

Ancestral Voyaging Knowledge in the Pacific Region

Overview of indigenous knowledge of the marine environment and ocean navigation by men and women of the Pacific Islands

UNESCO Local and Indigenous Knowledge Systems Programme
in cooperation with Dr. Marianne 'Mimi' George



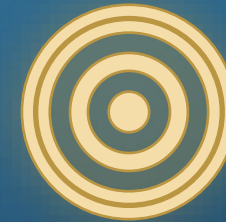
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Ancestral Voyaging Knowledge is a dynamic body of complex knowledge



AVK holders and scientists need an **enabling policy environment**



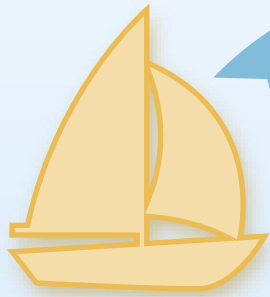
SDGs

★4	★14
★13	★15

RELEVANCE FOR POLICY MAKERS

PACIFIC COMMUNITIES EXIST TODAY DUE TO AVK

50,000 BC
occupation of modern-day New Guinea and **Australia**



30,000 BC
settling of Taiwan/China, the Bismarck Archipelago, and the main Solomons chain



1600 BC
establishment of sea roads into remote Oceania

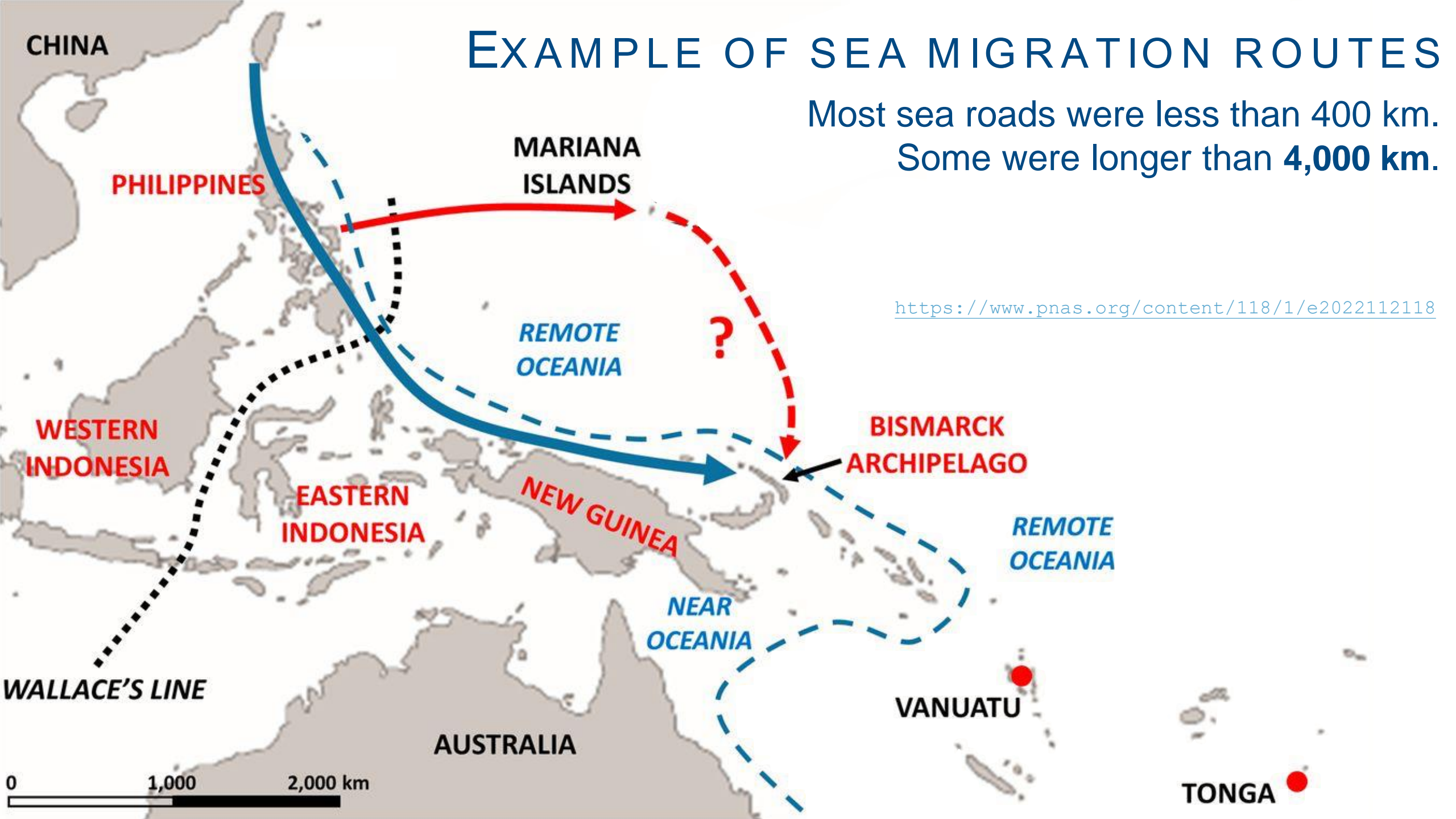


850—1200 AD
voyagers settle outer Oceania: **Hawaiian Islands**, Madagascar, Aotearoa, Rapanui

EXAMPLE OF SEA MIGRATION ROUTES

Most sea roads were less than 400 km.
Some were longer than 4,000 km.

<https://www.pnas.org/content/118/1/e2022112118>



OLD KNOWLEDGE CAN PROVIDE NEW SOLUTIONS



AVK is a key tool for helping younger people prepare for a new future. AVK contributes to cultural resilience, education, livelihoods, heritage management and resilience for Small Island Developing States (SIDS).

The ocean is changing rapidly with climate impacts and loss of biodiversity pose major threats to the Pacific SIDS.

Urgent action is needed to protect marine biodiversity and boost early warning systems and climate adaptation.

