

# Examining the future task of Victoria's Environment Protection Authority

## DISCUSSION PAPER

Ministerial Advisory Committee for the Inquiry  
into the Environment Protection Authority  
August 2015



Independent  
Inquiry into the EPA



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# Glossary

<b>CBD</b>	Central Business District
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation
<b>EMV</b>	Emergency Management Victoria
<b>EPA</b>	Environment Protection Authority Victoria
<b>EP Act</b>	<i>Environment Protection Act 1970 (Vic)</i>
<b>EREP</b>	Environmental and Resource Efficiency Plans
<b>e-waste</b>	electronic waste
<b>DEDJTR</b>	Department of Economic Development, Jobs, Transport and Resources
<b>DELWP</b>	Department of Environment, Land, Water and Planning
<b>DHHS</b>	Department of Health and Human Services
<b>DTPLI</b>	Department of Transport, Planning and Local Infrastructure
<b>PCB</b>	polychlorinated biphenyl
<b>PFOS</b>	perfluorooctanesulfonic acid

# Foreword

**Protecting the health of our environment not only protects the health of all Victorians: it also protects the legacy we will leave for our children and future generations.**

A healthy environment underpins everything we value about living in Victoria: the confidence we have in the air we breathe, a prosperous and vibrant economy, liveability and our ability to relax and play outdoors, and our unique and irreplaceable environment.

A healthy environment requires all Victorians – the EPA, members of the community, businesses, other government agencies and non-governmental organisations – to play our part.

Since 1971, the Environment Protection Authority Victoria (EPA) has played a pivotal role in protecting the environment to realise these environmental values.

As we look to the future and the economic, social, technological and environmental changes facing Victoria, it is critical that we have a strong EPA for the decades to come. What should the EPA of 2050 and beyond look like? To continue to be relevant and fit-for-purpose, the EPA must have clear roles and responsibilities and the powers and capabilities it needs to continue to make a difference.

The Minister for Environment, Climate Change and Water has charged the Ministerial Advisory Committee to consider these issues in consultation with the Victorian community.

To do this, we need your big ideas about what the EPA should look like into the future.

This is a once-in-a-generation opportunity to not just tinker at the edges, but to reflect on what we think the fundamental purpose and functions of the EPA should be.

We encourage you to join the conversation.



**Penny Armitage**  
Chairperson,  
Ministerial  
Advisory  
Committee



**Jane Brockington**  
Deputy Chair



**Janice van Reyk**  
Member

# 1 | The Inquiry: scope and key areas for attention

## **The Terms of Reference for the Inquiry into the EPA are broad and future-focused.**

The Inquiry is charged with examining the changing operating environment for the EPA, both in terms of new and emerging environmental challenges and public health concerns; and evolving expectations from business, the community and government about best-practice regulation and the requirements of environmental justice, a key objective of which is to ensure greater access to cleaner environments for more local communities.

This is not a performance review and it will not involve the investigation of individual cases or site-specific issues. However, the experiences of Victorian communities and businesses are important in terms of identifying how the EPA can perform more effectively in future.

This is the first comprehensive review of the EPA's role and powers since its establishment in 1971. The full Terms of Reference for the Inquiry, as framed by the government, are provided in Appendix 1. The Victorian Government's response (released in May 2015) to the 2013 *State of the environment* report also stated that: 'The public inquiry into the EPA will also consider the EPA's role in regulating greenhouse gas emissions.'<sup>1</sup>

Key areas for examination by the Inquiry are outlined below.

## **Responding to community concerns**

**Public health issues are a key focus of the Inquiry. Pollution and its effect on public health has always been a significant element of the EPA's regulatory activity, particularly in relation to air quality. While some risks have reduced over time, new risks have emerged with changing environmental conditions and improved knowledge of the impacts of past practices. Key community concerns relate to the legacy of past poor practices, that in many cases pre-dated the EPA, and now create risks such as exposure to contaminated soil and asbestos.**

The Terms of Reference also recognise the importance of environmental justice principles that support community involvement in decision-making and equitable protection from environmental hazards.

## **Improving regulatory efficiency and effectiveness**

**The Inquiry is charged with considering what expectations the community and industry have of the EPA as their environmental regulator, and how it performs this task.**

**In particular, the Inquiry is to consider the most effective operational setup for the EPA – in relation to its powers and regulatory tools and approaches, governance and funding. The Inquiry is keen to draw on the experience of regulators in the environmental field and, more broadly, on best-practice regulatory models from around the world.**

There is also a requirement in the Inquiry Terms of Reference to consider regulatory efficiency and how the task can be done with the least burden on business. This will require consideration of regulatory overlap, where the EPA's role intersects with those of local government and other regulators and government agencies, such as WorkSafe Victoria, the Earth Resources Regulator (for mining-related activity), and the Department of Health and Human Services (for health risk advice).

## **Combining environmental protection with economic viability**

**In setting environmental standards for industries operating in Victoria and pursuing compliance and enforcement action, the EPA directly engages with a wide range of businesses across the state.**

The EPA describes its vision as 'a healthy environment that supports a liveable and prosperous Victoria.'<sup>2</sup> Although in the past the goals of a healthy environment may have been considered to conflict with economic growth, there is a growing appreciation that they complement each other through the services provided to society by the physical environment and through liveability which attracts investment and skills. There is also recognition of the importance of the social licence to operate that businesses derive through the preferences of consumers and their relations with local communities. The Inquiry is keen to hear from stakeholders about how the regulatory framework might operate to support a healthy environment, economic viability and sustainable jobs.

<sup>1</sup> 2015 Victorian Government response to the state of the environment report 2013, Victorian Government, Melbourne, 2015.

<sup>2</sup> 'EPA Victoria: about us: who we are', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/about-us/who-we-are](http://www.epa.vic.gov.au/about-us/who-we-are), accessed 8 August 2015.

## 2 | How you can contribute to the Inquiry

**All Victorians are encouraged to get involved and share their views about the future role of the EPA.**

We would like to hear what you think of the ideas presented in this Discussion Paper and what other ideas you may have.

### Have your say in person

Public consultation events will be held in a range of locations across regional Victoria and metropolitan Melbourne.

Details about the full schedule of consultation sessions will be updated regularly on the Inquiry website.

### Make a submission

Anyone can make a written submission to the Inquiry.

If you are planning to make a submission you may wish to consider some of the questions asked throughout this paper. These questions are intended as discussion-starters and you should not limit yourself to the issues and questions raised here.

You can lodge your submission by:

- completing an online submission form
- making a submission in writing and sending it by:
  - email to: [info@epa-inquiry.vic.gov.au](mailto:info@epa-inquiry.vic.gov.au)
  - post to: PO Box 21428, Little Lonsdale Street, Victoria 8011.

**Please make your submission by 31 October 2015.**

### Connect with us

There are multiple ways to connect with the Inquiry. Visit our website or follow our social media channels to be informed about upcoming events, news and activities.

You can also contribute to the discussion in our online forums and share your ideas through our online brainstormer.

**Website:** [www.epa-inquiry.vic.gov.au](http://www.epa-inquiry.vic.gov.au)

**Email:** [info@epa-inquiry.vic.gov.au](mailto:info@epa-inquiry.vic.gov.au)

**Telephone:** 03 9948 2882

**Twitter:** [@EPA\\_Inquiry](https://twitter.com/EPA_Inquiry)

**Facebook:** [www.facebook.com/epainquiry](http://www.facebook.com/epainquiry)

# 3 | A changing Victoria

The world has changed significantly since the EPA commenced operations in 1971. Victoria's population is projected to increase to 10 million by 2051, with larger and more densely settled urban centres. Industry is evolving, both in the types of industries operating in Victoria and the scale and nature of their operations.

Community expectations about environmental quality and the protection of public health are changing. Community expectations for information from government are also changing.

The EPA of the future needs to be equipped to meet these new challenges.

## A changing population

Victoria's population is projected to increase from approximately 5.5 million in 2011 to 7.7 million by 2031 and then 10 million by 2051.<sup>3</sup> Population and demographic changes in Victoria will play a large part in shaping the future task for the EPA.

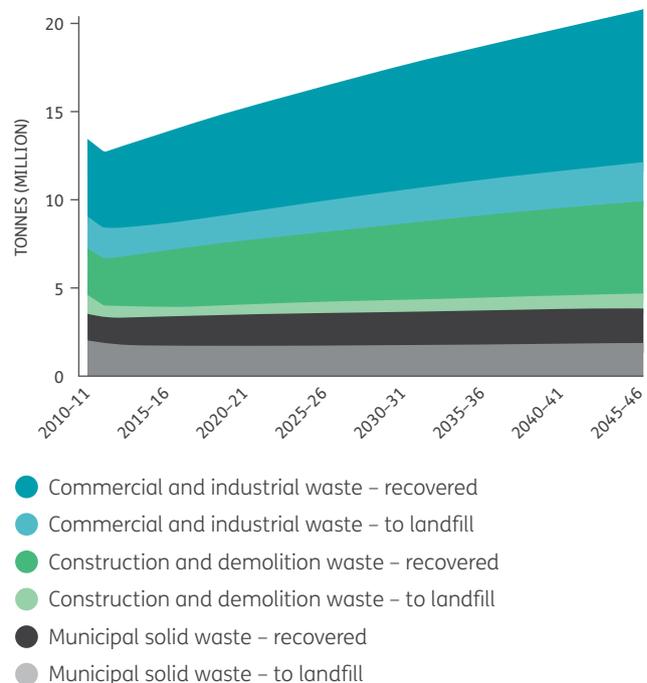
The bulk of population growth will occur within, and on the fringes of, existing urban areas and major regional centres. In particular, the Melbourne metropolitan area is projected to grow to nearly 8 million by 2051.<sup>4</sup>

In August 2014, Melbourne was voted the world's most liveable city for the fourth consecutive year.<sup>5</sup> Actions taken since 1971 to improve Victoria's environment have made a major contribution to Melbourne's status in this regard. Maintaining liveability across Melbourne and other population centres and continuing to improve environmental quality with a growing population present new challenges likely to require new responses from government. For the EPA, the priorities and the tools and approaches needed to meet these challenges will also have to change.

Population growth leads to increased demand for housing and transport, increased business activity, intensification of agricultural production, increased stormwater and stormwater pollution, and growing waste generation. The *Future Air* study, conducted by the EPA in partnership with the CSIRO, projected significant increases in emissions from domestic and business activities linked to population growth. Population growth also increases the health burden associated with pollution. Victoria is expecting to see a large increase in the number of people aged over 65<sup>6</sup>, who are known to be more sensitive to air pollution.<sup>7</sup> On the positive side, the study concluded that improved technology will reduce total motor vehicle exhaust emissions by 2030, despite population growth and increased vehicle numbers.<sup>8</sup>

Waste generation in Victoria is increasing at a faster rate than population growth and represents a certain future challenge for Victorians and for the EPA.<sup>9</sup> In 2011–12, Victorian landfills managed around 4,168,000 tonnes of waste materials.<sup>10</sup> Although 66 per cent of waste is currently recovered, based on current trends Victoria is likely to see total waste generation almost double, as illustrated in Figure 1, from 12.2 million tonnes in 2011–12 to 20.6 million tonnes in 2043–44.<sup>11</sup>

**FIGURE 1: PROJECTED VICTORIAN WASTE STREAMS, GENERATED UNDER BUSINESS-AS-USUAL SCENARIO**



Source: *Statewide waste and resource recovery infrastructure plan Victoria 2015-44*<sup>12</sup>

Waste presents the EPA and the community with a complex span of problems, including:

- litter affecting the environment of waterways, lakes and bays
- illegal dumping affecting amenity and people's feeling of safety
- potential risks to human health from waste stockpiling (e.g. fire hazards from tyre stockpiles) and landfill gas generated by closed landfills
- odour from landfills affecting the amenity of nearby residents.

<sup>3</sup> *Victoria in future 2015: population and household projections to 2051*, Department of Environment, Land, Water and Planning, [Melbourne], 2014.

<sup>4</sup> Ibid.

<sup>5</sup> *A summary of the liveability ranking and overview*, The Economist Intelligence Unit Limited, London, 2014.

<sup>6</sup> In 2009, 13.6 per cent of the population of Victoria was aged 65 years and over; this figure is expected to reach 23.1 per cent in 2056: '1367.2: state and regional indicators, Victoria, Jun 2010', Australian Bureau of Statistics, www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1367.2Chapter3Jun+2010, accessed 8 August 2015.

<sup>7</sup> EPA Victoria and CSIRO, *Future air quality in Victoria: final report*, Environment Protection Authority Victoria, Melbourne, July 2013.

<sup>8</sup> Ibid.

<sup>9</sup> *Statewide waste and resource recovery infrastructure plan Victoria 2015-44*, Sustainability Victoria, Melbourne, 2015.

<sup>10</sup> Ibid.

<sup>11</sup> 'Victorian waste and resource recovery projection model v1.1 2013', in *ibid*, Appendix 9.1, pp. 153–155.

<sup>12</sup> *Statewide waste and resource recovery infrastructure plan Victoria 2015-44*, Sustainability Victoria, Melbourne, 2015.

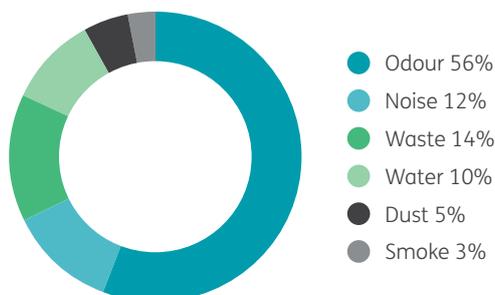
Waste management facilities (e.g. transfer stations, landfills and resource recovery and recycling facilities) provide an essential service to the community but they can also have a negative impact on local residents in urban areas across Victoria. The closure of smaller, more remote landfills in rural areas is improving safety through the use of larger, more centralised and modern sites, but may impose higher financial burdens for regional communities who need to transport their waste further distances. The EPA sits at the centre of these tensions between competing needs. The future task of reducing waste generation, improving resource recovery and managing any negative effects (including those relating to residential encroachment on essential waste infrastructure) will be increasingly demanding.

