

The Knowledge Strategy sets priorities for the knowledge needed by the Office of Environment and Heritage (OEH) to support NSW Government and corporate objectives. *Landscape Management* is one of six 'knowledge themes' in the Knowledge Strategy.



Knowledge goal: Promote integrated landscape management for long-term ecological, cultural, social and economic sustainability

Achieving this goal requires a sound understanding of the systems and processes operating in the landscape, including the interconnection, function and pathways between society, cultural heritage, biodiversity, vegetation, water and soil.

Outcomes

The *Landscape Management* knowledge theme aims to provide knowledge to:

- build healthy and resilient landscapes and protect cultural heritage, through landscape planning and the integrated management of public and private land
- increase the participation of Aboriginal people in natural resource management and conservation
- increase understanding of the social and economic aspects of landscape management
- improve access to information about natural resources, to protect strategic agricultural land and water, and enhance ecosystem services.

Major OEH programs to address priority knowledge needs

Enable better management decisions

- OEH is making it easier for communities, landholders and organisations to access information and decision-support systems about natural resource management. OEH works with customers to determine how best to meet their needs.
- OEH's research helps to predict how soils and landscapes respond to long-term management actions, to develop options to reverse land and soil degradation, and protect landscapes for future generations.

Build resilient, connected landscapes

- OEH is a lead partner in the *Great Eastern Ranges Initiative*. The initiative aims to build a wildlife conservation corridor along the Great Dividing Range, from Victoria to far north Queensland. OEH's studies of ecological processes enhance and restore landscape connectivity and resilience by informing management of invasive species, habitat rehabilitation and private land conservation agreements. OEH is also linking management of national parks with off-park efforts, to secure clean air and water, and protect biodiversity. Find out more at www.greateasterranges.org.au.

Apply traditional Aboriginal knowledge to manage landscapes

- Traditional Aboriginal knowledge offers a significant resource to build resilient landscapes. Applying such knowledge may reduce the frequency of extreme bushfires, maintain habitat 'mosaics' (areas with multiple habitats, usually at a fine-scale and important for biodiversity) and control invasive species.
- OEH seeks to empower and increase wellbeing for Aboriginal communities by working together at local, regional and state scales. For example, OEH is engaging Aboriginal communities to prioritise areas in the landscape to apply traditional knowledge.
- The *Firesticks* program aims to further integrate Aboriginal knowledge into existing monitoring programs and improve guidance to apply this knowledge.

Support healthy and sustainable landscapes

- OEH provides data and information to the NSW Government's strategic planning initiatives, which aims to drive regional investment, and protect agricultural land and water resources. OEH contributes land and soil maps that help identify Biophysical Strategic Agricultural Land (BSAL), and assists with protocols for verifying BSAL at a site scale.
- OEH is mapping groundcover, as well as assessing burned areas and hydrogeological landscapes (how groundwater moves and is distributed through the landscape), to support healthy and sustainable landscapes.

Opportunities to collaborate with OEH

OEH seeks collaborators and/or funding to address the following priority knowledge needs.

Understand landscape processes and ecosystem services

- Improve understanding of spatial landscape processes, ecosystem services, mosaics, connectivity and function, as well as threats to human and environmental health. This will help to promote productive and sustainable landscapes.

Understand social drivers of landscape change

- Develop more effective methods to communicate and engage with landholders, institutions and Aboriginal communities about landscape management.
- Improve knowledge of socio-cultural values and behaviours on landscapes, and the relationship between social change, economic change and landscape response.

Understand biophysical drivers of landscape change

- Determine the biophysical impacts of pressures and threats on landscape function across public and private land, to develop resilient landscapes and inform regional planning.

Understand landscapes through monitoring and collecting data

- Build knowledge of how landscape function and ecosystem services change over time and space, including changes in states of a landscape, trajectories, trends and threats.
- Determine the essential attributes of productive and resilient landscapes to enable better management decisions, by monitoring ground cover, land use, landscapes, conservation values and vegetation communities.
- Undertake monitoring and mapping of landscape threats and pressures (such as invasive species), to enable better management decisions to maintain healthy and productive landscapes.

Understand how to assess and manage landscapes by using decision-support systems

- Develop and promote decision-support systems for local and regional planning authorities, to increase their capacity to help communities adapt to threats and pressures on landscapes and ecosystem services.
- Assess the efficiency and effectiveness of capacity-building programs for the adoption of sustainable land-management practices over time.

More information

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