

**Animal Culture and Human-Animal Kinship in the Pacific: Shifting Conservation  
26th to 27th March 2024, University of Auckland Biology, Thomas Building,  
Auckland, New Zealand.**

Welcome by Associate Professor Dan Hikuroa, UNESCO National Commissioner for Culture and Professor Rochelle Constantine, University of Auckland

**Day 1: Perspectives on Animal Culture and Human-Animal Kinship**

**Introduction to Human-Animal Kinship Equation**

The workshop began with a discussion on the concept of human-animal kinship, emphasising the need to bridge different perspectives, including cultural, conservation, and philosophical viewpoints. A Venn diagram was presented to visually represent the intersection of these diverse areas of thought (see Annex I).

***Transdisciplinary Collaboration:***

- There was an acknowledgment of the importance of transdisciplinary and interdisciplinary collaboration, highlighting the necessity of working together to address complex issues such as conservation and human-animal relationships. The competitive nature of grant funding and the importance of fostering collaboration were emphasised.

*Research Collaboration Examples:* Examples of research collaborations were discussed, particularly focusing on marine species such as dolphins and whales. The importance of coordinating research efforts and integrating cultural aspects into scientific methodologies was highlighted.

***Incorporating Cultural Values:***

- There was a recognition of the significance of incorporating cultural values, traditional knowledge, and practices into research methodologies, especially concerning conservation in the Pacific islands. The need for guidance on how to include cultural aspects in research methodologies was acknowledged.

***Understanding Animal Behavior and Culture:***

- The participants shared their interest in understanding animal behaviour and culture, particularly focusing on fishes, sharks, and rays. The discussion encompassed topics such as social learning, animal cognition, and the integration of different tools and methods to study mammal behaviour and culture.

The workshop aimed to explore the interconnectedness between human and animal cultures in the Pacific region, emphasising the importance of collaboration, cultural understanding, and interdisciplinary approaches in conservation efforts.

**Session 1: Social learning and animal culture/ Culture and Conservation**

**Part 1 Speaker: Culum Brown**

The session began with an overview of animal behaviour, emphasising the influence of genetics and the environment on behaviour. The discussion highlighted the role of plasticity in behaviour, which can be shaped by individual or social learning. Learning allows animals to adapt their behaviour to changing environmental conditions.

***Types of Learning:***

- The two major routes of learning in animals are individual learning and social learning. Individual learning involves trial and error, whereas social learning allows animals to observe and learn from others, leading to a more efficient acquisition of behaviour. Social learning occurs vertically, between generations and horizontally between peers. Culture may also cross species boundaries, for example, through human and non-human cultural mutualism where social information is transmitted between species.

*Examples of Social Learning and Culture:* Various examples of social learning and culture across different animal species were presented. Examples included chimpanzees using tools, whales transmitting songs and migration routes, and fish learning migration routes and hunting strategies.

**Implications for Conservation:** The implications of social learning and culture for conservation were discussed. It was emphasised that cultural variants within populations may be important for maintaining behavioural diversity. Additionally, the spread of cultural behaviours, facilitated by social learning, can have both positive and negative impacts on populations, particularly in rapidly changing environments.

**Gene-Culture Coevolution:** The concept of gene-culture coevolution was introduced, highlighting the interaction between genetic and cultural information in shaping behaviour and adaptation to environmental changes.

**Social Networks and Information Flow:** The discussion extended to how information flows through populations via social networks. Influential or well-connected individuals within social networks can play a significant role in spreading cultural behaviours, and the removal of these individuals can impact the cohesion of social groups and conservation efforts.

*Examples of Human-Animal Interactions:* Examples of human-animal interactions demonstrating cultural behaviours were shared, including indigenous fishing practices and collaborative hunting between humans and killer whales. These examples illustrated the complex cultural relationships between humans and animals.

The session explored the role of social learning and culture in animal behaviour, emphasising its importance for conservation and understanding human-animal interactions.

## **Talanoa**

The discussion covered a wide range of topics related to animal behaviour, cultural interactions between humans and animals, adaptation to environmental changes, and the potential impacts of human activities such as tourism on wildlife behaviour. Here's a summary of the key points discussed:

1. **Research Methods:** The research on animal culture includes theoretical studies as well as setting up artificial situations to understand how information moves among animal groups as well as wild studies of photo ID'd individuals such as humpback whales in the South Pacific. Tagging and tracking sharks and fish helps track social relationships and interactions.
2. **Cultural Interactions:** Cultural interactions between humans and animals have likely been occurring for generations, with examples like tribes viewing killer whales as reincarnations of their ancestors.

3. **Migration and Adaptation:** Migration patterns and behaviours can have both genetic and learned components. Studies show that animals can adapt their migration routes based on social ties rather than genetics. Climate change can lead to shifts in behaviour, but whether culture conserves or facilitates change depends on specific circumstances and transmission mechanisms.
4. **Interactions with Marine Mammals:** Tourism and interactions with marine mammals, such as swimming with whales, can influence animal behaviour. Studies show that certain behaviours, like tiger sharks returning to tourist areas post-COVID, can be influenced by human activities.
5. **AI and Behavior Monitoring:** AI is increasingly used to track and analyse animal behaviour, such as identifying bird songs or monitoring multi-species interactions. Drones equipped with AI can detect behaviours in real-time, providing valuable data for research, but must be managed sensitively around wildlife.
6. **Traditional Knowledge and Conservation:** Traditional knowledge about animal behaviour, passed down through generations, is valuable for understanding and conserving wildlife. Collaborations between scientists and local communities can help gather and preserve this knowledge.
7. **Impacts of Human Activities:** Human activities such as feeding fish for tourism can disrupt natural behaviours and ecosystems. Aggressive fish species may dominate due to feeding practices, leading to loss of biodiversity.
8. **Social Networks and Behavior Transmission:** Social networks among animals can influence behaviour transmission, with certain individuals acting as influencers. Understanding these networks is crucial for studying and conserving wildlife populations.

The discussion highlighted the complex interactions between humans and animals, the importance of traditional knowledge, and the need for research methods like AI to monitor and understand animal behaviour in the face of rapid environmental changes and human impacts.