The recently released *Statewide waste resource and recovery infrastructure plan*<sup>13</sup> sets out the 30-year vision and framework for waste and resource recovery planning to meet the needs of all Victorians while minimising the impact on people’s health and amenity and on the environment. Waste and resource recovery infrastructure is increasingly viewed as an essential service that needs to be supported, requiring appropriate long-term planning to ensure the availability of enough suitably located and appropriately zoned land.<sup>14</sup>

The EPA currently plays a significant role in responding to impacts arising from industrial activities, landfills or intensive agriculture where these are located in close proximity to other land uses. Population growth in Melbourne and other population centres is increasingly resulting in residential development closer to existing industrial and agricultural activities, creating problems for residents and businesses – and often requiring regulatory interventions, including through the EPA.

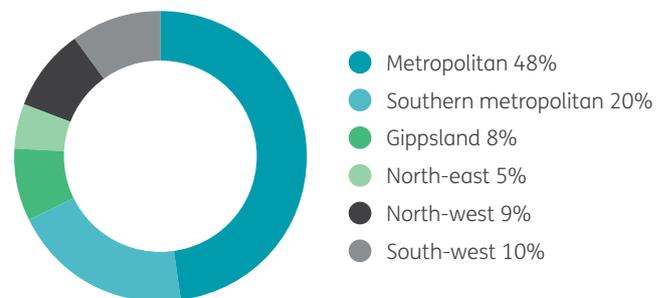
Pollution reports from the public indicate the significance of amenity issues. In 2013–14, the EPA received 12,005 pollution reports. As indicated in Figure 2 below, odour and noise reports made up almost 70 per cent of all pollution reports. Figure 3 shows the EPA region in which the reports were made.<sup>15</sup>

**FIGURE 2: TYPES OF POLLUTION REPORTS RECEIVED BY EPA (2013-2014)**



Source: EPA annual report 2013-2014

**FIGURE 3: REGIONAL LOCATION OF POLLUTION REPORTS TO EPA (2013-2014)**



Source: EPA annual report 2013-2014

Population growth and the high value of urban land may mean that in future residents will live in closer proximity to non-residential activities, with less capacity for using ‘space’ (including formal buffers) as a tool to manage the negative effects. This may require the EPA to move from a ‘complaint response’ model to one that allows for more strategic and integrated interventions. By engaging with and empowering communities the EPA could contribute to a process that helps build the social licence for industry.

Providing appropriate residential amenity in a higher-density urban environment and avoiding or minimising conflicts with other land uses, is likely to be an increasing task for land use planning and environmental regulation in the future. These issues also arise on the urban fringe, including where residential development is occurring in rural and regional Victoria. Community expectations for health, amenity and general environmental quality change as the environment around them changes. While this may create new tensions in some areas, the major growth in inner-city residential areas suggests that we are already seeing some changes in expectations about space and amenity.

Local communities close to industrial activities have often been disproportionately affected by these activities. The principles of environmental justice can provide a framework for the community and government to consider how negative impacts should be managed and mitigated. Among other things, environmental justice is about ensuring that impacts on amenity and public health do not fall disproportionately on certain communities.<sup>16</sup>

Across metropolitan Melbourne and in regional centres, population growth is driving the conversion of former industrial land to new uses, including housing and commercial activity. These ‘brownfield’ sites can play an important role in providing land for new residential development within established suburbs close to existing infrastructure and deliver significant social, economic and environmental benefits.<sup>17</sup> Major redevelopment activity is already projected for new precincts such as Fishermans Bend.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> *Year three: tackling pollution at the source: EPA annual report 2013–2014*, Environment Protection Authority Victoria, Melbourne, 2014, p. 12.

<sup>16</sup> Environmental justice is discussed further in Section 5

<sup>17</sup> As outlined in ‘Metropolitan Planning Authority: urban renewal’, Metropolitan Planning Authority website, [www.mpa.vic.gov.au/planning-activities/urban-renewal/](http://www.mpa.vic.gov.au/planning-activities/urban-renewal/), accessed 6 August 2015.

Where there has been a history of industrial or other polluting activity, risks to human health and the environment will need to be assessed and managed before redevelopment proceeds. The EPA, through its statutory environmental audit system, together with the land use planning system, currently plays a vital role in ensuring that land contaminated by past industrial activities is safe and suitable for the proposed new use.

Victoria's growing population will only serve to increase the pressure on government for timely processing to facilitate this redevelopment. Regulatory frameworks will also need to ensure high levels of quality assurance so as to build community confidence and stimulate business investment in 'brownfields' redevelopment.

## Fishermans Bend – large-scale conversion of former industrial land to residential use

This 455 hectare former industrial precinct provides Melbourne with the opportunity for major new land uses, including housing, in the inner-city, close to existing infrastructure, services and employment.

The precinct has a long history of industrial use, including contaminating activities, and therefore requires assessment and appropriate management to ensure it is safe for proposed new uses.

The EPA is working with the Metropolitan Planning Authority on a \$500,000 groundwater assessment and monitoring regime as a basis for establishing a precinct-based approach to managing groundwater contamination.

Redeveloped brownfield sites, such as Fishermans Bend, will play an important role in meeting the needs of Victoria's growing population. New regulatory approaches and better integration of processes across government will be important to facilitate urban renewal activity.

## A changing economy and changing technology

**Manufacturing as a percentage of economic activity in Australia peaked in the 1960s,<sup>18</sup> and Melbourne was Australia's major manufacturing base. This has been the defining context for the EPA to date.**

As Victoria's economy changes, the primary regulatory focus of the EPA will need to shift too. In particular, there are fewer large industrial and heavy manufacturing sites – that is, premises licensed by the EPA that can be actively managed and monitored – and increasing numbers of smaller, unlicensed and often diffuse sources of pollution that are more difficult to track and manage using EPA's traditional tools and approaches.

The increasing globalisation of businesses and international competition is leading to increased business mobility and contributing to the changing nature of economic activity in Victoria.

The Victorian Government has identified priority business growth areas, namely:

- medical technology and pharmaceuticals
- new energy technology
- food and fibre
- transport, defence and construction technologies
- international education
- professional services.<sup>19</sup>

The task for environmental regulation will differ across these sectors. For example, global food and fibre production is expected to double by 2030, driving Victorian growth in primary production by significantly intensifying production systems and expanding food processing in metropolitan Melbourne and regional areas.<sup>20</sup> By contrast, the new knowledge and service sector will increasingly place a premium on Victoria's liveability as a basis for attracting people, market share and investment capital.

Advanced manufacturing, deploying new materials and technologies, and operating on a much smaller scale, will require much more agile regulatory approaches that support the application of environmentally sound technologies, respond to more distributed activity, and are alert to new potential hazards. For example, new technologies such as micro-plastics may have unforeseen or not well understood ramifications. Traditional industrial zones are also changing as industrial land is converted to mixed use involving commercial activity, which can lead to conflicts about amenity. Smaller-scale light industrial activity and diffuse pollution are more difficult for regulators to manage in a practical sense.

<sup>18</sup> *Trends in Australian manufacturing*, Commission research paper, Productivity Commission, Canberra, 2003, p. xix.

<sup>19</sup> 'Future industries: building a stronger Victoria', Business Victoria website, [www.business.vic.gov.au/support-for-your-business/future-industries](http://www.business.vic.gov.au/support-for-your-business/future-industries), accessed 6 August 2015.

<sup>20</sup> *Victoria's future industries: food and fibre sector: discussion paper*, Department of Economic Development, Jobs, Transport and Resources, Melbourne, July 2015.

There is also a trend for some activities to become more intensive and aggregated. For example, agriculture in Victoria is intensifying with fewer, larger farms. This means that there is a need for greater attention to potential impacts on the surrounding environment. However, there are also opportunities for economies of scale to support improved environmental management. It will be necessary to consider how regulatory frameworks can protect the environment and local amenity while providing certainty for business investment, in particular, protection from future residential encroachment.

## Intensification of primary production

Modelling by the Victorian Department of Economic Development, Jobs, Transport and Resources shows that food and fibre production could double by 2030, but that this will require significant intensification of production systems.

Intensification can reduce the amount of land required for production and may allow previously unproductive land to be used for agriculture. For example, over the last 30 years dairy farmers have doubled milk production from the same number of cows but from one-third smaller area, and a 400,000-chicken farm was approved earlier this year to be built in Buckrabanyule. Intensification can also raise community concerns, including in relation to increased pressure on the environment (e.g. managing significant volumes of waste and avoiding impacts on local waterways) and impacts on local amenity.

In order to realise the benefits while addressing the challenges of intensification, a coordinated, partnership approach is needed across:

- competing land uses
- environmental protection regulation
- community engagement
- animal welfare.

Source: Victoria's future industries: food and fibre sector: discussion paper, DEDJTR, July 2015.

Over the past 10 years there has been a steady decline in the number of landfills in Victoria. The consolidation into larger regional landfills offers economies of scale while making it easier to meet improved environmental standards imposed by the EPA. Waste material streams (for example, organics or metals) are being consolidated and aggregated through a 'hubs and spokes' network of infrastructure facilities.<sup>21</sup> In addition, waste

streams have been transformed by new business opportunities and changed community attitudes, such as the emergence of industrial-scale waste recycling and focus on diverting organics from landfills.<sup>22</sup>

This restructuring of the industry can deliver overall benefits in environmental quality, but it may also negatively affect specific sectors of the community. For example, there is more waste to be transported over greater distances and those living near these larger landfills bear a disproportionate burden of impacts.

Landfill levies have increased significantly in the last few years and have driven rapid changes in the waste and resource recovery industry. As intended, this has created a large incentive to divert waste from landfill into higher value uses such as re-use or recycling. Unfortunately, in some cases this has led to poor waste management practices such as stockpiling and illegal disposal which undermines legitimate businesses and creates environmental impacts.

Waste streams are changing over time. The shorter life cycle for many products leads to significant volumes of e-waste, such as mobile phones and flat-screen televisions. In 2012–13, an estimated 137,756 tonnes of televisions and computers reached end-of-life in Australia, of which 40,813 tonnes was recycled.<sup>23</sup> In some cases, changes in the materials and composition of consumable products is making them more difficult to recycle. For example, the increased use of mixed plastics is reducing the percentage of recyclable materials in motor vehicles.

While these changes are occurring, Victoria, like most developed societies, will continue to live with the legacy of past industrial activities for a long time to come. Landfills have a long life cycle: putrescible waste landfills (i.e. containing organic matter that decomposes) require active management and oversight for 30 years or more post-closure.<sup>24</sup> Many of these legacies are the result of practices which are no longer acceptable today due to better scientific knowledge and a greater awareness of potential public health impacts.

Better information on these and other sites used in the past for contaminating activities will help to avoid risks to human health and the environment. For heavy industry and manufacturing sites, such as the Point Henry aluminium smelter and the Anglesea coal mine and power station, that are ending operations, there is a need for decommissioning and clean-up to allow for new uses. Victoria's traditional reliance on open-cut coal mines to generate electricity, coupled with the highly fire-prone nature of our environment, raises the risk of catastrophic fires occurring in existing and decommissioned mines, as was seen with the Hazelwood mine fire in 2014.

<sup>21</sup> *Statewide waste and resource recovery infrastructure plan Victoria 2015–44*, Sustainability Victoria, Melbourne, 2015, p. 33 (Section 2.2).

<sup>22</sup> Approximately 2.4 million tonnes of organic waste was produced in Victoria in 2011–12, of which about 1.5 million tonnes ended up in landfill, representing a cost to the Victorian economy of \$30 million per year. Future opportunities include using food waste for energy and fuel: see *Statewide waste and resource recovery infrastructure plan Victoria 2015–44*, Sustainability Victoria, Melbourne, 2015, p. 41 (Table 2.3).

<sup>23</sup> Department of Environment, Land, Water and Planning, 'Victorian Government submission to the national television and computer recycling scheme operational review', February 2015.

<sup>24</sup> *Managing landfills*, Victorian Auditor-General's Office, Melbourne, 2014, p. 2.

**TABLE 1: A CHANGING VICTORIA – A SNAPSHOT OF A CHANGING STATE**

	THE PAST	THE PRESENT	THE FUTURE
<b>Victoria's population</b>	3.4 million (1970) <sup>25</sup>	5.9 million (2015) <sup>26</sup>	7.7 million (2031) 10 million (2051) <sup>27</sup>
<b>Melbourne's population</b>	2.7 million (1973) <sup>28</sup>	4.4 million (2014) <sup>29</sup>	7.9 million (2051) <sup>30</sup>
<b>Melbourne CBD residential population</b>	12,727 (2004) <sup>31</sup>	30,878 (2014) <sup>32</sup>	52,324 (projected for 2036) <sup>33</sup>
<b>Real Gross State Product per person (GSP)</b>	\$36,297 (1992) <sup>34</sup>	\$59,245 (2014) <sup>35</sup>	\$121,900 (2054–55) (Australian Gross Domestic Product per person) <sup>36</sup>
<b>Jobs in manufacturing</b>	452,861 (employed in factories) (1968) <sup>37</sup>	270,777 (2011) <sup>38</sup>	
<b>Food and fibre production (including intensive agriculture)<sup>39</sup></b>		4.9% of gross state product (2015)	Potential for food and fibre production to double by 2030
<b>EPA licensing activity – number of sites licensed<sup>40</sup></b>	Approximately 5,000 (mid-1980s)	Approximately 700 (2015)	
<b>Number of landfills in Victoria</b>	Licensed: 251 (1990) <sup>41</sup> Unlicensed: 103 (2000–01) <sup>42</sup>	Licensed: 51 (2011–12) Unlicensed: 32 (2011–12) <sup>43</sup>	11 landfills in metropolitan Melbourne are scheduled to close by end 2023 <sup>44</sup>
<b>Installation of rooftop solar panels<sup>45</sup></b>		866 megawatts	5,573 megawatts (2034–35)
<b>Registered cars</b>	1.5 million (1970) <sup>46</sup>	3.5 million (2013) <sup>47</sup>	

<sup>25</sup> 1301.0: Year Book Australia, 2012: Population size and growth', Australian Bureau of Statistics, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1301.0~2012~Main%20Features~Population%20size%20and%20growth~47>, accessed 12 August 2015.