AVK skills and ways help young people learn navigation, marine biodiversity, technical knowledge of waves, tides and currents, **a complex network of biological knowledge, coastal and reef conservation, as well as cultural values, governance systems, and the spirit of resilience.**



UN DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT

The United Nations
proclaimed a Decade of
Ocean Science for
Sustainable Development
(2021 to 2030).

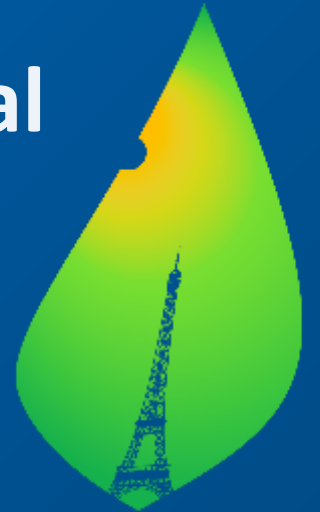


This Decade provides a **common framework** to ensure that ocean science can support actions to sustainably manage the Ocean and **achieve the 2030 Agenda**.

2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

“ Parties acknowledge that adaptation action [...] should be based on and guided by the best available science and, as appropriate, **traditional knowledge, knowledge of indigenous peoples and local knowledge systems.**”

Paris Agreement, article 7.5



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



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LEHUA KAMALU, VOYAGING
DIRECTOR, POLYNESIAN
VOYAGING SOCIETY

“Science for understanding the earth, nature and oceans is not just about the graphs and data. It’s also about **understanding the stories**, human connection and emotions for why these places are so important. This is what we can **learn from indigenous peoples**, whether they be navigators, hunters or trackers.”

”

From <https://oceandecade.org/news/99/A-Brave-New-Ocean-inspiring-the-start-of-the-Ocean-Decade>

UNDERVALUED

Women's AVK about navigation is a major body of knowledge that is **largely unreported**

EMBEDDED IN CULTURE

Indigenous women are **primary AVK actors** and experts, as evidenced in mythology and historical memory



EMPOWERING

AVK skills can empower women and girls as knowledge holders, support livelihoods, **promote gender equality**

