state and local governments, businesses and households manage the climate risks they face.

Similarly, having an understanding of the relevant laws and legal tools can help in identifying instances where existing laws are a **barrier** to responses to climate change impacts.

Legal tools and measures may influence and affect different groups in different ways, depending on a number of factors, including their vulnerability. So, understanding the way in which legal tools (and combinations of legal tools measures) can **shape** responses – in desirable and undesirable ways – is also helpful.

Challenges for adaptation responses

Developing adaptation measures and dealing with the risks associated with extreme events is made complicated by the scientific **uncertainty** about the way in which climate change will affect those risks. There are varying degrees of certainty about the effect of climate change on natural hazards and extreme events. Will extreme events become more frequent and severe? By how much? Where? How soon? Trends and forecasts based on historical data may not provide a useful guide as climate change introduces fundamental changes to the climate system.

Secondly, the **complexity** of modern society gives rise to uncertainty about the *consequences* and *impacts* of climate-affected extreme events. The world we live in is made up of many interconnected and complex systems –

Text Box 2 Complexity in governance arrangements

Changes to the legal system to achieve particular adaptation goals and allocate roles, responsibilities and risks among actors can affect the way other legal mechanisms operate. Introducing legal tools to enable better adaptation by one actor or in one sector has consequences and may introduce barriers to adaptation for another.

Recognition of this complexity and the relationship between sectors and actors reveals the importance of adopting an integrated approach to adaptation to ensure our legal system is well-adapted to a changing climate.

social, economic, technological and ecological – so a single extreme event can create unexpected flow-on and cascading risks.

Climate change has **context-specific impacts**. This means that the different locations and different timescales at which extreme events occur affects the nature of the impacts. This creates a whole range of possible risks. As a result, often there is no single solution or legal measure that can be taken to address climate risk, nor one single actor or group of actors who can be responsible for all responses. Responses must involve all members of the community and different levels of government.

Similarly, the severity of the impact varies depending on the vulnerability of the groups and individuals in question. Different sectors and groups will be affected by impacts to different degrees. In this sense, the risks of extreme events are **unevenly distributed**.

This raises fundamental questions of equity, including: who is exposed to the risk? Who bears the risk? How vulnerable are they? Are they able to manage the risk? Who is responsible and accountable for deciding on, implementing and paying for adaptation measures?

Legal tools can help deal with some of these challenges by:

Uncertainty and complexity

- Providing information about extreme events
- Ensuring risks are accounted for in decision-making
- Providing flexibility and guidance to decision-making to account for uncertainty (see **Figure 3**)
- Setting up legally binding strategic planning processes (see **Figure 3**)
- Allocating who will bear the risks in the event of certain circumstances arising

Context specific impacts

- Creating a framework for integrated and holistic decision-making (see **Figure 3**)
- Enabling roles and responsibilities for managing risks to be defined and legally binding

Unevenly distributed impacts

- Creating opportunities for community participation
- Ensuring the distributional effects of decisions are fair

Figure 2 Challenging features of climate change impacts

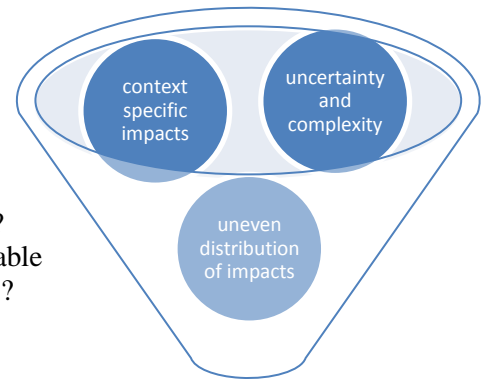


Figure 3 gives some examples of legal tools that can be used to guide decision-making in conditions of uncertainty and facilitate integrated management and strategic planning processes.

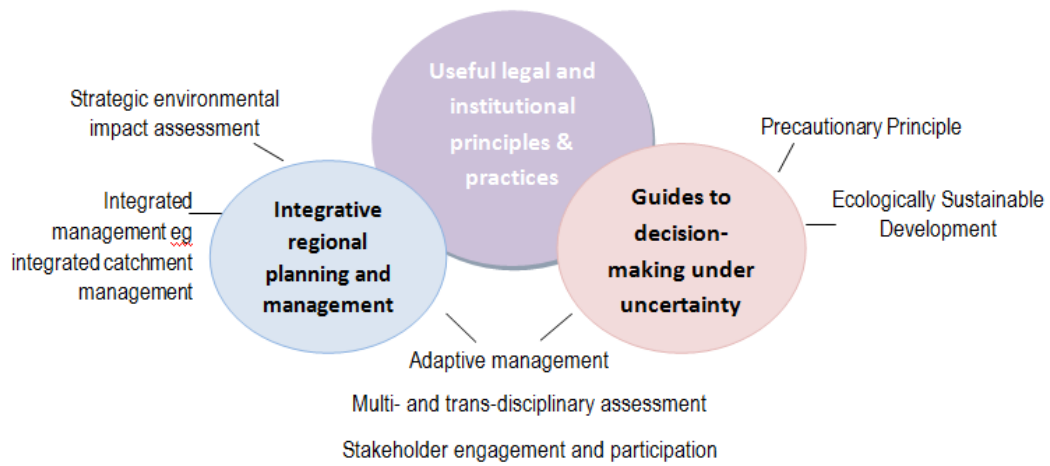


Figure 3 Principles and practices to deal with uncertainty

The next section turns to specific areas of law and highlights the legal tools they offer.

III SPECIFIC LEGAL TOOLS

This section looks at legal tools from the areas of public law, private law and other legal measures. Each of these areas shapes behaviour in some way and therefore affects how climate risks are managed.

For each area of law this section briefly describes the relevant legal tools and identifies the functions that they may serve. This section also explains how various legal tools and measures may enable, hinder and shape climate risk efforts and it provides some examples of how they can work in practice.

Legislation

Legislation is the most common source of the law in Australia. It is the law that is contained in an Act of Parliament or Regulations created under an Act (see **Text Box 3**). It applies to achieve overarching policy goals in respect of certain areas or sectors – such as planning, environmental protection and industry regulation – by enabling, constraining and shaping behaviour of different actors. Such actors might include individuals, government agencies, large corporations or entire industries.

Specific provisions of the legislation need to be interpreted in the light of the legislation's overarching objectives. Further, legislation may grant specific powers to various authorities, direct certain entities to make decisions and also identify various duties and obligations that are to be carried out and met by various actors.