<sup>26</sup> '3101.0: Australian Demographic Statistics, Dec 2014', Australian Bureau of Statistics, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0>, accessed 12 August 2015.

<sup>27</sup> *Victoria in future 2015: population and household projections to 2051*, Department of Environment, Land, Water and Planning, [Melbourne], 2014.

<sup>28</sup> 3218.0: Regional Population Growth, Australia, 2012–13', Australian Bureau of Statistics, <http://www.abs.gov.au/ausstats/abs@.nsf/products/AC53A071B4B231A6CA257CAE000ECC5?OpenDocument#PARALINK2>, accessed 12 August 2015.

<sup>29</sup> 3218.0: Regional Population Growth, Australia, 2013–14', Australian Bureau of Statistics, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3218.0/>, accessed 12 August 2015.

<sup>30</sup> *Victoria in future 2015: population and household projections to 2051*, Department of Environment, Land, Water and Planning, Melbourne, 2014.

<sup>31</sup> 3218.0: Regional Population Growth, Australia, 2013–14', Australian Bureau of Statistics, <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3218.0/>, accessed 12 August 2015.

<sup>32</sup> Ibid.

<sup>33</sup> *Melbourne Central Business District & Remainder small area demographic profile*, City of Melbourne, Melbourne, 2013, p. 19, [https://www.melbourne.vic.gov.au/AboutMelbourne/Statistics/Documents/Small\\_area\\_profile\\_Melbourne\\_CBD\\_2013.pdf](https://www.melbourne.vic.gov.au/AboutMelbourne/Statistics/Documents/Small_area_profile_Melbourne_CBD_2013.pdf).

<sup>34</sup> 5220.0 Australian National Accounts: State Accounts', Australian Bureau of Statistics, [http://www.abs.gov.au/AUSSTATS/ABS@Archive.nsf/log?openagent&5220001\\_annual\\_gross\\_state\\_product\\_all\\_states.xls&5220.0&Time%20Series%20Spreadsheet&FB2BCA8D44ABD1C4CA257C3000115D0F&0&2012-13&28.11.2013&Latest](http://www.abs.gov.au/AUSSTATS/ABS@Archive.nsf/log?openagent&5220001_annual_gross_state_product_all_states.xls&5220.0&Time%20Series%20Spreadsheet&FB2BCA8D44ABD1C4CA257C3000115D0F&0&2012-13&28.11.2013&Latest), accessed 12 August 2015 (A2336303L: Victoria: Real gross state income per capita: Chain volume measures).

<sup>35</sup> Ibid.

<sup>36</sup> 2015 *intergenerational report: Australia in 2055*, Commonwealth of Australia, March 2015, p. 99.

<sup>37</sup> 1301.0: Year Book Australia, 1970', Australian Bureau of Statistics, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1301.0Main+Features11970?OpenDocument>, Chapter 22 (Manufacturing Industry), p. 716, accessed 12 August 2015.

<sup>38</sup> National Regional Profile: Victoria: Industry', Australian Bureau of Statistics, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/nrp.nsf/Previousproducts/2Industry12007-2011?opendocument&tabname=Summary&prodno=2&issue=2007-2011>, accessed 12 August 2015 (10.7 per cent of 2,530,634 total employees).

<sup>39</sup> *Victoria's future industries: food and fibre sector: discussion paper*, Department of Economic Development, Jobs, Transport and Resources, Melbourne, July 2015.

<sup>40</sup> Information obtained from EPA.

<sup>41</sup> *Policy Impact Assessment: waste management policy (siting, design and management of landfills)*, Environment Protection Authority Victoria, Melbourne, December 2004, p. 5.

<sup>42</sup> Information obtained from Sustainability Victoria.

<sup>43</sup> Statewide waste and resource recovery infrastructure plan Victoria 2015–44, Sustainability Victoria, Melbourne, 2015, p. 102.

<sup>44</sup> Metropolitan waste and resource recovery strategic plan (2013 consultation draft), Metropolitan Waste Management Group, Melbourne, October 2013, p. 107.

<sup>45</sup> *National electricity forecasting report for the national electricity market*, Australian Energy Market Operator, 2015.

<sup>46</sup> Ari Unglik, *Between a rock and a hard place: the story of the development of the EPA*, Environment Protection Authority Victoria, 1996, Melbourne, p. 9.

<sup>47</sup> 4102.0: Australian Social Trends, July 2013: Car Nation', Australian Bureau of Statistics, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features40July+2013>, accessed 12 August 2015.

## A changing environment

**In the 1960s and 70s environmental concerns were focused on highly visible pollution with obvious impacts. Abattoirs were discharging directly into the Maribyrnong River causing it to run red with blood, hazardous waste was commonly being disposed of in the same tips as household garbage, and pilots flying into Melbourne complained of poor air quality.<sup>48</sup>**

While the air quality of metropolitan Melbourne has clearly improved over time<sup>49</sup> and Port Phillip Bay and waterways are no longer subject to gross pollution,<sup>50</sup> concerns across Victoria are increasingly focused on a range of complex pollution issues that are not readily managed by the EPA's conventional regulatory toolkit.

Combatting pollution on inland waterways in rural and urban areas will be an ongoing challenge, with sources as diverse as agricultural runoff, stormwater litter and pollution, septic tanks, mining waste and tailings, and accidents and spills. As the lead agency in responding to inland waters pollution incidents, EPA will continue to play a key role in this space.

The Hazelwood mine fire highlighted the risks of major pollution and associated health hazards from fires. Climate change will further exacerbate the risk of bushfires and the need for planned burning.<sup>51</sup> Emergency management is now a major focus for the EPA and other agencies, requiring new skill sets and tools and approaches, including strategic risk analysis, rapid response and the deployment of authoritative advice.

Other pollution problems, such as asbestos, landfill gas, and land and groundwater contamination represent the 'long tail' of past industrial practices. Regulators must deal with problems created when lower or no standards were in place, reflecting a different state of technical understanding and community awareness. Our understanding of the environmental and health risks of a number of materials and chemicals will continue to evolve, leading to significant changes in the way they are managed.

The profound changes that have already occurred in relation to use and handling of substances like asbestos,<sup>52</sup> polychlorinated biphenyls (PCBs)<sup>53</sup> and ozone-depleting substances<sup>54</sup> highlight the extent to which changed knowledge, nationally and internationally, can transform the task of the regulator and drive new industrial processes and community behaviour change. A key challenge for the environmental regulator is to keep abreast of the evolving scientific knowledge and understanding of risks,

and to apply this to protect human health from both legacy contamination and new hazards that may create the legacy problems of the future.

Coal seam gas extraction is an example of an emerging activity that has provoked significant community concern and required expert, technical responses from government and potential new regulatory interventions. The Victorian Government has recently released a study looking at the potential impacts on water resources of coal seam gas extraction in the Gippsland region, with findings that: 'Gas extraction depressurises the gas-bearing formation and may cause a decline in groundwater level, which could impact water users and ecosystems ... [and that] Hydraulic fracturing can increase gas yield, but may unintentionally contaminate water supplies with hydraulic fracturing fluids.'<sup>55</sup>

Climate change is increasingly acknowledged as the most significant future 'pollution' problem facing communities across the world. It is also a highly complex problem because it involves many cumulative sources embedded across the economy, including large emitters and small diffuse sources, and it has a long-term, widely distributed effect. For governments and environmental regulators, there are questions about setting practicable levels for reducing greenhouse gas emissions, and how these are adjusted over time to support the transition to a low carbon economy.

The shift to a low carbon economy is another influence changing economic activity and the industrial face of Victoria, and therefore changing the task of the environmental regulator. This will involve changes in the energy mix with a shift towards renewables and more distributed electricity generation, often in urban or densely populated areas,<sup>56</sup> and the development of new industries and technologies. In some cases, the process of 'decarbonisation' will yield broader benefits for the environment, for example, mass adoption of electric vehicles would improve urban air quality and reduce noise impacts.

Environmental regulation will also need to be adapted to deal with the effects of a changing climate. Conventional regulatory tools such as EPA licensing will not be sufficient to manage increases in pollution resulting from more bushfires and droughts, as well as the reduction in urban air quality from increased temperatures.<sup>57</sup> In addition, climate change means that the natural environment will become less resilient to the impact of industrial activities.<sup>58</sup> The EPA's role in the response to a range of issues relating to climate change will continue to evolve into the future.

<sup>48</sup> *The Environment Protection Act 1970: 25 years of making a difference*, Environment Protection Authority, Melbourne, 1996, p. 2.

<sup>49</sup> EPA Victoria and CSIRO, *Future air quality in Victoria: final report*, Environment Protection Authority Victoria, Melbourne, July 2013, p. 5.

<sup>50</sup> Ari Unglik, *Between a rock and a hard place: the story of the development of the EPA*, Environment Protection Authority Victoria, 1996, Melbourne, pp. 35–37.

<sup>51</sup> *Victorian climate change adaptation plan*, Victorian Government, Melbourne, March 2013, p. 44.

<sup>52</sup> In Australia, asbestos cement materials were commonly used in the manufacture of residential building materials from the mid-1940s until the late 1980s. From 31 December 2003, a total ban on the manufacture, use, re-use, import, transport, storage and sale of all forms of asbestos came into force. *Asbestos: a guide for householders and the general public*, enHealth (Environmental Health Standing Committee of the Australian Health Protection Principal Committee), Canberra, February 2013.

<sup>53</sup> The importation and manufacture of PCBs has been banned since the 1970s with ongoing phase-out of equipment containing PCBs. *Industrial waste resource guidelines: polychlorinated biphenyls (PCB) management*, Environment Protection Authority Victoria, September 2009.

<sup>54</sup> *Australia's progress towards meeting its commitments under the Montreal Protocol on Substances that Deplete the Ozone Layer*, Department of the Environment, 2014.

<sup>55</sup> *Gippsland region synthesis report: overview of the assessment of potential impacts on water resources*, Gas submission 658: Onshore natural gas water science studies, Department of Environment, Land, Water and Planning, June 2015.

<sup>56</sup> Giles Parkinson, 'Big utilities charge into distributed energy, one step at a time', *Renewconomy*, 27 February 2015 <http://renewconomy.com.au/2015/big-utilities-charge-into-distributed-energy-one-step-at-a-time-59843>

<sup>57</sup> Beyond 2030, climate change is predicted to cause significant increases in summer smog (ozone). EPA Victoria and CSIRO, *Future air quality in Victoria: final report*, Environment Protection Authority Victoria, Melbourne, July 2013, p. 2.

<sup>58</sup> *Victorian climate change adaptation plan*, Victorian Government, Melbourne, March 2013, pp. 20–24.

## Changing expectations of government

**The EPA already operates in a new information-rich environment in which ‘data is becoming the world’s new natural resource, transforming industries and professions ... [and] mobile and social technologies are transforming the way people engage as individuals.’<sup>59</sup>**

The digital economy has transformed business and community expectations of government in relation to information flows, trust and authority, and service provision. The community is looking for greater responsiveness and more information-sharing. This is challenging the EPA and other areas of government to consider how they can work with agility, establish their authority and build community trust, and ‘provide quick solutions which are intelligent and predictive – and designed from a citizen perspective – not based on government need or process.’<sup>60</sup>

New technology and the new data-rich environment are already changing the way governments around the world approach service provision and, in particular, driving collaboration across traditional boundaries within government. At the national level, the Commonwealth Government’s Digital Transformation Office is investing in technology that will make government information and services easier to find, use and consume. In New Zealand, the release of ‘high value public data’ to the private and community sectors has been identified as having the potential to ‘grow the economy, strengthen our social and cultural fabric, and sustain the environment ... [and] to encourage business and community involvement in government decision-making.’<sup>61</sup>

Information technologies and digital platforms also present specific opportunities for the environmental regulator to:

- collaborate and share information more effectively with co-regulators
- direct tailored and real-time information to specific audiences
- identify risks with more precision
- deploy smarter, more targeted regulatory interventions, with greater effectiveness and reduced burden on business.

For example, there is untapped data held by government about the location of potential environmental hazards, including land with legacy contamination. By harnessing this information regulators could improve risk management, and support private risk management and due diligence by prospective investors.

There is also a strong link with environmental justice objectives through improved transparency and greater community engagement in decision-making. The community is not only better resourced, it is better educated. With this comes greater expectations about people’s capacity to influence the environment in which they live and to engage with regulators about the quality of their amenity and to advocate for a healthy environment.<sup>62</sup>

The EPA is already dealing with the challenge posed by the availability of multiple sources of ‘expert’ advice through the internet. In emergency or pollution incident situations, information is disseminated quickly and broadly through social media and the 24-hour news cycle. The EPA needs to provide quick and authoritative advice – something that may be difficult given the technical requirements of monitoring and testing regimes for complex, science-based problems. In addition, the EPA needs to be able to explain complex issues in terms that can be understood by the wider community and to deal with questioning about the authority of its expert advice.

Technology is creating new opportunities for transparency and community involvement in monitoring and understanding impacts (for example, real-time monitoring on the internet and citizen science). The EPA’s citizen science initiative in the Latrobe Valley is an example of how the organisation is seeking to use this opportunity and also working with the community to build trust.<sup>63</sup>

Alongside these opportunities, the EPA and other areas of government will also need to assess and manage the risks of the new digital environment: a ‘global social milieu they cannot control, replete with disruptive technologies, new channels of communication, new forms of interconnectivity, new information sources, and new influential players.’<sup>64</sup>

- **Do you think the key environmental challenges which will impact the EPA in the future have been captured? Are there any others?**

<sup>59</sup> Kerry Purcell, ‘The power shift to the hands of the citizen’, *The Mandarin*, 1 July 2015.