SPECIFIC KNOWLEDGE

 swell patterns

 currents

 winds

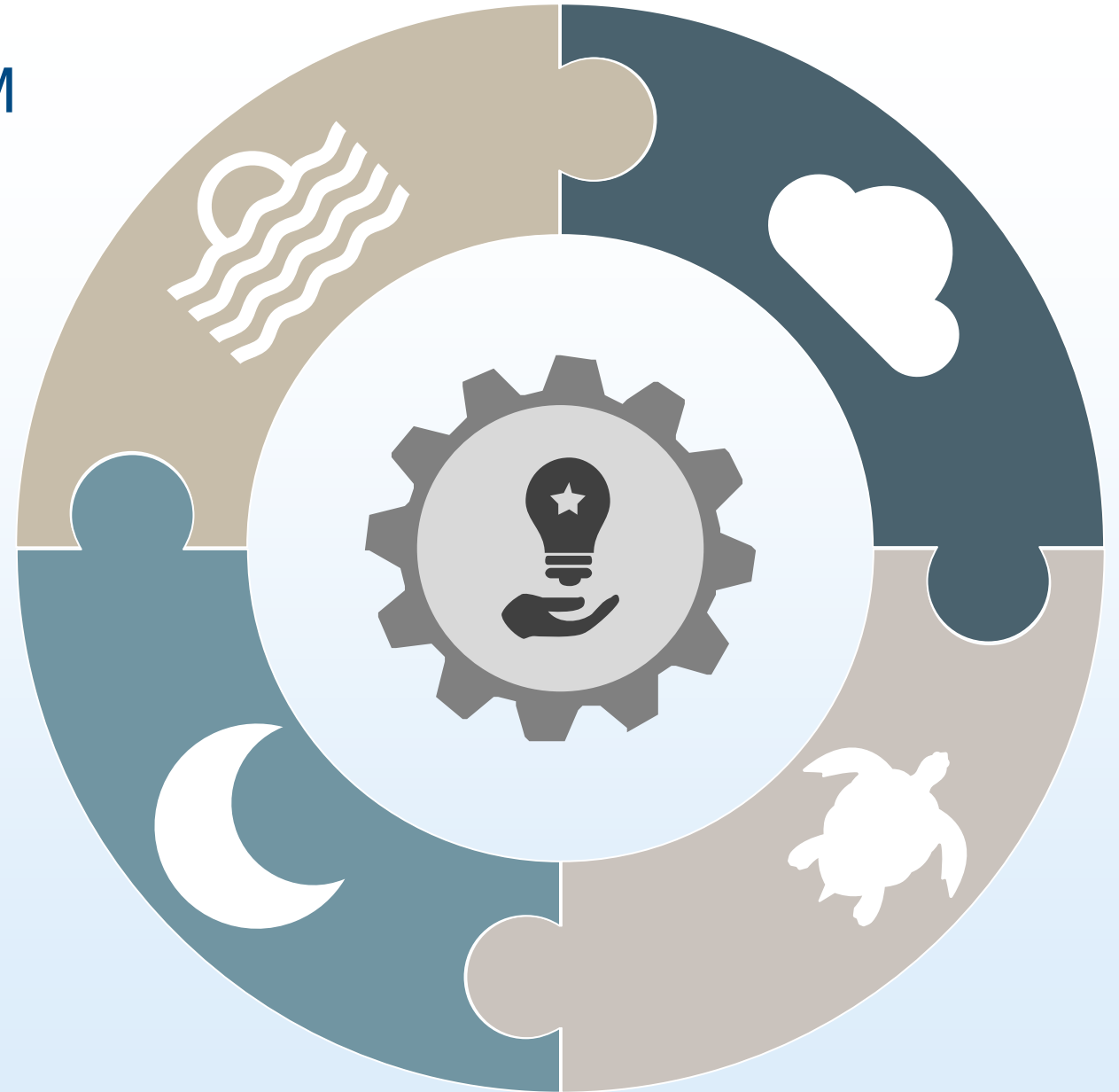
 biota

 stars

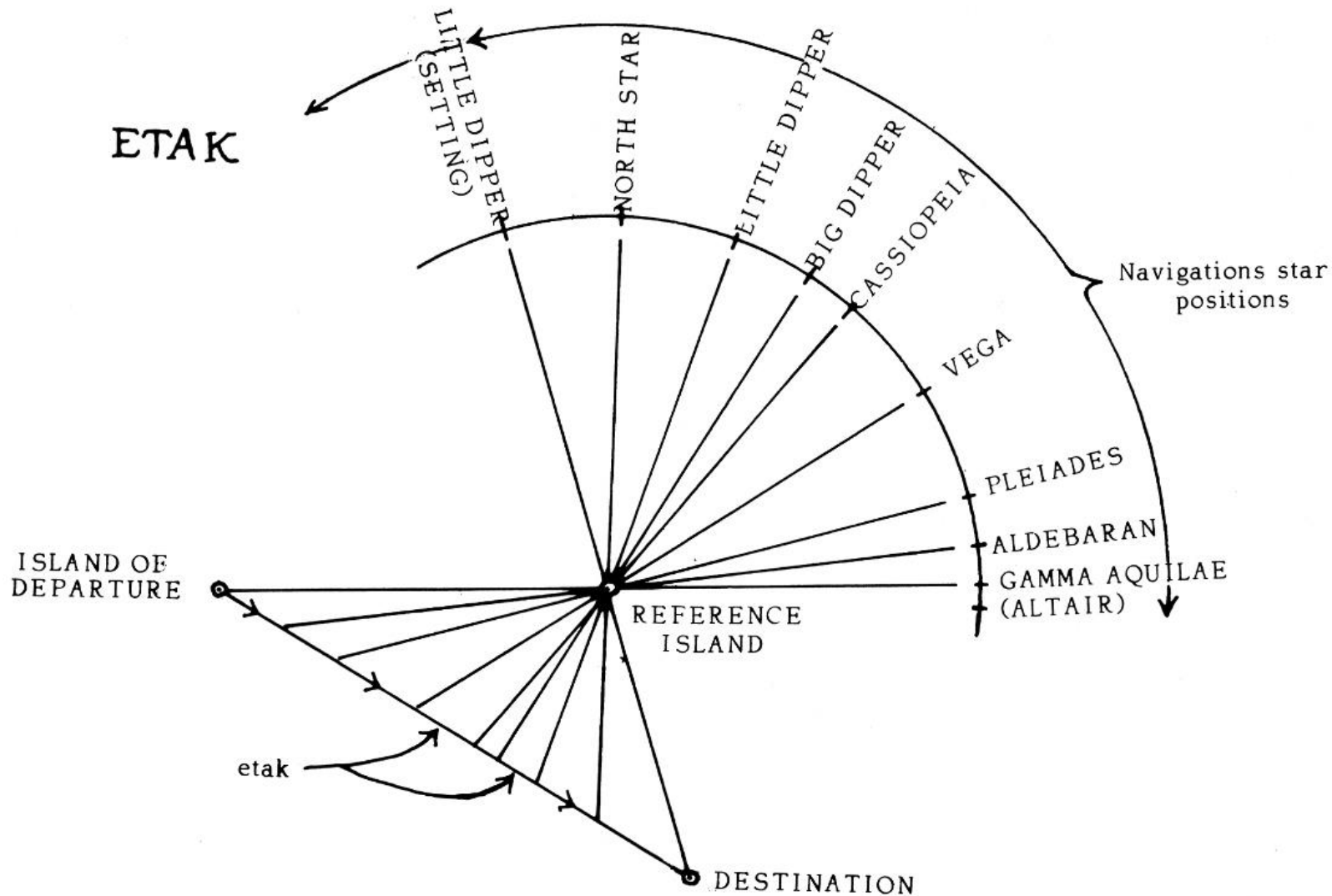
 weather

AVK IS A DYNAMIC SYSTEM

- ⊙ atmospheric conditions
- ⊙ the night sky and movement of celestial bodies
- ⊙ ocean conditions
- ⊙ marine biodiversity
- ⊙ swell patterns
- ⊙ oceanic lights (e.g. *te lapa*, flashing lights on ocean voyages) which signal the bearing and distance to land over 150 nautical miles away



ETAK: CAROLINIAN NAVIGATION



On the open ocean, from the perspective of the observer, **everything is in motion**, except the observer.

