CASE STUDY:

Ancient Trackways of Mer

Murray Islands, Torres Strait

Traditional Owners: Meriam people (Murray Islands: Mer, Dauar, Waier) of the Eastern Torres Strait.

Significance: For thousands of years, people from the Murray Islands used sacred trackways to travel between important ceremonial sites on the Murray Islands (Mer, Dauar, and Waier), and to connect with mainland Australia and Papua New Guinea. These paths are part of ancient stories and were used in special ceremonies.

Issues/Concerns: Many of the sacred trackways and landmarks are at risk of being lost due to colonisation, fading **cultural knowledge**, and damage from rising seas and coastal erosion.

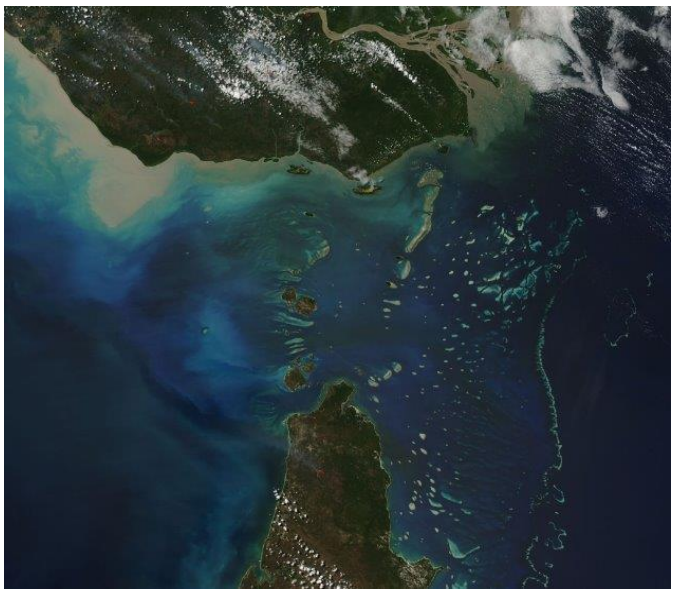
Actions taken: Meriam and Dauareb communities are working with researchers from the Australian Research Council (ARC) and The Australian National University (ANU) to map sacred trackways, uncover ancient artefacts, and record stories and ceremonies that have been passed down for thousands of years. By sharing knowledge and working closely with Elders, the project is helping to keep cultural traditions alive and strong for future generations.

Location

The Murray Island group are located on the Eastern Torres Strait. The main community lives on Mer. The nearby islets of Dauar and Waier (located about 4 km away) are uninhabited; however, they continue to hold strong cultural and spiritual significance and are used for traditional activities like hunting and fishing.

Torres Strait Islands





Torres Strait (MODIS 2018-08-23). Author: MODIS Land Rapid Response Team, NASA GSFC; Source: Wikimedia Commons. Used under licence: Public Domain

A Site of Significance

For centuries, the Meriam and Dauareb peoples of Mer, Dauar, and Waier islands used ancient paths known as Waiet markai or Waiet zogo paths to travel between important **ceremonial sites**. These sacred trackways were both walked on land and paddled by canoe across the sea, connecting the islands to each other and to places like mainland Australia and Papua New Guinea.

Long ago, people across Australia and the Pacific used these kinds of sacred pathways to connect with the land. Many of these routes were lost during **colonisation** and have been damaged due to rising sea levels and **erosion**, but today the Meriam and Dauareb peoples are working to bring this knowledge and tradition back.

The ancient trackways of the Torres Strait are significant because they connect sacred ceremonial sites and carry stories, songs, and traditions passed down through generations. They show thousands of years of cultural and spiritual connection between the islands, mainland Australia, and Papua New Guinea, and are still important to Torres Strait Islander identity today.

CASE STUDY: Ancient Trackways of Mer, Murray Islands, Torres Strait

Waiet and the Sacred Legacy of Waier Island

Waier Island is a small, crescent-shaped island formed from an old volcano. It is known as the home of Waiet (named 'Wayath', 'Uiat' or 'Naga' in Central Torres Strait and Western Torres Strait and 'Waiet' in Eastern Torres Strait), a cultural hero in the Torres Strait who is believed to have lived around 300 years ago.

Stories passed down through generations tell how Waiet travelled between islands, placing special rocks to mark sacred places called *zogo* sites. These places were used for important traditions like dancing, feasting, and initiation ceremonies[1]. In Torres Strait culture, stones are not just objects, they are believed to hold the spirit of powerful **ancestors**[2].

Although we don't know everything about Waiet's **rituals**, similar practices in other islands go back 700–800 years. On the Murray Islands, ceremonies connected to these traditions have been traced back at least 300 years, especially at a site used by the Dauareb people as a burial ground[1].

Threats and Risk

Sacred trackways in the Torres Strait are at risk because of two big threats: the loss of cultural knowledge from colonisation and the damage caused by rising sea levels and climate change. These threats could lead to the disappearance of both the stories and the physical signs of these ancient paths.

When missionaries arrived in the late 1800s, many traditional songs and ceremonies were stopped, and important knowledge about the trackways wasn't passed on[3]. Without people using or caring for them, special landmarks like stones and shrines are being forgotten. Some of the sacred paths, called *Waiet markai*, are still remembered in stories, but they aren't used in the same way anymore[4].

Sea levels in the Torres Strait are rising faster than in many other places in the world[5]. Many sacred sites are close to the shore or just above sea level, and flooding, erosion, and storms are damaging these areas. This not only affects the land, but also the deep spiritual connection between Torres Strait Islander Peoples and Place.

Protection

Efforts to protect the ancient trackways of the Murray Islands are being led by Meriam and Dauareb communities in partnership with researchers. They are not only trying to preserve the physical paths, but also to bring back the stories, ceremonies, and knowledge that make them special.

