

# Science Roadmap

## 2023–27

Environment Protection Authority Victoria



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## Acknowledgment of Country

EPA acknowledges Aboriginal and Torres Strait Islander people as the First Peoples and Traditional custodians of the land and water on which we live, work, and depend. We pay respect to Aboriginal Elders past, present, and future.

As Victoria's environmental regulator, we pay respect to how Country has been protected and cared for by Aboriginal people over many tens of thousands of years. We recognise the unique spiritual and cultural significance of land, water, and all that is in the environment and the continuing connection and aspirations for Country of Aboriginal people and Traditional custodians.

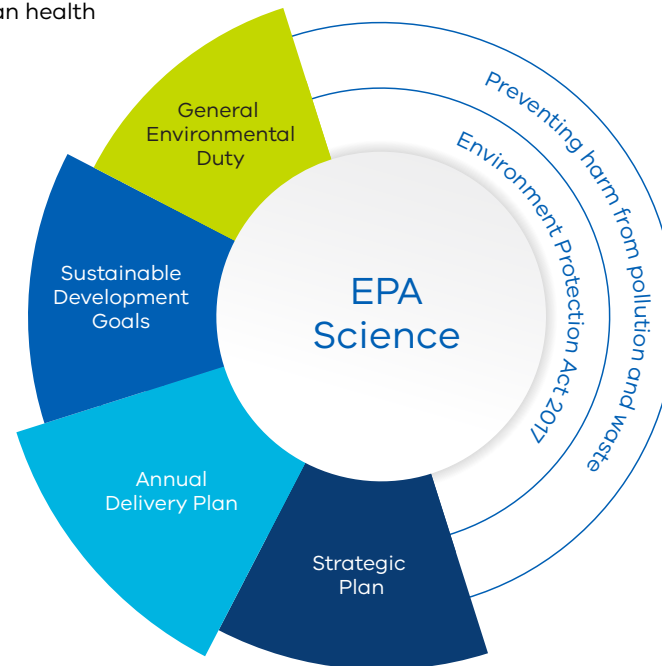


# Roadmap overview

Environment Protection Authority Victoria (EPA) is a science-based regulator. This Science Roadmap describes how innovative and targeted science and engineering will enable EPA to protect the health of our communities and environment.

EPA has five focus areas for science to enable efficient and effective regulation, and prevent harm to human health and the environment from pollution and waste.

- Address current and emerging pollution issues
- Adopt innovative science and technology
- Connect and influence
- Invest in our scientists
- Support regulatory excellence



The Science Roadmap will continue to evolve as needed. Though EPA's focus areas are unlikely to change, continuous improvement and new scientific knowledge will require it to be adaptive to achieve the outcomes of the **Strategic Plan 2022–27** and the principles of the *Environment Protection Act 2017*. The information presented in this roadmap is guided and informed by EPA's **Annual Delivery Plan**.

Our purpose is to protect the health of our communities and environment.

The outcomes we want to see by 2027 are:



Our environment is cleaner and communities are healthier



All Victorians reduce their environmental risks



We have influence and impact

**Professor Mark Taylor**  
Victoria's Chief  
Environmental Scientist

# The role of science at EPA

Science is a key enabler of regulatory excellence. At EPA, science supports strategic and operational decision making to prevent harm to human health and the environment from pollution and waste.



## Providing expert scientific advice

- Support regulatory and operational decision making by providing expert scientific advice.
- Inform strategy, policy and approach to addressing priority harms to human health and the environment.
- Provide scientific information about environment and human health to communities, industry and government.



## Delivering high quality scientific services

- Monitor, assess and forecast pollution levels to inform actions to reduce the harmful effects of pollution and waste.
- Undertake science outreach and citizen science to enhance knowledge and engagement in order to better protect the environment and public health.
- Inform emergency response and recovery to reduce impacts from pollution incidents.



## Demonstrating science leadership

- Set science-based performance standards to prevent harm and achieve better environmental and public health outcomes.
- Influence land use planning, infrastructure delivery and industry development, to prevent harm to communities and the environment.
- Engage with community, industry and government to ensure EPA science is available, understood, and used to prevent harm to communities and the environment.



## Maximising science impact

- Build knowledge through investment in research and development to meet current and future organisational needs.
- Support internships, postdoctoral supervision and partnerships with academic, science and research agencies to build capability and capacity.
- Share scientific knowledge and expertise with co-regulators, and other environment protection organisations in Australia and worldwide.

# Focus areas

As a trusted and credible science-based regulator, EPA is focused on five key science areas to support the achievement of organisational strategic outcomes by 2027.



## Address current and emerging pollution issues

EPA will continue to monitor, assess and advise on potential risks to the environment and human health by:

- understanding the impacts of new products, chemicals and technologies
- taking into account sustainability, circular economies, and mitigation and adaptation approaches to climate change
- considering the implications of long-term low dose chemical exposures for population health.

### How

- Work with leading scientists and organisations to protect communities and the environment from pollution and waste.
- Provide scientific advice about new risk management approaches and innovative solutions to environmental problems.
- Invest in scientific programs to help identify and address priority risks of harm.



## Adopt innovative science and technology

EPA will inform its decisions and improve operational efficiency by:

- applying the latest scientific knowledge to respond to harms caused by pollution and waste
- delivering real-time environmental data through the use of innovative technology
- exploring the use of artificial intelligence, machine learning and predictive analytics to develop new approaches to environmental regulation.

### How

- Keep across the latest developments in science and technology.
- Invest in research and development, and build partnership opportunities with scientific innovators.
- Create and use new tools to support sharing of and better access to knowledge and data.



## Connect and influence

EPA will provide access to scientific information, support and guidance to:

- enable Victorians to prevent harm to human health and the environment
- enhance understanding about the health and condition of Victoria's air, land and water
- increase trust in EPA as a science-based regulator.

### How

- Promote outreach to increase scientific awareness and engagement in the Victorian community.
- Equip EPA staff with the scientific expertise that will improve regulatory decision-making.
- Foster productive collaborations to enhance EPA's reach and impact.



## Invest in our people

EPA will support its scientists by:

- identifying learning and development opportunities to maintain and enhance knowledge and skills
- providing suitable resources for the efficient and effective delivery of scientific advice and services
- profiling the expertise of our scientists and their work.

### How

- Provide access to resources and opportunities for professional development.
- Support EPA scientists to communicate their work effectively.
- Create a safe working environment where EPA scientists are valued and respected as experts in their field.



## Support regulatory excellence

EPA will use science in the delivery of its core regulatory functions by:

- focusing its science resources on the highest organisational priorities
- providing timely access to scientific advice and services to support effective decision-making
- identifying, researching and evaluating approaches to better protect human health and the environment.

### How

- Apply targeted and fit-for-purpose science to inform effective regulation.
- Use the best available science to inform regulatory action.
- Enhance scientific capability and science-based decision-making across EPA.





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