

Indigenous knowledge as  
situated practices:  
Understanding fishers'  
knowledge in the Solomon  
Islands.

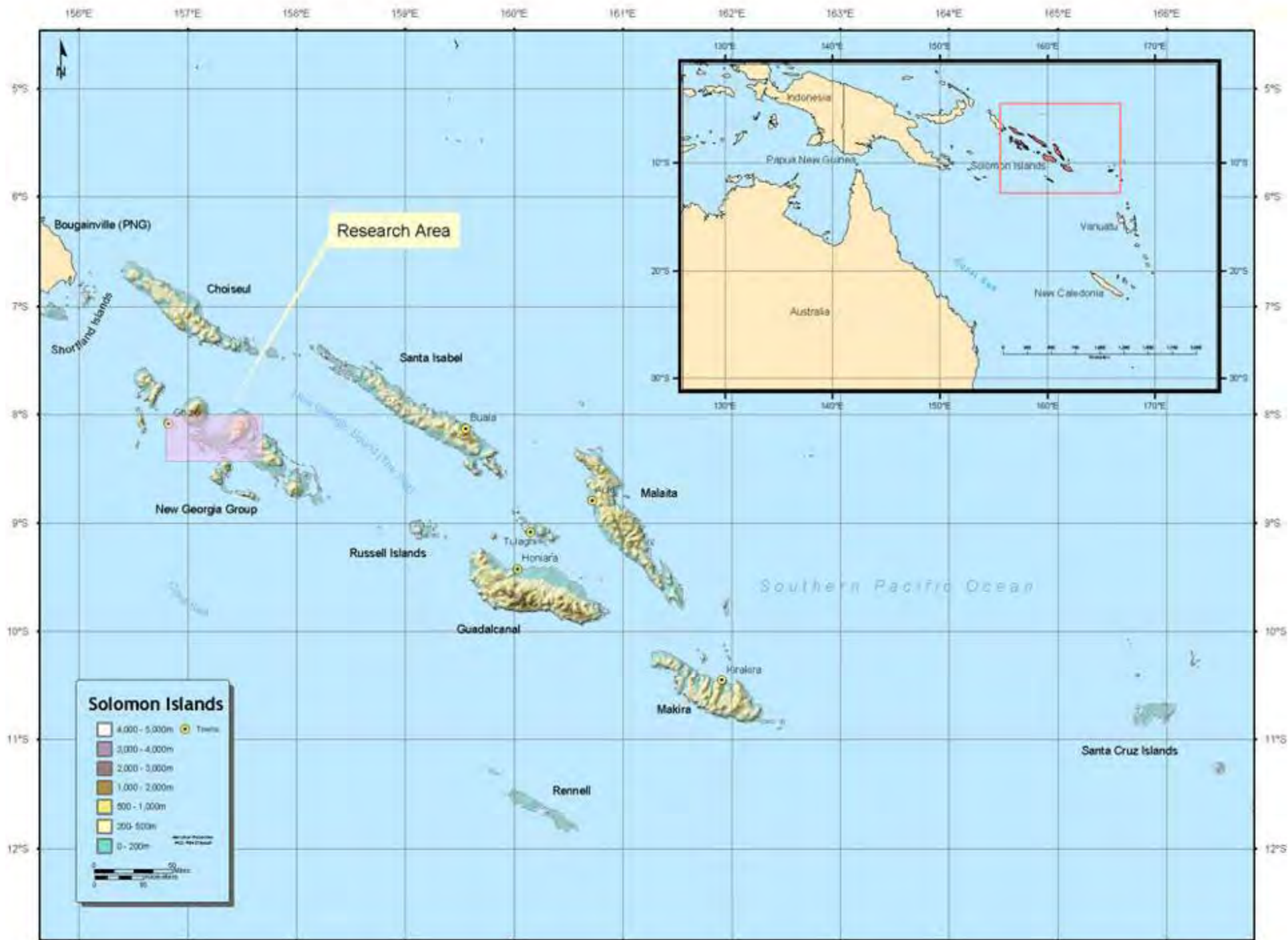
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## Objectives

1) Summarize how geographic tools (GIS and remote sensing) can be integrated with indigenous ecological knowledge, artisanal fishing data, along with biophysical and other information to assist in the design of MPAs.

