TERN

Panel 1B, 13 September 2018

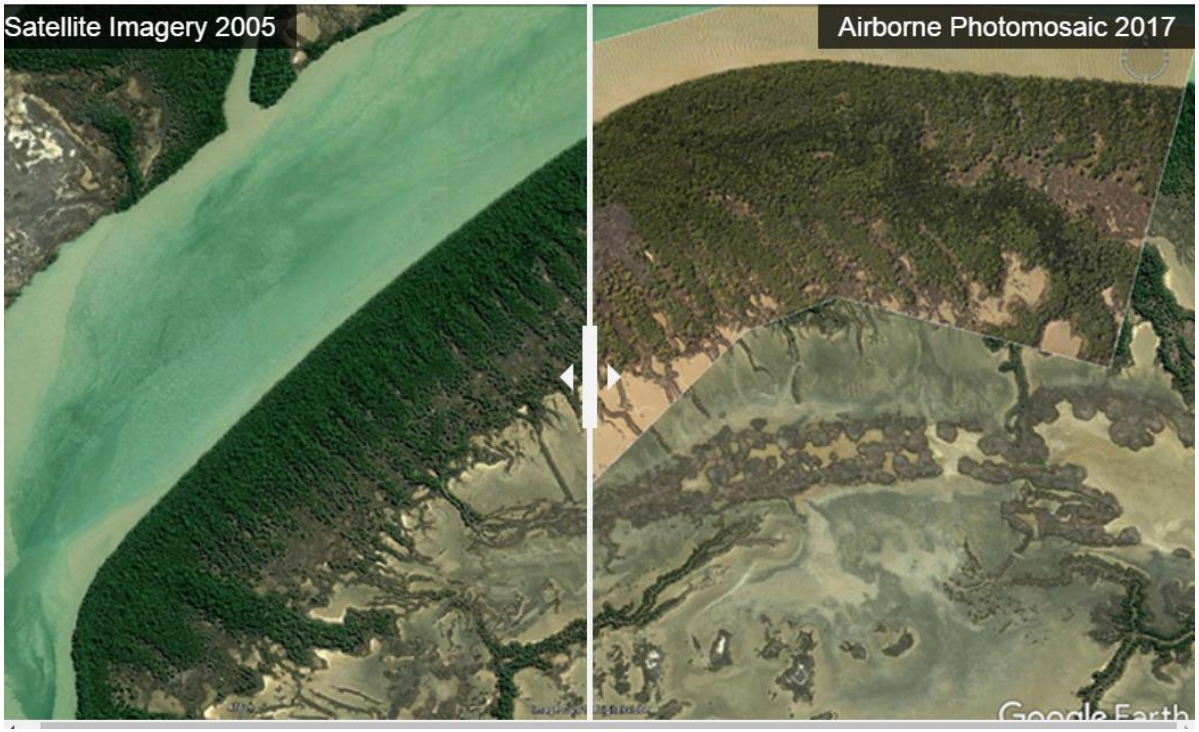
Fostering cooperation and synergies while avoiding unnecessary duplication of facilities

Dr Beryl Morris, TERN Director

ICRI 2018, Vienna

TERN is supported by the Australian Government through the National Collaborative Research Infrastructure Strategy.