A project led by the Australian Research Council (ARC), Australian National University (ANU) and Torres Strait Elders is mapping these sacred paths and recording the stories and traditions connected to them. By working closely with Elders, the project makes sure that Indigenous voices lead the research. Excavations on Waier Island have uncovered important items like pottery, charcoal, and bones, showing that these paths were used in ceremonies for over 2,000 years.

Future Considerations

The work to revive the ancient trackways of the Torres Strait is helping to restore cultural knowledge and protect these important sites for future generations. By combining archaeological research with leadership from Meriam and Dauareb communities, the project is building a strong foundation for long-term preservation and recognition of these sacred paths.

The project also supports efforts to protect cultural sites from threats like rising sea levels, erosion, and development. Future plans include expanding cultural mapping, developing community-led education programs, and creating digital and physical archives to share knowledge. Elders and researchers aim to involve more young people, strengthen partnerships with schools and museums, and advocate for formal **heritage protection** and Indigenous leadership in managing these important cultural landscapes.

Glossary

Ancestors - Family members from long ago. In Torres Strait culture, ancestors are respected and have a spiritual connections to the land and sea.

Ancient Trackways - Sacred paths used by Torres Strait Islander Peoples for thousands of years to travel between ceremonial sites and connect with places like Papua New Guinea and mainland Australia.

Ceremonial Site – A special place where important cultural traditions, such as initiation or dancing, take place.

Colonisation – When people from another country take control of the land and try to change or replace culture, beliefs, and traditional of the people who already live there.

Cultural Knowledge – The shared history, beliefs, language, customs, and stories of a group of people, passed down generations.

Erosion – When wind, infrastructure, water, or waves slowly wear away land or rocks. This can damage coastal sites, including sacred places.

Heritage Protection – Laws and actions that help protect important cultural places, stories, and traditions for future generations.

Ritual – A special action or ceremony done in a traditional or scared way, often connected to culture or religion.

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CASE STUDY:

Warddeken Indigenous Protected Area

Northern Territory

Traditional Owners: Nawarddeken people.

Significance: The Warddeken Indigenous Protected Area (IPA) is part of Australia's National Reserve System and plays a critical role in preserving ecological and cultural heritage. It is home to dozens of endemic plants, federally protected ecosystems like the Arnhem Plateau Sandstone Shrubland Complex, and **threatened species** such as the northern quoll, black wallaroo, and Oenpelli python. The area protects the headwaters of major rivers, including the Katherine, South Alligator, and Liverpool rivers. Tens of thousands of cultural and ancestral sites across the IPA reflect continuous Aboriginal connection to the land.

Collaborators: Warddeken Land Management Limited oversees the IPA and is governed by an all-Indigenous board representing the 36 clan groups.

Actions taken:

- Up to 130 Indigenous rangers are employed annually, working on projects such as fire management, weed and feral animal control, rock art conservation, and cultural heritage protection.
- **Traditional fire management** (cool burning) reduces wildfires, protects biodiversity, and generates carbon credits.
- Elders pass on **traditional ecological knowledge** to younger generations.
- Rock art sites are conserved, and cultural education programs are a priority.

Location

The Warddeken Indigenous Protected Area (IPA) covers 1,394,951 hectares of stone and gorge country on the Arnhem Plateau immediately east of Kakadu National Park.

Northern Territory





Nourlangie Rock from Nawurlandja Lookout. Location: Northern Territory. Photographer: Ahmad Zulfa. Source: Wikimedia Commons. Used under licence: CC BY-SA 4.0.

A Site of Significance

Warddeken Indigenous Protected Area is a sanctuary for **biodiversity**, home to dozens of endemic plant species and numerous threatened animals, including the bustard, northern quoll, black wallaroo, Arnhem Land rock-rat, and the Oenpelli python Warddeken Land Management (2025). Additionally, it protects the federally listed Arnhem Plateau Sandstone Shrubland Complex and serves as the headwaters for major river systems, including the Katherine, East Alligator, South Alligator, Goomadeer, Mann, Liverpool, and Cadell rivers, making it critical for regional water health Warddeken Land Management (2025).

Beyond its ecological importance, the Warddeken IPA is an unparalleled cultural landscape, with tens of thousands of rock art and occupation sites that provide evidence of Aboriginal habitation stretching back tens of thousands of years. These ancient rock paintings depict creation stories, daily life, and even early encounters with European settlers.

Indigenous Protected Areas

Indigenous Protected Areas (IPAs) are areas of land and sea managed by First Nations groups to protect and conserve biodiversity and cultural values, in line with Traditional Owner objectives (Smith et al., 2024).
The Warddeken IPA was declared in September 2009 (National Indigenous Australians Agency, 2025).

Ngarrngga
to know, to hear, to understand

CASE STUDY: Warddeken Indigenous Protected Area, Northern Territory.

Management

The land belongs to Nawarddeken, who are traditional owners from at least 30 clan groups of the Bininj Kunwok language group (National Indigenous Australians Agency, 2025). Traditional owners of the Warddeken IPA established Warddeken Land Management Ltd. in 2007. As an Aboriginal-owned, not-for-profit organization, it integrates traditional ecological knowledge with western science to safeguard one of Australia's most ecologically and culturally significant landscapes.

Operating from ranger bases in the remote communities of Kabulwarnamyo, Mamardawerre, and Manmoyi in western Arnhem Land, the organization employs around 150 Indigenous rangers annually on a casual basis. These rangers lead a range of initiatives, including fire management and **carbon abatement**, weed and feral animal control, rock art conservation, education, and cultural heritage management, ensuring the continued protection of both the environment and cultural traditions.

Further information around areas of management can be found below:

- **Fire Management (Manwurrk)**

Warddeken Land Management helps reduce wildfires and cut greenhouse gas emissions by using a mix of traditional and modern fire practices. Through the West Arnhem Land Fire Abatement (WALFA) project, they work with businesses and the government to offset 100,000 tonnes of emissions each year, with profits going back into Indigenous ranger programs. Led by Traditional Owners, over 50 rangers carry out controlled burns to protect the land and share cultural fire knowledge.