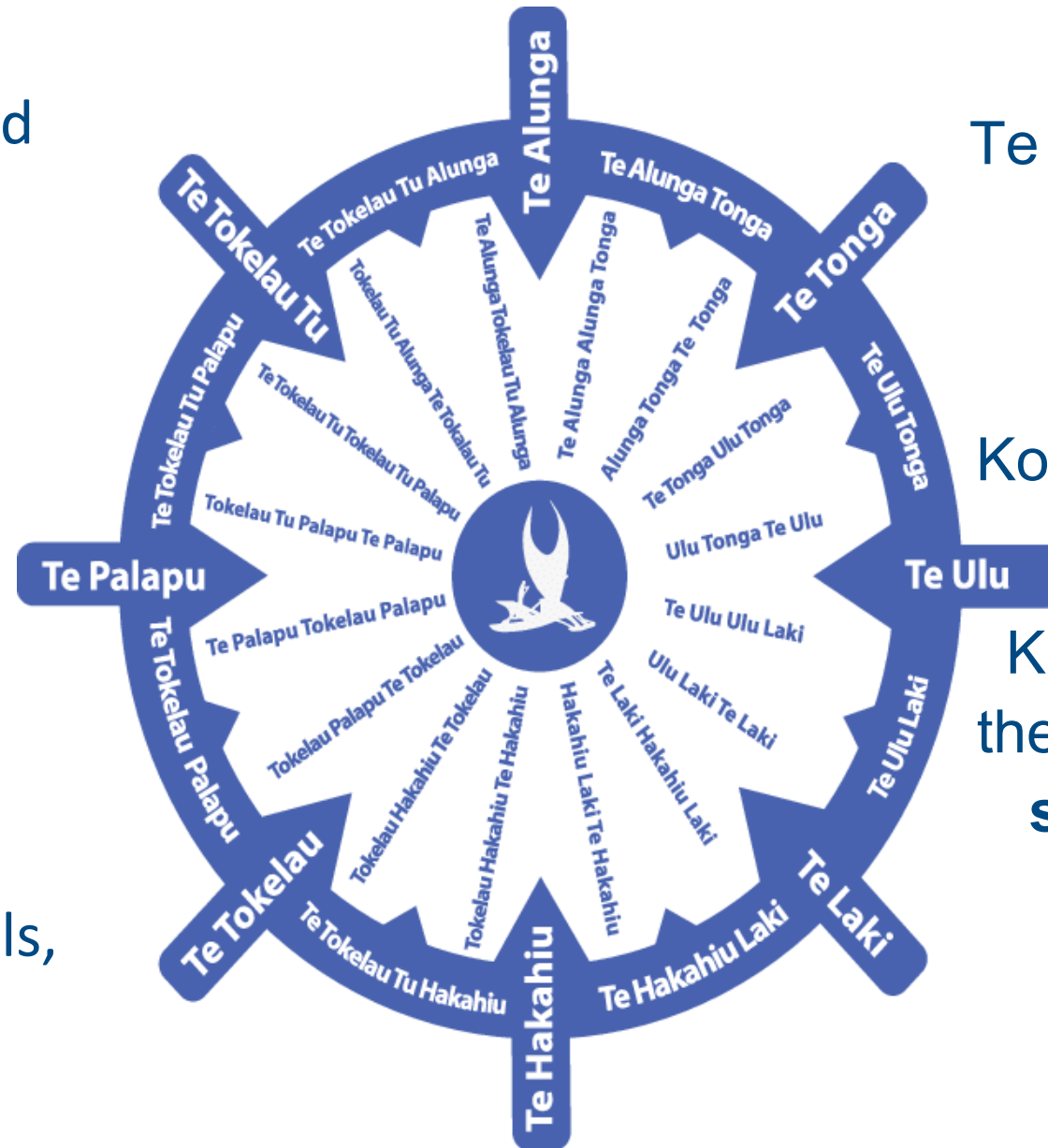
The Carolinian navigation system divides each inter-island route into 6 sections, each called an *etak*.

The vessel is not thought of as moving, rather, **the navigator is a fixed** reference point about whom the islands and ocean move.

