



**Infrastructure
Australia**

Sustainability Principles

Infrastructure Australia's approach
to sustainability



April 2021

Section 1

Introduction

Purpose of this document

This document defines Infrastructure Australia’s approach to sustainability. It also outlines the role infrastructure networks play in promoting a sustainable community and how critical it is that infrastructure supports sustainability outcomes.

Summary

Infrastructure Australia is the nation’s independent infrastructure advisor. We have a statutory role to share knowledge, promote good practice and facilitate collaboration and leadership. We undertake research and provide advice to governments, industry and the community on the infrastructure investments and reforms that will benefit Australians.

Sustainability and sustainable social, economic, environmental and governance outcomes are increasingly important to government, industry and the community. Infrastructure is not immune from these considerations. All levels of government are attempting to maximise value-for-money investments and prepare for climate change, while taking into account international commitments. Our 2019 [Australian Infrastructure Audit](#) highlighted the benefits of adopting sustainability-enhancing approaches to infrastructure assets, as well as the associated risks of inaction.

Our role requires us to help ensure the benefits of sustainability are harnessed. We have a mandate (under the [Infrastructure Australia Act 2008](#)) to provide advice on matters relating to infrastructure, including:

- Australia’s current and future needs and priorities relating to nationally significant infrastructure
- policy, pricing and regulatory issues that may impact the utilisation of infrastructure
- policy issues arising from climate change
- the needs of infrastructure users, and
- the delivery of infrastructure projects.

With this in mind, we have developed **Sustainability Principles** to guide our approach to sustainability. The principles enable us to adopt a consistent approach to inform our policy reform agenda and our infrastructure assessment and prioritisation functions. We have also identified how we will promote, support, reflect and communicate sustainability across our work.

Section 2

Defining sustainability

How we define sustainability

We support an outcomes-focused understanding of sustainability as:

meeting the needs of the present without compromising the ability of future generations to meet their own needs.¹

What is sustainable infrastructure?

Sustainable infrastructure refers to the network and system, equipment and assets designed to meet the population's essential service needs, while adhering to sustainability principles. This results in infrastructure that is planned, designed, procured, constructed and operated to optimise social, economic, environmental and governance outcomes over an asset's life.

Sustainable infrastructure protects and preserves the ecological processes required to maintain human health, equity, diversity and the functioning of natural systems. It is not just about building new projects, but also about the rehabilitation, reuse or optimisation of existing infrastructure.

Sustainable infrastructure enables economic development and the efficient use of financial resources, while enhancing quality-of-life and protecting natural resources. Sustainable infrastructure can reduce the life-cycle cost of infrastructure, while limiting negative effects on the environment.



¹ World Commission on Environment and Development 1987, *Our common future (the Brundtland Commission report)*, United Nations, viewed on 30 November 2020, available at: https://www.aren.admin.ch/dam/aren/en/dokumente/nachhaltige_entwicklung/dokumente/bericht/our_common_futurebrundtlandreport1987.pdf.download.pdf/our_common_futurebrundtlandreport1987.pdf.