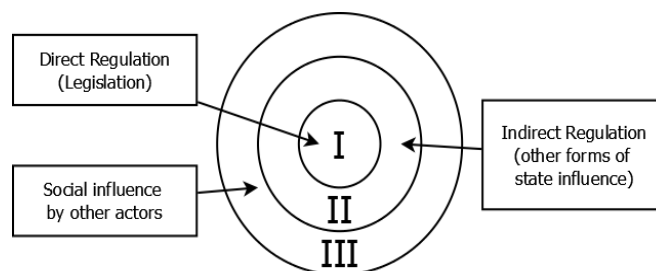
Text Box 3 Legislation: Acts and Regulations

<i>Planning and Environment Act 1987</i> (Vic) ('P&E Act')	Created by parliament using its general law-making powers
<i>Planning and Environment Regulations 2005</i> (Vic)	Officially created by the Governor in Council. The Governor is authorised to do so by Part 10 of the P&E Act

The term 'regulation' can be used in a more general way. It can refer to 'a law and state-centred process of legislative action combined with administrative enforcement'.¹⁹ Use of legally enforceable standards of behaviour is an example of this kind of direct regulation and is commonly used in many pollution control laws.

Figure 4 Three types of regulation

Based on: Jacint Jordana & David Levi-Faur, *The Politics of Regulation: Institutions and Regulatory Reforms for the Age of Governance*, (Edward Elgar, 2004), 3.



This type of direct regulation is still one of the principal means by which law is used to govern society. All these types of legislative instruments will be relevant to situations of adaptation; and in any one situation it is likely that a wide range of statutes may apply. In the section below more specific instances of regulation are defined.

¹⁹ Christine Parker and John Braithwaite, 'Regulation' in Peter Cane and Mark Tushnet (eds), *The Oxford Handbook of Legal Studies* (2003) 119, p 127.

Common law (judge-made rules)

Legislation also works in conjunction with judge-made law (sometimes called common law). These are rules set out by judges in deciding cases brought before Courts (and Tribunals). Judges also play a role in developing legally binding interpretations of legislation. Areas of case law thus are relevant to many areas of climate risk and extreme events

Legislation relevant to adaptation

Legislation relevant to climate change adaptation activities can take a number of forms.

First, there is that legislation that is purpose-built to the adaptation challenge. An example of this law is contained in parts 2 and 3 of the Victorian *Climate Change Act 2010*. Such legislation provides for specific models of governance and management of climate change adaptation.

Second, there are those legislative provisions which, while not purpose built to adapting to climate change, may require climate change adaptation measures to be considered under specified circumstances. An example of this type of legislation is clause 13.01-1 (Coastal Planning Strategy) in the Victorian Planning Provisions. This clause requires local planning authorities to consider the effect on proposed development of sea level rise and other coastal impacts due to climate change.

Finally, there is that legislation which while not expressly mentioning climate change, has the capacity to influence actors' behaviour in ways that enable, hinder or shape their ability to adapt to climate change impacts. Clauses 13.02-1 (Floodplain Management) and 13.05-1 (Bushfire Management) of the Victorian Planning Provisions fall into this category.

Through express provision, legislation can:

- require information about the effects, likelihood and extent of extreme events to be generated and provided to those who need it;
- ensure risk is accounted for in decision-making;
- create opportunities for community participation;
- provide flexibility and guidance to decision-making in light of future uncertainties;
- shape the distributional effects of decisions;
- create legally-binding strategic planning processes;
- create a framework for integrated and holistic decision-making; define and bind parties to specific roles and responsibilities for risk management; and
- allocate risks between actors.

Planning law

A specific example where a combination of different types of law come together is the planning system. Planning laws are primarily concerned with setting broad, spatially-based guidelines for where activities can occur or are prohibited; and then with providing site-specific controls such as developments permits or certificates. Typically there will be one main statute but other, related statutes and common law rules will also impinge in various ways.

A report prepared for the Australian Local Government Association identified land use planning as providing ‘a comprehensive set of tools to reduce exposure to hazards and consequent risk by controlling where development occurs.’²⁰

According to Hurlimann and March, the features of planning which position it well to facilitate adaptation to climate change include an ability to address matters of collective concern or public good, to facilitate the consideration of competing interests, and to coordinate thinking and action across various spatial, temporal and governance scales while retaining a sensitivity to local circumstances and needs.²¹

The various types of legal tools and measures in a planning system relevant to climate risks and extreme events include:

- Planning legislation including broad framing principles and objectives
- Statutory planning instruments
- Statutory powers such as the powers given to various authorities to grant development consents

Planning law in Victoria deals with the ‘use, development, protection or conservation of ... land’.²² It serves multiple functions:

- setting objectives for the use of land ‘to secure a pleasant, efficient and safe working, living and recreational environment’²³
- setting standards for use and development of land and controlling the behaviour of users of land by requiring, preventing or allowing certain activities on the land
- providing information about the land, including details of the types of risk present
- creating a framework to assess new uses of the land for their impact on the land and surrounds in order to assist planning authorities to make decisions about what to allow on the land.

Victorian planning law performs these functions by creating general rules for the use of all land throughout the state and then by applying special land use rules to specific areas. Land subject to such special rules includes land vulnerable to certain natural hazards, land of particular historical use or significance, and land subject to a particular development plan. Once categorised, planning bodies place *zones* and *overlays* over the land. Attached to each zone or overlay are particular rules that apply to land of that type. These rules can prevent the land be used for certain purposes, or place mandatory conditions for any new development that is to occur on the land.

²⁰ SMEC Australia, *Local Government Land Use Planning and Risk Mitigation: National Research Paper for the Australian Local Government Association*, December 2006, p 6.

²¹ Anna Hurlimann and Alan March, ‘The Role of Spatial Planning in Adapting to Climate Change’ (2012) 3 *Wiley Interdisciplinary Reviews: Climate Change* 477, p 480.

²² *Planning and Environment Act 1987* (Vic), s 6(1)(b).

²³ *Planning and Environment Act 1987* (Vic), s 4(1)(c).

Local and state planning authorities create and apply most planning law. Local ‘responsible authorities’ include local government authorities, and an example at the state level is the government minister responsible for planning. When, for example, development is proposed for certain types of land or strategic planning policy in certain areas is being developed, other, more specialised, bodies will be asked to consult on proposals. Examples of such bodies include catchment managers in the case of land subject to flooding or the Country Fire Authority in the case of land subject to bushfire.