### **Session 1: Part 2**

#### **Speaker: Philippa Brakes**

The next session delved into the relationship between social learning, animal culture, and conservation efforts, exploring how understanding these dynamics can inform more effective preservation strategies. Following are the Main points.

1. **Conserving Migratory Species:** Conservation efforts often transcend national boundaries, especially for migratory species traversing various countries. Collaboration is essential to ensure the preservation of these species along their migration routes. The Convention on the Conservation of Migratory Species of Wild Animals (CMS) plays a crucial role in coordinating such efforts.
2. **Integrating Social Learning into Conservation:** Recognizing the importance of social learning and culture in animal populations, conservationists are grappling with how to incorporate these aspects into conservation strategies. Social learning, defined as the sharing of behavioural information within a community, has been observed in

various species and proven beneficial in initiatives such as reintroduction programs, where animals are taught survival skills before release into the wild, or migration routes are seeded into the population.

*Examples of Social Learning in Conservation:*

- Golden lion tamarins benefited from social learning in reintroduction efforts, significantly increasing their survival rates.
- Elephants demonstrate adaptive behaviours, such as avoiding crop raiding through innovative methods like using beehives as deterrents.
- Sperm whales exhibit complex communication patterns and habitat use, raising important questions about the role of culture in their conservation.
- Humpback whales' migration routes and maternal knowledge have played a crucial role in population recovery after commercial whaling.

**3. Challenges and Considerations:**

- Specialisation on certain prey or behaviours can make some species vulnerable to environmental changes, as seen in killer whales' reliance on Chinook salmon in the northwest Pacific.
- Social learning can also confer resilience, as evidenced by dolphins using tools for foraging which buffered against the effects on the food web of a marine heatwave.
- Understanding the mechanisms and implications of cultural transmission remains a complex task, with many unanswered questions about its role in population dynamics and conservation.

**4. Frameworks for Conservation:**

- Frameworks like those developed by the CMS help organise evidence, innovations, and practical applications for integrating cultural conservation into policy and practice.
- Efforts to build capacity and share knowledge among researchers, particularly in regions like the eastern tropical Pacific, have led to a capacity building network among early career researchers within the region.

**5. Future Directions:**

- Questions remain about where to focus conservation efforts, whether on vulnerable populations, resilient behaviours, or cultural capacity.
- Recognizing and incorporating indigenous knowledge into conservation practices is essential for informing this emerging field.
- Ongoing research, development of new methods and discoveries such as the evidence for social learning in Baird's beaked whales, challenges human-centric perspectives on sociality and underscores the need for continued exploration of animal culture and social learning.

**Talanoa**

Main points from the discussions:

1. **Concerns about engaging with indigenous communities:** There's a recognition that there's a need to engage more with indigenous communities, especially in the policy sphere, but there's a lack of concrete action in many cases. While there's a genuine intention to involve indigenous peoples, there's a gap in understanding how to effectively, or appropriately do so, in order to protect knowledge shared.

2. ***Need for inclusive governance in research:*** There's a call for better inclusion of indigenous knowledge and people in research governance, particularly in the Pacific region. This includes bringing indigenous perspectives to the table and ensuring that they are not side-lined in decision-making processes.
3. ***Challenges and aspirations in conservation efforts:*** Various challenges exist, including the commercialization of resources and the loss of indigenous knowledge. However, there are aspirations to bridge the gap between traditional knowledge and scientific research, as well as to empower indigenous communities to take a more active role in conservation efforts.
4. ***Intersection of human and animal culture:*** There's recognition of the parallels between human and animal culture, with discussions about the transmission of culture among animals like whales. This leads to broader questions about the value of conserving animal culture for its intrinsic worth.
5. ***Opportunities for collaboration and funding:*** Participants discussed opportunities for collaboration between researchers, indigenous communities, and conservation efforts. They also highlight the need for strategic approaches to funding research and conservation initiatives.
6. ***Challenges in integrating traditional knowledge:*** participants highlighted the challenges in integrating traditional knowledge with scientific processes to inform policy efforts. Noting that there is often a privileging of scientific perspectives and a risk of treating traditional knowledge as an extractive resource rather than as an equal form of knowledge and Indigenous knowledge holders as equal partners in knowledge production.

### ***Cautionary note***

There was an emphasis on the need for creating systems that allow science and traditional knowledge to work together on equal footing, stressing the importance of ensuring that traditional knowledge is not instrumentalized for other agendas, such as commercialization. Participants called for equal collaboration between different knowledge systems in policy and legal decision-making processes.

## **Session 2: Story Telling**

### **Speakers: Viliamu Iese and Ron Vave**

In Session 2, the two speakers shared personal experiences and research findings on the relationships between humans and animals, particularly focusing on dolphins, whales and fish. Viliamu recounted a childhood memory of swimming with dolphins with his great grandmother, who communicated with the dolphins as if they were family members. This experience sparked his interest in reconnecting with dolphins later in life which is something that is an ongoing preoccupation for him. Viliamu also gave an example of a connection through a whale between the Tinilau clan of Niutao in Tuvalu and Aotearoa.

Ron shared some of his research about the loss of a traditional management practice of river fishing by women in Tiliva village in Bua, Fiji, where a species of goby known as beli, (their totem fish) was associated with a particular chant notifying the arrival of beli (associated with a flowering of a plant) used to be fished collectively, with a sharing of the catches apportioned to

each household. This practice and the traditional rules of fish gathering have not taken place for 30 years and with the fish now being sold for money, its abundance has declined.

The storytelling continued with a discussion of the cultural significance of dolphins and whales in various communities, such as the stories from New Caledonia and Fiji, where these animals are considered ancestors and protectors. The participants highlighted the importance of understanding and respecting these cultural beliefs in conservation efforts.

Ron also shared a story about a cultural practice associated with a type of sea slugs across two distant villages in Fiji which share a mutual tradition, known only to them. The discussion then focused on how traditional knowledge and practices are being lost due to various factors like urbanisation, changing priorities, and the influence of Western science.

Throughout the session, participants emphasised the need to incorporate traditional knowledge into conservation efforts and research methodologies, advocating for a more holistic approach that respects and values local cultural beliefs and practices, rather than solely relying on Western scientific perspectives.

Ron and Viliamu encouraged participants to share their own stories related to land, ocean, and atmosphere, to further explore the interconnectedness between humans and the environment. They stressed the importance of preserving and sharing these stories to ensure the continuation of cultural heritage and environmental stewardship.