TE NOHOANGA TE MATANGI: PACIFIC WIND COMPASS

Each position is linked with phenomena:

- sidereal
- calendric/seasonal
- meteorological
- oceanographic
- sea-routes
- oceanic lights
- behaviors of animals, plants, clouds

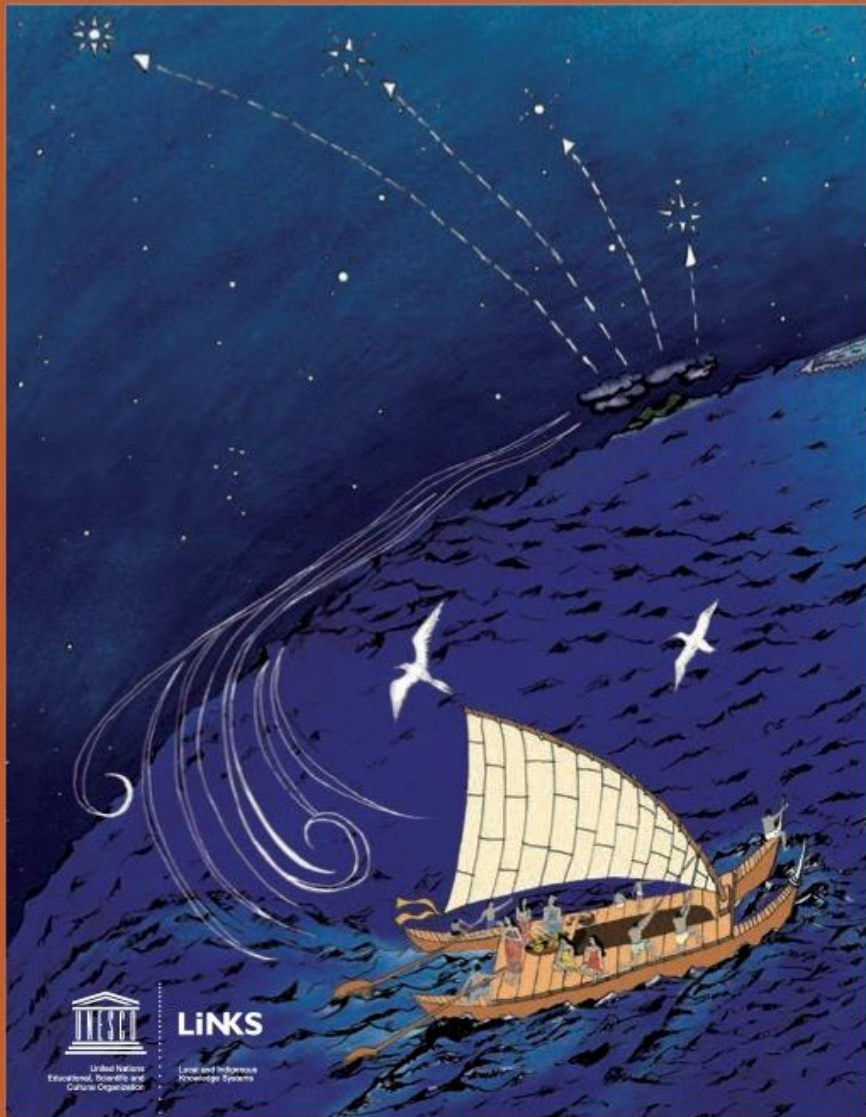


Te Nohoanga Te Matangi is the **‘wind positioning system’** as taught to Marianne George by Koloso Kaveia of Taumako, Solomon Islands.

Kaveia regarded TNTM as the **Polynesian navigation system**, as handed down by his ancestors.

(George, 2012, 2018, 2020b)

The Canoe Is The People TEACHER'S MANUAL



EDUCATION & INTERGENERATIONAL TRANSMISSION

AVK can support formal education, informal education, and hybrid forms of learning where there is an interaction of science and indigenous knowledge.

For example, a Māori version of The Canoe Is The People is being used in Aotearoa.

cf. <https://en.unesco.org/links/transmission/canoe>
<http://www.canoeisthepeople.org/?lang=MAORI>



BIODIVERSITY

AVK analyses and transmits large amounts of information on biodiversity; e.g. knowledge of biodiversity necessary to build the boats and sails, as well as provision the boats.