Related legal tools and instruments

In conjunction with the planning law system are other, related legal tools and measures such as administrative and legal systems for land title registration and areas of private law that govern transactions such as the sale of land.

The Crown (a term that refers to the state as a legal entity) has specific powers to deal with *Crown land* such as by creating various types of land reservations. A significant proportion of Victoria and Australia remains Crown land and so these powers are very meaningful in a Victorian context. Government entities have other significant powers to manage the spatial arrangement of Victoria’s development, including, for example, the power to set *levies and charges*. The Crown has the power to *compulsorily acquire* land for public purposes.

The Courts and Tribunals, such as Victorian Civil and Administrative Tribunal (VCAT), also play an important role in reviewing decisions and in settling disputes and in the process further develop and interpret the body of planning law – developing important tests and applying principles such as sustainable development and the ‘amenity balance’ concept to help guide planning law decisions.

Working alongside this formal system may be more informal information and ‘voluntary’ measures, although some information and notification requirements can be mandatory. Negligence, contract and property law will also play a role in shaping private and public adaptation systems as well as setting standards of relevance to the planning system.

Closely related to planning law is environmental regulation of uses of land. Environmental protection legislation has its own processes for controlling operational activities on land and typically works in conjunction with planning controls – certain development proposals will need to be assessed for their potential environmental impact. Permission to undertake a project or development in a particular place may be made conditional on the developer taking specific measures to reduce the impact of the development on the environment. For instance, environmental protection legislation has a suite of powers to protect land from contamination, while also having power to limit the use of contaminated land for certain purposes such as childcare facilities.

Planning laws and the associated tools and measures can influence actor behaviour and have a significant impact on individual, business and community-wide capacity to adapt to climate change.

While planning law systems are an example of legal tools and measures that are predominantly, but not exclusively, public (i.e. government centred) other areas of activity governed by private law can also strongly influence behaviour in relation to climate risk and extreme events. The following example in **Text Box 4** shows how ‘public’ and ‘private’ law systems may operate concurrently and interact.

Text Box 4 Implications of land use planning tools for insurance affordability

Purchasing insurance cover is a basic measure that individuals, businesses and governments can take to avoid incurring substantial losses from property damage caused by extreme events. It is well recognised in the wake of recent natural disasters, however, that private (home and contents) insurance has become inaccessible and unaffordable for many Australians.²⁴

The Victorian Government has committed to clarifying the insurance arrangements for climate-related risks.²⁵ Insurance arrangements for household building and contents are regulated at a national level under the *Insurance Contracts Act 1984* (Cth). This Act is primarily directed to securing consumer protection and understanding of insurance contracts.

Amending insurance industry regulations is only one way of addressing this problem. As the recognised in the Productivity Commission's *Barriers to Effective Climate Change Adaptation*, other options exist, including

- Reducing the need for insurance by reducing exposure to extreme events.
- Changing laws and policies that affect the cost and coverage of private insurance.²⁶

Planning law tools can be used for both of these purposes.

By accounting for the risk of extreme events and minimising development in exposed areas or imposing certain conditions planning law tools can reduce the number of claims that insurers have and are likely to have. Building controls can also reinforce the strength of buildings to climate change impacts. In combination, these can reduce insurance premiums overall.²⁷

²⁴ Productivity Commission, *Barriers to Effective Climate Change Adaptation* (September 2012), pp 302-4; See also, Natural Disaster Insurance Review, Inquiry into flood insurance and related matters (September 2011).

²⁵ Victorian Government, *Environmental Partnerships* (November 2012), p 25.

²⁶ Productivity Commission, above n 24, p 297.

²⁷ *Ibid*, p 309. Insurance Council of Australia, *Improving community resilience to extreme weather events* (April 2008) pp 8-12.

Contract

The contract is a key legal tool and mechanism for facilitating transactions between individuals. Effectively it is ‘an agreement or set of promises that the law will enforce’²⁸ and the law of contract governs many commercial relationships between individuals, businesses, and an increasing number of government departments and service providers.

Contracts are used in a variety of circumstances including for construction of infrastructure, the sale and purchase of retail products and the procurement of services. The purpose of a contract is to give each party to the agreement the ability to rely on the other to deliver on promises made between them. In most instances, if a party fails to deliver on their promises they may be required to compensate their contracting partner for the loss that the contracting partner has suffered. This is usually through a cash payment (‘damages’). Thus, contracts enable parties to manage the commercial risk that the other party will not deliver on their promise.

The terms of the contract can specify the manner in which things are to be done including when, where, how and by whom. Parties may also choose to allocate responsibility for dealing with various future events. Contracts can also specify that parties do not need to deliver on their promises if certain future events do or do not occur. As a form of ‘future planning’ contracts have considerable significance for private forms of adaptation and where governments are entering into contracts in area such as infrastructure development.

Contracts and climate risks

Collaboration between the public and private sectors through contractual arrangements such as public private partnerships (PPPs)²⁹ are relevant to climate risk in a number of ways.

Tenders and project agreements, for example, can specify infrastructure or maintenance requirements to reduce the impacts of climate change by prescribing adaptive or mitigative behaviours. For example, the project agreement for the development of the new \$250 million Royal Women’s Hospital in Melbourne included a condition that the private partners would design and construct a building that was energy efficient.³⁰

Consideration of the impacts of climate change, and which party may ultimately bear the risk of those impacts is a factor that is significant for the drafting of project agreements. The *National PPP Guidelines* offer guidance as to government’s preferred risk position for a myriad of risk events, including site conditions, late completion or poor performance of the asset/services and, significantly in the context of this report, *force majeure* events.³¹ The ‘optimal’ risk allocation is expressed as being that ‘risk will be allocated to whoever is best able to manage it, taking into account public interest considerations.’³²

Over time, the common law has developed specialised rules around the circumstances in which parties to a contract may be excused from performance. One of these rules concerns frustration of contracts by force majeure clauses.

²⁸ Jeannie Paterson, Andrew Robertson and Arlen Duke, *Principles of Contract Law* (Lawbook Co., 4th ed, 2012), p 1.

²⁹ For an overview of the different contractual arrangements, see Maddocks, *The role of regulation in facilitating or constraining adaptation to climate change for Australian infrastructure* (January 2012) pp 37-8.

³⁰ Partnerships Victoria, *Project Agreement*, cl 16.1(g), available at

<http://www.partnerships.vic.gov.au/CA25708500035EB6/0/8593BF0CB6FB5FACCA2570DC0077EDF0>.