- **Animals and Diversity Management (Mayh)**

The Warddeken IPA covers most of the West Arnhem Plateau, which is home to many unique plants, animals, and ecosystems, including threatened species such as the black wallaroo (pictured).

Rangers combine traditional knowledge with modern science to protect wildlife, including the endangered Arnhem Plateau Sandstone Shrublands Complex, which they manage through strategic fire practices. Long-term monitoring projects, including a large-scale mammal survey in 2017, help track biodiversity and guide conservation efforts in this ecologically and culturally significant region.

- **Rock Art Documentation and Conservation**

The Warddeken IPA contains some of Australia's most valuable rock art. To protect these sites, rangers survey and document them, often traveling by foot or helicopter, and install exclusion fences to prevent damage from feral animals like buffalo and pigs.



Black Wallaroo Location: Nourlangie Rock. Photographer: Michael Wifall. Source: Wikimedia Commons. Used under licence: Public Domain.

Benefits of the Warddeken IPA

There are several significant social, economic, cultural, and environmental benefits generated by the Warddeken IPA for Nawarddeken Rangers, community members, government, and other stakeholders (National Indigenous Australians Agency, 2025).

The positive outcomes are largely driven by the time spent living and working on country and the remoteness of the IPA. For Rangers, key benefits include enhanced land stewardship, increased pride, and a stronger sense of identity. Community members benefit from having Rangers and their families on country and the revitalization of cultural burning practices.

Glossary

Biodiversity – is the variety of all living things in an area, including plants, animals, and microorganisms, which helps ecosystems stay healthy and balanced.

Carbon abatement – are any actions that are taken to reduce the amount of carbon dioxide (CO_2) released into the air to help slow down climate change.

Traditional fire management – is the careful use of fire by Indigenous Australians to manage the land, reduce bushfire risks, and help plants and animals thrive.

Threatened species – are animals or plants that are at risk of becoming endangered or extinct due to things like habitat loss, climate change, or human activity.

Traditional ecological knowledge - The deep understanding of nature, passed down by Indigenous Australians over thousands of years, used to care for the land and environment.

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CASE STUDY:

Tidbinbilla Nature Reserve
Australian Capital Territory



Tidbinbilla Nature Reserve. Location: Australian Capital Territory (ACT). Photographer: Natalie Maguire. Source: Wikimedia Commons. Used under licence: CC BY 2.0.

Traditional Owners: Ngunnawal people.

Site Features
Ngunnawal people have a deep connection to the many features of the land, including mountains, waterholes, rivers, caves, rock formations, flora and fauna, as well as wind and air.

For the Ngunnawal people, history is within the landscape through oral traditions, storytelling, dance, memory, ceremony, and rock art sites. For example, in the heart of the Tidbinbilla Valley, a rock formation appears as a perched eagle (*Maliyan*), the creator spirit of the Tidbinbilla Dreaming story [1].

Tidbinbilla was a key place for Ngunnawal ceremonies, with groups from nearby areas entering through Gibraltar Peak, where an elder would light a fire to guide people into the valley. Rock formations within Tidbinbilla are sacred cultural places for either Men or Women's business.

There are places in Tidbinbilla where you can see signs of Ngunnawal history, like trees with bark taken off to make things, stone tools, and areas used for ceremonies. Grinding grooves can still be seen along the river's edge. These are oval-shaped indentations in sandstone used to give stone axe heads a sharp cutting edge[2].

Location
Tidbinbilla Nature Reserve is located approximately 40km southwest of Canberra, in the Australian Capital Territory (A.C.T.)

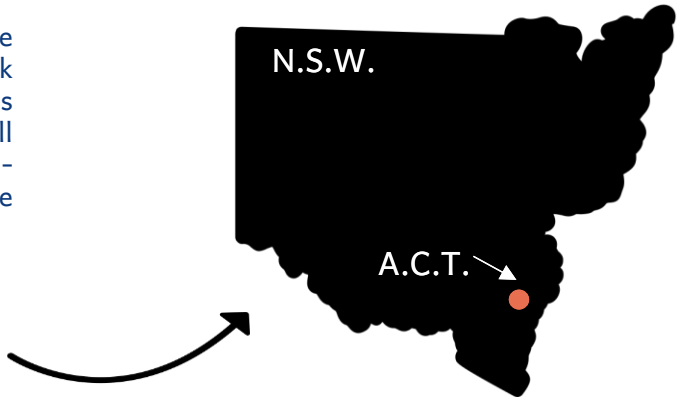
Issues/ Concerns
- Visitors accidentally damaging cultural sites, including rock formations, grinding grooves and scarred trees.
- Environmental changes like wildfires, droughts or invasive species could also affect natural features including rivers, plants and animals.
- Preserving cultural knowledge is also a priority.

Management
Tidbinbilla Nature Reserve is cared for by different groups working together, including:
- Aboriginal Natural Resource Management (Aboriginal NRM)
- Ngunnawal Traditional Custodians
- ACT Heritage
- ACT Parks and Conservation Service (ACT PCS)

They help protect the land and its cultural sites by sharing their knowledge and using traditional practices, like looking after fire and waterways3.

Actions Taken
- Cultural tours, led by Ngunnawal guides, educate visitors about the area's significance and history.
- Ecological and cultural restoration programs focus on restoring habitats for native species, while protecting cultural heritage sites.
- Local schools and Ngunnawal youth are actively involved in learning about and caring for the reserve

Conservation
Tidbinbilla Nature Reserve combines traditional knowledge with conservation efforts, teaching visitors about Aboriginal culture while helping protect animals like the Southern Brush-tailed Rock-wallaby and Northern Corroboree Frog4.



Ngarrngga
to know, to hear, to understand

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CASE STUDY:

Mutawintji National Park

New South Wales

Traditional Owners: The Mutawintji area has deep ties to the Malyangapa, Pantjikali, Wanyuparlku, and Wilyakali peoples, with influences from Wiimpatja and Yarli languages.