Global RI cooperation: biodiversity loss

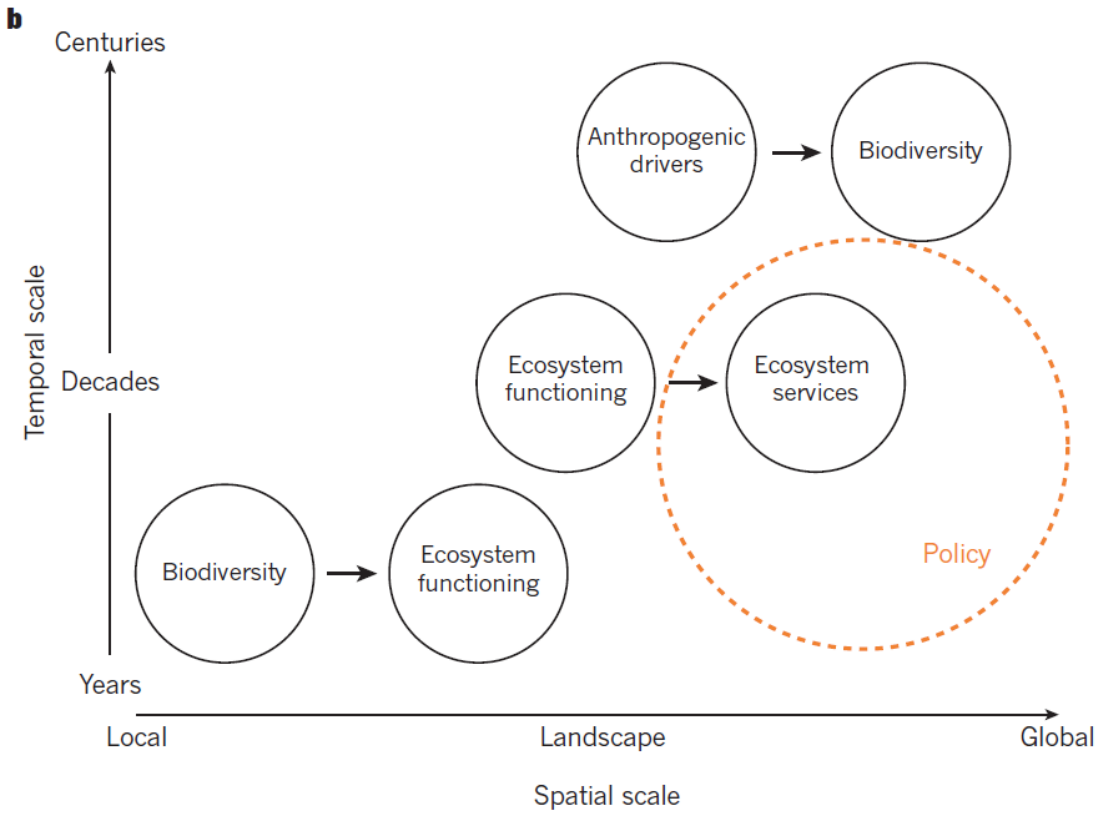


- Biodiversity loss substantially diminishes several ecosystem services by altering ecosystem functioning and stability, especially at the large temporal and spatial scales that are most relevant for policy and conservation.

TERN

Global RI cooperation: biodiversity loss

At the global spatial scale over decades or centuries, the ever-increasing and unprecedented extent and impact of human activities on land and in the oceans is dramatically reducing global biodiversity