### **Talanoa**

Main points from the discussions:

- Concern about the loss of traditional knowledge and practices due to external pressures and changes, leading to a disconnect between generations and cultural and natural heritage.
- Observation of younger generations preferring fast food over traditional foods, leading to a loss of connection with traditional food sources and practices like gathering from gardens or shores.
- Frustration over the transformation of certain local communities into high-end vacation rental areas, resulting in the loss of indigenous knowledge and increase in risks due to lack of awareness about natural phenomena.
- Reflections on the significance of cultural practices such as chanting to sharks for protection and recognition, and the potential consequences of neglecting these traditions.
- Importance of sharing of personal stories about the continuity of cultural practices despite modernization, highlighting the importance of maintaining connections to ancestral knowledge and traditions.
- Recognition of the ongoing relevance of cultural indicators and connectors in everyday life, such as recognizing weather patterns or changes in animal behaviour.
- Adaptation of cultural practices to changing environmental conditions, such as altering migration routes of marine animals in response to rising sea temperatures.
- Affirmation of the value of indigenous knowledge alongside scientific understanding, with the hope that science will eventually acknowledge and work with traditional knowledge.

**Session 3: Animal Symbolism - *Explore the symbolic significance of animals in Pacific cultures and discuss how these symbols influence beliefs, values, and daily life***

### **Speaker: Tevita Ka'ili**

Session 3 focused on animal symbolism within Tongan culture and its significance in understanding the relationship between humans and nature. Here are the main points discussed:

1. **Indigenous Sources of Understanding Animal Symbolism:** There are three primary sources for understanding the symbolic significance of animals in Oceania: cosmogonies and creation stories, traditional narratives, and geometric motifs found in art and objects, including petroglyphs.
2. **Symbolic Significance of Animals:** Animals, especially marine life and birds, are regarded as atua (deities) or deified ancestors. They serve as protectors, partners, and companions to humans, and are seen as the original sources of significant plants. Animals also serve as predictors of weather and future events.
3. **Traditional Practices and Beliefs:** In traditional Tongan beliefs, sharks are considered judges of character. There is also a story of Hina turning herself into coral to provide shelter for animals. This story emphasises the importance of reciprocity and maintaining a respectful relationship with animals. This story emphasises the importance of reciprocity and maintaining a respectful relationship with animals.
4. **Embodiments of Atua:** Animals embody the atua (gods) and are cared for as such, forming a spiritual connection between humans and nature. The role of priests, in anchoring the vaka (canoe) symbolised the connection between spirituality and nature.
5. **Approaches to Conservation and Decoloniality:** Tevita advocated for the revival of indigenous spirituality and the blending of indigenous knowledge with Western science to challenge epistemic violence<sup>1</sup> and promote conservation efforts. He also highlighted the importance of arts and literature in raising awareness and fostering a deeper understanding of the relationship between humans and animals.

Tevita re-emphasized the importance of recognizing and honouring indigenous knowledge and practices in understanding and preserving the natural world, calling for a decolonial approach to conservation that respects indigenous spirituality and integrates it with Western science for holistic and sustainable solutions.

### **Talanoa**

Main points from the discussions:

1. **Relationship between Christianity and Indigenous Culture:** There was a question about the role of Christianity in Pacific cultures and how to maintain traditional spirituality without having it condemned by the Church: “We need to acknowledge Tagaloa as well as the Christian God”. There was agreement about the importance of maintaining cultural identity alongside Christianity as it was crucial for communities to be able to keep their pride in their cultural beliefs.

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<sup>1</sup> For definitions and examples see: <https://epistemicviolence.aau.at/index.php/en/home-2/> .

2. ***Struggle with Syncretism:*** The struggle to blend traditional cultural practices with Christianity, particularly in areas where traditional beliefs are deeply ingrained, was highlighted. Some efforts have been made regionally to find parallels between traditional cosmogonies and Christian beliefs, particularly through the work of scholars at the Pacific Theological College.
3. ***Impact of Diaspora on Traditional Knowledge:*** Participants raised the migration of communities away from their ancestral lands as a concern leading to the potential decontextualization of traditional knowledge. It was agreed that efforts are needed to maintain and transmit traditional knowledge among diaspora communities.
4. ***Importance of Arts and Literature:*** The role of arts and literature in preserving and transmitting traditional knowledge was emphasised as these mediums help bridge generational gaps and engage younger audiences.
5. ***Challenges with Christian Theology:*** The challenges of reconciling traditional beliefs with Christian theology, particularly regarding the perception of certain animals as deities, was discussed as were gender dynamics within Christianity and the impact on traditional power structures.
6. ***Cultural Activism within Churches:*** Participants agreed that some churches were making strides in humanitarian and conservation efforts, while others less so including not being prepared to respond to disasters and ecological transformation. The shifting of theology in organisations such as the Pacific Conference of Churches and the Pacific Theological College towards inclusion of ecological care was noted by participants as being a positive development.
7. ***Gender Dynamics in Church Governance:*** Concerns were raised about the dominance of men in church governance and its impact on women's agency, particularly in conservation efforts.

Overall, the discussions reflected a nuanced exploration of the complex interactions between Christianity, traditional knowledge, gender dynamics, and conservation efforts within Pacific communities.

#### **Session 4: Practice past and present: cultural interaction with animals**

**Speakers: Aunofu Havea Funaki (Tonga), Danny Nane (Papua New Guinea), June Hoskins (Cook Islands)**

Aunofu gave a presentation on whale watching in Tonga, based on her role in the industry and observations.

Main points from the presentations:

##### **Tonga:**

- *Observations of Whale Behavior:* Aunofu discussed various behaviours observed in whales, such as breaching or tail slapping which, depending on circumstance, she interprets as a possible indication of happiness or readiness to interact, or as a possible sign of distress. She emphasised the importance of understanding these behaviours without relying solely on academic knowledge but through direct observation and experience.