Significance: Mutawintji is renowned for its sacred rock art galleries, ceremonial spaces, and ancient stone arrangements. These elements reflect thousands of years of continuous cultural practices. The site holds significant spiritual and ceremonial importance and serves as a testament to the traditions of the region's Indigenous peoples.

Collaborators: The Mutawintji Local Aboriginal Land Council, NSW National Parks and Wildlife Service, and the Mutawintji Board of Management, which is composed primarily of Aboriginal owners, work together to ensure the park's preservation and accessibility.

Actions taken:

- Mutawintji National Park is jointly managed under an agreement that prioritises traditional owner input in all decisions. The Mutawintji Board of Management oversees annual work programs.
- The park offers heritage tours led by traditional custodians, providing visitors with a deeper understanding of the site's cultural significance.
- Restoration projects include the Yellow-Footed Rock-Wallaby recovery plan and protection of ancient rock art from environmental and human threats.

Location

Mutawintji National Park is located in the semi-arid lands near Broken Hill, New South Wales





Mutawintji National Park. Location: New South Wales. Photographer: Doug Beckers. Source: Wikimedia Commons. Used under licence: CC BY 2.0.

A Site of Significance

Mutawintji is highly important in relation to ongoing themes of Aboriginal culture – land, spiritual, kinship, economic, communication, historical, environmental and survival (Mutawintji Cultural Heritage Tours, 2025). It is one of the most significant sacred places in the far west of New South Wales. Communities have performed **initiations**, rainmaking and other ceremonies here in gatherings of up to 1000 people (NSW National Parks and Wildlife Service, 2025). Ceremonial connections are often based on the creation of the landscape; creators travelled and left behind waterholes, creeks, rivers, hills and other features (Mutawintji Cultural Heritage Tours, 2025). The Aboriginal history and cultural values of Mutawintji National Park, Mutawintji Historic Site and Mutawintji Nature Reserve are significant. It is home to renowned art sites and many other important cultural sites.

Management

In 1998, ownership of Mutawintji National Park, Mutawintji Historic Site and Mutawintji Nature Reserve was transferred to the Mutawintji Aboriginal Land Council to be held on behalf of the Aboriginal owners. The land was then leased back to NSW National Parks. NSW National Parks and the Mutawintji Board of Management are working together to ensure Mutawintji National Park is managed in a way that prioritises traditional owner input in all decisions.

CASE STUDY Mutawintji National Park, New South Wales

Conservation Initiatives

Restoration projects in Mutawintji National Park include the Yellow-Footed Rock-Wallaby recovery plan and protection of ancient rock art from environmental and human threats. To preserve the cultural and natural values of the park, access to some areas is restricted, and visitors are encouraged to take guided tours led by local Aboriginal guides who provide valuable cultural insights. These tours offer a deeper understanding of the significance of the land and the traditions of the Mutawintji people.

Yellow-Footed Rock-Wallaby Recovery Plan

The Mutawintji National Park Board of Management is working on a relocation project to translocate a population of South Australian Yellow-Footed Rock Wallabies to the national park to breed with the existing Mutawintji Yellow-Footed Rock Wallabies (Jensen, 2024). This approach increases **genetic variation** and strengthens the species' long-term survival. Yellow-footed Rock Wallabies contribute to the ecological balance of the park as they play a role in seed dispersal and vegetation management.

Other conservation strategies involve feral predator control, habitat restoration, and continuous monitoring to assess population health. Fencing and baiting programs mitigate threats from **invasive species** like foxes and feral goats, which compete for resources and degrade the wallabies' rocky habitats (Sharp et. al. 2015)

Community engagement is integral to the success of the recovery plan. The collaboration between Indigenous rangers, local **conservation groups**, and government agencies ensures that the project aligns with traditional land management practices and supports cultural heritage conservation.



Petrogale xanthopus (Yellow-Footed Rock Wallaby). Photographer: Peripitus. Source: Wikimedia Commons. Used under licence: CC BY-SA 3.0.

Mutawintji Future Plans

Future plans for Mutawintji are centred on enhancing cultural preservation, environmental conservation, and community engagement (Dragovich & Farshad, 2023). A significant focus is on fostering youth involvement through educational programs and mentorship initiatives, enabling younger generations to connect with and uphold the traditions of the Traditional Owners. This approach is in line with the Mutawintji Plan of Management, which emphasizes the importance of the area for Aboriginal people to connect with their country (National Parks and Wildlife Service, 2025).

Expanding **cultural tourism** is another key objective (New South Wales National Parks and Wildlife Service, 2025). Efforts include developing immersive cultural experiences and guided tours that showcase the region's rich history and rock art. The Mutawintji Board of Management has been proactive in upgrading infrastructure, constructing viewing platforms to protect art sites, and providing cultural tours to enhance visitor engagement.

Glossary

Conservation groups - are organisations or people working together to protect nature, wildlife, and the environment.

Cultural tourism - involves travelling to experience and learn about different cultures, traditions, and ways of life, such as visiting Indigenous communities or historical sites.

Genetic variation - is the small differences in the DNA of plants, animals, and people that make each individual unique and help species survive in different environments.

Initiations - are special ceremonies or traditions that mark an important stage in a person's life, often practiced in Indigenous cultures.

Invasive species - are animals or plants that are brought to a new place where they do not naturally belong and cause harm to the environment, native species, or ecosystems.

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CASE STUDY:

Murujuga (Burrup Peninsula)

Western Australia

Traditional Owners: The Ngarluma, Yindjibarndi, Yaburara, Mardudhunera and the Woon-goo-tt-oo peoples, the collective term "Ngarda-Ngarli" people is sometimes used.

Significance: This site is sacred to Aboriginal peoples to and is home to one of the largest collections of ancient rock art in the world, some of which dates back over 40,000 years.