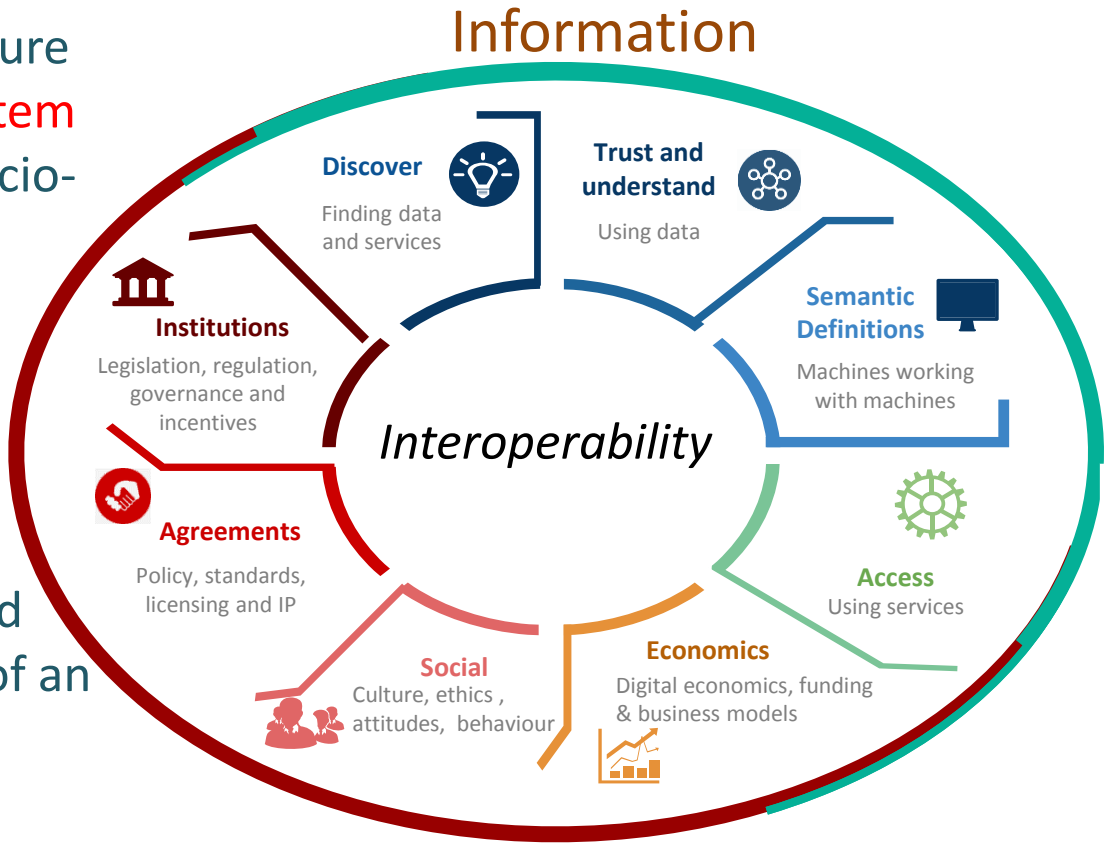


TERN

Fostering cooperation in building global RI

Not all problems have a technological solution "Tragedy of the Commons"

Information infrastructure is a socio-technical System requiring integrated socio-technical design



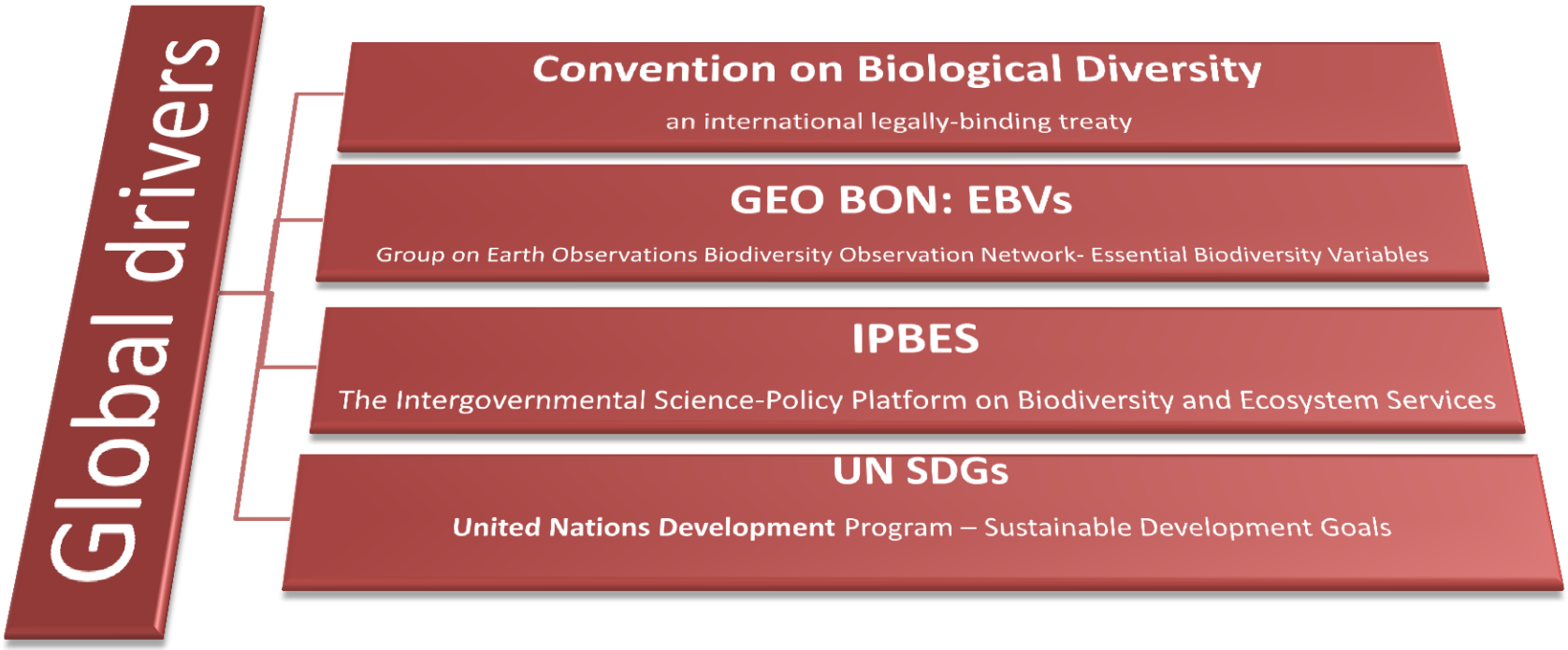
Social systems involved the conscious design of an environment that encourages a desired range of behaviours leading towards some goals