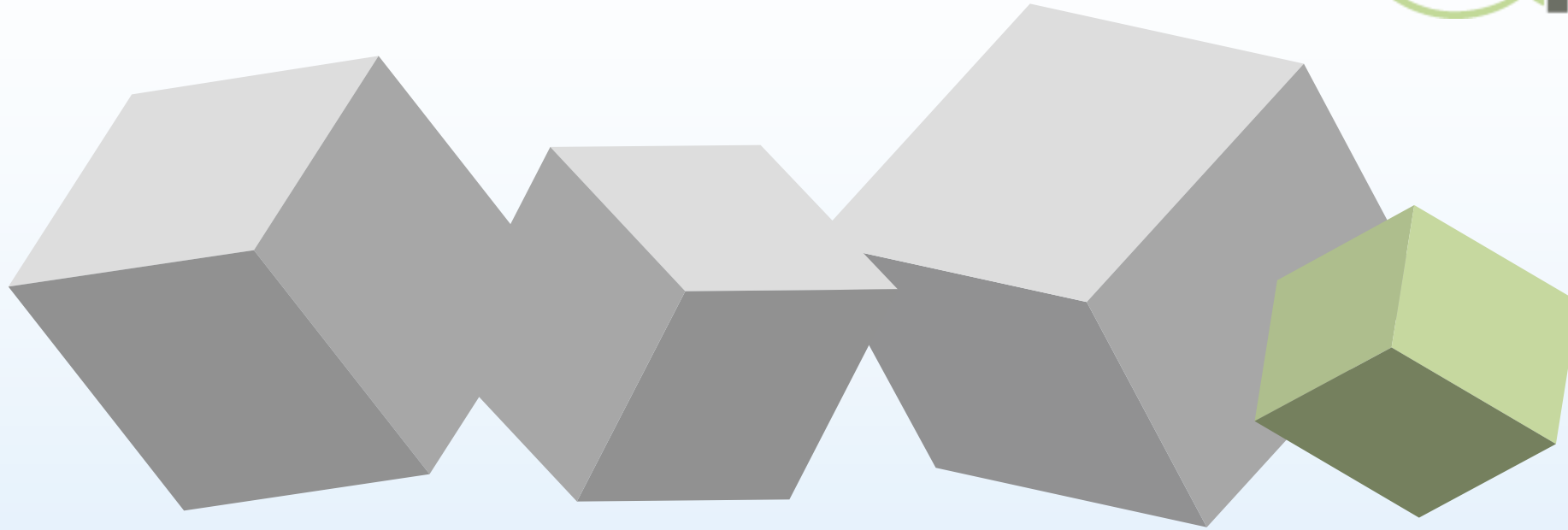
AVK has **under researched expertise and transmission of knowledge regarding migrations of sea mammals** (particularly whales) and sea birds, information important for understanding ocean and wind currents in navigation.

AVK also traditionally involves inter-island trade and gift exchanges, ensuring a flow of biodiversity resources between islands.

AVK IN BIODIVERSITY POLICY

- **AVK can inform biodiversity policy** processes as well as knowledge mobilisation
- Climate change and biodiversity issues are key for Pacific SIDS, yet the AVK indigenous knowledge component is **still under developed**
- The Convention on Biological Diversity contains Articles 8j and 10c on indigenous knowledge, and a new programme of work may emerge from the Post-2020 Global Biodiversity Framework
- Draft text in the negotiation of the new treaty on biodiversity beyond national jurisdiction will also give attention to traditional knowledge

AVK IN BIODIVERSITY POLICY



Currently only **one** Pacific SIDS is a member of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystems Services (**IPBES**), which has included indigenous and local knowledge in all of its regional and thematic assessments.

CO-PRODUCED KNOWLEDGE

The two or more epistemologies can be **combined** to produce the **best available knowledge**, improving decision-making in climate issues—respecting their different origins, functions and governance. Complementarity creates opportunities for knowledge coproduction and improving decision-making.