³¹ See *National Public Private Partnership Guidelines Volume 7* (‘Commercial Principles for Economic Infrastructure’ – 2011).

³² Infrastructure Australia, *National Public Private Partnership Policy Framework* (2008) p 10.

Text Box 5 Public Transport Victoria Example

Force majeure events are those which, should they affect the performance of contractual promises, do not do so through any fault of the parties themselves. They include acts of God, lightning, storm, explosion, flood, landslide, bush fire, earthquake, acts of terrorism or epidemics.³³

The inclusion of terms in a contract relating to force majeure events allows parties to allocate the risk of events which significantly affect the party's performance of the contract otherwise than through negligence or other malfeasance by the party. As such, force majeure clauses permit contracting parties to introduce even greater certainty into their contracts than might otherwise be so. Often force majeure clauses will free parties from their obligation to meet contractual terms by either extending deadlines or relieving the parties of their obligations entirely.

In the case of public transport, the Melbourne Metropolitan Train Franchise Agreement between the statutory authority Public Transport Victoria and the private operator Metro Trains Melbourne, suspends the obligations of the affected party for the duration of the 'Force Majeure Event', other than obligations to pay money, to the extent that the party is prevented from or delayed in complying with its obligations as a direct result of the event.³⁴

³³ Allens Arthur Robinson, *Melbourne Metropolitan Train Franchise Agreement: Public Transport Victoria, Metro Trains Melbourne Pty Ltd (Consolidated Conformed Copy 2012)*, cl 25.1 – viewed at <http://ptv.vic.gov.au/about-ptv/victoria-s-pt-network/public-transport-partnership-agreements/>

³⁴ *Ibid* 25.3.

Negligence

The basic purpose of the law of negligence is to protect individuals, companies and governments from the risk of harm caused by the carelessness of those around them.

A fundamental question in establishing negligence is ‘Did a party do any act that a reasonable person would not have done, and thus cause injury to another which was reasonably foreseeable?’ ‘Do’ in this definition includes ‘omit to do’, so that an injury caused by not doing an act that a reasonable person would have done is also caught up in the definition.

In order for an instance of legal negligence to exist, and compensation awarded to a victim of the negligence, there must be three elements present:

- A **‘duty of care’** owed by one party to another at the time of the act in question;
- Negligent conduct from the party owing the duty of care that amounts to a failure to meet the standard of care imposed by law (constituting a **breach** of duty); and
- **Harm** suffered by the party owed the duty of care **as a result of the breach** (failure to meet the acceptable standard of care). A number of legal tests apply to this element.

Although the tort of negligence is largely a creation of the common law, it is supplemented in many states by legislation. In Victoria the primary piece of legislation to do so in Victoria is the *Wrongs Act 1958*. The Act does not replace the common law, and case law continues to develop and refine the law of negligence.

A duty of care is a legal duty owed to persons who would foreseeably be injured by a party’s action or inaction. The standard of care owed will vary under the circumstances and will depend on the standard of a reasonable person in the position of the duty-holder.

Special principles apply to public authorities such as government entities and officers (see **Text Box 6**).³⁵ This is because, as discussed in the section on **legislation**, the public authorities will often have a degree of **discretion** as to when and how they exercise their powers and perform their statutory functions.³⁶

For example:

- A public authority does not owe a person a duty of care just because they have a power they could exercise which could prevent harm.³⁷
- The level of **control** that the public authority has over the risk of harm and the level of **vulnerability** of persons to the public authorities’ actions, omissions or decisions is relevant as to whether they owe those persons a duty of care.³⁸

The Courts have been reluctant to adjudicate *policy*-related decisions, actions and omissions.³⁹ This includes decisions relating to how to allocate funds, decisions about how to

Text Box 6 What are Public Authorities?

The definition of ‘public authorities’ in section 79 of the *Wrongs Act 1958* is very broad and includes

- Public service bodies
- Local Government
- Individuals holding office or position under an Act
- Incorporated and unincorporated bodies established under an Act to serve a public function

³⁵ See generally, M Aronson, ‘Government Liability in Negligence’ (2008) 32 *Melbourne University Law Review* 44.

³⁶ *Sutherland Shire Council v Heyman* (1985) 157 CLR 424 at 467 per Mason J.

³⁷ *Pyrenees Shire Council v Day* (1998) 192 CLR 330; In Victoria, road authorities are not liable for harm caused as a result of their failure to repair or maintain a road: *Road Management Act 2004* (Vic) s 102.

³⁸ *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540; 196 ALR 337 at [149]-[150].

³⁹ *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540. See also *Stuart v Kirkland-Veenstra* (2009) 237 CLR 215 and *Pyrenees Shire Council v Day* (1998) 192 CLR 330.

regulate a sector and decisions subject to political constraints. In contrast, the Courts are more willing to consider whether a duty of care is owed in the case of public authorities' *operational* decisions, actions and inactions. The distinction between the two, however, is not always clear.

In *Pyrenees Shire Council v Day*,⁴⁰ the local council had sent notice to the residents of a property alerting them to a dangerous fireplace in that property, but took no follow up action. A subsequent tenant, who was unaware of the danger, used the fireplace and caused a fire that damaged the premises and neighbouring premises. The decision of the council not to follow up was considered to be *operational* in nature and in the circumstances led to a finding of negligence against the council.

However, in *Graham Barclay Oysters v Ryan*,⁴¹ consumers who contracted hepatitis A as a result of eating contaminated oysters sued the local council and New South Wales government arguing that the governments should have better regulated the industry, which was self-regulated. The High Court found that the decision as to how the industry should be regulated was a *policy* question, with legislative and budgetary implications and not something the Court could assess. As such, the Court was unable to find the State and local governments liable in negligence.

In determining whether authorities owe a duty of care or have breached their duties in the way they have performed their statutory functions or exercised or failed to exercise their statutory powers, section 83 of the *Wrongs Act 1987* requires that Courts bear in mind the following principles when assessing whether an authority owes a duty of care:

- that the authority is limited by the financial and other resources available for those purposes;
- the broad range of activities that the authority is required to be engaged in; and
- whether the authority has complied with general procedures and standards applicable to the exercise of the function in question.

Breaches of duty and climate risk

The law of negligence can both promote and hinder climate change adaptation by government and non-government actors. It can promote it by encouraging laggards in a particular sector to meet minimum standards imposed on them by law, because they fear future liability to actions in negligence if they fail to act. In the alternative, it may hinder action by discouraging actors from using innovative methods for adapting to climate change for fear of being found negligent should the action have uncertain flow-on effects.