TERN

https://research.csiro.au/oznome/

Global organisations: biodiversity targets and measures

For example…



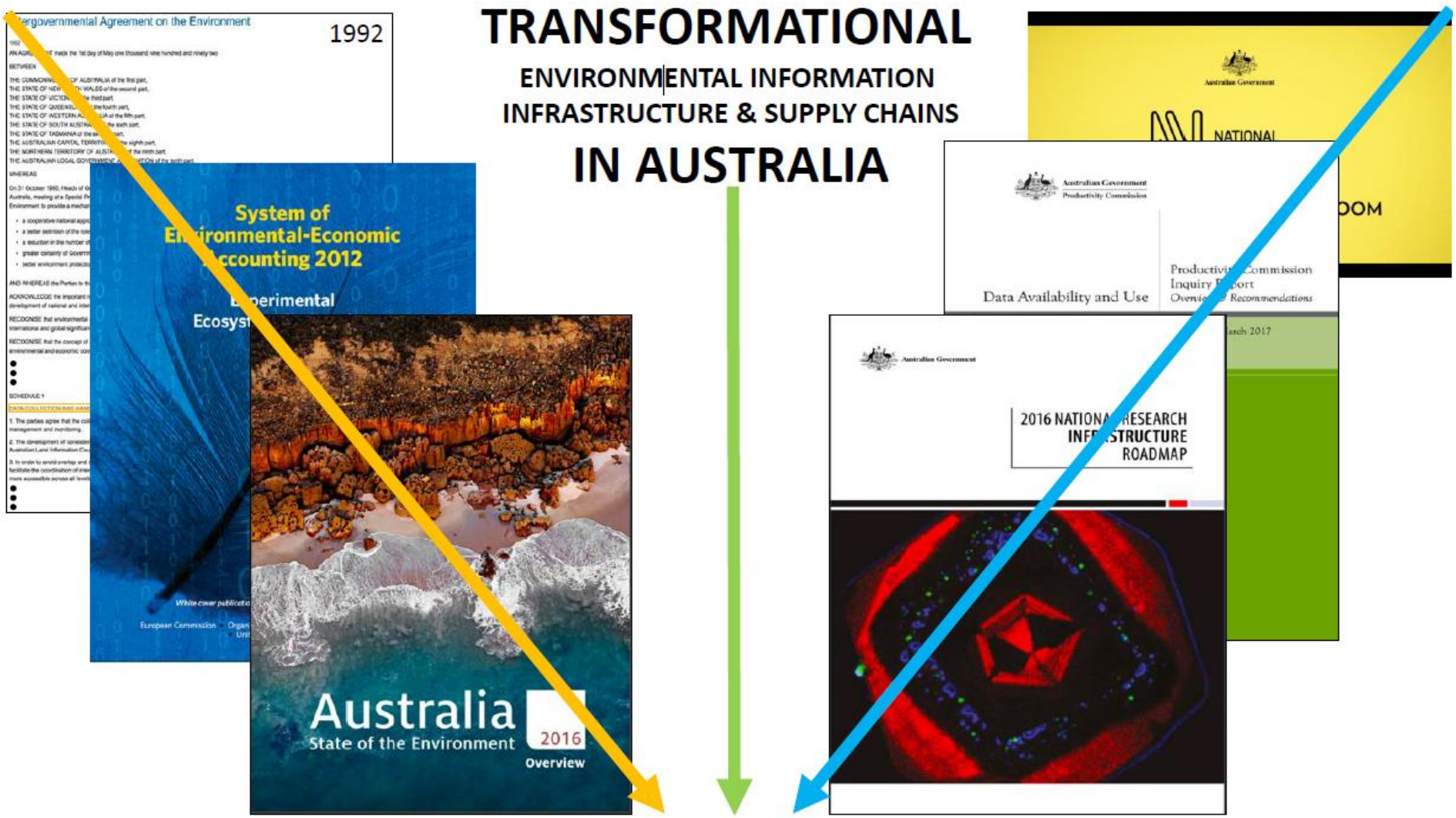
TERN

Social infrastructure: Tanami Indigenous cooperation

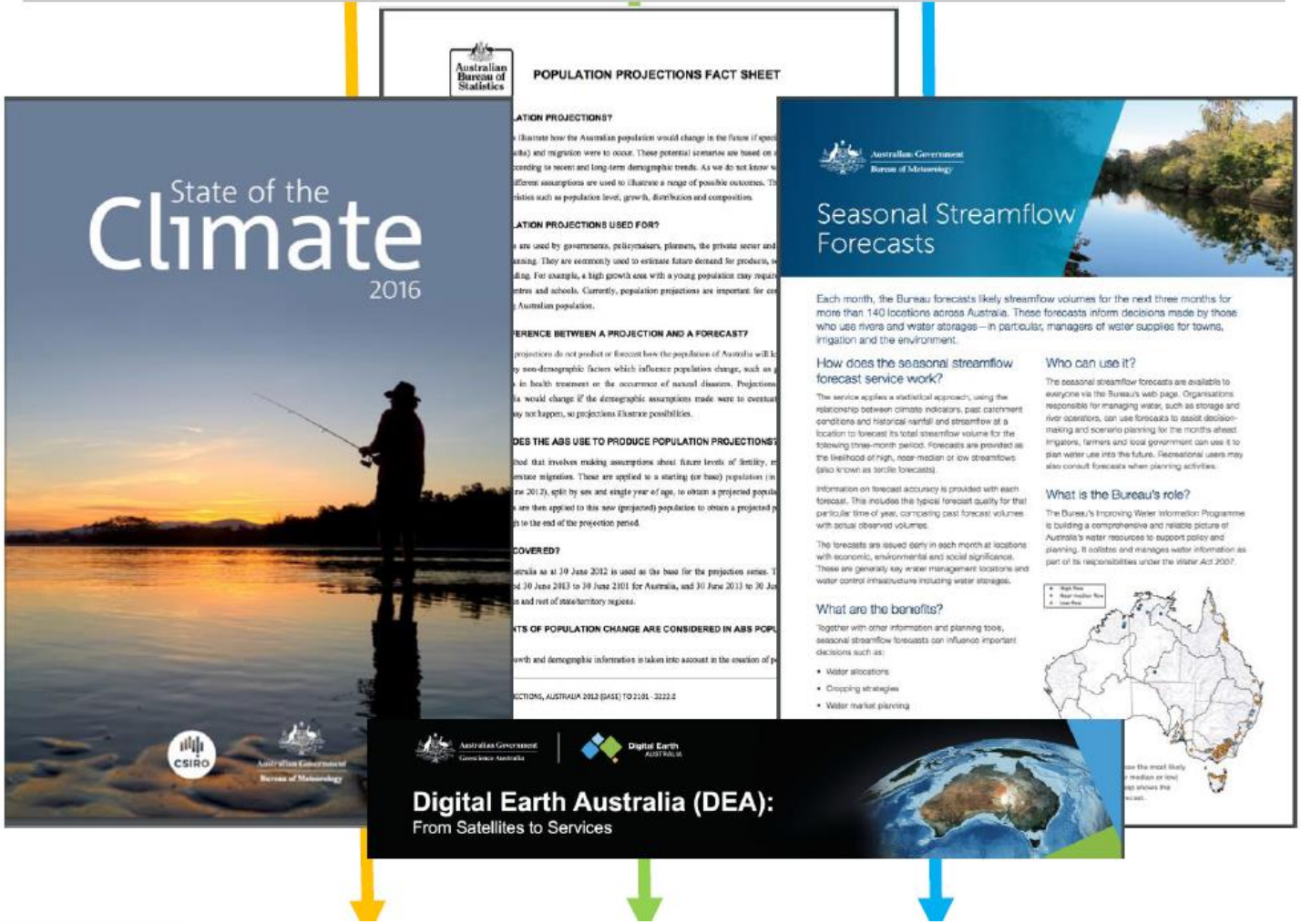
- Data on the biodiversity of more than 10 million hectares of land in central Australia are now openly available to the world via TERN RI.
- Collected by Indigenous rangers and traditional owners in collaboration with the mining industry, land council and environmental consultancy partners with TERN protocols
- The data is being used to assess the spatial and temporal trends in the occurrence of threatened species, and the impacts of mining on the region's flora and fauna