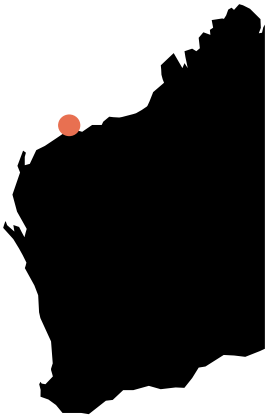
Issues/Concerns: Industrial development, including gas and mining projects, has led to the destruction or degradation of some rock art and the landscape. Emissions from industry are also believed to be causing erosion and discoloration of the engravings.

Collaborators: The Murujuga Rangers, established in 2012 by the Murujuga Aboriginal Corporation (made up of members from five traditional owner groups) co-manage Murujuga National Park and the surrounding National Heritage-listed areas in partnership with the Department of **Biodiversity**, Conservation, and Attractions.

Actions taken: The Murujuga Aboriginal Corporation (MAC) works to protect land, heritage, and culture through initiatives like the Rock Art Monitoring Program, Murujuga Rangers, and Cultural Tourism Program. They also promote sustainable development with projects like the Edible Oyster Project, balancing cultural preservation with economic opportunities for future generations.

Location

Murujuga, also known as the Burrup Peninsula, is in the Pilbara region of Western Australia, near the town of Dampier and the city of Karratha. It sits on the northwest coast, extending into the Indian Ocean





Pilbara Kangaroo. Location: Murujuga (Burrup Peninsula), Western Australia Photographer: Marius Fenger. Source: Wikimedia Commons. Used under licence: Public Domain.

A Site of Significance

This site is sacred to Aboriginal peoples and is home to one of the largest collections of ancient rock art in the world, some of which dates back over 40,000 years. These artifacts are 10 times older than the pyramids of Egypt. Carved into rocks are images of changing landscapes, tribal customs, and now-extinct species such as the Tasmanian tiger and fat-tailed kangaroo.

Ngarda-Ngarli stories describe how Murujuga's rock art was shaped by the Marrga ancestral creator beings. These spirits helped to shape the natural world. Cut into Murujuga's rocks are Dreaming stories thousands of years old that remain deeply relevant to Aboriginal people, says Marduthenera people custodian Raelene Cooper: "The rock art tells the stories of evolution and are a biblical archive of our sacred ancient history. They carry and hold a deep connection to Mother Earth." [1].

As well as being works of art, these carvings provide remarkable scientific insights. "Murujuga has some of the oldest known images of the human face and a series of extinct animals," Benjamin Smith, Professor of World Rock Art at University of Western Australia says. "The changing fauna within the art shows massive climatic and environmental changes over time. The site was once more than 60 miles inland. Now it is a peninsula surrounded by sea."[1].

CASE STUDY: Tidbinbilla Nature Reserve Area, Australian Capital Territory

Damage to Murujuga

The Burrup Peninsula is home to Australia's largest **fossil fuel project**. Pollution generated by huge and expanding industrial complexes threaten the ancient site[1]. Marduthenera custodian Raelene Cooper shares that toxic emissions from the Scarborough gas field development would damage Murujuga: "We can physically see the destructive consequences from chemical pollution and greenhouse emissions [from existing projects]" [1].
Professor Ben Mullins' work involves determining whether there is anything humans are doing that is causing the rock art to degrade or have accelerated weathering. "The dominant theory up until now has been an acid rain kind of hypothesis — that you have these chemicals that are released that can form acids and they can then accelerate the weathering" he says[2]. Many people believe that gases from industry such as **nitrogen dioxide, sulphur dioxide and ammonia** are impacting rock art, Professor Mullins says the latest research project aims to provide a "definitive answer"[2].

Murujuga Aboriginal Corporation

Murujuga Aboriginal Corporation (MAC) is made up of members from five traditional owner groups: the Ngarluma, Mardudhunera, Yaburara, Yindjibarndi, and Wong-Goo-Tt-Oo peoples. MAC's mission is to preserve and protect the land, heritage and culture while bringing together the five groups to pave the way for future generations and work together for country, while respecting lore, heritage and traditions[3]. MAC leads the following projects:

Rock Art Monitoring Program (MRAMP)
Described as the largest and most comprehensive rock art monitoring program ever implemented in the world, the research will be used to set new emissions standards[3]. Yingibarndi man Glen Aubrey, a local ranger being trained in rock art monitoring as part of the Murujuga Rock Art Monitoring Program (MRAMP), wants to know what impact major gas and fertiliser plants are having on ancient rock art: "I don't want to see any rock art getting destroyed through emissions or anything like that. I'd just like to protect it."[2].

Murujuga Rangers
The Murujuga Rangers, established in 2012, co-manage Murujuga National Park and the surrounding National Heritage-listed areas in partnership with the Department of Biodiversity, Conservation, and Attractions. Ngarda-Ngarli custodians conduct regular patrols, utilize advanced data collection tools, and uphold cultural protocols to preserve the region's natural ecosystems and cultural heritage. Their responsibilities also encompass visitor education, enforcement of national park regulations, and pest and weed management to protect Murujuga's biodiversity[3].

Cultural Tourism
The Murujuga Tourism Program aims to develop a Tourism Precinct at Conzinc Bay, featuring the Murujuga Living Knowledge Centre. This initiative seeks to protect and promote the cultural and natural values of the Murujuga area.

Edible Oyster Project
The Edible Oyster Project, led by the Murujuga Aboriginal Corporation (MAC) in collaboration with the Pilbara Development Commission and Maxima Pearling Company, aims to establish a sustainable rock oyster industry in the Pilbara region. In 2015, over 120,000 juvenile oysters were introduced to assess optimal growth conditions[3]. This initiative not only seeks to boost local **aquaculture** but also offers employment and training opportunities for Ngarda-Ngarli custodians, while enhancing regional tourism [3].