Fear of being sued and found liable in negligence, may result in over-cautious and thus expensive adaptation responses. Concern about legal consequences has been identified as a major barrier to many local governments taking actions or releasing information in relation to prospective climate change impacts.⁴² In this sense, it is the *apprehension* of legal

⁴⁰ (1998) 192 CLR 330.

⁴¹ (2002) 211 CLR 540.

⁴² Productivity Commission, above n 24, 166-9. COAG Select Council on Climate Change, *2012 Work program for management of the coastal zone*, Communiqué (16 November 2012), '<http://www.climatechange.gov.au/2012-work-program-management-coastal-zone>.

consequences, which may not actually be borne out in law,⁴³ that drives behaviour.⁴⁴ See **Information** (p 23) for a discussion of how the law of negligence is relevant to communicating information about climate change impacts and providing warnings about risks.

Text Box 7 Organisational and institutional models

The formal and informal arrangements within and between institutions and organisations can impact Victoria's ability to adaptively manage climate risks. Legal tools, such as legislation and contract, will affect the arrangements between and within organisations.

The following list is not intended to be exhaustive, but includes some questions that affect the manner in which an organisation acts and so will affect its capacity to adaptively manage climate change risks:

- Is the organisation government or privately owned (or a combination of both)?
- What relationships does the organisation have with others under statute, contract or otherwise?
- Is the organisation serving a public function or a private function?
- What duties are imposed on the organisation? Among others, these could include obligations from:
 - Corporations law (including directors' duties),
 - Specific climate change legislation,
 - Contract,
 - Planning law,
 - Statements of Obligations or Ministerial Directives, and
 - Negligence law and the law of wrongs more generally.
- What resources does the organisation have? These may include:
 - Financial means,
 - Technical capacity, and
 - Relevant expertise and experience.

⁴³ See Nicola Durrant, *Legal Responses to Climate Change* (2010, Federation Press), chapter 20, where the author argues that while local authorities are still subject to the law of negligence and may still be found liable under it, reform to the *Wrongs Act 1958* (Vic) have limited that liability extensively.

⁴⁴ A report was commissioned to shed light on local government liability in the context of adaptation to climate change: Baker & McKenzie, *Local Council Risk of Liability in the Face of Climate Change – Resolving Uncertainties* (22 July 2011).

Other legal measures

Less prescriptive forms of law include performance-based mechanisms and incentive schemes. These tools can be used in a climate change adaptation context.

In performance-based mechanisms government sets goals for actors in the community or business sectors rather than setting the precise methods those actors should use to achieve them. The advantage of this type of regulation is that it gives those with the on-the-ground expertise (that is, the community or business actors themselves) the flexibility to select from a number of options and to use the one that best suits their circumstances.

Government may also establish voluntary incentive schemes. Governments reward the actors for their participation in the scheme, but their participation is not mandatory. The actor will need to comply with the terms of the scheme.

Text Box 8 Examples of legal measures other than directive legislation, contract and negligence

Tools	Details	Examples of their use
Information – based tools	May be mandated by law Designed to inform consumer behaviour or improve transparency around government decisions.	<ul style="list-style-type: none"> • Vendor disclosure requirements for the sale of properties in bushfire prone areas: <i>Sale of Land Act 1962</i> s 32. • Requirement for the public release of the Climate Change Adaptation Plan under the <i>Climate Change Act 2010</i> (Vic).
Collaborative partnerships	Brings together different actors to work collaboratively towards a particular outcome	<ul style="list-style-type: none"> • Partnership Agreement for Preparedness and Response to Waterway Incidents in the Goulburn Broken Catchment.
Market and financial mechanisms	Provide a flexible, and incentive oriented approach to regulation	<ul style="list-style-type: none"> • <i>Ecotender</i> a voluntary, market-based scheme that creates incentives for landholders to manage and conserve native vegetation on their properties.
Voluntary incentive schemes	Framework for these schemes is generally provided for by law	<ul style="list-style-type: none"> • Sustainability Covenants and Voluntary Environment Improvement Plans under the <i>Environment Protection Act 1970</i> (Vic).
Community participation tools	May be mandated by law To build community resilience To enhance transparency around government decisions	<ul style="list-style-type: none"> • <i>Victorian Local Sustainability and Adaptation Accord</i> - to support councils to work with their communities to become more sustainable and resilient to climate change.

IV INCORPORATING INFORMATION ABOUT RISK

Adaptation and managing climate risk depends critically on information about extreme events and the vulnerability and exposure of communities, sectors and activities to those events.

The development of legal tools like planning instruments relies on scientific data and information such as hazard mapping and vulnerability assessments. Tribunal decisions have also considered the science around the impacts of climate change.⁴⁵

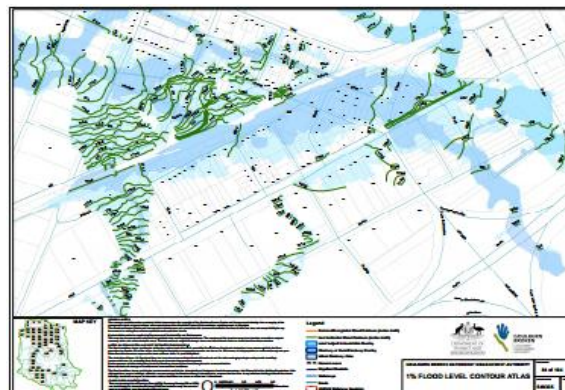
Legal tools can affect the collection, content, quality, communication and use of information.

Communicating information about risks

The planning system conveys information about risk in particular areas through mechanisms like zones and overlays (for example, the Urban Floodway Zone, Floodway Overlay, and Bushfire Management Overlay (BMO)).

Publicly available maps and plans detailing the location of these zones and overlays can promote awareness of environmental hazards.

Figure 5 Information functions of legal tools



Text Box 9 Legal tools for bushfire hazard information

Land in Victoria is assessed for its exposure to bushfire hazard using a methodology developed by the Department of Environment and Primary Industries. Planning controls under the BMO and building controls apply in areas that have been assessed as having a high Bushfire Hazard Level.

The application of the BMO and building controls is a signal that the area is exposed to fire risk.

Amendments to section 32 *Sale of Land Act 1962* will require vendors to disclose to purchasers that the property is in a bushfire prone area.

