



Environmental Defenders Office

What is ecologically sustainable development (ESD)?

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Ecologically sustainable development (ESD) is an important concept in environmental law

ESD is a long-standing and internationally recognised concept.

The concept first emerged in the Report of the World Commission on Environment and Development, *Our Common Future* (**the Brundtland Report**) in 1987. The Brundtland Report defined sustainable development as:

“Development that meets the needs of present generations while not compromising the ability of future generations to also meet their needs.”

The concept of sustainable development was affirmed at the UN Conference on the Human Environment 1972 in Stockholm:

“The natural resources of the earth, including the air, water, land and flora and fauna, must be safeguarded for the benefit of present and future generations through careful planning and management.” – Principle 2 of Stockholm Declaration

Since then, sustainable development has been a key principle enshrined in numerous international agreements and declarations.

In Australia, the principle is known as ‘ecologically sustainable development’ (or **ESD**) and has been included in over 60 pieces of Australian legislation. The [National Strategy for Ecologically Sustainable Development \(1992\)](#) defines ecologically sustainable development as:

“using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.”

At its core, ESD requires the effective integration of social, economic and environmental considerations in decision-making processes.

At a federal level, ESD is notably enshrined in Section 3A of the [Environment Protection and Biodiversity Conservation Act 1999 \(Cth\)](#) (**EPBC Act**) as a set of principles, which are:

- decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations;
- if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; and
- improved valuation, pricing and incentive mechanisms should be promoted.

Read: [EDO Factsheet on the EPBC Act, Referrals and Opportunities to Comment for more information about the EPBC Act.](#)

Across jurisdictions, states/territories differ in their approach to integrating principles of ESD in their laws. Nonetheless, the following are generally accepted as principles of ESD:

The Precautionary Principle

If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. If risk to the environment is high, but scientific certainty of the risk eventuating is low, the precautionary principle can fill the gap and essentially requires decision-makers to act as though the risk to the environment is real.

There is an implicit acknowledgment that science and scientific methodologies have limitations. Because of these limitations, it is unlikely that the full consequences a particular act or activity upon the environment can be known in advance. A lack of full scientific certainty is therefore the norm, rather than the exception.

Inter-generational equity

This principle states that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

It is based on the notion that current generations hold the environment in trust for future generations. The environment should therefore be managed for the benefit of current and future generations because we have a moral obligation to hand over to subsequent generations a stock of environmental wealth comparable to that which was handed on to us by our forebears. One way of thinking about this is that current generations should use the interest produced by our assets while keeping the capital of the planet intact for the future.

Conservation of biological diversity and ecological integrity

Biodiversity refers to the variety of all life on Earth – including ecosystem, species and genetic diversity.

“...Conserving biodiversity cannot be an afterthought once other objectives are addressed – it is the foundation on which many of these objectives are built.”

– Global Biodiversity Outlook

Since biodiversity is the foundation of our social and economic systems, the conservation of biological diversity and ecological integrity should be a fundamental consideration in environmental planning and decision-making processes. Thorough environmental assessments are an example of how this principle is enacted.

Improved valuation, pricing and incentive mechanisms

Environmental factors should be included in the valuation of assets and services, such as:

- polluter pays – those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
- the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
- environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

These principles are implemented through a number of decision-making processes, including the regulation of pollution, and development assessment and approval regimes.

Visit: [The Australian Department of Agriculture, Water and the Environment website](#) for more information about how the principles of ESD are implemented at the national level.

ESD in practice

ESD is mentioned in the objects sections of many pieces of legislation. For example, the objects (or aims) of the [Protection of the Environment Operations Act 1997 \(NSW\)](#) include:

“to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development.”

The objects outline the underlying purpose of the legislation and can be used to resolve uncertainty and ambiguity.

Where ESD is an object of an Act, it is likely that decision-makers should have regard to ESD in exercising their decision-making powers under the Act.

ESD may also be specifically mentioned in law as a matter for consideration by the decision-maker. In such cases, a failure to take ESD into account could expose the decision to legal challenge.

A requirement to consider ESD when making a decision may also be implied. For example, where the law requires the decision-maker to consider the public interest, this can be read to include a requirement to consider ESD.

Whether the requirement to consider ESD is express or implied in law, it is often the case that ESD is just one factor to be considered in weighing the merits of a proposal and the decision-maker will decide what weight to give the various principles of ESD.

This approach may miss the point of ESD. Bates argues that ESD “is not a factor to be balanced against other considerations; ESD *is* the balance between development and environment imperatives.”¹

ESD as a balancing act

There are inherent trade-offs between the different components of ESD.

ESD seeks to maximise the combined total of economic, social and environmental values relevant to a decision but to do this, value judgments may need to be made by the decision-maker.

It can be very difficult to balance all the elements relevant to ESD, especially when some can be prescribed monetary values more easily than others. Traditional cost–benefit analysis will find it difficult to value the ecosystem services of a forest or the value of clean water which can make it difficult to compare such values to aspects of a project that have monetary values, such as jobs.

¹ Gerry Bates, *Environmental Law in Australia* (5th ed, LexisNexis, 2002), para [5.19]-[5.20].

A failure to properly value environmental considerations can make these considerations appear less important to decision-makers than social and economic considerations.

Incorporating ESD in decision-making

Chief Judge of the NSW Land and Environment Court, Brian Preston, has written extensively on ESD.

He has provided some guidance on how to incorporate ESD into decision-making.

1. Approach ESD as not just a process (tick-a-box), but as an intended outcome.
2. What will achieve the overall objective of making the outcome sustainable? (water quality, greenhouse emissions, recycled resources?)
3. How can the various principles of ESD help us achieve the objectives?
4. Does the decision involve a polycentric problem where gains in one area might cause losses in another? For example – is protection of biodiversity in relation to future land releases going to impact the principle of intra-generational equity by making it harder for government to provide affordable housing? Is a whole of government approach warranted?
5. What level of analysis do we need to address these issues? City-wide, State-wide, Nation-wide?
6. Where do we draw the boundaries? To what extent will downstream impacts be considered?
7. What values are involved? How will value be ascribed (economic and non-economic factors)? When will a development outweigh the protection of a threatened species – how much employment, capital expenditure etc would be sufficient? Or is the species too valuable?
8. Recognise that EIA is project specific and not good at identifying cumulative impacts or alternatives. Ensure conditions of consent reflect the EIA.
9. Costs need to be internalised otherwise the true cost of a decision will impact on society as a whole.
10. Where the impacts of decision-making are uncertain, use the precautionary principle.