Scientific knowledge

Knowledge of indigenous peoples and local communities

AVK AND CLIMATE CHANGE

- Enabling policies and finance for AVK transmission would contribute to knowledge generation and knowledge management for sustainable development in the Pacific.
- **AVK can assist with disaster risk reduction, early warning systems and longitudinal trend analysis, particularly considering impacts on food systems.**
- **Climate change knowledge** and policy opportunities include linking AVK with:
 - Intergovernmental Panel on Climate Change assessments and special reports
 - Local Communities and Indigenous Peoples Platform, UNFCCC
 - National Adaptation Plans and Nationally Determined Contributions, UNFCCC

OPPORTUNITIES FOR ACTION

- Pacific SIDS National Commissions to be informed of AVK opportunities nationally and, where appropriate, **develop a national action plan**;
- **Undertake national inventories of AVK experts** and existing intergenerational knowledge transmission, including both in schools and traditionally;
- **Support the establishment of an international union** of traditional seafarers of indigenous Pacific communities to gather and share AVK knowledge.
- **Include women AVK experts and girls equitably** in all inventories, groupings, committees, planning, and programmes.
- Consider national curriculum **goals for recognising AVK** and AVK knowledge holders and the use of The Canoe is The People and other resources;

OPPORTUNITIES FOR ACTION

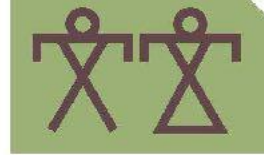
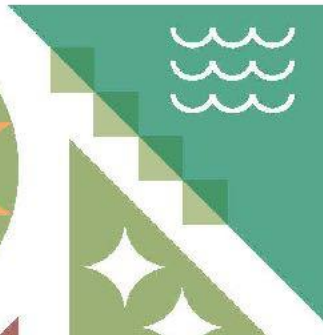
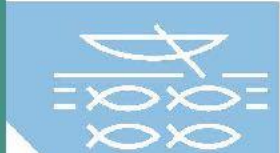
- Consider developing a national or transnational inscription of AVK into the register of the 2003 Convention on the Safeguarding of Intangible Cultural Heritage;
- Identify connections between UNESCO World Heritage Sites and UNESCO Biosphere Reserves and expertise in AVK. Promote a good governance relationship that facilitates AVK transmission and vitality;
- Develop a strategy for linking AVK and marine education with the UN Decade of Ocean Science for Sustainable Development and the UN International Decade of Indigenous Languages.
- Investing in online resources for AVK practitioners and curriculum, available in English and Pacific languages;
- Establish national scientific teams to work with AVK holders on knowledge of biodiversity, ecosystems and climate change, with the option of developing a National Ecosystems Assessment (NEA) using multiple evidence bases;



LiNKs

United Nations
Educational, Scientific and
Cultural Organization

Local and Indigenous
Knowledge Systems



**Local
Knowledge,
Global Goals**

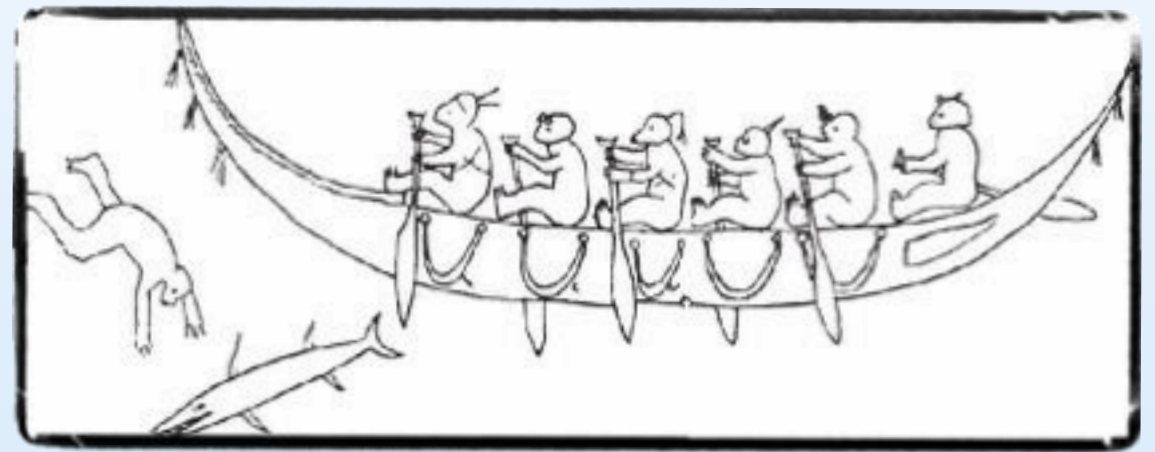
CONTACT DETAILS

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THANKS TO expert consultant
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