Section 3

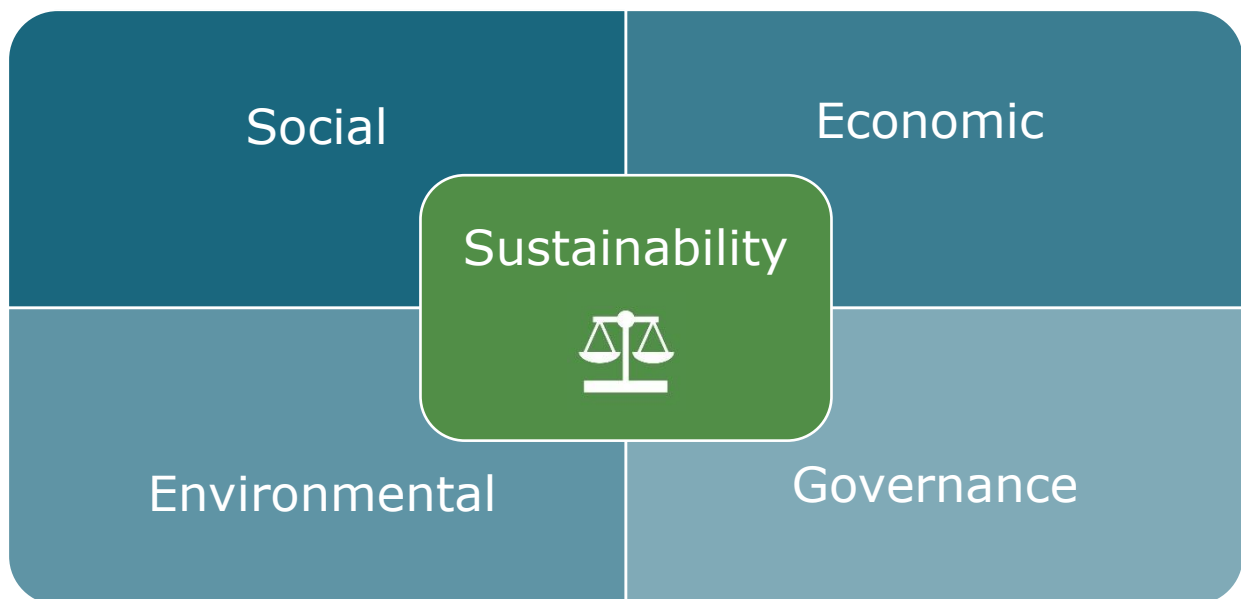
Principles of sustainability

Infrastructure Australia's principles of sustainability

Sustainable outcomes are contingent on balancing social, economic, environmental and governance outcomes (see **Figure 1**). Balancing outcomes across each of these four areas will help communities to be functioning and fair, while not adversely impacting future generations and the planet.

Dividing sustainable outcomes into these four components aligns with global best practice, such as work published by the World Economic Forum.² This approach is also informed by community research undertaken while developing the 2021 *Australian Infrastructure Plan*.³

Figure 1: Components of sustainability



In our Sustainability Principles (see **Table 1**), we define what sustainability represents for each of these four key components, with a focus on outcomes. These principles reflect our understanding of sustainability and the goals of sustainable infrastructure. They have been developed to guide our activities and promote sustainable outcomes.

² Global Future Council on Infrastructure 2020, *Six qualities of sustainable infrastructure: Community paper*, World Economic Forum, Geneva, viewed 7 December 2020, available at: <https://www.weforum.org/reports/six-qualities-of-sustainable-infrastructure-in-action>

³ JWS 2020, *Community preference research for the Australian Infrastructure Plan*, JWS, Sydney, available upon release of the 2021 *Australian Infrastructure Plan*.

Table 1: Sustainability Principles

Component of sustainability	Principle
Social	Infrastructure and policies should improve quality-of-life, access and wellbeing, to create an inclusive and fair society.
Economic	Infrastructure and policies should grow productivity, the Australian economy and allow equitable access to economic and growth opportunities, while efficiently using financial resources.
Environmental	Infrastructure and policies should protect environmental outcomes by reducing pollution, balancing resource consumption, conserving natural ecosystems and resources, and supporting climate mitigation and adaptation.
Governance	Infrastructure and policies should build trust in governance and institutions through transparent, accountable and inclusive decision-making.

These principles help us and our stakeholders better understand our role and aims, and the opportunities for partnership. For each of these principles, we have identified specific factors that will help achieve sustainable outcomes.

Specific factors that support sustainability outcomes

This section outlines the specific factors that need to be balanced to support sustainable outcomes in line with our Sustainability Principles.

Social outcomes

Social outcomes relate to, but are not limited to, improving community health, liveability and wellbeing, social cohesion, gender equality, education, housing and security. Specifically, we consider the key factors driving good social outcomes to be:

Factors driving good outcomes	Description
Wellbeing and quality of life	Improving communities' health, social cohesion and liveability.
Fairness	Equitable outcomes for Australian communities. Comparable services across geographies, and for diverse groups, including disadvantaged and vulnerable individuals.
Inclusivity	Considering the needs of all Australians, including cultural needs and the needs of vulnerable individuals. Ensuring all communities can access essential services.

Economic outcomes

Economic outcomes relate to, but are not limited to, productivity, employment, financial stability, consumption, production, innovation, wealth creation, international competitiveness, social mobility and value for money. Specifically, we consider the key factors driving good economic outcomes to be:

Factors driving good outcomes	Description
Equity	Distributing equitable economic benefit to Australians. The distribution of costs and benefits should also consider how disadvantaged members of society are impacted. Costs should be distributed fairly based on users' ability to pay.
Value for money	Ensuring financially sustainable, proportionate infrastructure investment that takes account of consumer willingness to pay. Optimising service levels and lifecycle costs through the delivery of long-term improvements and enhancements, such as demand response.
Productivity	Improving the rate an economy transforms inputs (including its people and natural resources) into outputs. Greater productivity results in more efficient use of resources and increased economic yields.