Future Considerations

In July 2025, Murujuga was formally inscribed on the UNESCO **World Heritage** List as the "Murujuga Cultural Landscape," recognising it as one of the world's most significant continuous records of human cultural expression, with petroglyphs dating back more than 40,000 years. The listing brings strengthened international expectations for the protection of cultural and environmental values, requiring future development, tourism, and industrial activity to align with the site's Outstanding Universal Value. While the inscription marks a historic achievement for Ngarda-Ngarli custodians, concerns remain about the impact of surrounding industrial emissions, making long-term cultural monitoring programs, Traditional Owner–led management, and stronger heritage protections essential to ensuring the rock art endures for future generations[4].

Glossary

Aquaculture — The farming of aquatic organisms like fish, shellfish, and oysters.

Biodiversity — The variety of living things, including plants, animals, and microorganisms, in an environment.

Fossil fuel project — Large industrial sites that extract and process oil, gas, or coal for energy.

Nitrogen dioxide, sulfur dioxide, ammonia — Pollutant gases that can harm the environment and human health.

World Heritage listing — A recognition by UNESCO for sites of outstanding cultural or natural importance.

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CASE STUDY:

Ikara-Flinders Ranges National Park

South Australia

Traditional Owners: Adnyamathanha people

Significance: Ikara (Wilpena Pound) is a sacred site with significant Dreaming stories tied to its unique rock formations. It also holds **archaeological evidence** of continuous Aboriginal occupation for tens of thousands of years. The area is of ecological importance, home to unique **flora and fauna** and listed on Australia's **National Heritage Register**.

Collaborators: Adnyamathanha Traditional Lands Association (ATLA) collaborates with the South Australian Department for Environment and Water. The region is co-managed by the Adnyamathanha people and the state government under a formal joint management agreement.

Actions taken:

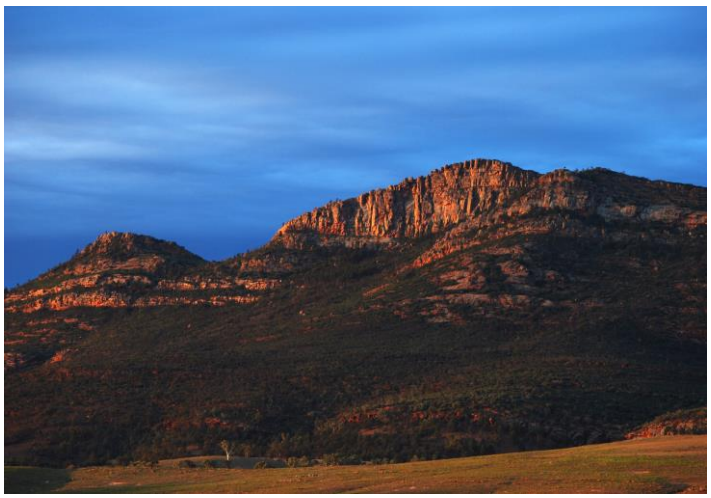
- The Adnyamathanha people and the South Australian government co-manage the park, ensuring traditional ecological knowledge is integrated into **conservation** efforts.
- Visitor experiences include Adnyamathanha-guided tours to share stories of the land, educating visitors on the site's cultural and spiritual significance.
- Environmental and cultural protection Programs focus on protecting ancient art sites, sacred locations, and restoring native species while ensuring sustainable tourism practices.
- Youth Engagement programs pass on cultural knowledge

Location

Ikara-Flinders Ranges National Park is part of the traditional Yarta (lands) of the Adnyamathanha people. It is located in South Australia, approximately 450 kilometres north of Adelaide.

South Australia





Wilpena Pound – moody sunset.jpg. Photographer: Peripitus Licence: CC BY 3.0, via Wikimedia Commons

A Site of Significance

The park's landscape is rich with sacred sites, ancient rock art, ochre paintings and engravings that document Adnyamathanha history, lore, and the creation of unique geological formations.

Ikara (Wilpena Pound)

The name "Ikara," means "meeting place" in the language of the Adnyamathanha people, referring to Wilpena Pound, a natural **amphitheatre** central to the Adnyamathanha people's creation stories and a traditional site for cultural ceremonies and initiations.

Akurra Adnya (Arkaroo Rock)

Akurra Adnya is located off the main Wilpena Road Akurra Adnya (Arkaroo Rock) is a significant Adnyamathanha painting site that depicts aspects of the Yura Muda (stories) for Ikara/Wilpena Pound[5]. According to the Yura Muda, powerful Creation serpents known as Akurra created many features of the Ikara-Flinders Ranges landscape. The bodies of two Akurra form the walls of Ikara-Wilpena Pound. Akurra Adnya (Arkaroo Rock) is a significant cultural site for the Adnyamathanha people of the Flinders Ranges [1].

Yura Mulka (Sacred Canyon – restricted access)

Yura Mulka (Sacred Canyon) is a small chasm where ancient Aboriginal rock engravings representing animal tracks, people, waterholes and other symbols are found on sandstone walls [1].

Ngarrngga
to know, to hear, to understand

CASE STUDY: Ikara-Flinders Ranges National Park, South Australia

Management

"Our land cannot survive without its people; and the people cannot survive without the land. Co-management recognises the connection between Aboriginal people and country."

Glenise Coulthard
Ikara-Flinders National Park board member[2].

Ikara-Flinders Ranges National Park is co-managed through a partnership between the Adnyamathanha people and the South Australian Government. The Ikara-Flinders Ranges National Park Co-management Board, established under a 2011 agreement, comprises representatives from both the Adnyamathanha community and the Department for Environment and Water[3]. This board is responsible for setting strategic directions, protecting cultural heritage, promoting Adnyamathanha culture, and managing public access to the park. Additionally, the Adnyamathanha Traditional Lands Association (ATLA) owns and operates the Wilpena Pound Resort within the park, providing employment opportunities for Adnyamathanha people and enhancing visitor engagement with their culture[4]. The co-management agreement requires that preference be given to Adnyamathanha people to work in the park and currently over half of the park employees are Adnyamathanha people.