<sup>60</sup> Ibid.

<sup>61</sup> New Zealand Deputy Prime Minister Bill English (February 2015), quoted in John Wanna, ‘Opening government: transparency and engagement in the information age’, background paper to ANZSOG Annual Conference, Melbourne, 4–6 August 2015.

<sup>62</sup> Environmental justice issues are discussed further in Section 5.

<sup>63</sup> Participants in the EPA’s Citizen Science Program are currently doing water testing and using photos to record air quality in the Latrobe Valley. ‘Hazelwood recovery effort: citizen science’, Environment Protection Authority Victoria website, [www.epa.vic.gov.au/hazelwood/citizen-science](http://www.epa.vic.gov.au/hazelwood/citizen-science), accessed 6 August 2015.

<sup>64</sup> John Wanna, ‘Opening government: transparency and engagement in the information age’, background paper to ANZSOG Annual Conference, Melbourne, 4–6 August 2015.

## The statutory framework

The EPA was established by the *Environment Protection Act 1970 (the EP Act)*. It commenced operations in 1971 as Victoria's first centralised pollution control agency and the second EPA in the world.<sup>65</sup>

While it was a very different economy, society and environment in 1971, the concerns and aspirations expressed then are still relevant today – to ensure that people are not fearful for their health, to manage the environmental impact of a growing population and its waste generation, and to prevent pollution before it occurs. In order to meet these aspirations, the EPA was set up with a strong scientific base to inform its decision-making. This approach has continued throughout the life of the EPA.

### Environment Protection Act principles

The EP Act was amended in 2000, requiring the EPA to give regard to these principles in administering the EP Act:

- integration of economic, social and environmental considerations
- the precautionary principle
- intergenerational equity
- conservation of biological diversity and ecological integrity
- improved valuation, pricing and incentive mechanisms
- shared responsibility
- product stewardship
- wastes hierarchy
- integrated environmental management
- enforcement
- accountability

The EP Act lists the powers, duties and functions of the EPA<sup>66</sup> but does not clearly define the EPA's role. In lieu of a clear statutory description, the EPA has described its role as having two elements:

- an effective environmental regulator
- an influential authority on environmental impacts.<sup>67</sup>

The EP Act has been amended many times since 1970; it has grown from 33 to 424 pages. Key milestones in the evolution of the EPA and the EP Act are set out in Appendix 2. As the EP Act has developed, the EPA's statutory functions have become increasingly broad and diverse, as illustrated in Figure 4.

FIGURE 4: RANGE OF EPA'S STATUTORY FUNCTIONS

LITTER	Litter infringement for dropping a cigarette butt	Prosecution of illegal dumping of commercial-scale asbestos waste
AIR POLLUTION	Responding to complaints regarding smoke from wood-burning heaters	Licensing a 2,200 megawatt coal-fired power station
WASTE	Administering the collection of landfill levies	Licensing a hazardous waste landfill
WATER	Monitoring and reporting on recreational water conditions during summer at beaches in Port Phillip Bay	Licensing a major sewage treatment plant

Regular amendments to the EP Act have not substantially changed the core pollution offences around which the EP Act is framed. These are only triggered after pollution has occurred. This 'post-harm' statutory framework limits the EPA's capacity to proactively prevent pollution from occurring. The EPA's *Compliance and enforcement policy* recognises the value of 'planned and proactive inspections and [aims to] target areas of greatest risk and where non-compliance is most likely.'<sup>68</sup> While the EPA seeks to implement strategic, preventative inspection activities, its inspection regime still needs to be responsive to the immediate pressures of pollution reports or complaints.

<sup>65</sup> The first was the United States Environmental Protection Agency.

<sup>66</sup> *Environment Protection Act 1970 (Vic)* Section 13.

<sup>67</sup> *Environment Protection Authority Victoria 5 year plan 2011–2016*, Environment Protection Authority Victoria, Melbourne, 2011, p. 1.

<sup>68</sup> *Compliance and enforcement policy*, Environment Protection Authority Victoria, Melbourne, September 2011, Publication 1388.1, <http://www.epa.vic.gov.au/~media/Publications/1388%201.pdf>

## Regulatory tools and approaches

Regulators have a range of different tools and approaches which they may apply in different circumstances. Some of the tools and approaches available to the EPA include:

### **Pre-harm**

- Developing operating standards and guidance on how to comply (including statutory policies)
- Informing and educating businesses and the community about environmental obligations
- Undertaking air and water quality monitoring to identify changes over time and possible future issues
- Site inspections to monitor compliance
- Works approvals for activities with the potential to cause significant environmental impact
- Research, development and demonstration approvals for works of limited scale, duration and environmental impact
- Licences for activities with the potential to cause significant environmental impact

### **Post-harm**

- Site inspections to investigate non-compliance
- Undertaking air and water quality sampling or testing to assess the environmental impact
- Providing advice about how to comply, including issuing of pollution control notices (i.e. Pollution Abatement Notices and Clean Up Notices) or directions to prevent or remedy pollution or contamination
- Sanctions for non-compliance, with a range of escalating sanctions available:
  - official warning
  - penalty infringement notice
  - notice of contravention
  - enforceable undertaking
  - injunction
  - licence/permit suspension
  - prosecution
  - court-ordered action, including remediation projects
  - licence/permit revocation

### **Public participation in regulatory decisions**

- Public comment sought on all works approval and some licence applications
- Public conference of interested parties to a matter to discuss relevant issues
- Third party appeals of some EPA decisions to the Victorian Civil and Administrative Tribunal

The EPA directly regulates activities with the potential to cause significant environmental harm such as landfills, power stations, composters, abattoirs and sewage treatment plants. It does this through its works approval and licensing regime.

**Works approvals** allow the EPA to ensure the construction, installation or modification of works meet environmental standards. **Licences** allow the EPA to set conditions on activities, including the setting of emission limits for pollutants. The works approvals and licensing regime is used by the EPA to regulate noise, odour, waste, land contamination and air and water pollution for licensed activities.

## Environmental audit system

The EPA is responsible for appointing environmental auditors and regulating their conduct under the EP Act.

Environmental auditors provide independent expert advice on the condition of the environment at a site and any risks posed.

Environmental auditors play a key role in the land use planning system by assessing contamination risks for sites where a more sensitive use is proposed for the future (for example, where it is proposed to convert industrial land for residential use).

The EP Act has broad application and applies to businesses whether they are licensed by the EPA or not. For example, the pollution offences in the EP Act apply to all activities. The EPA can issue directions to remedy pollution or take enforcement action where environmental standards are breached.

In addition to the works approvals and licensing regime, the EPA's regulatory role for different sectors of the environment includes:

- **Noise** – investigating complaints about noise from major industries and overseeing the noisy vehicle compliance program, including the approval of vehicle noise testers.
- **Odour** – investigating complaints about offensive odours.
- **Waste** – administering the collection of landfill levies, regulating the transport of hazardous waste and investigating large-scale industrial dumping.
- **Litter** – administering the litter reporting program for littering from vehicles.
- **Land** – overseeing the environmental audit system and appointment of environmental auditors, and issuing clean-up notices where there is an unacceptable risk to human health or the environment.
- **Air** – enforcing vehicle emission limits and administering the smoky vehicle reporting program. The EPA also monitors air quality and issues air quality bulletins and smog alerts.
- **Water** – administering the *Pollution of Waters by Oil and Noxious Substances Act 1986* which specifically deals with oil, chemicals and litter from ships. The EPA also operates a beach reporting program throughout summer.

## Landfill levies

The levies to be paid to the Victorian Government for the disposal of waste to landfill are set out in the EP Act.

Landfill levies have increased significantly in recent years to provide an incentive to divert waste away from landfill and encourage re-use and recycling.

The Victorian Government sets the landfill levy rates and determines how landfill levy revenue is used.

The EPA is responsible for collecting landfill levies from landfill operators. Approximately 60 per cent of the EPA's operating budget is funded via landfill levy revenue.

## The EPA today

**The EPA of today is strongly influenced by recent external reviews. The past five years saw a renewed focus on compliance and enforcement<sup>69</sup> and human health hazards, arising out of external reviews by the Victorian Ombudsman (2009)<sup>70</sup> and the Victorian Auditor-General (2010).<sup>71</sup>**

The EPA has increasingly adopted a risk-based approach to allocate its 'compliance monitoring and inspection efforts towards the biggest risks of harm to the environment and to those people and businesses that are less likely to comply.'<sup>72</sup>

More recently, the Hazelwood coal mine fire inquiry reinforced the need for the EPA to build capacity to respond to public health concerns, particularly in emergency situations, and to build community confidence that the EPA is ensuring a safe and healthy environment.

These reviews have reinforced the need for the EPA to have a strong field-based regulatory presence, and science and engineering capability.

### Field-based regulatory activity

Monitoring compliance and enforcing the EP Act is primarily undertaken by EPA's on-the-ground authorised officers, often known as Environment Protection Officers. The EPA operates in six regions across Victoria as set out in Table 2.

TABLE 2: EPA REGIONS

REGION	OFFICE LOCATION	STAFF (FULL-TIME EQUIVALENT)*
Melbourne Metropolitan	Carlton	23.15
Southern Metropolitan Melbourne	Dandenong	14.2
Gippsland	Traralgon	13.32
North East	Wangaratta	12.3
North West	Bendigo	11.2
South West	Geelong	10.55

\* As at 11 August 2015.

Source: EPA, 2015

<sup>69</sup> Following Stan Krpan, *Compliance and enforcement review: a review of EPA Victoria's approach*, Environment Protection Authority Victoria, Melbourne, February 2011.

<sup>70</sup> *Brookland Greens Estate: investigation into methane gas leaks*, Ombudsman Victoria, Melbourne, October 2009.

<sup>71</sup> *Hazardous waste management*, Victorian Auditor-General's Office, Melbourne, June 2010.

<sup>72</sup> *Compliance and enforcement policy*, Environment Protection Authority Victoria, Melbourne, September 2011, p. 6.

### Science and engineering capability

The EPA's science and engineering capability is fundamental to its role in making regulatory decisions and providing advice to government, the community and industry. The EPA's science-based workforce is supported by in-house experts and laboratories at its Centre for Applied Sciences located at Macleod. Core capabilities include air quality, freshwater, marine and groundwater science, chemistry, statistics, social science and engineering.

## The EPA – a snapshot

### As at 30 June 2014:

Staff (full-time equivalent)	312
Licensed sites	~700

### For 2013–14:

Pollution reports	12,005
Inspections	2,950
Pollution control notices	604
Official warnings	36
Industry infringement notices	29
Litter infringement notices	12,859
Works approvals issued	31
Licences amended/transferred	54
Noisy vehicle notices	2,142
Smoky vehicle notices	1,404
Vehicle infringement notices	13

Source: EPA, 2015

## Governance and funding

**The external reviews also led to changes to EPA's governance arrangements. Under the EP Act, the EPA consists of a Chairman as a single-member governing body who, historically, was the Chief Executive Officer. The EP Act also establishes a three-member Environment Protection Board to provide advice to the Chairman and the Minister.**

To broaden the oversight and accountability for the EPA, the roles of Chairman and Chief Executive Officer were separated and the EPA has created a number of internal advisory committees to support the Chairman. Wider changes to the EPA's governance structure would require amendments to the EP Act.

The EPA's operating budget is approximately \$70 million a year. Around 60 per cent of this total comes from landfill levies, which is the money paid to dispose of waste to landfill.

The EPA publishes an Annual Plan and an Annual Compliance Plan which set out its priorities for the coming year, including its priorities for compliance and enforcement activities. It also sets out performance measures that are reported on in its Annual Report.

## Environment protection – a shared responsibility

**The task of environment protection cannot be undertaken by the EPA alone. It requires collaboration with other areas of government, including local government; and with businesses, individuals and communities.**

The business conducting an activity is best placed and has the primary responsibility to identify and manage the associated risks. The EPA's role is to provide an appropriate level of accountability and assurance that the risks and potential environmental impacts are being managed by the business.

The EPA's regulatory framework sets standards for industry to minimise the impact of its activities on the environment and human health. Key industry sectors are set out below:

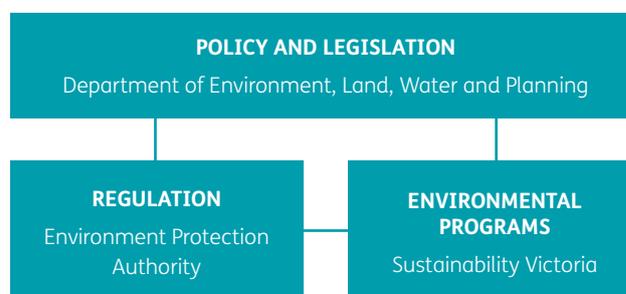
### Key industry sectors regulated by the EPA

- Agriculture
- Chemical industries
- Food manufacturing
- Manufacturing
- Waste and recycling
- Water and sewerage

The community also has an important role in protecting the environment. The community can help by reporting pollution incidents to the EPA, and the EPA's public litter reporting and smoky vehicle programs are designed to encourage this type of community response.

The EPA must have a clear understanding of its role and communicate this to industry and the broader community. In particular, focusing the organisation on the distinctive task of the regulator – as separate to the policymaker – is an important element of regulatory best practice.<sup>73</sup> This approach is reflected in Figure 5, which sets out the principal roles of the environment portfolio agencies, noting that in practice there is some overlap of roles.

**FIGURE 5: EPA'S ENVIRONMENT PORTFOLIO PARTNERS**



The EPA operates within a complex regulatory environment that includes numerous agencies across all three levels of government (Commonwealth, state and local government). The EPA works with more than a dozen Victorian Government agencies and 79 local councils. The roles and relationships change for each environmental segment and are often not clearly delineated, creating potential duplication or gaps, and a lack of accountability. The complexity of Victoria's framework of environmental regulation was highlighted by the Victorian Competition and Efficiency Commission in its 2009 Inquiry into Environmental Regulation.<sup>74</sup>

Local government plays a key role as many environment protection issues are local in nature and can be best managed by those with the greatest knowledge of the local community and environment.