- *Importance of Whales to Tongan Culture:* Whales are deeply connected to Tongan culture, serving as ancestors and integral parts of Tongan people's heritage. Aunofu highlighted the need to preserve this cultural connection and educate visitors about the significance of whales to Tonga's ecosystem and identity.
- *Environmental Changes and Whale Behavior:* Aunofu shared that she had noted changes in whale behaviour over time, potentially influenced by environmental factors such as water quality and climate change. She discussed the importance of monitoring and documenting these changes for conservation efforts.
- *Educating Visitors:* Visitors in Tonga are encouraged to respect whales and understand their importance beyond mere entertainment or tourism. Aunofu stressed the importance of educating visitors about whale conservation and fostering a deeper connection with the majestic creatures. She also stressed the difficulties of the whale watching industry in Tonga with the excessive number of boats operating with the majority being owned by expatriates.
- *Preservation for Future Generations:* Aunofu emphasised the need to protect whales and their habitat for future generations. She highlighted the role of traditional knowledge, cultural heritage, and sustainable practices in achieving this goal.

The discussion focused on the intersection of traditional knowledge, environmental conservation, and cultural preservation through the lens of whale watching in Tonga.

### **Papua New Guinea**

Danny began with a short introduction to the YUS Conservation Area, (named after the three rivers, Yopno, Uruwa and Som) the country's first Conservation Area under the Protected Area Act 1978. Danny himself is a landowner who pledged his forest to the YUS Conservation Area. The Tree Kangaroo Conservation Program (TKCP) in YUS started in 1986, with the aim of protecting the Matschie's Tree Kangaroo, which is endemic to this region of Papua New Guinea. The protected area spans 160,683 hectares, and the organisation has a strong focus on community involvement in conservation efforts. The main points raised by Danny:

1. **Threats to Tree Kangaroos:** Main threats include habitat loss due to forest conversion and fire. Human activities such as logging and mining also contribute to habitat degradation. Hunting is also a threat.
2. **Indigenous Knowledge and Conservation:** Indigenous practices, such as establishing "Masalai" taboo areas where hunting is prohibited, demonstrate a strong connection between Indigenous communities and forest conservation. Local knowledge informs conservation efforts.
3. **Integration of Science and Local Knowledge:** Conservation efforts integrate scientific research with local knowledge. Behaviour studies, movement patterns, and species distribution data are collected through collaboration with local hunters and community members.
4. **Community One Health Program:** This program integrates human, wildlife, and environmental health, recognizing the interconnectedness of these aspects. It aims to address health issues in communities while promoting environmental conservation.
5. **Supporting Community Livelihoods:** The TKCP supports various livelihood projects, including agriculture and education initiatives, to reduce dependency on unsustainable practices like hunting and logging.
6. **Monitoring and Conservation:** Monitoring programs involve local communities, empowering them to identify and address environmental stressors. Results from monitoring activities inform conservation strategies.

Danny emphasised the importance of community involvement, Indigenous knowledge, and scientific research given its positive impact on the conservation efforts to protect the Matschie's Tree Kangaroo and its habitat in Papua New Guinea.

### **Cook Islands**

Speaker: June Hoskins

June gave a presentation on changing hermit crab behaviour in Mauke, Cook Islands:

- Hermit crabs are adapting to using plastic waste as alternative shells due to a shortage of natural shells. Plastic seems to be “doing the job”, despite concerns about its durability and impact on the crabs' growth and the potential negative impact of plastic waste on hermit crabs, including constraints on health.
- There is anecdotal evidence of social learning among hermit crabs, as they quickly adopt the use of new shelter discovered by other crabs. This behaviour may suggest a form of cultural transmission among them. June also noted that before a tropical storm, she has observed that the crabs climb up to shelter in the eaves of her home in large groups and wondered how they may be signalling to each other, or whether this is innate, or individually learned.
- June and her community in Mauke are open to hosting researchers interested in studying hermit crab behaviour and is willing to offer free accommodation. However, she suggested that researchers should bring funding to support the community. The community is willing to collaborate with researchers and provide local knowledge to support scientific studies on hermit crabs and their adaptation to plastic waste.
- June noted that there were less whole mollusc shells available for hermit crabs to use as shelter and she noticed that the crabs were using a variety of other objects as shelter, including glass jars and kiwi fruit skin, or other items of rubbish. Many such items were unsuitable, and she has been considering alternative housing options for the crabs - suggestions include experimenting with different types of shells, such as those from invasive species like giant African snails or using plastic replicas of shells. A traditional method of extracting the molluscs from their shells used in Tuvalu which left the shells undamaged on the beach (and therefore available for the crabs) was shared and it was suggested that if this knowledge were shared in the Cook Islands it could help increase the number of available homes for the crabs.

### **Talanoa**

Summary of Discussion Points:

- The devastation caused by deforestation, especially in biodiverse regions, is changing cultural connections and affecting indigenous communities.
- Strong cultural ties to the forest motivate efforts to protect the landscape and prevent deforestation.
- Corruption poses challenges to conservation efforts, with instances where deforestation occurs despite local opposition due to corrupt officials.
- Remote areas with limited infrastructure make it difficult for companies to exploit resources, preserving the environment and cultural heritage.
- Projects that integrate economic empowerment with conservation efforts have wide-ranging benefits and should be implemented more widely.
- Indigenous communities are increasingly involved in the whale-watching industry, with efforts to preserve cultural practices and ensure sustainable practices.

- Strict guidelines and regulations are enforced to ensure the sustainability of the whale-watching industry and protect marine life.
- There is a need to assess the financial literacy of Indigenous operators in industries like whale-watching and empower them for ownership and management of resources.
- Efforts in Tonga are underway to ensure financial transparency and reinvestment of profits into the local economy rather than repatriation to foreign countries.

The discussion highlighted the intersection of environmental conservation, cultural preservation, economic empowerment, and governance challenges in the context of natural resource management.