Petrogale xanthopus (Yellow-Footed Rock Wallaby) - Monarto 1.jpg Photographer: Peripitus. Licence: CC BY-SA 3.0 via Wikimedia Commons.

Conservation

Bounceback is a conservation program run by National Parks and Wildlife Service SA. The decline of the yellow-footed rock-wallaby in South Australia led to efforts to protect its populations in Ikara-Flinders Ranges National Park during the early 1990s[5]. The Bounceback program introduced science-backed **integrated pest management** to better understand and address threats to the species.

What started as a program focused on protecting a threatened species gradually grew into a large-scale landscape conservation initiative. With increased resources, investment, and a broader vision, Bounceback expanded beyond park boundaries into the Flinders, Gawler, and Olary ranges, working in collaboration with landholders, the SA Arid Lands and Northern and Yorke natural resources management boards, conservation organizations, and volunteer groups[5].

Glossary

Amphitheatre — A large, circular or oval outdoor space, often surrounded by hills or rocks, like Wilpena Pound.

Archaeological evidence — Physical remains (like tools, bones, or rock art) that show how people lived in the past.

Conservation — The protection and preservation of nature and wildlife.

Flora and fauna — Plants (flora) and animals (fauna) that live in a particular area.

Integrated pest management — Using different methods (like controlling invasive species) to protect native plants and animals.

National Heritage Register — A list of places in Australia that have special cultural, historical, or environmental significance.

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CASE STUDY:

Gariwerd

(Grampians National Park), Victoria

Traditional Owners: Djab Wurrung and Jardwardjali peoples.

Significance: Gariwerd contains rock art sites dating back more than 20,000 years of cultural importance to the Djab Wurrung and Jardwadjali peoples. The area holds dreaming stories, ceremonial sites and sacred landscapes central to the identity of the traditional owners.

Issues/ Concerns: Popular rock art shelters, such as Bunjil's Shelter, have faced damage from graffiti, littering, and vandalism. Physical wear on the sites has also been caused by visitors touching or stepping on fragile rock.

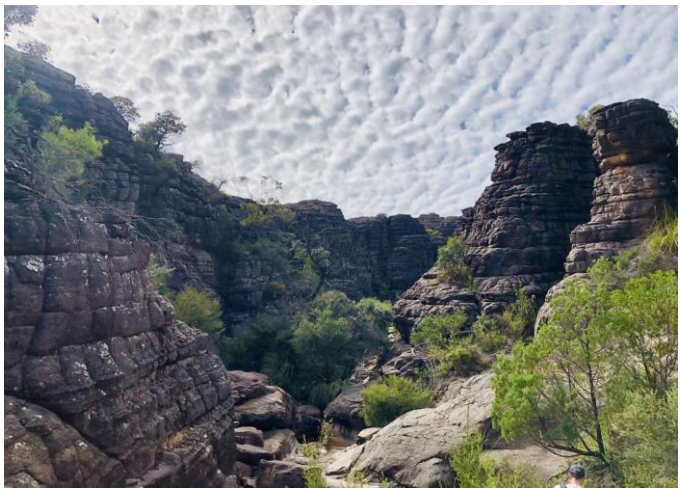
Action taken: Some protections have been implemented; however, ongoing tourism pressures continue to threaten the preservation of these sites.

Gariwerd

Known as Gariwerd in Djab Wurrung and Jardwardjali languages, the Grampians has about 200 rock art sites – almost 90% of all rock sites Victoria. The Victoria Range, with 77 rock art shelters to date, has the highest concentration of rock art sites in Gariwerd. For Traditional Owners, the rock art sites, along with other archaeological and mythological sites, represent a tangible and irreplaceable connection to a particular facet of their ongoing culture (Gunn, Goodes, Thorn, Carlyle & Douglas, 2020).

Grampians National Park, Victoria





Grampians. Location: Victoria. Photographer: IDK Ramen. Source: Wikimedia Commons. Used under licence: Public Domain.

Damage Caused

Since the 1960s, Gariwerd become well-known for its wide variety of rock climbs. The escalation of **bouldering** and bolting in the sandstone ranges of western Victoria, Australia, has caused noticeable damage to Aboriginal rock art sites in the Grampians National Park (Gunn, Goodes, Thorn, Carlyle & Douglas, 2020). Climbers have caused environmental and cultural damage, including cutting their own paths to rock art sites, drilling **climbing bolts** into rock walls, squashing native plants and leaving chalk in sacred areas (Parks Victoria, 2023).

Indigenous ranger Jake Goodes said seeing the damage was devastating. *"To see there's fire rings, there's bolts, there's chalk all over the rock, vegetation's been cut, it's really heart-wrenching,"* he said (Day, 2019). John Clarke, one of the Eastern Marr traditional owners, stated *"Our heritage, our stories, our identity is just not up for debate, the value of these places is just not up for debate, and we need to protect these places"* (Day, 2019).

Dylan Clarke, chairman of the Barengi Gadjin Land Council, which represents the traditional owners, in April shared that *"There are things like graffiti and racist drawings on sacred colours. That just makes a mockery of our culture and heritage. When you see that stuff in our sacred areas, it really impacts you – that's heartbreaking."* (Eddie, 2019).

CASE STUDY: Grampians National Park (Gariwerd), Victoria

Action
All Aboriginal places in Victoria are protected under the **Aboriginal Heritage Act**. According to the Act, an Aboriginal place is any area in Victoria or its coastal waters that holds **cultural heritage** significance to Aboriginal people. It is illegal to harm or engage in activities likely to harm Aboriginal cultural heritage, regardless of whether its significance is known, except in exceptional circumstances.