Local governments manage local environment protection and related public health issues through:

- making and enforcing land use planning decisions
- making and enforcing local laws that may control or limit activities with a negative impact on the environment
- managing local issues through the nuisance provisions of the *Public Health and Wellbeing Act 2008*
- enforcing requirements under the EP Act such as the residential noise provisions.

At the Commonwealth level, the Department of Environment coordinates policy development on national issues such as the National Plan for Clean Air. The Victorian Minister for Environment, Climate Change and Water is a member of the National Environment Protection Council, which sets national standards for environment protection through the development of National Environment Protection Measures, implemented in Victoria under the EP Act.

A broad overview of state and local government agency roles is set out in Table 3.

<sup>73</sup> *A sustainable future for Victoria: getting environmental regulation right: final report*, Victorian Competition and Efficiency Commission, Melbourne, July 2009, p. 295.

<sup>74</sup> *Ibid*, p. 273.

**TABLE 3: OVERVIEW OF VICTORIAN STATE AND LOCAL GOVERNMENT AGENCY ROLES IN ENVIRONMENT PROTECTION**

SUBJECT MATTER	AGENCY ROLES
<b>Air quality</b>	<b>EPA</b> – regulates air quality and pollution, including vehicle emission limits for light vehicles (smoky vehicle reporting program)
<b>Water quality</b>	<b>EPA</b> – regulates water pollution <b>DHHS</b> – lead agency for regulating for safe drinking water
<b>Land contamination</b>	<b>EPA</b> – regulates land pollution and contamination where there is an unacceptable risk to human health or the environment
<b>Waste</b>	<b>EPA</b> – regulates waste management activities such as landfills, regulates the transport of hazardous waste and investigates large scale industrial dumping of waste <b>Local government</b> – investigates illegal dumping of waste
<b>Odour</b>	<b>EPA</b> – regulates odour offensive to humans
<b>Noise</b>	<b>Local government</b> – enforces noise requirements from residential premises, shops and other small commercial premises <b>Victoria Police</b> – responds to noise complaints from entertainment venues and domestic noise complaints such as loud music at parties or where the noisy neighbour might also be threatening and can report noisy vehicles <b>EPA</b> – regulates noise from major industrial and manufacturing facilities and noisy vehicles <b>VicRoads</b> – responsible for traffic noise and can report noisy vehicles
<b>Litter</b>	<b>EPA</b> – administers the litter reporting program and EPA officers can issue infringement notices for littering <b>Local government, Victoria Police and other enforcement agencies</b> - issue infringement notices for littering
<b>Mines and quarries</b>	<b>DEDJTR</b> - responsible for the regulation of mines and quarries, including onsite environmental impacts <b>EPA</b> – regulates offsite impacts of mines and quarries
<b>Occupational health and safety</b>	<b>WorkSafe Victoria</b> – regulates environment protection issues as they affect people at a workplace, as well as regulating major hazard facilities and the storage and transport of dangerous goods
<b>Biodiversity and natural resources</b>	<b>DELWP</b> – regulates flora and fauna, water resources, native vegetation and wildlife management

SUBJECT MATTER	AGENCY ROLES
<b>Land use planning</b>	<b>DELWP</b> – responsible for the land use planning framework
	<b>Local government</b> – responsible for making most land use planning decisions
	<b>EPA</b> – provides formal and informal input into planning decisions for future developments to take into account environmental impacts
<b>Waste and resource recovery planning, implementation and education</b>	<b>Sustainability Victoria</b> – prepares the long-term, statewide plan for waste and resource recovery infrastructure, facilitates market development and develops education strategies
	<b>Waste and Resource Recovery Groups</b> – prepare regional implementation plans setting out how the infrastructure needs of their region will be met over a ten-year timeframe, facilitate procurement of infrastructure and services, and educate business and communities in their region
	<b>EPA</b> – provides input into the regional implementation plans, with a particular role in ensuring that any proposed landfills meet environmental requirements
<b>Emergency management</b>	Victoria has an All Agencies, All Hazards approach to emergency management, with agency roles and responsibilities set out in the <i>Emergency Management Manual Victoria</i>
	<b>Emergency Management Commissioner</b> – responsible for coordinating emergency management, with the support of Emergency Management Victoria and relevant agencies
	<b>EPA</b> – ‘control agency’ for pollution of inland waters and assesses the environmental impacts of emergencies
<b>Public health</b>	<b>DHHS</b> – the Chief Health Officer provides advice on the public health consequences of exposure to pollution (informed by environmental data collected by from the EPA)
	<b>Local government</b> – provides advice through environmental health officers
<b>Climate change</b>	<b>DELWP</b> – administers the <i>Climate Change Act 2010</i>
	<b>EPA</b> – considers greenhouse gas emissions in assessing works approval applications
	<b>Sustainability Victoria</b> – climate change program delivery
<b>Monitoring environmental quality</b>	<b>DELWP</b> – monitors natural resources status and function
	<b>EPA, Melbourne Water and Catchment Management Authorities</b> – conduct monitoring programs, with the EPA’s programs focused on air and water quality monitoring
	<b>Commissioner for Environmental Sustainability</b> – undertakes State of Environment reporting
<b>Environmental policy</b>	<b>DELWP</b> – leads policy, legislation and statutory policy development
	<b>EPA</b> – provides operational and technical advice to support policy, legislation and statutory policy development
<b>Environmental sustainability programs</b>	<b>Sustainability Victoria</b> – lead agency for environment sustainability programs (waste management, resource efficiency and climate change) in collaboration with the EPA, DELWP and Waste and Resource Recovery Groups

- What aspects of the EPA’s work do you value and wish to preserve in the future?
- How can the EPA effectively work in partnership with other government agencies to meet the environmental challenges of the future?

# 5 | How we get there – some directions for consideration

**Businesses and the community must work in partnership with the EPA to protect and improve the health of Victoria's environment. The United Nations Convention on access to information, public participation and access to justice in environmental matters<sup>75</sup> recognises that every person has the 'right to live in an environment adequate to his or her health and well-being, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations.'<sup>76</sup>**

Businesses are often best placed to minimise and manage the environmental impact of their activities, and to engage with communities in surrounding areas. Environmental quality also depends on communities taking an active interest in monitoring the environment and dealing with environmental issues. Individuals must also consider how their consumption and other behaviours affect the environment.

The government has an important role in providing incentives for businesses and the community to help find solutions to environmental problems. Some difficult problems, however, will continue to require the EPA's intervention. While it is not possible to predict everything that will happen in the future, it is possible to build an EPA that is flexible and adaptive, and therefore well placed to face the challenges of the future.

Considerations for framing the future EPA have been grouped into the following themes:

- protecting public health
- protecting liveability – the importance of land use planning
- keeping communities safe – the EPA and emergency management
- being strategic – preventing problems before they arise
- protecting the environment – an increased focus on environmental outcomes
- the EPA and climate change
- environmental justice
- regulatory approaches.

These considerations are not intended to be exhaustive – but they will all be important in framing discussions of the EPA's role, powers, tools and approaches, governance and funding. Some of these considerations build on work already undertaken within the EPA and in other areas of government. The Inquiry welcomes feedback on these ideas and any other issues relevant to the Inquiry's Terms of Reference.

<sup>75</sup> United Nations Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, opened for signature 25 June 1998, 2161 UNTS 447 (entered into force 30 October 2001), <https://treaties.un.org/doc/Treaties/1998/06/19980625%2008-35%20AM/37770-En.pdf>

<sup>76</sup> Preamble, United Nations Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. Note: Australia is not a signatory to the convention.

## Protecting public health

**The primary objective of the EPA is to enforce environmental standards in order to safeguard public health. Public health can be seriously affected where people are exposed to pollution or contaminants. Some of these dangers affect people in a short space of time, while the effects of others may be cumulative or not become apparent until years or decades later. Some dangers may be visible, but others (such as PCBs) are not. Exposure risks can apply to whole communities or just individuals. All these factors will affect how the risk is best managed.**

The Inquiry is directed under its Terms of Reference to consider the EPA's appropriate role in relation to environmental impacts on public health, including:

- **Air pollution:** The EPA has sole responsibility for managing air quality in Victoria. While monitoring shows that there have been clear improvements over time,<sup>77</sup> air quality remains a key public health priority. Air pollution can have widespread impacts across local communities, and particularly for those most vulnerable (poor air quality can aggravate respiratory diseases such as asthma and bronchitis and increase the risk of respiratory problems<sup>78</sup>).

Air pollution can result from one-off events, such as bushfires or industrial spills, or as a result of cumulative exposure, for example, to dust from unsealed roads. This means that the EPA is involved in a range of regulatory and non-regulatory responses as part of managing air pollution. The EPA also plays an important role as a technical expert in monitoring air quality and contributing to national standard-setting for the purposes of regulation.

- **Water pollution:** Many of the sources are diffuse and not easily identifiable. Beaches and waterways are affected by stormwater contaminated by oil, industrial waste or litter, seepage from septic tank systems and pesticide and fertiliser runoff from farms.<sup>79</sup> This has an impact on the environment and amenity and, in some cases, on human health.

The EPA does not generally deal with drinking water and the reticulated water supply system, but it does play a role in managing risks from contaminated groundwater. The environmental audit system provides a statutory process for assessing and managing these risks (which can include risks to human health from vapours), and informing the community of appropriate uses.<sup>80</sup>

<sup>77</sup> EPA Victoria and CSIRO, *Future air quality in Victoria: final report*, Environment Protection Authority Victoria, Melbourne, July 2013, p. 5.

<sup>78</sup> 'Air pollution', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/your-environment/air/air-pollution](http://www.epa.vic.gov.au/your-environment/air/air-pollution), accessed 6 August 2015.

<sup>79</sup> 'Point and nonpoint sources of water pollution', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/your-environment/water/protecting-victorias-waters/point-and-nonpoint-sources-of-water-pollution](http://www.epa.vic.gov.au/your-environment/water/protecting-victorias-waters/point-and-nonpoint-sources-of-water-pollution), accessed 6 August 2015.

<sup>80</sup> *Map of groundwater quality restricted use zones in Victoria*, Environment Protection Authority Victoria website, [www.epa.vic.gov.au/your-environment/land-and-groundwater/groundwater-pollution/gqruz-map](http://www.epa.vic.gov.au/your-environment/land-and-groundwater/groundwater-pollution/gqruz-map).

- **Asbestos:** Asbestos is present in many older buildings in Australia because it was widely used in products such as cement sheeting and piping. The main risks from asbestos arise when it is damaged, disturbed or removed from buildings without appropriate safeguards.<sup>81</sup>

The EPA regulates the safe disposal of asbestos waste and regulates the transport of larger amounts of asbestos. Illegal disposal and dumping of asbestos waste creates risks for the community and are a key concern for the EPA and local government. The EPA, WorkSafe Victoria and the Department of Health and Human Services work together to provide community information on asbestos risks.<sup>82</sup>

- **Dangerous chemicals:** In Victoria the use or sale of dangerous chemicals is either highly restricted or prohibited, but they can still be found in old sites. Chemicals such as PFOS (perfluorooctanesulfonic acid)<sup>83</sup> and polychlorinated biphenyls (PCBs) are now banned, although they may still be present in old equipment and sites and can cause serious environmental and health harms. PCBs, for example, are linked to cancers and can interfere with the proper functioning of the body.<sup>84</sup> At present, there is no consistent national approach to managing the environmental risks of industrial chemicals.

Statutory frameworks, which provide for the assessment and clean-up of legacy contamination (including the EPA's environmental audit system), can help to manage these risks where they have been identified.

- **Site contamination:** Land that was used for landfilling and certain industrial activities in the past may have contamination – including heavy metals, vapours from contaminated groundwater and methane gas – that is dangerous to human health. When land it is being converted to a residential or other sensitive use the focus of the assessment and clean-up process is on protecting public health.

To make sure land is safe for use, the regulatory system needs good upfront information about site history (i.e. the location of likely hazards) and good integration of land use planning with the assessment of contamination risks by EPA-appointed environmental auditors. The EPA also plays an important regulatory role in making sure that current activities do not create ongoing contamination risks for future generations.

This wide range of risks requires the EPA to work with other parts of government such as the Department of Environment, Land, Water and Planning; the Department of Health and Human Services; WorkSafe; and Victoria's 79 local governments. If they work together well, different parts of government can bring a wide variety of skills and experience to deal with complex problems and incidents. If not, it can lead to confusion, delay and duplication.

In particular, it is important that there is clarity about who holds the appropriate expertise and where the community can find authoritative public health advice. For example, in dealing with recent asbestos concerns in Sunshine North, the Department of Health and Human Services coordinated the response, seeking the EPA's assistance with the testing regime and referring the results to an Expert Advisory Panel for an assessment of potential health effects.

- **How can the EPA's role in safeguarding the community against the health effects of pollution and pollution incidents be clarified or strengthened?**

<sup>81</sup> *Asbestos: a guide for householders and the general public*, enHealth (Environmental Health Standing Committee), Canberra, February 2013.

<sup>82</sup> About asbestos – Health facts', asbestos.vic.gov.au, www.asbestos.vic.gov.au/about-asbestos/health-facts, accessed 6 August 2015.

<sup>83</sup> Previously used extensively as a fire retardant.

<sup>84</sup> 'Health effects of PCBs', United States Environmental Protection Authority website www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/effects.htm, accessed 6 August 2015.

## Protecting liveability – the importance of land use planning

In Victoria, land use planning is primarily driven through planning schemes, of which there are 82 in total: one for each local government area (79 in total) and three for special planning areas. Planning schemes set out zones, overlays and other policies and requirements.<sup>85</sup> Planning decisions under planning schemes are made either by the local council or the Minister for Planning.