### **Final Session of Day 1: Reflections on learnings and experience**

**Speakers: ku’ualoha hoomanawanui and Clayton Viliamu**

Summary of Reflection:

- ku’ualoha expressed gratitude for being able to participate in discussions with passionate practitioners from various Pacific cultures, which gives hope for continued collaboration and shared efforts.
- A main point made during the day was the concept of being part of the environment rather than separate from it, and she emphasised the importance of recognizing this interconnectedness.
- Different approaches are needed to address various needs and challenges faced by different communities and career fields, ranging from small, specific actions to larger policy changes.
- A richness of the day was the sharing of personal anecdotes and experiences related to environmental conservation, cultural identity, and relationships with animals, highlighting the significance of these connections in shaping perspectives and actions.
- Ku’ualoha emphasised the power of storytelling, symbolism, and traditional knowledge in connecting people to their environment and cultural heritage.
- She also focused on the importance of collaboration, inclusivity, and bringing together diverse perspectives, including those of pastors and indigenous knowledge holders, for effective conservation efforts.
- Clayton talked about the importance of exploring traditional fishing practices and encountering marine life first-hand as they provide valuable insights and inspiration for further research and conservation efforts.
- He highlighted how certain animals, and their behaviours are integral to Pacific cultural practices, such as birds indicating fishing spots.
- Clayton described traditional fishing techniques, including using whales to indicate fish location, utilising moon phases for fishing, and smoking fish to maintain quality.
- He discussed ongoing efforts in Niue to protect coastal areas, combat climate change, and address issues such as ghost fishing gear and illegal fishing activities and noted the importance of collaboration with organisations like National Geographic and universities to integrate scientific knowledge and traditional practices and educate fishermen about sustainable fishing methods.

**Call for action:** ku’ualoha and Clayton’s reflections concluded with a call to action to preserve cultural traditions, reconnect with traditional practices, and work towards sustainable relationships with the environment for future generations.

### **Day 2: The Future of Animal Culture and Human-Animal Kinship Approaches**

## **Introduction**

**Speakers: Philippa Brakes and Elise Huffer**

Day 2 began with some thoughts about the discussions on Day 1

### ***Utilising Traditional Knowledge and Scientific Perspectives:***

- A learning from Day 1 is the importance of bringing together traditional knowledge about animals from Pacific communities and Western scientific perspectives. There is good potential for collaboration between communities and scientists to enhance conservation efforts.

### ***Cultural Rescue, enhancing cultural capacity and conservation:***

- The concept of "cultural rescue" that was introduced on Day 1, highlights the importance of preserving cultural practices and knowledge, and building cultural capacity for both humans and animals. Elise suggested that unpacking this notion to revitalise identity and restore relationships with animals, which includes acknowledging the responsibility humans have in protecting and fostering cultural practices among animals, and understanding how this can be integrated into conservation efforts.

*Practical Collaboration Examples: Practical examples of collaboration could include enhancing whale-watching activities and observations by incorporating education on animal culture research and vice versa. There is a need to bring together research and cultural approaches to address conservation challenges comprehensively.*

### ***Impact of Climate Change on Human-Animal Relationships:***

- The question of the impact of climate change on both animal culture and human-animal relationships was raised on Day 1. There is a need to address this equation also.

### ***Sharing Stories and Amplifying Messages:***

- To continue sharing stories and amplifying messages, would it be useful to organise further conferences or events to share stories about relationships with animals on a larger scale? Could this allow us to reach out to broader audiences, including those in Western scientific fields, to raise awareness about conservation and cultural preservation jointly?

### ***Learning from Nature:***

- The importance of learning from the land, sea, and sky was emphasised on Day 1 by ku'ualoha along with the need to shift from viewing nature as an object of study to recognizing it as a source of wisdom and guidance.

The introduction to day 2 called for a holistic approach to conservation that integrates traditional knowledge, scientific perspectives, and cultural practices to address environmental challenges and preserve human-animal relationships in the Pacific region.

## **Day 1 Reflection**

Main Points raised by Day 1 Reflection:

### ***Resonance of Stories Across Cultures:***

- There were reflections on the profound impact of hearing stories from different Pacific Island cultures and how they resonate across vast distances. They highlight the importance of maintaining cultural practices and knowledge, even when they may seem lost or forgotten in contemporary times.

### ***Value of Traditional Knowledge:***

- Traditional knowledge, conveyed through stories and cultural practices, holds significant value in understanding human-animal relationships and environmental changes. The question was raised as to why certain practices have been lost over time and participants explored the potential reasons behind these changes.

***Cultural Enhancement and Climate Change:***

- The concept of "cultural enhancement" is introduced as a means to realign cultural practices with shifting environments, particularly in the context of climate change. The irreversible impacts of climate change on marine ecosystems and the urgent need to address loss and damage, both for human and animal communities was discussed.

***Empowerment through Cultural Identity:***

- Embracing cultural identity and storytelling empowers individuals and communities to recognize the importance of their heritage and traditions. The significance of cultural practices in shaping human-animal relationships and enhancing livelihood security was emphasized.

***Observations of Adaptation:***

- The adaptation of both human and animal communities to environmental changes and how to facilitate faster adaptation processes was considered. The importance of observing coping mechanisms and permanent adaptations in animal behaviours and integrating these observations into conservation efforts was highlighted.

***Advocating for Loss and Damage:***

- A call was made to advocate for addressing loss and damage, including the cultural aspects of these challenges, in climate crisis assessments and initiatives. The need for collaborative efforts to preserve cultural heritage and support communities in the face of environmental threats was underscored.

The reflections underscored the interconnectedness of human and animal communities, the value of traditional knowledge in navigating environmental changes, and the urgency of addressing loss and damage in the context of climate change. The importance of cultural resilience and adaptation in shaping sustainable futures for Pacific Island communities and their animal counterparts was emphasised.

**Session 1: A focus on whales**

Speakers: Lahaina Loris (Tonga) and Fiafia Rex (Niue)

***Tonga***

**Background and Family Business:** Lahaina introduced herself as a whale swim guide and discussed her family's business, which involves whale swimming, scuba diving, and snorkelling in Tonga.

- Despite being part of a tourist-oriented operation, Lahaina expressed her own deep passion for the preservation of whales. She emphasised her approach to whale interactions as one where it is left up to the whale to engage or not with humans.
- She shared her family's history with whales and, in particular, how her father's decision to transition from a Navy officer to a whale swim operator affected her six siblings, all of whom are girls, as being female in Tonga wasn't traditionally associated with ocean-related activities.
- Lahaina reflected on her personal journey, sharing that after initially feeling uncomfortable in the ocean she developed a love for it after her father introduced her and her siblings to scuba diving. She recounted their experiences with whales, describing them as gentle and graceful creatures.
- Drawing a parallel between Tongan culture and whale behaviour, Lahaina compared the gracefulness of whales' movements to traditional Tongan dances. She felt that whales,

with their annual migration to Tongan waters, could be thought of as embodying Tongan values more authentically than Tongans themselves, many of whom live away from and don't necessarily return to Tonga themselves.

