A First Nations approach to addressing climate change using the CVI process

What is the CVI?

The Climate Vulnerability Index (CVI) was specifically developed to assess the impacts of climate change upon World Heritage areas. To date, the CVI has been applied in a diverse range of areas including natural, cultural and mixed areas, large and small, terrestrial or marine, as well as serial and transnational areas. The CVI differs from other vulnerability assessments as it comprises two distinct stages:

- assessing the **vulnerability of key values** and their capacity for adaptation; and
- assessing the risks to economic, social, and cultural connections with the area (the **community vulnerability**), and the adaptive capacity of these to cope with climate impacts.

CVI

Who are YBM?

The Yuku-Baja-Muliku (YBM) people are the Traditional Owners (First Nation People) of the land and sea country around Archer Point, in Far North Queensland, Australia. YBM Country:

- includes rainforest, woodlands, mangroves, saltpans, beaches, fringing coral reefs, rocky shores, sea grass beds
- encompasses parts of two Australian World Heritage areas – the Wet Tropics Rainforests & the Great Barrier Reef

Working together – a partnership

YBM community members expressed concerns that their indigenous seasonal calendar "is way out of whack!" Examples include the changed timing of flowering plants that are seasonal indicators for other resources; and changes to weather patterns that affect traditional fire management practices.
YBM invited the developers of the CVI to their Country to trial the CVI and to co-develop a process that is Traditional Owner-centric. The aim was to place Indigenous values, risk assessment, and risk mitigation and management within the CVI framework. Establishing initial protocols for the partnership were essential and were undertaken by developing an agreed methodology, context setting and then walking country with YBM Rangers and Elders.

Significant values, processes and cultural protocols initially chosen by YBM for assessment:

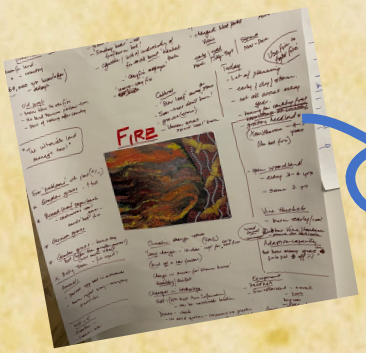
Annan River
crocodile
mangroves
sea turtle
green ants

traditional medicine
traditional hunting
fish (e.g. black bream)
fire management
seasonal foods
women's cultural sites

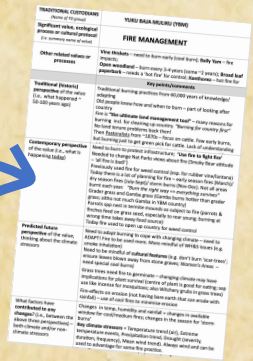
mussels
rain
seagrass
wattle
stingray

Artwork by Zeila Wallace, YBM

Analysis of each value



Workshopped on large sheet of paper



Information sheet summarised in table

Key innovations

- Existing assessment criteria from IUCN were initially considered, but improved wording for these four criteria was developed with YBM, using more meaningful language relevant for an Indigenous context
- These were grouped into **tangible concepts** (e.g. good condition, reliable patterns, unhealthy) and **intangible concepts** (e.g. fully connected to country, loss of expectation, sadness, distraught)
- The recent trend of the values (over the past 50 years) was assessed by the community as either:- improved, deteriorated, stable or unknown (shown by the direction of the arrows in the table below)

Example assessments from among the sixteen values initially chosen by YBM:

Value	Current Condition	Recent Trend
Annan River	Good *(not getting flushed out – sand mining effects)*	↘ *(gone down but recently stabilised)*
Mussels	Concerning *(small numbers, small size, sun damaged; still in deep water)*	↘ *(some spots no longer have them; some still there but deeper; sand mining upstream)*
Mangroves	Very Good	↗
Seagrass	Good	↘ *(damage near wharf recovered; Cyclone Ita damage recovered)*
Fire management	Good	↗ *(better training, equipment, team & proficiency from practice)*

Publications to date

- **A First Nations approach to addressing climate change—Assessing interrelated key values to identify and address adaptive management for country** (Hale, Gerhardt, Day & Heron, 2022), in a special Indigenous-focused issue of *Parks Stewardship Forum* 38(2)
- **Shifting seasons: using Indigenous knowledge and western science to help address climate change impacts,** *The Conversation* (Gerhardt, Day, Hale & Heron, 2022)

Artwork by Irene Doughboy, YBM

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