Although the EPA does not make planning decisions in its own right, it does have a role in some instances as a ‘referral’ authority to provide advice to the decision-maker. In limited circumstances, the EPA has a veto power.<sup>86</sup>

Planning decisions on the location of residential and industrial areas play a critical role in maintaining and enhancing liveability through minimising the impact of dust, excessive noise and offensive odours. This can occur through design or operating conditions or separation distances, also known as buffers. Land use planning can help protect:

- residents and other land users from past, existing and future pollution
- essential infrastructure such as waste processing facilities and sewerage treatment plants
- significant economic investments made by industry.

Good planning decisions can prevent or minimise the impact of conflicting land uses, avoiding the need for the EPA to address issues down the track.

Planning is therefore an important issue for the EPA, and often involves interactions with individual local governments on a site-by-site basis. In recent times, the EPA has sought to have greater input into higher-level planning decisions at a municipal or precinct level, to have a greater strategic influence on ensuring environmental risks are adequately considered early in the planning process.

The issue of conflicting land uses is becoming more and more prevalent with Victoria’s rapidly growing population.

- **How could environmental regulation and other statutory frameworks more effectively prevent future environmental risks and land use conflicts?**

<sup>85</sup> For more information see ‘About planning schemes’, Planning schemes online, DELWP, <http://planningschemes.dpcd.vic.gov.au/about>, accessed 6 August 2015.

<sup>86</sup> *Victoria Planning Provisions*, clause 66.

## Keeping communities safe – the EPA and emergency management

In recent years, there has been a major focus on improving coordination and clarity of responsibility in emergency management and response in Victoria, through the All Hazards, All Agencies approach, which seeks to bring all emergency response agencies to work together during emergencies. This has seen the establishment of the Emergency Management Commissioner and Emergency Management Victoria (EMV) in 2014 under the *Emergency Management Act 2013*.<sup>87</sup>

Under the *Emergency Management Act*, emergency management in Victoria is coordinated by the Emergency Management Commissioner, supported by EMV, with management of particular incidents undertaken by a lead emergency response agency such as the police, ambulance or fire brigades, depending on the circumstances.

The EPA has not had a role as an emergency response agency except in limited circumstances. However, given the environmental impact of some emergency incidents, the EPA has become increasingly involved in emergency response situations.

In addition, changes in technology have altered community expectations about the time taken to respond to reports of pollution and environmental incidents. These incidents require authoritative, science-based advice, and the capacity to appropriately communicate scientific information to decision-makers and the community.

### Ball Road former landfill site<sup>88</sup>

In May 2015, the EPA began air quality testing around Ball Road, Heatherton, as a precautionary measure following some elevated readings in methane levels near a former landfill site. Given the potential risks posed to local residents, the EPA undertook precautionary testing of nearby homes, all of which were eventually given the all clear.

The management of this incident involved coordination across the EPA, emergency services and the local council.

<sup>87</sup> For more information see the Emergency Management Victoria website <https://www.emv.vic.gov.au/>, accessed 12 August 2015.

<sup>88</sup> ‘Ball Road, Heatherton’, Environmental Protection Authority Victoria website, [www.epa.vic.gov.au/our-work/current-issues/landfills/ball-rd-heatherton](http://www.epa.vic.gov.au/our-work/current-issues/landfills/ball-rd-heatherton), accessed 6 August 2015.

These trends have been highlighted by recent incidents such as the seeping of methane into homes at the Brookland Greens Estate in Cranbourne in 2008,<sup>89</sup> and the extended smoke impacts from the Hazelwood mine fire in 2014.<sup>90</sup> Although the Inquiry will not be reviewing the EPA's response to past events such as these, it is important to examine how events such as the Hazelwood mine fire may have changed expectations of the EPA's role and to consider what role the EPA should play in potential future events, together with other emergency response agencies. As noted by the Hazelwood mine fire inquiry, 'the scope, scale, resources and duration of EPA activities in its emergency response to the Hazelwood mine fire were significant, and went beyond the EPA's traditional role.'<sup>91</sup>

- What role should the EPA play in emergency management?

## Being strategic – preventing problems before they arise

**A large part of the EPA's work is dealing with environmental problems after they occur. However, it is far better for the environment and for public health and safety if problems are prevented from happening in the first place. It can also be much less expensive.**

Problems can emerge today from practices and events of the past, where there is no accessible site history record, or where industrial and landfill sites were redeveloped before there were adequate controls, or where industrial sites are no longer in active use but have not been closed and decommissioned.

New problems can also arise from emerging economic, technological or social trends such as, for example, the expected increased use of larger lithium batteries for home power storage: lithium and lithium-ion batteries are classified as dangerous goods in Victoria.<sup>92</sup>

Problems that are predictable should be capable of being prevented. The EPA needs to have the right tools, approaches and resources to diagnose such problems. The EPA is already applying better information technology to track issues, including through geographic information system (GIS) mapping. There are opportunities to more effectively target preventative regulatory activity through enhanced data-gathering, for example, by using digitised site history information to identify potential contamination.

It is also important that the EPA have the scientific capability to undertake its own research and work with other EPAs and experts across Australia and internationally to identify risks, as has previously been the case with PCBs and PFOS.

There is potential for the scientific and analytical skills of the EPA to be harnessed more widely as a source of authoritative and independent advice. For example, the Western Australian Government has requested strategic advice from the WA EPA on protecting biodiversity and amenity in the face of urban growth in the Perth-Peel region.<sup>93</sup>

<sup>89</sup> *Brookland Greens Estate: investigation into methane gas leaks*, Ombudsman Victoria, Melbourne, October 2009.

<sup>90</sup> Bernard Teague, John Catford and Sonia Petering, *Hazelwood mine fire inquiry report*, Victorian Government Printer, Melbourne, 2014. In May 2015 the Victorian Government announced the reopening of the Hazelwood mine fire inquiry, which is also considering how to minimise fire risks at the Anglesea coal mine site, see Reopening of Hazelwood mine fire inquiry website, <http://hazelwoodinquiry.vic.gov.au/>, accessed 6 August 2015.

<sup>91</sup> *Ibid.*, p. 268.

<sup>92</sup> *Handheld battery recycling: guidelines for lithium batteries*, Sustainability Victoria, Melbourne.

<sup>93</sup> Government of Western Australia, 'EPA: compact city needed to protect future of Perth-Peel environment', press release, 6 August 2015, <http://www.epa.wa.gov.au/News/mediaStmnts/Pages/EPACompactcityneededtoprotectfutureofPerth-Peelenvironment.aspx>.

## Priority waste streams in Victoria

In addition to looking at ways to reduce Victoria's overall waste footprint, Sustainability Victoria – together with the EPA and other agencies – is prioritising efforts to reduce specific waste streams that are likely to cause significant problems if left unchecked. These include:

- **E-waste:** A growing waste stream, e-waste contains valuable materials that can be re-used, as well as hazardous materials. Victoria is currently participating in the National Television and Computer Recycling Scheme, which aims to increase television and computer recycling to 80 per cent. The Victorian Government has also committed to banning all e-waste from landfills.<sup>94</sup>
- **Organics:** Organic waste includes food scraps and garden waste. Organics have a low recycling rate compared to other types of waste, with approximately 60 per cent of organic waste going to landfill. Organic waste in landfills decomposes, which generates methane. New technologies in recent years means that organics can now be more cheaply and safely reprocessed.<sup>95</sup>
- **Tyres:** Waste tyres are often stored as part of the tyre-processing chain, such as for re-use or recycling. However, large quantities of waste tyres in Victoria are being collected and stored indefinitely as a means of avoiding the costs of proper management. As well as undercutting legitimate tyre-processing and recycling businesses, such practices pose a fire risk as tyre fires are difficult to control and generate hazardous smoke.<sup>96</sup> Recent amendments to regulations will improve the capacity of the EPA to manage the risks posed by tyre stockpiles in the future, as stockpiles of more than 5,000 car tyres (or equivalent) will require an EPA licence.<sup>97</sup>

The government has a goal that 'landfills will only be used for receiving and treating waste streams from which all materials that can be viably recovered have been extracted.'<sup>98</sup> This will mean the EPA and other agencies will need to ensure the correct processing and management of new streams of waste diverted from landfill.

Once problems are diagnosed, the EPA needs tools and approaches that are flexible and nimble enough to take quick and targeted action if an imminent risk is posed. Such powers exist in other areas, for example, under the Australian Consumer Law, consumer affairs ministers in Australia can impose an interim ban on a consumer good that will or may cause injury.<sup>99</sup>

The ability to prevent problems before they arise is also integrally linked to proper land use planning, discussed previously. The ability to manage risks also needs to be considered in the context of the roles of other regulators: although the EPA has oversight over pollution leaving mining sites, it does not regulate the activities on the site itself, which are overseen by DEDJTR.

- How can the EPA better identify and, where necessary, address problems that are the result of past activity?
- What can the EPA do to minimise hazards for the future?

## Dealing with contaminated land in Victoria

The *Cleaner Environments* policy<sup>100</sup> proposed a number of legislative reforms to help Victoria deal with its contaminated sites in a more systematic fashion. These include:

- the use of a preliminary risk screening process, in association with more comprehensive digitised site history information, for potentially contaminated sites with a proposed sensitive use – to improve safeguards and streamline regulatory processes
- better targeting the application of Environmental Audit Overlays in the planning system to areas that pose greater risk
- mandatory notification of serious health risks by auditors and assessors.

<sup>94</sup> 'Waste and recycling – Television and computers', Sustainability Victoria website, [www.sustainability.vic.gov.au/services-and-advice/households/waste-and-recycling/televisions-and-computers](http://www.sustainability.vic.gov.au/services-and-advice/households/waste-and-recycling/televisions-and-computers), accessed 6 August 2015.

<sup>95</sup> *Victorian organic resource recovery strategy* (draft), Sustainability Victoria, Melbourne, 2014.

<sup>96</sup> 'Waste tyres', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/your-environment/waste/waste-tyres](http://www.epa.vic.gov.au/your-environment/waste/waste-tyres), accessed 6 August 2015.

<sup>97</sup> 'Storage of waste tyres in Victoria', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/business-and-industry/guidelines/waste-guidance/storage-of-waste-tyres-in-victoria](http://www.epa.vic.gov.au/business-and-industry/guidelines/waste-guidance/storage-of-waste-tyres-in-victoria), accessed 6 August 2015.

<sup>98</sup> *Statewide waste and resource recovery infrastructure plan Victoria 2015–44*, Sustainability Victoria, Melbourne, 2015.

<sup>99</sup> *Competition and Consumer Act 2010* (CCA) Schedule 2, Section 109.

<sup>100</sup> 'Cleaner environments – Smarter urban renewal', Department of Primary Industries website, [www.depi.vic.gov.au/environment-and-wildlife/sustainability/Cleaner-Environments-Smarter-Urban-Renewal](http://www.depi.vic.gov.au/environment-and-wildlife/sustainability/Cleaner-Environments-Smarter-Urban-Renewal), accessed 6 August 2015.

## Protecting the environment – an increased focus on environmental outcomes

There is a great deal of overlap between human health and environmental objectives. Improving environmental quality (such as air and water quality) is relevant for its importance to health outcomes, and also can be considered an important outcome in its own right.

If the EPA is to play a greater future role in improving environmental outcomes beyond those necessary to safeguard human health, it will be important to consider whether Victoria has the right environmental indicators, and that these are up to date and accurate.<sup>101</sup> Further, it will be important to consider how the EPA best uses such indicators in its planning and objectives.<sup>102</sup>

- What role should the EPA play in improving environmental outcomes beyond those necessary to safeguard human health?

## Environmental levies

Future interventions to improve environmental outcomes or address the disproportionate burden of negative environmental impacts borne by some sectors of the community could be funded by levies. Current environmental levies include:

- **Metropolitan Parks Charge:** Collected on water bills in the Melbourne urban area, the Metropolitan Parks Charge helps fund metropolitan parks, gardens, trails, waterways and zoos.<sup>103</sup>
- **Melbourne Water Waterways Charge:** Also collected on water bills, the Waterways Charge is used to fund waterway health and flood prevention programs around Port Phillip Bay.<sup>104</sup>
- **Landfill levy:** The landfill levy is charged for the disposal of waste going to landfill. Collected by the EPA from landfill operators on behalf of the Victorian Government, the landfill levy helps fund the EPA and other government agencies. Local governments pass on the costs of the levy incurred as part of providing waste collection services through local government rates.

A recent example where government has redesigned a levy to achieve specific outcomes is the Fire Services Levy. It is now collected as part of local government rates and funds the Metropolitan Fire Brigade and Country Fire Authority.<sup>105</sup>

## The EPA and climate change

The EPA's role in reducing greenhouse gas emissions from Victorian entities has shifted a number of times over the past 15 years. This is due to the changing policy landscape at both the state and Commonwealth level.

In 2002, the EPA led Australia in introducing the first regulatory greenhouse and energy efficiency program for industry. The EPA's Industry Greenhouse Program, and its successor the Environmental and Resource Efficiency Program (EREP), which operated until 2014, applied mandatory energy efficiency requirements to Victoria's larger industrial entities as a means of reducing greenhouse gas emissions.<sup>106</sup>

The EREP was discontinued when the Commonwealth's Carbon Pollution Reduction Scheme was proposed. Although it has retained a power to regulate greenhouse gas emissions, the EPA does not currently deploy interventions specifically targeted at emissions reduction. This is in contrast, for example, with the United States EPA's strong role in emissions reduction in that country.<sup>107</sup>

The Victorian Government has announced that it will 'reposition Victoria as a national climate change leader' and will aim to lower greenhouse gas emissions across the state.<sup>108</sup> In looking at the EPA's potential future role, it will be important to consider the scope for flexibility and for enduring roles that can be pursued within an evolving policy context at state, national and international levels.

The Inquiry will also be informed by the work currently underway through the independent review of Victoria's *Climate Change Act 2010*, which is due to report to government by the end of 2015.<sup>109</sup>

- What role should the EPA play in reducing greenhouse gas emissions?

<sup>101</sup> Many existing indicators are summarised in *Victoria: state of the environment report 2013*, Office of the Commissioner for Environmental Sustainability, Melbourne, 2013, pp. 37, 55, 75, 113, 131, 169 and 195.