Environmental outcomes

Environmental outcomes are related to, but not limited to, impacts on our atmosphere, land, oceans, seas, habitat, coasts, freshwater and biodiversity due to factors such as carbon emissions, use of natural resources, toxic materials, efficient use of resources, waste management and reforestation. Specifically, we consider the key factors driving good environmental outcomes to be:

Factors driving good outcomes	Description
Protection and enhancement	Preserving ecological value by taking account of impacts on atmosphere, land, oceans, seas, habitat, coasts, freshwater and biodiversity. Climate change mitigation and adaptation, and building resilience to shocks and stresses.
Circular economy	Ensuring balanced extraction and use of natural resources, materials, waste and food, focusing on waste reduction, increased recovery, reuse and recycling.
Reducing pollution	Limiting all types of pollution including air, water, noise, soil and greenhouse gas pollution.

Governance outcomes

Governance outcomes are related to, but not limited to, inclusive governance mechanisms, effective community engagement, capacity building, transparency and user focus. Specifically, we consider the key factors driving good governance outcomes to be:

Factors driving good outcomes	Description
Transparency of decision-making	Ensuring transparent, accountable and consistent governance systems that communicate and measure short-term and long-term economic, environmental and social impact. Creation of anti-corruption frameworks to safeguard the integrity of infrastructure investments.
Trust in institutions and leadership	Supporting informed and inclusive decision-making, to ensure processes across government jurisdictions effectively engage affected or interested communities and users. Better understanding local sensitivities and needs, local customs and the needs of disadvantaged groups.
Coordinated planning and decision-making	Ensuring decision-making is guided by robust planning and coordination, which involves proactively establishing priorities and allocating resources. Processes should also monitor and adjust work to accomplish goals and deliver outputs that reflect the community's expectations.

Section 4

How we promote sustainability

How Infrastructure Australia promotes sustainability

We are committed to sustainable infrastructure and have identified how we promote, support, reflect and communicate sustainability across our work. Importantly, to support sustainable outcomes, we are committed to working collaboratively to support sustainability by sharing knowledge, promoting good practice and researching the challenges and opportunities that inform success. We plan to continuously refine our definition of sustainability and our understanding of the factors required to achieve sustainable outcomes.

Leading and informing debate to support sustainable outcomes from infrastructure

We lead and inform debate about policies and reforms that support sustainability across all infrastructure sectors. By supporting knowledge sharing, we build capability at all levels of government and within industry. We work collaboratively with proponents to continuously improve the sustainability of infrastructure investment decisions.

Providing transparency, clarity and evidence in assessing sustainability

We are committed to recognising best practice in the application of sustainability through the [Infrastructure Australia Assessment Framework](#), the guidelines for how we assess infrastructure proposals.⁴ We are committed to continuously improving our assessment guidelines and working collaboratively with governments and proponents to help them consider sustainable outcomes at every stage of infrastructure development. We also have a role in providing government, the private sector and communities with relevant, up-to-date evidence to enable good decision-making.

Recognising global leadership

We support international leadership to progress sustainable infrastructure and help deliver improved social, economic, environmental and governance outcomes. We support the Australian Government's endorsement of the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals.⁵ We recognise the leadership provided by the World Economic Forum and the Global Future Council's Six Qualities of Sustainable Infrastructure.⁶

⁴ Infrastructure Australia 2018, *Infrastructure Australia Assessment Framework*, available at:

<https://www.infrastructureaustralia.gov.au/submission-guidelines>

⁵ The United Nations 2020, *Sustainable Development Goals*, The United Nations, viewed on 30 November 2020, available at: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

⁶ Global Future Council on Infrastructure 2020, *Six qualities of sustainable infrastructure: Community paper*, World Economic Forum, Geneva, viewed 7 December 2020, available at: <https://www.weforum.org/reports/six-qualities-of-sustainable-infrastructure-in-action>

Ongoing efforts for reconciliation with Aboriginal and Torres Strait Islander peoples

We are committed to contributing to quality-of-life improvements for Aboriginal and Torres Strait Islander communities. This aim is reflected in our [Reflect Reconciliation Action Plan](#),⁷ which acknowledges the need to empower communities and develop solutions in partnership, be it in improved and culturally appropriate education and health services or opportunities for employment and development.