This session provided insights into individual upbringing, family business, passion for whale preservation, personal journeys with the ocean, cultural comparisons, and readiness to engage. Lahaina's narrative intertwined personal anecdotes with broader themes of environmental conservation and cultural identity.

### ***Talanoa***

The main points from the conversation were:

- It was noted that an initial fear of whales developed into a deeper connection with whales and a feeling that whales could sense human emotions and react accordingly. There was a sharing of anecdotes about how whales sensed and responded to pregnant guests. However, the importance of respecting whales' boundaries was also emphasised.
- The dominance of foreign-owned whale tour operators in Tonga and the importance of local ownership for cultural preservation and sustainability was also raised. Efforts have been ongoing to train and employ local Tongans in the industry, despite challenges such as seasonal employment and competition from other industries such as fruit picking were shared.
- The importance of traditional Tongan stories featuring women interacting with marine life, challenging modern perceptions of women in the ocean was highlighted. The need for support for running whale watching operations based on Tongan values and traditions was also expressed.

In summary, the conversation touched on local ownership and cultural sustainability in the whale tourism industry, the role of traditional stories in shaping perceptions, and the collective support for running operations aligned with Tongan values.

### ***Niue***

The presentation covered various aspects of OMA Tafua's work and experiences in the field of marine conservation, particularly focusing on whale protection and indigenous empowerment. The main points:

#### ***Establishment of OMA Tafua:***

- OMA Tafua is a non-profit organisation dedicated to the protection and celebration of marine mammal species.

#### ***Engagement with Indigenous Communities:***

- Fiafia stressed the importance of direct engagement with indigenous communities to understand their needs and how to appropriately support them in conservation efforts.

#### ***Cultural Significance of Whales in Pacific Islander Tradition:***

- Whales hold immense cultural significance in Pacific Islander tradition, symbolising good luck and a return to home. Legends of whales underscore the deep connection between whales and Pacific Islander communities.

#### ***Highlighting Women's Contributions:***

- Fiafia highlighted the importance of celebrating and highlighting women's contributions, both historically and in contemporary contexts and amplifying women's voices in various sectors, including conservation was stressed.

#### ***Mitigating Tourism Expectations:***

- Fiafia noted the challenges of managing tourist expectations during whale watching experiences and the need for conservation organisations to engage with tourism operators to ensure responsible practices was emphasized.

***Intersectionality of Conservation and Indigenous Empowerment:***

- The importance of including indigenous perspectives and empowering indigenous communities in conservation initiatives were underscored.

***Concerns about Mining and Environmental Impact:***

- Concerns about the environmental impact of mining activities, particularly in relation to marine ecosystems were raised. and Fiafia raised the need for research into the potential effects of mining activities on marine life.

***Observations of Whale Behavior:***

- Observations of unique whale behaviours were shared: one such example was of whales displaying their white underside seemingly in anticipation of the full moon were shared. Another was the observation of a one-off mother whale seen flapping her tail which was subsequently followed by many more mothers following this trend. These observations demonstrated the complexity and richness of whale behaviour and the importance of ongoing research and observation.

Fiafia's presentation provided insight into the multifaceted nature of marine conservation, emphasising the importance of cultural heritage, indigenous empowerment, responsible tourism, and environmental stewardship in protecting marine ecosystems and species such as whales.

**Talanoa**

The discussion revolved around various aspects of ocean-related topics, ranging from the behaviour of whales to the cultural significance of women's involvement in maritime activities.

- There was speculation about the behaviour of whales, particularly the action of raising and flapping their tails above the surface, possibly as a cooling mechanism due to the warming ocean temperatures. The conversation acknowledged the need for further scientific exploration in understanding this phenomenon.
- Participants expressed concerns about the environmental impacts of deep-sea mining, citing examples of past damage to ocean ecosystems that have yet to recover. The renaming of deep-sea mining to "deep-sea harvesting" as a euphemism and a means to circumvent regulatory hurdles was also discussed.
- The importance of cultural narratives and stories in preserving and understanding relationships with the ocean was highlighted. Participants shared stories from their respective cultures, emphasising also the need to empower women in maritime activities and preserve traditional knowledge.
- The discussion delved into the role of women in maritime traditions and the need for gender equity in preserving cultural practices. Participants discussed efforts to involve women in fishing and sailing/navigation activities traditionally dominated by men, emphasising the importance of cultural continuity and adaptation.
- Traditional practices related to moon phases and tide predictions were discussed, particularly in relation to fishing and whale behaviour. Participants shared insights into how these practices influenced fishing activities and maritime safety.

The conversation reflected a multidimensional approach to ocean-related issues, encompassing scientific inquiry, cultural preservation, gender equity, and traditional ecological knowledge. Participants emphasised the importance of holistic perspectives in addressing the complex challenges facing ocean ecosystems and maritime communities.

## **Session 2: Practise and Research pathways**

**Speakers: Chloe Molou (Vanuatu), Omar Ubedei (Palau), Ron Vave (Fiji)**

### **Vanuatu**

The main points presented by Chloe were:

#### ***Turtle Conservation Efforts in Vanuatu:***

- A play in Vanuatu about turtles and their alarming decline by the Wan Smol Bag theatre group in 1995 led to the formation of a network called "Vanua tai Conservation and Environmental Advocacy." The network, established by Chiefs from North Efate, focuses on monitoring turtles and has been expanded to include terrestrial and marine conservation efforts at the community level.

#### ***Volunteer-Based Network:***

- The network operates on a volunteer basis, with a small core team from Wan Smol Bag providing support and coordination. Over nearly 30 years, the network has grown to include about 400 monitors spread across almost every island in Vanuatu, forming 26 sub-networks and operating in 120 communities.

#### ***Conservation Activities:***

- The network engages in various conservation activities, including marine protected areas, turtle monitoring, and mangrove tree planting. Training, workshops, and awareness campaigns are organised to involve communities in conservation efforts.

#### ***Field Trips and Data Collection:***

- Coordinators organise field trips for nesting surveys and beach cleanups, as well as waste audits to assess pollution. Data collected over the years, includes turtle nesting records dating back to 1973. The data is being organised and analysed for conservation purposes.

