Legend

Status

N/A Not Applicable
The indicator assessment is based on future projections or the change in environmental condition and providing a status assessment is not applicable. Only a trend assessment is provided.

Unknown
Data is insufficient to make an assessment of status and trends.

Poor
Environmental condition is under significant stress, OR pressure is likely to have significant impact on environmental condition/ human health, OR inadequate protection of natural ecosystems and biodiversity is evident.

Fair
Environmental condition is neither positive or negative and may be variable across Victoria, OR pressure is likely to have limited impact on environmental condition/human health, OR moderate protection of natural ecosystems and biodiversity is evident.

Good
Environmental condition is healthy across Victoria, OR pressure is likely to have negligible impact on environmental condition/ human health, OR comprehensive protection of natural ecosystems and biodiversity is evident.

Trend

N/A Not applicable
This indicator assessment is based on current environmental condition only and it is not applicable to provide a trend assessment. Only a status assessment is provided.

? Unclear

↘ Deteriorating

→ Stable

↗ Improving

Data quality

Poor
Evidence and consensus too low to make an assessment

Fair
Limited evidence or limited consensus

Good
Adequate high-quality evidence and high level of consensus

AIR

Summary		Status				Trend
		UNKNOWN	POOR	FAIR	GOOD	

Indicator
A:01 Ambient ozone levels (summer smog)

Region
Melbourne, Geelong, Latrobe Valley

Measures
Ambient ozone concentrations (measured in ppb)

Data custodian
EPA Victoria

Ozone standards have only been exceeded on a small number of days in Victoria since 2000.

Status: Good (●) Trend: → Stable

DATA QUALITY
Good

Indicator

A:02 Carbon monoxide and nitrogen dioxide

Region

Melbourne, Geelong, Latrobe Valley

Measures

Ambient carbon monoxide (measured in ppm) and nitrogen dioxide (measured in ppb) concentrations

Data custodian

EPA Victoria

Carbon monoxide and nitrogen dioxide concentrations rarely exceed air quality standards and peak concentrations are still reducing in Victoria, albeit at a slower rate during the 21st century than during the 1980s and 1990s.

DATA QUALITY

Good

Indicator

A:03 Particle pollution (PM_{10} and $PM_{2.5}$)

Region

Melbourne, Geelong, Latrobe Valley

Measures

Ambient concentrations (measured in $\mu g/m^3$) of particles less than 2.5 micrometres in size ($PM_{2.5}$) and less than 10 micrometres in size (PM_{10}).

Data custodian

EPA Victoria

The air quality standards for particle pollution are exceeded more frequently than for other pollutants. Despite this Victoria's particle pollution is reasonably low by global standards. PM_{10} pollution remains an issue in Brooklyn in Melbourne's inner west associated with dust emissions generated by industry and vehicles.

Elsewhere in Victoria   Brooklyn   Geelong, the Latrobe Valley and most of Melbourne

DATA QUALITY

Fair (lacking coverage in regional Victoria and near major Roads)

Indicator

A:04 Sulfur dioxide

Region

Melbourne, Geelong, Latrobe Valley

Measures

Ambient sulfur dioxide concentrations (measured in ppb)

Data custodian

EPA Victoria

There have been no significant trends in sulfur dioxide concentrations in Victoria since the 1980s, with levels remaining well below the three air quality standards legislated in this state.

DATA QUALITY

Good

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Indicator

A:05 Stratospheric ozone

Region

Melbourne

Measures

(i) Ultraviolet radiation (UV index) (ii) Average total column ozone (Dobson Units) (iii) Emissions of ozone depleting substances (M tonnes)

Data custodian

DEE, BoM

The long-term changes in stratospheric ozone due to ozone-depleting substances over a mid-latitude location such as Victoria are small compared to natural variations. Melbourne's ultraviolet levels have generally been stable since the 1980's.

DATA QUALITY

Good

Indicator

A:06 Odour and noise

Region

Victoria

Measures

(i) Odour pollution reports (ii) Noise pollution reports

Data custodian

EPA Victoria, local councils

Odour is the type of pollution most frequently reported to EPA and noise is the second most. Apart from a spike in 2014, odour reports have generally increased from 2013-17 and noise reports were generally stable until a spike of reports in 2017.

DATA QUALITY

Fair
(No compatibility between data collected by EPA and councils – so the data presented here is just EPA data)

Indicator

A:07 Light pollution

Region

Victoria

Measures

Artificial sky brightness as a ratio to the natural sky brightness (assumed to be 174 µcd/m²)

Data custodian

None

Artificial lighting has reduced bat activity and species richness in Victoria as well as affecting bird survival patterns on Phillip Island.

DATA QUALITY

Poor - (data mainly collected as case-studies or at a national level)

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Indicator

A:08 Emissions of major air pollutants by sector

Region

Victoria

Measures

Emissions by source in t/yr

inventories

Data custodian

EPA Victoria

Motor vehicles and large industry are estimated to account for the majority of carbon monoxide, oxides of nitrogen and sulfur dioxide emissions across Victoria.

DATA QUALITY

Fair (current emissions data unable to be compared to historical emissions data)

Indicator

A:09 Health impacts of air pollution

Region

Victoria

Measures

(i) Number of respiratory illnesses related to adverse air quality (ii) Cost (in $) associated with health effects due to adverse air quality

Data custodian

None

Associations between adverse health effects and exposure to $PM_{2.5}$ have been found in Victoria.

DATA QUALITY

Poor (a limited amount of local research and exposure studies)

Indicator

A:10 Health impacts of noise pollution

Region

Melbourne

Measures

The proportion of population exposed to high levels of road traffic noise in Melbourne

Data custodian

EPA Victoria

Melbourne has a lower percentage of its population exposed to excessive night time noise than many of Europe's major cities.

Fair for Melbourne and Unknown for the rest of Victoria

DATA QUALITY

Poor (a limited amount of local research and exposure studies)

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Indicator

A:11 Indoor air quality

Region

Victoria

Measures

Indoor air quality concentrations of common indoor air pollutants (e.g. volatile organic compounds)

Data custodian

None

Relatively little research has been done on the quality of air in our homes, schools, recreational buildings, restaurants, public buildings, offices, or inside cars.

DATA QUALITY

Poor (a limited amount of local research and exposure studies)

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