⁴⁵ See, e.g. *Gippsland Coastal Board v South Gippsland Shire Council* [2008] VCAT 1545; *Printz v Glenelg SC* [2010] VCAT 1975 (10 December 2010).

Incorporating information and expertise into decision-making

Legal tools can also ensure that information, either in general terms or as part of specialist expertise, is incorporated into decision-making by making its inclusion a mandatory consideration.

For example

- Section 14 of the *Climate Change Act 2010* requires persons making decisions or taking actions under specified Acts to have regard to the relevant potential impacts of climate change.
- Clause 13.01 of the Victorian Planning Provisions requires decision-makers to consider the risks associated with climate change in planning and management decision-making processes in regard to coastal inundation and erosion.

In certain circumstances, local governments are required to refer planning permit applications to bodies with expert knowledge and experience in managing the risks of particular extreme events ('referral authorities').⁴⁶

This is a way of ensuring that the best available information and advice about the risks to and potential created by a development proposal is incorporated into planning application decisions.

Promoting communication of and decisions based on best available information

In terms of communicating information about the impacts of climate change both public and private entities may be liable to compensate for losses caused by their *negligent misstatements*.⁴⁷

This situation may arise where the entity providing information about climate impacts knows, or should know, that the recipient intends to rely on that information. If the entity is negligent in providing the information (for example by not taking reasonable care to ensure its currency and quality), the entity could be liable for harm suffered by the recipient where the recipient has reasonably relied on the information.⁴⁸ This is particularly the case where the information provider is the sole source of the information or has particular expertise in providing that information or is responding to a request for information.⁴⁹

If a person has a duty of care to give another person a warning or information about a risk, they will have met the standard of care so long as they take reasonable care in giving that warning or information.⁵⁰

However, rather than merely being a 'stick' to impose liability after harm has occurred, we argue that negligence law can also function as an incentive to encourage the implementation

Text Box 10 Using referral authorities to incorporate expertise into the planning system

Planning permit applications in areas covered by the BMO must be assessed by the Country Fire Authority or Metropolitan Fire Brigade in the case of bushfire.

Planning permit applications in areas subject to a flood management zone or overlay must be assessed by the local catchment management authority or, in the case of metropolitan Melbourne, Melbourne Water.

⁴⁶ *Planning and Environment Act 1987* (Vic) ss 55, 61; VPP 66.03.

⁴⁷ *Mutual Life & Citizens Assurance Co Ltd v Evatt* (1968) 122 CLR 556; *Tepko Pty Ltd v Water Board* (2001) 206 CLR 1.

⁴⁸ *Mutual Life & Citizens Assurance Co Ltd v Evatt* (1968) 122 CLR 556; *Tepko Pty Ltd v Water Board* (2001) 206 CLR 1.

⁴⁹ *L Shaddock & Associates Pty Ltd v Parramatta City Council* (1981) 150 CLR 225.

⁵⁰ *Wrongs Act 1987* (Vic) s 50.

of processes for prudent risk management (identification, assessment and treatment of risk) and decision-making based on best available information (see **Text Box 11**).⁵¹

Text Box 11 Measures and processes for good risk management that also minimise legal risk

By adopting sound processes for risk management, businesses and government entities can also minimise their exposure to legal risk:

Obtaining or accessing information

- Processes to collect or gain access to as up-to-date and accurate information about hazards and local exposure and vulnerability as reasonably possible.
- Processes to routinely check accuracy and currency of information.

Decision-making

- Processes to reasonably integrate best available information into decision-making processes.

Communicating information and providing warnings about risk

- Processes to ensure best available information is reasonably made publically available.
- Protocols to ensure information provided on request is accurate and up-to-date and systems to ensure that protocols are followed.
- Where it is nevertheless necessary to use disclaimers as to the accuracy of information, ensuring they are displayed prominently and not overly broad. (See *Mid Density Developments Pty Ltd v Rockdale Municipal Council* (1993) 116 ALR 460.)

Affecting other drivers

The availability and affordability of insurance is a factor that influences an individual's awareness of, and response to, climate change risks.⁵²

In the absence of up-to-date and as robust as possible information, insurers tend to price risk conservatively. The Productivity Commission found that '[i]mprovements in the quality, extent or availability of information can make insurers more willing to provide cover'.⁵³

The better the information, the greater the certainty insurers have in valuing the risks that they are to cover. This can improve the accuracy of the valuations and lower the cost of insurance premiums in some circumstances.⁵⁴

⁵¹ See also, Baker & McKenzie, above n 44, pp 82-83; Sharon Christensen, Bill Duncan, Amanda Stickley, 'Shifting paradigms of government liability for inaccurate information' (2008) 15(2) *Murdoch University Electronic Journal of Law* 185.

⁵² Productivity Commission, above n 24, p 298.

⁵³ Productivity Commission, above n 24, p 308.

⁵⁴ Of course there are other factors that will affect the cost of insurance, including the measures taken by individuals to mitigate and prepare for certain risks by clearing vegetation (in the case of bushfire) and ensuring their houses are designed and built appropriately to withstand relevant hazards.

V CASE STUDY EXAMPLES

The following case studies illustrate how a number of legal tools and laws can operate in a single context. In each of the case studies the various legal tools perform different functions, all shaping adaptation and the way in which climate risk is managed.

Governing flood risk in floodplains

According to the *Report on Climate Change and Greenhouse Gas Emissions in Victoria* published in 2012, while the total annual rainfall in South Eastern Australia is expected to decline, the likelihood of heavy rainfall in a climate changed Victoria is expected to rise.

Heavier rainfall bursts will lead to an increased risk of flood and an increased effect of flood events when they do occur. Further complicating the situation is the fact that, in a changed climate, our accumulated historical data on Victorian flood risk may become an increasingly unreliable predictor of the future flood risk. This uncertainty will affect the ability to manage floodplains.

Complex governance arrangements

Presently, institutions, organisations, businesses and individuals involved in the use and management of Victoria's floodplains are regulated by the full range of tools discussed in [Part III](#).