#### ***Community Engagement and Communication:***

- Facebook groups have been utilised for communication among monitors, where they share updates, photos, and forum discussions. Efforts have been made to engage communities in conservation through education and awareness campaigns, including the creation of turtle ID cards with local language names.

The network illustrates a comprehensive approach to turtle conservation in Vanuatu, involving community participation, education, data collection, and communication strategies to address threats to turtle populations and marine ecosystems.

### **Palau**

The main points presented by Omar were:

#### ***Dugong Monitoring in Palau:***

- The dugong monitoring program led by Ebiil Society involves regular surveys conducted at different phases of the moon, including quarter moons, full moons, and new moons. Data on turbidity, water temperature, wind speed, and weather conditions are collected, along with GPS-tagged photographs and drone imagery to study dugong habitats and behaviour.

#### ***Partnerships and History:***

- The monitoring initiative began in 2019, initiated by Ebiil Society in partnership with Waves Research, to fill gaps in D\dugong monitoring, particularly in the northern region of Palau. The program aims to standardise monitoring methods and compile data over a five-year period.

#### ***Fieldwork and Community Engagement:***



- Fieldwork is conducted by a team from Ebiil Society, including staff members and local captains, who engage with fishermen to gather traditional knowledge about dugong sightings and feeding areas. Efforts are made to involve children through educational initiatives, which include the creation of a book, *Mesekiu er Belau*, documenting the cultural and ecological significance of dugongs (see <https://www.lulu.com/shop/caroline-e-ferguson-and-ann-singeo-and-ngesur-victor-and-zharika-skebong/mesekiu-er-a-belau-dugongs-of-palau/ebook/product-dkk8q2.html?page=1&pageSize=4>).

***Cultural and Environmental Importance:***

- The dugong holds cultural significance in Palau, akin to mythical creatures like unicorns, and efforts are made to integrate cultural perspectives into conservation initiatives. Data collected from monitoring efforts have been presented to community chiefs and incorporated into state zoning and master planning to protect dugong habitats from development.

***Impact on Policy and Conservation:***

- The data presented to community chiefs and legislators has influenced decision-making regarding land use planning and development projects, including military base construction. Additionally, specially managed areas are being designated based on Dugong monitoring data to ensure habitat protection.

***Scientific Collaboration and Data Management:***

- Collaboration with Waves Research facilitates data compilation and analysis, ensuring that scientific research informs conservation efforts effectively.

The point raised by Omar highlighted the value in using a multidisciplinary approach to dugong conservation in Palau, integrating traditional knowledge, scientific research, community engagement, and policy advocacy to protect this culturally and ecologically significant species.

**Systematic Literature Review  
Presented by Dr Ron Vave**

1. Systematic Literature Review Proposal:
  - It was proposed that a systematic literature review on human-animal relationships should be conducted in the region to understand existing research, identify gaps, and inform future projects.
2. Methodology and Framework:
  - The PRISMA method was suggested as a framework for conducting the systematic literature review, focusing solely on the review process without meta-analysis. The goal would be to gather information from various sources, including articles, books, reports, and even videos, to comprehensively cover the topic.
3. Visual Representation of Data:
  - A mock data visualisation was presented to demonstrate how the systematic literature review findings could be represented. A heat map was used to show preliminary research on the quantity of publications related to human-animal relationships in different countries and ecosystems.
4. Coding and Analysis:
  - It was suggested that literature could be categorised based on variables such as ecosystems, species, engagement level, language, and sentiment. This process would allow for a deeper understanding of the existing literature and its implications.
5. Quantitative Approach:

- A systematic literature review takes a quantitative approach to analyse data over time, track trends in research focus areas, and could be used to identify patterns in engagement with human-animal relationships.
6. Publication Listing and Inclusion Criteria:
    - The proposed systematic literature review would include a list of all references considered, along with details of exclusion and inclusion criteria. The inclusion of different languages and media types was also discussed.
  7. Collaborative Approach:
    - Involving researchers from various countries in the review process to ensure comprehensive coverage and understanding of regional literature was suggested. To achieve this training may be required for those unfamiliar with systematic literature review protocols.
  8. Value and Impact:
    - The proposed systematic literature review was seen as a valuable tool for understanding the diversity of existing research, informing future projects and policies, and facilitating interdisciplinary collaboration.

In summary, the proposed systematic literature review would aim to provide a comprehensive overview of human-animal relationships in the region, utilising a structured approach to analyse existing research and inform future endeavours. The process involves data collection, coding, analysis, and visualisation, with the potential for significant impact on research, policy, and collaboration efforts.

Participants agreed that pursuing a systematic literature review on human-animal relationships in the Pacific Islands context was a valuable exercise, and that this initiative should be pursued.

### **Session 3: Conservation, language, and culture - *Networks, initiatives, challenges, opportunities, and ways forward.***

Speakers: James Tremlett (Aotearoa/New Zealand), Paul Fizin (Kanaky/New Caledonia), Jonathan Liljeblad (Australia)

#### ***Networking***

James gave a brief presentation on various regional networks related to conservation efforts that are relevant to the meeting topics:

1. ***Pacific Islands Roundtable for Nature Conservation (PIRT)***: This network, has been active for about 27 years and involves major conservation organisations in the Pacific region, including intergovernmental organisations. It consists of six working groups, including the Nature Culture working group, focusing on biodiversity conservation.
2. ***Pacific Nature Conference***: PIRT organises a conference every five years, focusing on nature conservation. The upcoming conference in 2026, to be held in Niue, could serve as a platform to address topics such as relationships with animals and species conservation more prominently.
3. ***Ocean Rights and Kinship Alliance (ORKA)***: This newer network emerged from a workshop aimed at exploring legal frameworks related to the rights of nature, particularly in the ocean environment. It seeks to give voice and agency to ocean entities and is aligned with the goals of the UN's Ocean Decade for Sustainable Development.

These networks in Oceania provide opportunities for collaboration, knowledge sharing, and exchanges of ideas among conservation practitioners and researchers in the Pacific region. The importance of storytelling and effective communication in biodiversity conservation efforts was emphasized and it was suggested that these networks could serve as platforms for promoting more compelling narratives about conservation goals and values.

