



Mitchell River, photo Kerry Trapnell.



**Northern Australia  
Environmental  
Resources  
Hub**

National Environmental Science Programme

## Environmental-economic accounting for the Mitchell River catchment

Start-up factsheet

### Environmental-economic accounts track the value of ecosystem assets and services

It's hard to track the impacts of development and conservation investments on interconnected environmental, socio-economic and cultural values. This is especially the case in relatively natural landscapes and in places of important cultural significance, since interlinkages between different values are often complex and unclear, clouding decision-making. Environmental-economic accounts (EEAs) help inform development and conservation investments by tracking the extent and condition of ecosystem assets, the ecosystem services produced by those assets, and the direct benefits delivered to individuals and society over time (Figure 1). These benefits can be valued in economic terms so that EEAs can help reveal the benefit delivered by specific land management activities. Research is needed on EEA approaches that can better account for interconnected ecosystem assets and their condition in ways that reflect regional ecological and socio-cultural contexts.

### EEAs that consider links and context could better inform land use planning and investment

This research will develop an EEA approach that is appropriate for northern Australia. The team will work in Queensland's Mitchell River catchment to develop a

set of EEAs that reflect interconnected assets and the regional socio-cultural context. As well as being useful for informing decisions in the Mitchell River catchment,

### Overview

This project will:

- work with land managers in the Mitchell River catchment to link interconnected environmental assets to ecosystem services and benefits
- develop a set of environmental-economic accounts for the Mitchell River catchment
- identify headline indicators of ecosystem asset condition, ecosystem service flows, service flow value and asset value suitable for tracking management outcomes through time and informing decision-making in the region
- help progress Australia's EEA Strategy and Action Plan
- align with the scope of accounting under both the United Nations System of Environmental Economic Accounting – Central Framework (SEEA-CF) and the System of Environmental-Economic Accounting – Experimental Ecosystem Accounting (SEEA-EEA).

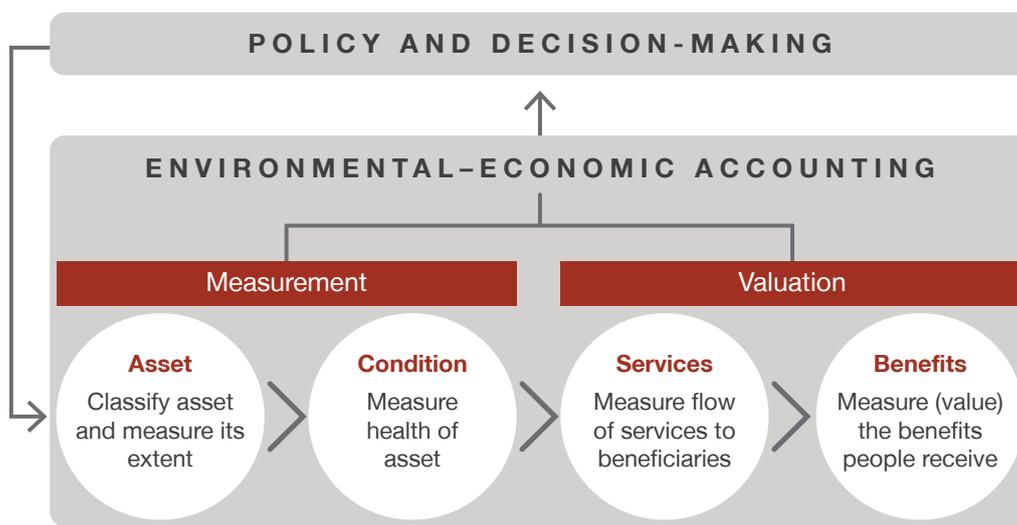


Figure 1. The type and extent of an ecosystem asset and its condition affects the flow of goods and services that the asset provides. Asset condition is affected by historical and current land management. This in turn affects the level of ecosystem services delivered by the asset, in the form of benefits to community, government and businesses. These benefits can be measured by market transactions or non-market valuation techniques to help inform ongoing investments.

(Figure from EEA Strategy and Action Plan 2018)

these accounts will help inform Australia's evolving approach to EEA as one of several pilot accounts being considered through the national EEA Strategy and Action Plan. As part of this broader work, researchers will consider the extent to which a common national approach to EEA can represent the full suite of ecosystem-related values relevant to regional populations.

### Project activities

- Conduct field work with stakeholder groups in the Mitchell catchment to link ecosystem assets to services and benefits, and facilitate community workshops and user consultations to determine existing land and water management in the catchment
- Apply existing SEEA-CF and SEEA-EEA frameworks to identify – subject to data availability – appropriate indicators for measuring ecosystem assets and ecosystem services, and exchange values for these services in the Mitchell River catchment
- Develop physical ecosystem accounts and monetary ecosystem accounts for the Mitchell River catchment (e.g. SEEA-compliant accounts for the extent and condition of ecosystem assets, ecosystem service flows, and the accounting value of those assets and service flows)
- Consider the degree to which SEEA-compliant ecosystem accounts can fully represent the values delivered by ecosystem assets and services in the Mitchell River catchment – which values are well represented in the accounts, and which are not?

- Suggest how EEAs could be improved to better represent values that are currently not well-represented
- Examine the potential for community-driven EEA processes to inform investments in land management.

### Anticipated outputs

- A review of existing environmental accounting frameworks and research in northern Australia
- A set of environmental-economic accounts for the Mitchell River catchment and user guide
- A report to support the national EEA strategy identifying processes, improvements and limitations
- Recommendations for integrating EEA indicators into on-ground management
- Scientific papers, factsheets and datasets.

## Who is involved?

This project is led by [Dr Jim Smart](#) from [Griffith University](#).

Dr Smart will be assisted by researchers from Griffith University and [CSIRO](#) as well as by land managers, rangers and others in the Mitchell catchment.

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For further information and project updates, visit the project webpage at [nespnorthern.edu.au/projects/nesp/environmental-economic-accounting](http://nespnorthern.edu.au/projects/nesp/environmental-economic-accounting)



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