The number and diversity of obligations imposed on bodies involved in floodplain management may be conflicting, as has been pointed out by the Goulburn Murray Rural Water Corporation.⁵⁵ For instance, under the *Water Act 1989 (Vic)*, water corporations appointed as water storage managers, such as Goulburn Murray Water, are obliged to perform their functions with regard to, among other things, 'developing and implementing strategies to mitigate flooding, where possible.'⁵⁶

One of only a few strategies that a water storage manager might implement to mitigate the effect of flooding is to release water before the flood arrives and so limit the height of the waters when they peak. However, water storage managers are almost always prohibited from taking this sort of action by their bulk entitlement orders. For instance, Goulburn-Murray Water has seven bulk entitlement orders issued to them. In six of these, the order precludes releases of water from storage except for very limited circumstances, being to supply water to primary entitlement holders or to address water quality concerns.⁵⁷

This conflict between legal obligations means that there is little that water storage managers could do to mitigate floods in an emergency situation.

Conflicts such as these, where an Act of Parliament envisions the potential for bodies to take certain adaptive actions but the bodies are expressly prohibited from taking those actions under delegated legislation, create clear barriers to effective adaptation.

The governance arrangements surrounding Victoria's catchment management authorities reveal the true extent of the complexity of a statutory authority's daily operations. Alongside their primary duty, which is to manage the sustainable development of land and water in their region, CMAs owe duties under corporations law, planning law, are subject to the laws of negligence and contract and are involved in the creation of community engagement and

⁵⁵ Environment and Natural Resources Committee, Parliament of Victoria, *Inquiry into Flood Mitigation Infrastructure in Victoria* (2012), 159.

⁵⁶ *Water Act 1989 (Vic)*, s 122ZL(2)(d).

⁵⁷ See, for example *Bulk Entitlement (Broken System – Goulburn-Murray Water) Conversion Order 2004*, cl. 12.

incentive schemes. Each of these areas of law is specialised and complex and the duties and obligations imposed by one area may affect an authority's capacity to act in another area. Similar, though not identical networks of legal duties and obligations surround most statutory authorities in Australia and while it is not suggested that these authorities responsibilities should be considerably lessened, it is important that it be understood.

Legal tools for reducing bushfire risk

Victoria has introduced a range of measures to reduce the risk of bushfire to human life and property.

These measures utilise planning and building controls to reduce exposure to bushfire hazard and build resilience of those in bushfire prone areas. These measures apply primarily to new development and subdivisions.

The measures serve a number of functions.

Measure	Function	Details
Bushfire Management Overlay (BMO)	Communicate information about level of bushfire hazard	Through mapping and application of the BMO in planning schemes.
	Building awareness of exposure to hazard	Through <i>site and location description</i> that must be lodged with planning permit application.
	Risk assessment	Through bushfire site assessment that must be prepared as part of <i>building statement</i> , which must be lodged with planning permit application.
	Building resilience	Through proponent's list of bushfire protection measures contained in the <i>bushfire management statement</i> must be lodged with planning permit application.
	Direct regulation	Compliance with standards and objectives relating to defensible space; water supply and access; property access and egress.
	Incorporate expertise	CFA or MFB to review all planning permits for development in areas covered by the BMO.
Bushfire-prone area building controls	Communicate information about level of bushfire hazard	Through designation of bushfire prone areas.
	Direct regulation building and construction standards	Building permit required to undertake construction and only issued by building surveyor if building plans comply with the building and construction standards for the corresponding Bushfire Attack Level (BAL).
	Risk assessment	Through site assessment that must be prepared as part of building permit application under the <i>Building Act 1993</i> .
Vendor disclosure rules	Communicate information about risk	Vendor must disclose to purchaser that property is in an area subject to the BMO: <i>Sale of Land Act 1962</i> s 32.
Native vegetation removal rules	Facilitating private adaptation and risk management	Property owners no longer require a planning permit to remove native vegetation around homes for the purposes of bushfire protection.

Managing climate risks at Victoria's Ports

Victoria's ports and the rail and road links that support them are vulnerable to rising sea levels, storm surges, erosion and storm events creating closures and delays - risks heightened by climate change.⁵⁸ A combination of legislative and private law mechanisms governs actors at Victoria's four commercial ports (at Melbourne, Hastings, Geelong and Portland). The arrangements for maintenance and upgrading of port and related infrastructure (see **Figure 6**) will be critical to managing the risks to port operations created by climate change impacts.

Key actors

Ownership, operation and management responsibilities differ at each of the ports.

- The Victorian government owns the Port of Melbourne and Port of Hastings. Statutory authorities operate these ports, the Port of Melbourne Corporation (PoMC) and Port of Hastings Development Authority (PoHDA).
- The Ports of Portland and Geelong were privatised in 1996 and are owned and operated by private companies which are the port managers (Port of Portland Pty Ltd (POPL) and GeelongPort and GrainCorp Ltd, respectively).

Port managers are responsible for the operations of the port, development of port infrastructure, port administration, maintenance and harbor control.

- PoMC is the port of Melbourne port manager. It leases and licenses land to privately-owned third parties.
- There are two private sector port managers at the port of Hastings - Patrick Ports Hastings (Patrick), which has a Port Management Agreement ('the Agreement') with PoHDA. BlueScope Steel is the other private sector manager. It owns, manages and operates the steel wharves at the port of Hastings.

Port stakeholders include terminal operators, shipping lines, freight and logistics companies, customs brokers, stevedores and trucking companies. Stakeholders whose business operations are based on port land have commercial arrangements with port managers.

Legal tools

Tools governing arrangements at commercial ports include Safety and Emergency Management Plans ('SEMPs') (a legislative requirement) and commercial agreements including leases, contracts and port user agreements.

SEMPs are a legally mandated instrument that requires port managers to develop and implement an integrated and coordinated plan across the whole port. One of the objectives of SEMPs is to promote an integrated and systematic approach to risk management in relation to the operation of a port. SEMPs must identify all key facilities and infrastructure in the port, highlighting any that are vulnerable to extreme climate events.⁵⁹ The *Victorian Climate Change Adaptation Plan* recognises that SEMPs are a tool to address climate change risks.⁶⁰

Port managers are required to set out how they will involve tenants, licensees and service providers in the implementation of their SEMPs⁶¹ and must then ensure that 'reasonable steps' are taken to follow those processes⁶².

⁵⁸ See Darren McEvoy and Jane Mullet, *Enhancing the resilience of seaports to a changing climate: research synthesis and implications for policy and practice*, Report series: Enhancing the resilience of seaports to a changing climate (NCCARF 2013).

⁵⁹ Victorian Government, *Ministerial Guidelines: Port Safety and Environment Management Plans*, November 2012, 14.

⁶⁰ Victorian Government, *Victorian Climate Change Adaptation Plan* (2012) 55

⁶¹ *Port Management Act 1995* (Vic) s 91D(1)(f).