Paul gave a presentation on the importance of focusing on language in conservation drawing on his experience working at the Academy of Kanak Languages in New Caledonia which works on the promotion of the diverse Kanak languages. He presented an activity with animal cards which demonstrate the relationship between culture and conservation. Paul created the animal cards as a way to connect animals with natural signs in kanak languages and as a means of teaching both language and the importance of conservation. The participants matched the cards and discussed connections between the animals and their cultural significance. Paul developed these cards as a teaching aid for children in schools.

As part of his presentation, Paul gave a range of examples from Kanak culture linking sea animals and planting and the growth stages of ceremonial crops such as yam, as well as taboos around consumption of turtle meat without proper rights. He discussed the symbolism of the octopus in Kanak leadership with its nine brains and three hearts, illustrating the importance of consensus.

### **Animal-culture knowledge Protection**

The presentation by Jonathan emphasised the importance of not only producing knowledge but also considering how it is utilised and the impacts of knowledge once it is disseminated. He shared that it was encouraging to note the extensive discussion over the two days on the compatibility and interaction between traditional knowledge and scientific research but that there was a need to ensure constructive outcomes that would benefit communities. He provided a cautionary tale of his past experiences advising indigenous communities in Myanmar on creating a research protocol. He recounted that despite good intentions of the work, the systemic structures privileged certain perspectives, leading to outcomes that marginalised indigenous voices in favour of commercial interests.

Knowledge transfer was a concern in cases where legal and policy processes could favour commercial interests over indigenous communities' interests, leading to loss of control over knowledge and potential negative impacts on the natural world.

Jonathan invited participants to a Round Table Discussion that he was organising to explore issues of knowledge transfer between academic research and policy settings, particularly concerning differing priorities.

### **Talanoa**

The discussion that followed raised the following main points:

- How does animal- culture knowledge align with the UN Declaration of the Rights of Indigenous Peoples (UNDRIP)?
- The challenges associated with the implementation of UNDRIP were discussed. It was agreed that while UNDRIP is not legally binding, it holds weight similar to that of the Universal Declaration of Human Rights. However, the commitment to UNDRIP varies

among different states, with some only supporting it in principle but not implementing it within their borders.

- The implementation of UNDRIP depends on the discretion of individual states, which may choose whether or not to follow through on their commitments. It was noted that indigenous communities often span multiple states, leading to disparities in the recognition and protection of their rights.
- UN agencies are obligated to promote compliance with UNDRIP as a UN document. However, they emphasise that simply having rights is not enough; indigenous communities must actively defend and exercise their rights, which may require resources and expertise that many communities lack.
- The resource constraints faced by many indigenous communities, include limited access to education and financial hardship. The disparity between the rights recognized on paper and the realities faced by indigenous communities were highlighted.
- In summary, the conversation explored the complexities of implementing legal frameworks such as UNDRIP and highlighted the challenges faced by indigenous communities in defending and exercising their rights, particularly in the face of resource constraints and varying levels of state commitment to indigenous rights and biodiversity.

## **Workshop Conclusion**

The participants agreed on a few outcomes that would be useful to pursue in the context of the work on animal culture and animal-human kinship. They are listed below:

- 1. Conduct a Systematic Literature Review on** animal culture and animal-human kinship in the Pacific Islands region
- 2. Grassroots Science Training on animal culture:**  
Draft a proposal to organize training and a manual on animal social learning and behaviour that can be used by local communities
- 3. Promote Indigenous and local Priorities:**  
Work with indigenous communities to prioritise their perspectives and knowledge in conservation initiatives
- 4. Consider organising a conference** that focuses on human-animal relationships from a range of diverse perspectives
- 5. Create a promotion video discussing** animal culture and human-animal kinship in the Pacific Islands context

Additional recommendations were also proposed by the participants. These include:

- 1. Invest in Local Capacity Building:**  
Advocate for investing in-country workshops and capacity-building initiatives to enhance knowledge sharing and freedom, rather than solely focusing on large delegations attending COP meetings, where individual voices and cultural nuances can be lost.
- 2. Integrate Research and Conservation Funding:**  
Explore strategies to bridge national research funding and philanthropic conservation funding to maximise resources for conservation initiatives.

- 3. *Ecological Restoration:***  
Develop strategies for restoring and caring for ecological systems, emphasising indigenous knowledge and practices.
- 4. *Promote a One Health Approach:***  
Foster connections between traditional knowledge and modern science, emphasising the interconnectedness of ecosystems and human health and collaborate with other actors in this field.
- 5. *Utilise AI for Data Recording:***  
Suggestion to implement AI technology for recording and sharing ecological data, promoting collaboration and knowledge exchange among stakeholders, (OMA Tafue to share their model on whale monitoring using AI).
- 6. *Incorporate Indigenous Knowledge:***  
Develop a model or plan to integrate indigenous knowledge into existing conservation efforts, ensuring local perspectives are considered and valued.
- 7. *Localising Research Initiatives:***  
Plan to encourage local research initiatives involving local communities, utilising research grants to address conservation challenges at the grassroots level.
- 8. *Supporting Local Conservation Efforts:***  
Provide greater support for local people in conservation efforts through training, capacity building, and resource allocation.
- 9. *Continuation and Collaboration:***  
Establish a working group under the auspice of XYZ, to continue collaborative efforts and build synergies between diverse stakeholders involved in conservation and cultural preservation.
- 10. *Integrate Traditional Knowledge with Science:***  
Develop systems and protocols to facilitate collaboration between traditional knowledge holders and scientific researchers, fostering mutual learning and understanding.
- 11. *Methodology Handbook for Indigenous Communities:***  
Create a handbook outlining methodologies for indigenous communities to engage with researchers and vice versa, promoting respectful and effective collaboration.
- 12. *Curriculum Development for Schools:***  
Draft a document on animal culture for curriculum development in Pacific schools, integrating indigenous perspectives and conservation principles.
- 13. *Hermit Crab Shell Alternatives:***  
Formulate a plan to involve local communities in assisting hermit crabs in finding alternative shells and promoting community engagement in biodiversity conservation efforts.

## ANNEX I

Potential intersections between the conservation of non-human cultures, perspectives on these cultures from across diverse human cultures and the intrinsic value of non-human cultures