<sup>102</sup> The EPA's *Five year plan 2011–16* considers some general indicators for water, land and air quality, and noise and odour experience: *Environment Protection Authority Victoria five-year plan 2011–2016*, Environment Protection Authority Victoria, Melbourne, 2011, p. 7.

<sup>103</sup> 'How we're funded', Parks Victoria website, <http://parkweb.vic.gov.au/about-us/who-we-are/how-were-funded>, accessed 6 August 2015.

<sup>104</sup> *Ibid.*

<sup>105</sup> 'What does the levy fund?' Fire Services property levy website, [www.firelevy.vic.gov.au/what-does-the-levy-fund.html](http://www.firelevy.vic.gov.au/what-does-the-levy-fund.html), accessed 6 August 2015.

<sup>106</sup> 'Industry greenhouse program', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/our-work/programs/past-programs/industry-greenhouse-program](http://www.epa.vic.gov.au/our-work/programs/past-programs/industry-greenhouse-program), accessed 6 August 2015; and 'The EREP program', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/our-work/programs/past-programs/erep-program](http://www.epa.vic.gov.au/our-work/programs/past-programs/erep-program), accessed 6 August 2015.

<sup>107</sup> 'What EPA is doing about climate change', United States Environmental Protection Agency website, [www.epa.gov/climatechange/EPAactivities.html](http://www.epa.gov/climatechange/EPAactivities.html), accessed 6 August 2015.

<sup>108</sup> *2015 Victorian Government response to the state of the environment report 2013*, Victorian Government, Melbourne, 2015, p. 7.

<sup>109</sup> 'Climate change', Department of Environment, Land, Water and Planning website, [www.delwp.vic.gov.au/environment-and-wildlife/climate-change](http://www.delwp.vic.gov.au/environment-and-wildlife/climate-change), accessed 6 August 2015.

## Environmental justice

The principles of environmental justice grew out of the United States of America in the 1980s, in response to poorer and minority communities objecting to the placing of heavily polluting industries in their neighbourhoods.<sup>110</sup> This movement articulated the principle that ‘people should have equal access to environmental goods (like parks and clean water) and share the burden of environmental bads (like landfills and polluting activities)’.<sup>111</sup>

There are now a number of ways of conceptualising environmental justice. For example:

- ensuring that all members of society can enjoy ‘the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn and work’<sup>112</sup>
- ‘everyone has [a] right to healthy places to live, work and enjoy themselves, [a] right to a fair share of nature’s benefits like food and water [and a] responsibility to look after the planet for others and for future generations’<sup>113</sup>
- asking ‘how environmental risk is distributed (distributive justice), and to what extent the public can participate in decisions about the environment (procedural or participatory justice)’.<sup>114</sup>

In addition to distributive and participatory justice, restorative justice is often also considered to be an important pillar of environmental justice. Restorative justice can be described as ‘a systematic response to wrongdoing that emphasizes healing the wounds of victims, offenders and communities.’<sup>115</sup> The EP Act currently includes some elements of restorative justice.<sup>116</sup>

The EPA has incorporated some elements of environmental justice in its *Environmental citizenship strategy*.<sup>117</sup>

## The EPA’s *Environmental Citizenship Strategy*

The EPA’s vision for environmental citizenship is that ‘communities are actively protecting their local environments across Victoria. In partnership with the EPA they report pollution, collect data and evidence, co-create solutions to problems and improve the environment. Businesses in Victoria are compliant and connected with their communities. The EPA has more time to solve complex environmental problems’.<sup>118</sup>

In the strategy, the EPA acknowledges that it needs to become more innovative and adaptive to address increasingly complex environmental problems. To help with this, the strategy provides a framework to work with community, businesses and organisations who want to protect the environment, and not just because they are required to do so.

The strategy aims to create lasting pro-environmental behaviour change. Long-term goals include measurable improvements in:

- the reporting of pollution by communities and businesses
- the demonstration of environmental responsibility and leadership by businesses
- the empowerment of communities to work with businesses and the EPA to resolve environmental issues that are important to them
- communities and businesses know their rights and responsibilities.

- How do you see environmental justice being applied to the work of the EPA?

<sup>110</sup> See for example: Gregory Roberts, ‘Environmental Justice and community empowerment: Learning from the civil rights movement’ 48 *American University Law Review* 229.

<sup>111</sup> Australian Law Dictionary.

<sup>112</sup> ‘What is environmental justice?’ United States Environmental Protection Agency website, [www.epa.gov/environmentaljustice/](http://www.epa.gov/environmentaljustice/), accessed 6 August 2015.

<sup>113</sup> *Environmental Justice*, Friends of the Earth, London, 2010, [http://www.foei.org/wp-content/uploads/2014/01/environmental\\_justice.pdf](http://www.foei.org/wp-content/uploads/2014/01/environmental_justice.pdf), accessed 12 August 2015.

<sup>114</sup> *Submission to Charter of Human Rights and Responsibilities Act 2006 review*, Environmental Justice Australia, Melbourne, 2015.

<sup>115</sup> ‘Restorative Justice Online’, [www.restorativejustice.org/](http://www.restorativejustice.org/), accessed 6 August 2015.

<sup>116</sup> See, for example, Section 67AC(2)(c).

<sup>117</sup> *EPA environmental citizenship strategy*, Environmental Protection Authority Victoria, Melbourne, February 2013.

<sup>118</sup> *EPA environmental citizenship strategy*, Environmental Protection Authority Victoria, Melbourne, February 2013.

## Regulatory approaches

**A key part of the Inquiry is to consider what legislation, powers, authorities, structure, tools, approaches, capabilities and resources the EPA should have in the future. It is also important to consider whether the scope of the EPA's activities, both in terms of the breadth of issues covered and the depth of involvement in these issues, strikes the right balance. This may involve decisions about what the EPA should do more of or less.**

Modern approaches to regulation often focus less on low-risk activities and businesses in order to dedicate resources to activities that pose the highest risk.<sup>119</sup> Under this approach, activities that do not pose a risk are not regulated; riskier activities that have a benefit may be permitted with conditions; and only activities that are highly risky and lack appropriate safeguard mechanisms are not permitted.

Societies and individuals make risk-based decisions every day – we consider the risks and rewards of activities and take steps to mitigate risks, such as changing our behaviours. For example, although driving a car poses a risk, it is allowed if you hold a driver licence, the vehicle is registered and traffic laws are obeyed.

As noted previously, the EPA has increasingly adopted a risk-based approach to focus its compliance monitoring and inspection efforts.<sup>120</sup> For example, the EPA now varies its response to a licence breach based on the risk or harm to the environment or health, and the culpability of the duty holder involved. This could result in a warning only, if the duty holder has a genuine lack of awareness or understanding of their obligations and has no history of non-compliance, and the risk of harm is minor. On the other hand, repeated and wilful contravention leading to a high risk could lead to prosecution or revocation of the duty holder's licence.<sup>121</sup>

Focusing regulation on reducing risk will not totally eliminate risk. No approach to regulation will ever be riskless. It is therefore important for any regulator to consider what should happen when something goes wrong. Regulators should also be mindful of the community's experience and expectations in making decisions. Taking a strict risk-based approach can result in a disconnect from community expectations and dissatisfaction with the outcome and lack of trust in the regulator.

In addition to considering the EPA's overall regulatory approach, the Inquiry is considering whether the EPA currently has the right tools and approaches to protect public health and the environment, a number of which are listed in Section 4.

When using these tools, regulators like the EPA also play a part in building the social licence for a business (i.e. the community's informal acceptance of its operations), creating a level playing field for businesses and supporting economic productivity.

The Inquiry's Terms of Reference require it to consider ways to improve regulatory efficiency and minimise regulatory burden. This is sometimes considered cutting 'red tape'. However, it is important to consider the total overall costs and benefits of regulatory activities. Although regulation might impose a cost on some, the benefits to society as a whole might be greater, as some forms of activity impose costs on others. For example, the full costs of pollution, which causes illness and negatively affects individuals and the broader community, is not fully borne by the polluter. By helping to return these costs to the polluter, regulation can better support economic productivity in the long run.

## Diffuse pollution sources

Due to improvements in environmental regulation and business practices, and changes in the economy, the EPA is now increasingly dealing with nonpoint or small point sources of pollution. This 'diffuse pollution' occurs over a wide area and is not easily attributed to a single source.

Such pollution is often associated with particular land uses as opposed to more traditional individual point source discharges (for example, large factories).<sup>122</sup> Examples of diffuse sources of pollution include agricultural fertilisers and pesticide runoff into waterways, litter and oil in stormwater, air pollution from cars and wood heaters, and toxic substances poured down household drains and placed in household rubbish. Some of the activities that generate this pollution are permitted, but others are not.

Traditional tools and approaches, such as licensing, are less effective for diffuse pollution, as it can be difficult to detect and attribute to particular sources. Partnerships and education approaches have had positive results in the past, such as the government's work with irrigators to reduce salinity and nutrient threats to the environment.<sup>123</sup>

With improved scientific knowledge, changing technology and an increased focus on corporate social responsibility and their 'social licence' to operate, businesses now minimise their environmental impact more than ever before. However, environmental and health outcomes expected by the community today may not be matched by the legal requirements for businesses which have been fixed in time. To address this issue, the EPA needs to work with businesses to improve operational capacity and adopt improved environmental practices.

<sup>119</sup> Julia Black, 'Risk based regulation', presentation to OECD, 1 December 2008.

<sup>120</sup> *Compliance and enforcement policy*, Environmental Protection Authority Victoria, Melbourne, June 2011, p. 36.

<sup>121</sup> *Ibid.*

<sup>122</sup> 'Point and nonpoint sources of water pollution', Environment Protection Authority Victoria website, [www.epa.vic.gov.au/your-environment/water/protecting-victorias-waters/point-and-nonpoint-sources-of-water-pollution](http://www.epa.vic.gov.au/your-environment/water/protecting-victorias-waters/point-and-nonpoint-sources-of-water-pollution), accessed 6 August 2015.

<sup>123</sup> 'Managing impacts of irrigation', Department of Primary Industries, [www.depi.vic.gov.au/water/rural-water-and-irrigation/managing-impacts-of-irrigation](http://www.depi.vic.gov.au/water/rural-water-and-irrigation/managing-impacts-of-irrigation), accessed 6 August 2015.

## Improving environmental practice – coal-fired power stations in Canada<sup>124</sup>

In Canada, the *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* now apply greenhouse gas performance standards to coal-fired power stations at the time they reach the end of their useful life, which is generally 50 years of age. The performance standard is the same as the standards required for new power stations being built.

The effect of these regulations will be to require the oldest generators to either be retired or retrofitted with modern carbon capture and storage equipment.<sup>125</sup>

Modern regulators look to use a range of statutory and non-statutory tools and approaches to implement more successful regulatory interventions. The EPA has tended to focus on statutory interventions in recent years and seek to work in partnership with other areas of government, such as Sustainability Victoria, to deliver complementary approaches to maximise environmental outcomes.

However, where there are gaps or lags in program delivery or market failures, the EPA's toolkit might be insufficient to deal with significant risks to the environment and human health. This problem has occurred in the waste sector, where avoidance of the landfill levy has led to illegal dumping (including of hazardous waste such as asbestos), and banning the disposal of tyres to landfills has led to stockpiling, which in turn poses a major fire risk in regional Victoria.

Innovative approaches may also offer the EPA ways of tackling seemingly intractable problems such as littering and illegal dumping. For example, nudge theory gained prominence in 2008 with the publication of Richard H Thaler and Cass R Sunstein's book *Nudge*. Nudge theory seeks to 'steer people towards better decisions by presenting choices in different ways.'<sup>126</sup> Utilising this approach, it may be possible to achieve better environmental and other outcomes at little or no cost: for example, placing green footprints leading to rubbish bins in one experiment reduced littering by 46 per cent<sup>127</sup>. In another experiment, the sending of 'smiley' and 'frown' food recycling performance feedback cards to households increased participation in the scheme by six per cent.<sup>128</sup> The strength of 'nudging', as shown by these examples, is in using insights into how we actually behave to understand biases or create systems better designed to achieve desired objectives.

<sup>124</sup> *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*; and 'Backgrounder: Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations', Environment Canada website, [www.ec.gc.ca/default.asp?lang=En&n=5C4438BC-1&news=D375183E-0016-4145-A20B-272BDB94580A](http://www.ec.gc.ca/default.asp?lang=En&n=5C4438BC-1&news=D375183E-0016-4145-A20B-272BDB94580A), accessed 6 August 2015.

<sup>125</sup> 'AGL greenhouse gas policy', AGL, 2015, p. 2.

<sup>126</sup> 'Nudge nudge, think think', *The Economist*, March 24, 2012.

<sup>127</sup> *Ibid.*

<sup>128</sup> Paul Rainford and Jane Tinkler, *Innovating through design in public services seminar series 2010–2011: Seminar Four*, UK, 2011, p 9.

## Alternative regulatory model – WorkSafe

WorkSafe Victoria enforces Victoria's occupational health and safety laws and manages Victoria's compulsory workplace injury insurance scheme.<sup>129</sup>

As part of its role WorkSafe Victoria also, among other things, licences major hazard facilities (industrial sites that store, handle or process large quantities of hazardous chemicals, and regulates dangerous goods, such as oil refineries and chemical manufacturing plants)<sup>130</sup> and the storage and handling of dangerous goods such as petrol, acids and explosives.<sup>131</sup>

In working with industries and other workplaces to manage risk, WorkSafe Victoria deploys some different regulatory tools from those currently available to the EPA under the EP Act.

Workplaces that store or handle dangerous goods in excess of specified quantities do not require a licence but must notify WorkSafe so that it is aware of who is undertaking these activities.

A key feature of WorkSafe's regulatory system is the general duty that an 'employer must, so far as is reasonably practicable, provide and maintain for employees of the employer a working environment that is safe and without risks to health'.<sup>132</sup> Under this duty, WorkSafe is able to regulate the desired outcome, rather than trying to prohibit specific activities.