‘Reasonable steps’ may include:

- Regular communication and information exchange;
- Encouraging participation in workshops and joint exercises;
- Incorporation of SEMP related requirements into current/new tenancy agreements, ‘common user agreements’, licences and other relevant commercial/access agreements’
- Establishment of port safety and environment committees.⁶³

Port managers do not have inherent powers to compel businesses operating in their ports to comply with safety and environmental requirements, beyond any rights and powers which flow from their commercial and contractual arrangements.

Specific climate change duties apply to the PoMC and PoHDA, which, in performing their functions, including in the preparation of SEMPs, must actively contribute to environmental sustainability by, amongst other matters, preparing for and adapting to climate change challenges.⁶⁴

Interaction with other drivers

Commercial drivers for all port managers may see climate change adaptation issues considered and factored into their SEMPs and legal arrangements as they identify and respond to the risks posed by climate change to their businesses.

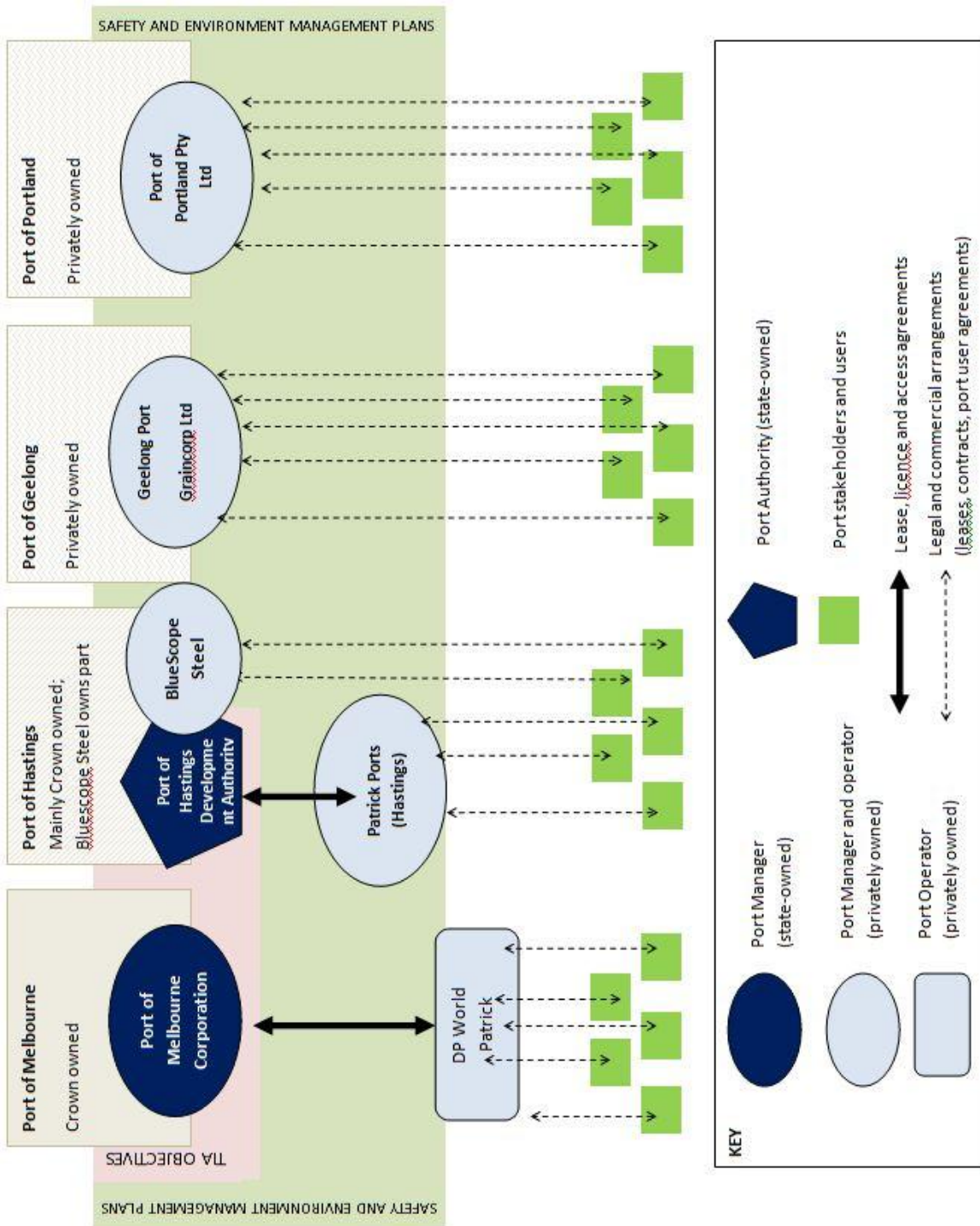
Port owners and managers can drive the incorporation of climate change adaptation strategies into hazard and risk management profiles across the port areas for which they are responsible, within the bounds of their legal and commercial powers. However, the consent of the third party is required if new or updated requirements are sought to be added to agreements. The most effective time to incorporate climate change adaptation requirements will therefore be when a new commercial agreement is entered into, when the port manager is in a strong negotiating position.

⁶² *Port Management Act 1995* (Vic) s 91C(2)(b).

⁶³ Victorian Government, *Ministerial Guidelines: Port Safety and Environment Management Plans*, November 2012, 22.

⁶⁴ *Transport Integration Act 2010* (Vic), ss 10(e), 22 and 24.

Figure 6 Legal tools governing actors at Victoria's ports



V CONCLUSION

A range of tools and mechanisms are available to individuals, business and government to manage the risks posed by climate change impacts by reducing vulnerability and building resilience to extreme events.

This report has begun to sketch out the areas of law relevant to adaptation efforts. Understanding the different areas of law, what legal tools they offer and what functions they serve can help when choosing between measures.

The *Victorian Climate Change Adaptation Plan* sets out the Victorian Government's key strategies to build Victoria's climate resilience, including the measures in place to build resilience in key sectors and manage climate hazards.⁶⁵

This project will build on the work in this report to develop a legal toolkit for policy-makers. The toolkit will provide guidance on the suitability of different legal tools for use in implementing strategies such as these (considering matters such as cost, flexibility and certainty).

Legal tools, measures and frameworks are an integral part of the governance arrangements for managing climate change risks. This report has aimed to promote better understanding of the role and relevance of the legal dimensions of adaptation.

⁶⁵ Victorian Government, above n 1.