⁷ Infrastructure Australia 2020, *Reflect Reconciliation Action Plan May 2020-May 2021*
<https://www.infrastructureaustralia.gov.au/reconciliation-action-plan>

Section 5

Sustainability in our work program

How we include sustainability in our work

The following sections outline how we are embedding our understanding of sustainability and how we can promote sustainable outcomes into our work program.

The Australian Infrastructure Plan

The *Australian Infrastructure Plan* (the Plan) sets out the infrastructure solutions required to drive productivity growth, maintain and enhance our standard of living, and ensure our cities and regions remain world class. The 2021 Plan will outline practical and implementable sustainability reforms, which have been informed through close consultation, collaboration and partnerships with industry, peak bodies, governments and the community. Sustainability is a cross-cutting theme and is considered in each chapter of the 2021 Plan.

The Australian Infrastructure Audit

The *Australian Infrastructure Audit* (the Audit) strategically assesses Australia's nationally significant infrastructure needs over the next 15 years.⁸ This forms the evidence base for the Plan, which specifies national and state level priorities. The Audit assesses equity, productivity and value for money considerations in identifying the challenges and opportunities Australia is likely to face. The 2019 Audit identified that new demands for sustainability provide opportunities to achieve better outcomes and that sustainability is poorly considered in infrastructure plans and decisions. The Audit's findings provide the evidence base to prosecute the 2021 Plan's reforms.

Policy and research

Infrastructure Australia consistently advocates for reform on important issues including the planning, funding, delivery and use of our nation's infrastructure. Building on the recommendations in the *Australian Infrastructure Plan*, we make the case for change through our Reform Series papers. In these papers (such as *Planning Liveable Cities: A place-based approach to sequencing infrastructure⁹ and growth* and *Future Cities: Planning for our growing population¹⁰*) we provide detailed research and advice to help chart a pathway to sustainable reform. Complementary work is also being undertaken by our Policy and Research team to embed resilience and sustainability into Australian communities.

⁸ Infrastructure Australia 2019, *Australian Infrastructure Audit*, Commonwealth of Australia, Sydney.

⁹ Infrastructure Australia 2018, *Planning Liveable Cities: A place-based approach to sequencing infrastructure⁹ and growth*, available at: <https://www.infrastructureaustralia.gov.au/publications/planning-liveable-cities-place-based-approach-sequencing-infrastructure-and-growth>

¹⁰ Infrastructure Australia 2018, *Future Cities: Planning for our growing population*, available at: <https://www.infrastructureaustralia.gov.au/publications/future-cities-planning-our-growing-population>

Infrastructure Priority List

The [*Infrastructure Priority List*](#) (Priority List) is a prioritised list of nationally significant investments.¹¹ It provides decision makers with advice and guidance on specific infrastructure investments that will underpin Australia's continued prosperity. As a national investment pipeline, the Priority List can promote sustainable outcomes by identifying and then endorsing proposals with sustainability benefits as suitable for investment. The Priority List includes:

- The *Northern Territory remote community power generation program*, which sets out an opportunity to improve the resilience, flexibility, reliability, amenity and sustainability of power infrastructure in remote Aboriginal communities of the Northern Territory.
- The national *Enabling infrastructure for hydrogen exports* initiative identifies opportunities for upgraded or new infrastructure for the electricity, gas and water supply networks, refuelling stations, roads, rail and ports to support the development of a hydrogen industry. This would meet potential domestic and export demand for green hydrogen as a zero carbon emissions energy source.
- The *Tasmanian irrigation schemes: Tranche 3* initiative, which outlines an opportunity to develop a well-managed water capture and distribution scheme, will promote the sustainable use of water resources.
- The *Enabling infrastructure and essential services for remote NT communities (Wadeye, Tiwi Islands, Jabiru)* initiative identifies the need for infrastructure upgrades that will support sustainable economic and social development for residents.

Infrastructure Australia's Assessment Framework

Our [*Assessment Framework*](#) sets out the process Infrastructure Australia uses to consider initiatives and projects for inclusion on the Priority List. The Framework outlines what Infrastructure Australia does and how initiatives and projects are assessed, to enable proponents to develop their submissions. While sustainability is implied in most jurisdictional frameworks, only a few explicitly require a specific sustainability assessment. As such, the next iteration of the Assessment Framework (due for release in 2021) will provide advice on how we assess sustainability and how proponents can consider it in their proposal development. This new approach demonstrates our commitment to supporting more sustainable social, economic, environmental and governance outcomes throughout infrastructure development.

¹¹ <https://www.infrastructureaustralia.gov.au/infrastructure-priority-list>