TERN

Timing, capability and circumstances are important for fostering cooperation

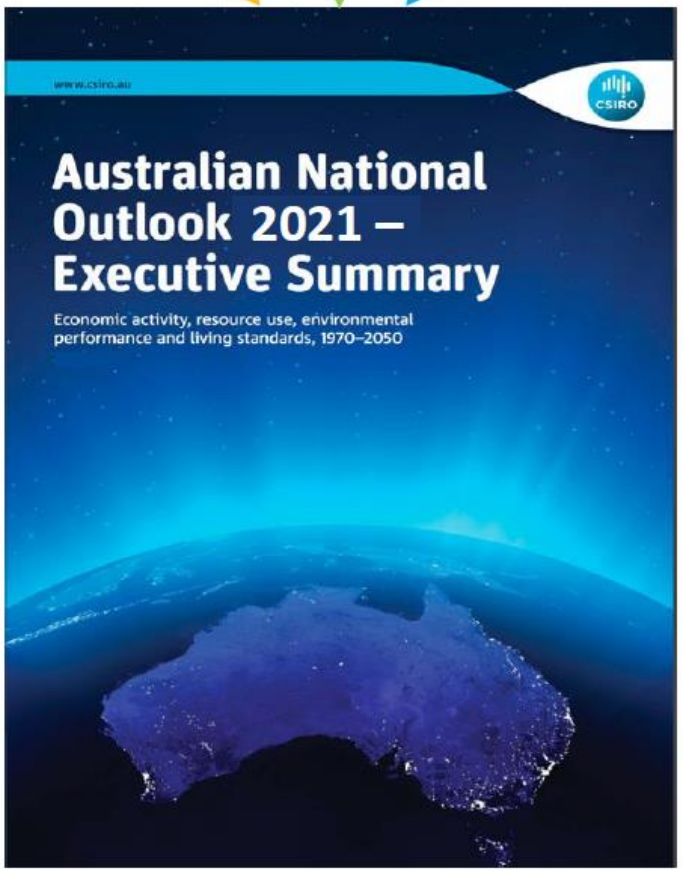


Operational prediction infrastructure



TERN

potential prediction system outcome



Integrated understanding of environmental, economic and societal response to plausible futures

TERN

A national integrated environmental prediction system (NEPS)