In March 2023, More than 150 Aboriginal and Torres Strait Islander rangers and elders from across Australia gathered on the lands of the Djab Wurrung, Jadawadajali peoples of the Wotjobaluk Nations and Gunditjmara peoples to share knowledge and experiences of Rock Art in the Gariwerd Cultural Landscape. The forum provided a platform for Aboriginal and Torres Strait Islander land managers to share challenges and explore opportunities related to the care of Rock Art and cultural heritage sites. A key outcome of the forum was the development of a "Practical Guide for Indigenous Rangers in Managing Rock Art Cultural Landscapes," addressing both the physical and intangible cultural values of these sites (Parks Victoria, 2023). The guide emphasizes the importance of Indigenous leadership in Rock Art management, a crucial and overdue shift.

As part of a **conservation** project in 2023, Gariwerd traditional owners and Parks Victoria worked with rock-climbers to remove more than 50 bolts. and climbing chalk in one of the rock art shelters. Troy Lovett, Gariwerd Project Officer with the Gunditj Mirring Traditional Owners Aboriginal Cooporation (GMTOAC) said *"it was important having the three Traditional Owner groups coming and working together for this significant healing work. We held a **smoking ceremony** at the site each morning acknowledging the place, the people, and the Country, as well as a closing smoking at the completion of the works."* (Gunn, Goodes, Thorn, Carlyle & Douglas, 2020).

Debate
In March 2023, when Parks Victoria announced a climbing ban covering about a third of the park, some members of the climbing community have hit back, saying the number of climbers using the area and the damage they have been accused of causing have been overstated (Day, 2019). Other climbers acknowledge invaluable rock art may not have been properly cared for in the past, and want to work with traditional owners to protect the area (Eddie, 2019)

Gariwerd Today
Today, the Aboriginal Cultural Heritage of Gariwerd is collaboratively managed by Parks Victoria, Aboriginal Victoria, and the individual Traditional Owner parties (Barengi Gadjin Land Council Aboriginal Corporation, Eastern Maar Aboriginal Corporation, Martang Pty Ltd and Gunditj Mirring Traditional Owners Aboriginal Corporation).

Currently, there are some rock-climbing bans in place to protect the rock art; however, rock climbing still takes place in Gariwerd. There are more than 100 designated rock-climbing areas in the landscape including 13 bouldering areas. Most of these areas have multiple climbs within them. A plan to increase knowledge of Aboriginal traditional land management and learning to heal country is in place, it includes establishing protections for environmental habitats by reducing visitor impact.

Eastern Marr traditional owner John Clarke said Aboriginal people were happy to share the Grampians with climbers and tourists, but only if they treated them with respect (Day, 2019).



Mount William (Duwil) view to the North. Location: Grampians National Park. Photographer: BennyG3255. Source: Wikimedia Commons. Used under licence: CC BY-SA 4.0.

CASE STUDY: Grampians National Park (Gariwerd), Victoria

Glossary

Aboriginal Heritage Act - A law that helps protect important Aboriginal cultural sites, traditions, and objects to ensure they are respected and preserved for future generations.

Bouldering – A type of rock climbing that involved climbing short routes without ropes, which can sometimes damage rock art sites.

Climbing Bolts – Metal anchors drilled into rocks to help climbers, which can harm rock art and the environment.

Conservation - The protection and care of natural and cultural places to ensure they are preserved for future generations.

Cultural Heritage – The traditions, practices and places that are important to a community's history and identity.

Smoking Ceremony – A traditional practice where smoke from burning plants is used for cleansing, healing and welcoming people to Country.

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CASE STUDY:

Arthur-Pieman Conservation Area Tasmania



Arthur-Pieman Conservation Area. Location: Tasmania. Photographer: DHx1. Source: Wikimedia Commons. Used under licence: Public Domain.

Traditional Owners: Palawa people.

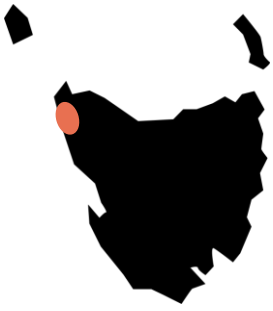
Site Features

The Arthur-Pieman Conservation Area (APCA) landscape features ancient shell **middens**, rock engravings, burial sites and stone arrangements.

Shells are the most common component of these coastal middens, but they also contain stone artefacts and tools, animal bones, **bone implements**, **ochre**, charcoal and ash. For traditional owners, the middens found in APCA represent a physical and spiritual link between past, present and future.

Location

The Arthur-Pieman Conservation Area us on the North-West coast of Tasmania, covering over 100,000 hectares.



Issues/ Concerns

The APCA has been a popular place for people to visit and enjoy for many years. Lots of locals like to drive off-road vehicles, like four-wheel drives (4WDs). People can get special permits to drive on certain tracks, which are shown on a map that comes with the permit. However, some tracks are close to important Aboriginal sites, and this has caused problems. The vehicles cause deep ruts which have destroyed sections of coastline and dunes, exposing fragile artefacts.

It's hard to stop people from driving outside the allowed areas, and many do so without getting in trouble. This can harm plants, damage beaches, disturb birds, and destroy Aboriginal cultural sites.

Management

The 2002 Arthur Pieman Conservation Area Management Plan tried to protect Aboriginal sites and mentioned problems caused by 4WD use and cattle grazing[1]. But the plan didn't do enough to protect cultural areas because it focused more on fun and tourism than conservation[2]. More 4WD driving in the 'Natural Zone' is putting Aboriginal sites at risk.

In 2012, the Giddings government closed 37.2 km of tracks in a special heritage area along the coast, between Sandy Cape and the Pieman River. There are 144 registered Aboriginal sites within 500 metres of these tracks. However, many tracks north of Sandy Cape are still open.



Arthur-Pieman Conservation Area. Location: Tasmania. Photographer: Dhx1. Source: Wikimedia Commons. Used under licence: Public Domain.

Ngarrngga
to know, to hear, to understand

Glossary

Bone implements - are tools made from animal bones, used by Aboriginal people for cutting, hunting, and other daily tasks.

Middens - are piles of shells, bones, and other food remains left by Aboriginal people long ago, showing how they lived and ate.

Ochre - is a naturally coloured clay used by Aboriginal people for painting, ceremonies, and artwork.

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