Another of WorkSafe's activities is the setting of premiums for the compulsory workplace injury insurance scheme. Premiums vary according to the employer's industry and history of occupational health and safety incidents.<sup>133</sup>

- What can we adopt from other regulators and regulatory models to implement best-practice approaches and ensure that the EPA can rise to key future challenges?

<sup>129</sup> *Victorian WorkCover Authority annual report 2014*, WorkSafe, Melbourne, 2014, p. 1.

<sup>130</sup> 'Major hazard facilities', WorkSafe website, [www.worksafe.vic.gov.au/safety-and-prevention/your-industry/major-hazard-facilities](http://www.worksafe.vic.gov.au/safety-and-prevention/your-industry/major-hazard-facilities), accessed 6 August 2015.

<sup>131</sup> 'Dangerous goods', WorkSafe website, [www.worksafe.vic.gov.au/safety-and-prevention/health-and-safety-topics/dangerous-goods](http://www.worksafe.vic.gov.au/safety-and-prevention/health-and-safety-topics/dangerous-goods), accessed 6 August 2015.

<sup>132</sup> *Occupational Health and Safety Act 2004* (Vic), Section 21(1).

<sup>133</sup> 'Your industry premium rate', WorkSafe website, [www.worksafe.vic.gov.au/insurance-and-premiums/calculating-your-insurance-premium/your-industry-premium-rate](http://www.worksafe.vic.gov.au/insurance-and-premiums/calculating-your-insurance-premium/your-industry-premium-rate), accessed 6 August 2015.

# Conclusion

**Since it commenced operations in 1971, the EPA has protected the environment from pollution and made Victoria a healthier place to live. But, nearly 45 years later, it is time to reflect on how the EPA might need to be changed and strengthened to best face the challenges of today and the next 45 years.**

This discussion paper is the starting point for the Ministerial Advisory Committee's consultations across Victoria. The Inquiry into the EPA provides Victorians with an opportunity to reflect on our current and emerging environmental challenges and on the future task of the EPA.

Once we have heard about Victoria's experiences and expectations of the EPA we will prepare a report and recommendations. The final report and recommendations are due to be submitted to the Minister by 31 March 2016.

We encourage all Victorians to get involved.

- **Are there any other issues relevant to the Terms of Reference that you would like to raise that have not been covered in this paper?**

## Have your say

### WRITE A SUBMISSION

Anyone can make a written submission to the Inquiry.

If you are planning to make a submission you may wish to consider some of the questions asked throughout this paper. These questions are intended as discussion-starters and you should not limit yourself to the issues and questions raised here.

You can lodge your submission by:

- Completing an online submission form at the Inquiry website: [www.epa-inquiry.vic.gov.au](http://www.epa-inquiry.vic.gov.au)
- Making a submission in writing and sending it by:  
email to: [info@epa-inquiry.vic.gov.au](mailto:info@epa-inquiry.vic.gov.au)  
post to: PO Box 21428, Little Lonsdale Street, Victoria 8011.

*Please make your submission by 31 October 2015.*

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## Appendix 1: Terms of Reference for the Inquiry into the EPA

### Preamble

Our promise to Victoria at the election was to respond to concerns about how our environment and our industries are managed together to protect the health of Victorians.

We promised to look closely at the Environment Protection Authority (EPA) to establish how we can develop the authority to ensure it can protect public health, while protecting our precious Victorian environment for future generations.

Since the EPA was first established, our population has changed and so have our challenges. Victoria's population is expected to double by 2050. Increases in resource consumption, traffic and waste volumes will follow. Demand for housing and urban density will continue bringing communities into closer proximity with potentially contaminated land, industrial areas and with each other. We need to better protect Victorians from exposure to chemicals and pollution than we unfortunately sometimes have in the past. And we need to ensure that the principle of environmental justice is adhered to. We all have the right to participate in making decisions on our shared environment, and share in the benefits it provides.

Victoria's environment protection approaches need to be ready to deal with the range of human and environmental impacts and challenges we expect to face in the future.

The review will examine whether the EPA has the right powers, right tools and proper resourcing to ensure it is agile and efficient and can tackle the environmental challenges of today and tomorrow.

Undertaking a public inquiry will ensure we are setting the EPA up for success – to be able to respond to the justifiable public health concerns arising from contaminated sites, water quality, air pollution and community concerns such as exposure to asbestos.

To ask if the EPA is our environmental protector or regulator or both.

In undertaking this inquiry, the government will seek the advice of a ministerial advisory committee on the EPA's most appropriate role in public health issues related to land, air and water pollution, and in protecting our environment. It will also examine how to best prevent contamination of sites as well as the EPA's ability to respond to day-to-day environmental issues.

The ministerial advisory committee will seek the views of the community, industry and workers in related industries as well as those of other relevant stakeholders.

From this review, I expect to see recommendations about the way the EPA can execute the right powers, duties and functions to achieve sustainable health for our State.

Hon Lisa Neville, MP  
Minister for Environment, Climate Change and Water

### Establishment of a Ministerial Advisory Committee to conduct inquiry

The Minister for Environment, Climate Change and Water (Minister) establishes an independent ministerial advisory committee (MAC) to be known as the 'Environment Protection Authority Inquiry MAC' by these terms of reference to conduct a public inquiry into the EPA.

### Scope of inquiry

The inquiry will be conducted by the MAC which will inquire into, report on, and present any recommendations and/or options that it considers appropriate in relation to the matters specified below. These are to be considered in the following order of priority:

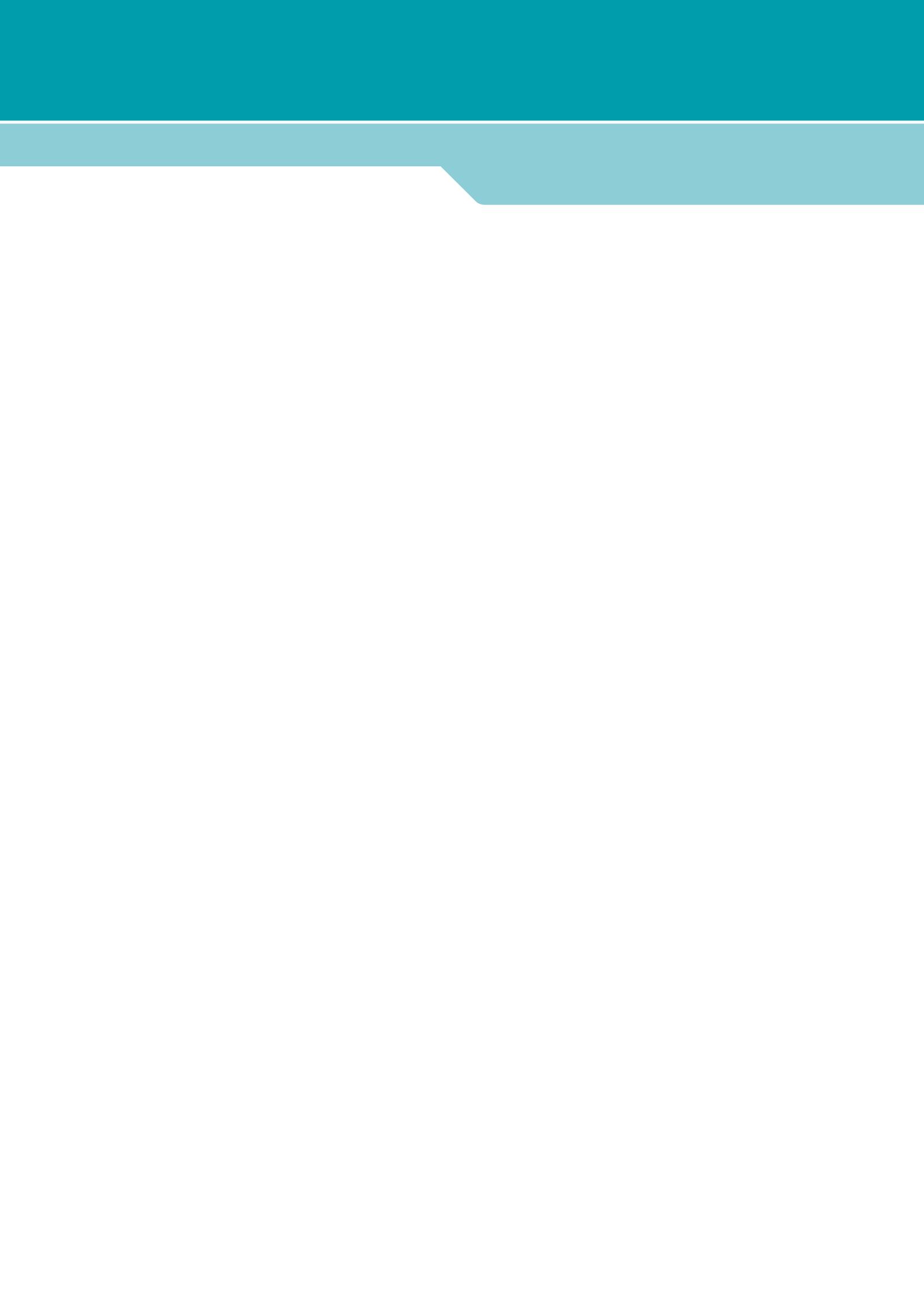
- 1) the EPA's appropriate role in relation to public health issues, including at least: community concerns such as exposure to asbestos, chemicals and other pollutants; the prevention and management of site contamination, air quality, and water quality in rivers and other waterways;
- 2) the Victorian community's and industry's expectations of the EPA as its environmental regulator;
- 3) the EPA's appropriate role in protecting the environment;
- 4) the ability of the EPA to ensure that the principle of environmental justice is adhered to, the environment is protected for the benefit of the community, and members of the community can be meaningfully involved in, and access fair treatment through, environmental regulation;
- 5) the ability of the EPA's current governance structures and funding arrangements to enable it to effectively and efficiently discharge its powers, perform its duties and implement its required functions;
- 6) the scope and adequacy of the EPA's statutory powers, and the effectiveness and efficiency of the suite of tools available to and utilised by the EPA, in enabling protection of the Victorian community and the environment, particularly in light of recent, new and emerging risks and issues; and
- 7) any other matter reasonably incidental to these above matters.

In conducting this inquiry, the MAC will consider the best way to combine environmental protection with economic viability and growing sustainable jobs in Victoria, including through improving regulatory efficiency and minimising regulatory burden. The MAC will also seek the views of the community, industry and workers in related industries, local government and Victorian government agencies, as well as those of other relevant stakeholders.

## Appendix 2: Milestones in the evolution of the EPA and EP Act

1970	<ul style="list-style-type: none"> <li>• <i>Environment Protection Act 1970</i> passed by the Victorian Parliament</li> </ul>	1994	<ul style="list-style-type: none"> <li>• Accredited licensee scheme developed</li> <li>• Research, development and demonstration approvals introduced</li> </ul>
1971	<ul style="list-style-type: none"> <li>• The EPA commenced operations</li> </ul>	1995	<ul style="list-style-type: none"> <li>• National Environment Protection Council established to make national environment protection measures</li> </ul>
1973	<ul style="list-style-type: none"> <li>• Licensing system for waste discharges established</li> </ul>	1999	<ul style="list-style-type: none"> <li>• Separate landfill levy for hazardous waste introduced</li> </ul>
1980	<ul style="list-style-type: none"> <li>• Third-party appeal rights introduced</li> </ul>	2000	<ul style="list-style-type: none"> <li>• EP Act principles introduced</li> <li>• Neighbourhood environment improvement plans established</li> </ul>
1981	<ul style="list-style-type: none"> <li>• EPA gains responsibility for air pollution abatement notices</li> </ul>	2002	<ul style="list-style-type: none"> <li>• Power to make sustainability covenants introduced</li> </ul>
1984	<ul style="list-style-type: none"> <li>• Scheduled premises introduced to focus licensing on environmentally risky activities</li> <li>• Works approvals introduced to enable EPA to approve the design of facilities</li> <li>• Pollution abatement notices extended from air to all forms of pollution</li> <li>• Permit system for transporting waste introduced</li> <li>• Unleaded petrol mandatory for all cars manufactured after January 1986</li> </ul>	2006	<ul style="list-style-type: none"> <li>• Environment and resource efficiency provisions developed</li> </ul>
1985	<ul style="list-style-type: none"> <li>• Power to make waste management policies introduced</li> <li>• Waste transport certificates established</li> </ul>	2007/2008	<ul style="list-style-type: none"> <li>• Hazardous waste landfill levies increased (in 2007 and in 2008)</li> </ul>
1988	<ul style="list-style-type: none"> <li>• Clean-up provisions introduced, including capacity for EPA to direct clean-up and recover costs</li> <li>• Financial assurances requirements developed</li> <li>• Creation of aggravated pollution offences</li> </ul>	2009	<ul style="list-style-type: none"> <li>• Brookland Greens Ombudsman report released</li> </ul>
1989	<ul style="list-style-type: none"> <li>• Environmental improvement plans introduced</li> <li>• Environmental auditor system for contaminated land established</li> </ul>	2010	<ul style="list-style-type: none"> <li>• Municipal and industrial landfill levies increased</li> <li>• <i>Climate Change Act 2010</i> passed by the Victorian Parliament</li> <li>• Victorian Auditor-General's hazardous waste management audit released</li> </ul>
1992	<ul style="list-style-type: none"> <li>• Introduction of landfill levies</li> </ul>	2011	<ul style="list-style-type: none"> <li>• Compliance and enforcement review</li> <li>• EPA 5 year plan released</li> <li>• New <i>Compliance and enforcement policy</i></li> </ul>
		2013	<ul style="list-style-type: none"> <li>• <i>Environmental citizenship strategy</i> released</li> </ul>
		2014	<ul style="list-style-type: none"> <li>• Hazelwood coal mine fire inquiry</li> </ul>

# Notes





Independent  
Inquiry into the EPA