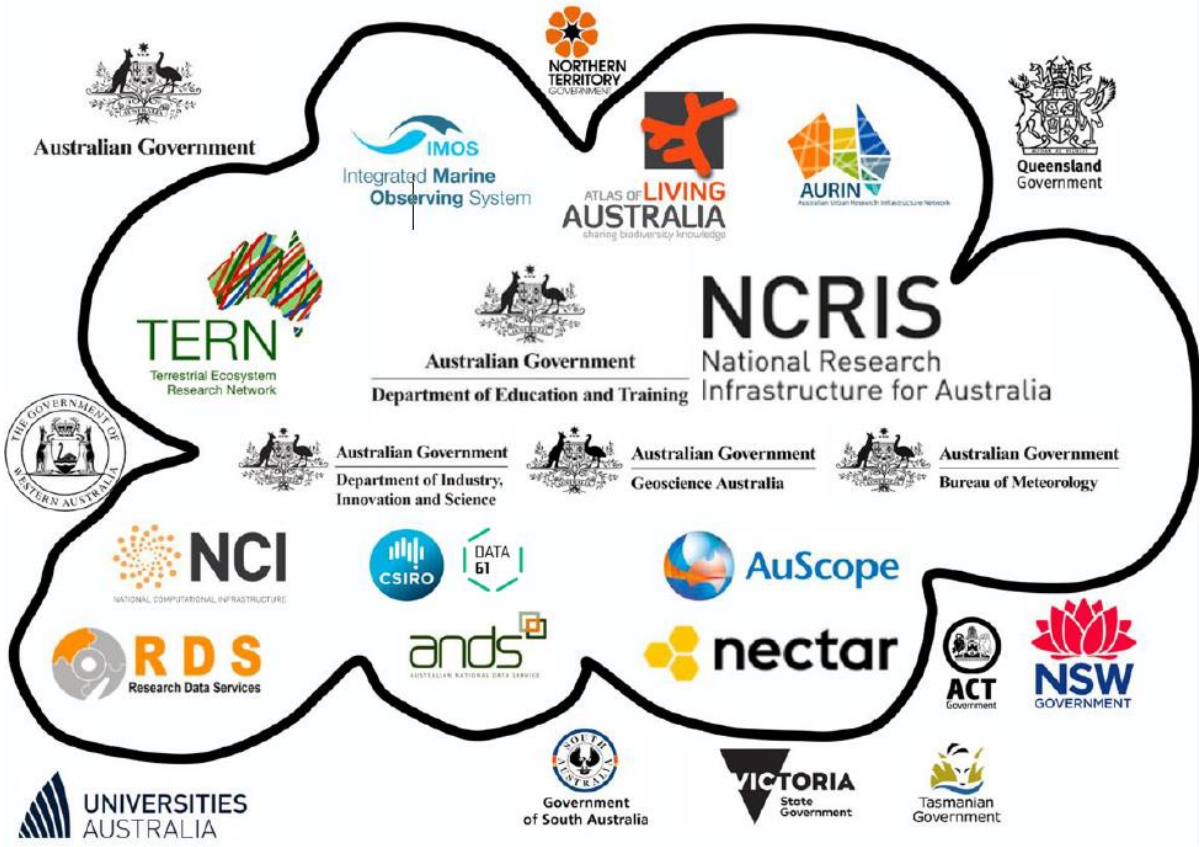
PRINCIPLES

- **ADOPT–ADAPT–(INVENT)**: Construct the NEPS through networking of existing infrastructure, where possible
- **ENHANCE–ACCELERATE**: Invest in the strengthening of existing national research infrastructure elements to enhance their accelerating abilities in inter-operability
- **USER–CENTRED**: Grow the NEPS by prioritising early developments in innovative, valued information products for users
- **COLLABORATIVE**: Prepare for medium-term integration with relevant environmental information systems outside the government's national research infrastructure, such as the ACCESS model and Data Integration Partnerships for Australia
- **INTEGRATED**: Plan for inter-operability with economic and social system models

TERN

Fostering cooperation and synergies while avoiding unnecessary duplication of facilities

NEPS: using what we have through partnerships…



Citizens | Research | Industry | Government

Fostering cooperation

Challenge is to harmonise our existing Networks and to formalise Global Environmental RIs

Aim is to achieve an international, comprehensive, integrated, and sustained Global Environmental observation system that provides the tools and data to help “take the pulse of the planet”

TERN