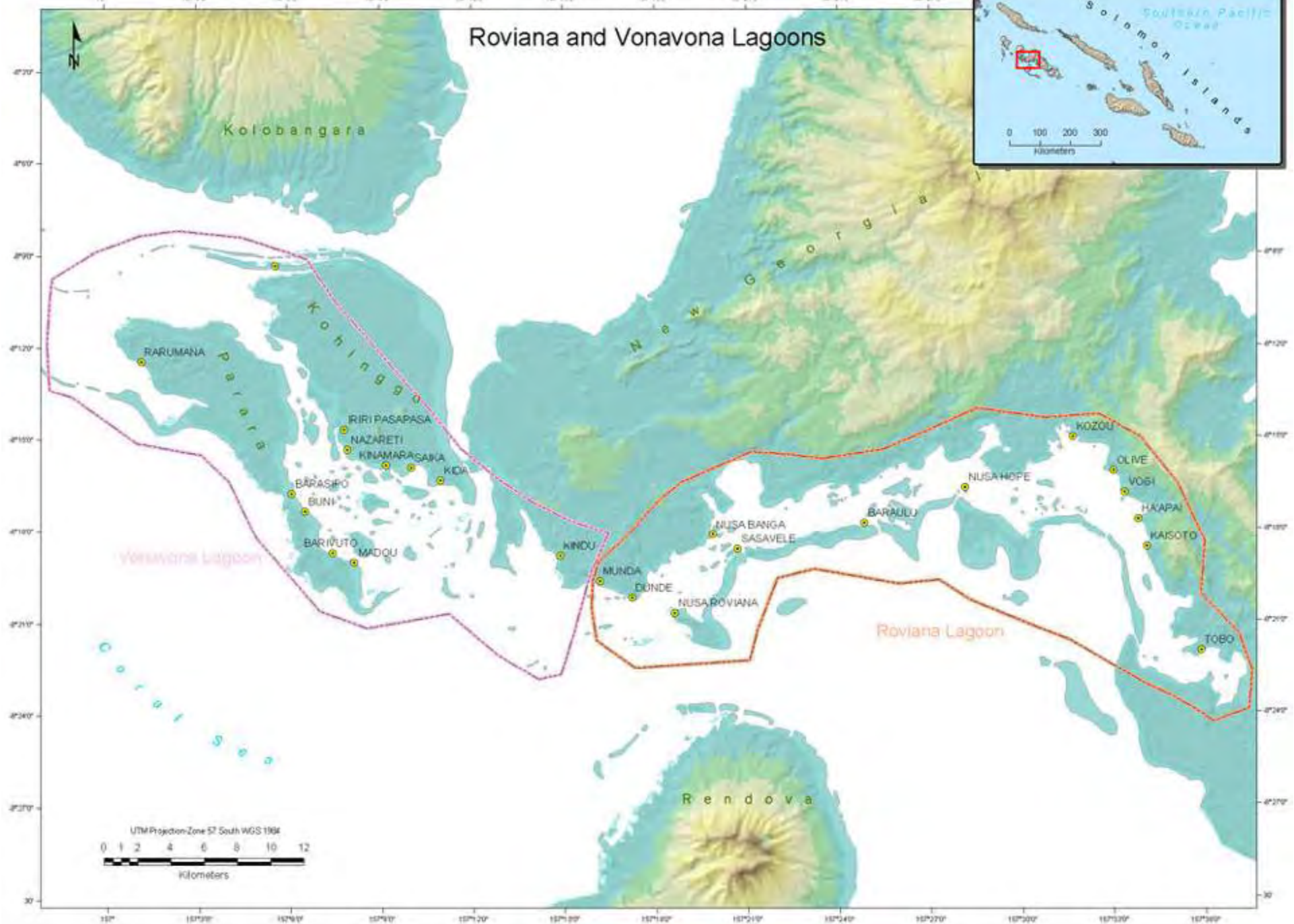
2) Examine the epistemological assumptions informing many indigenous knowledge studies and contrast them with results from my ongoing research and environmental management program in the Solomon Islands.







# Roviana and Vonavona Lagoons





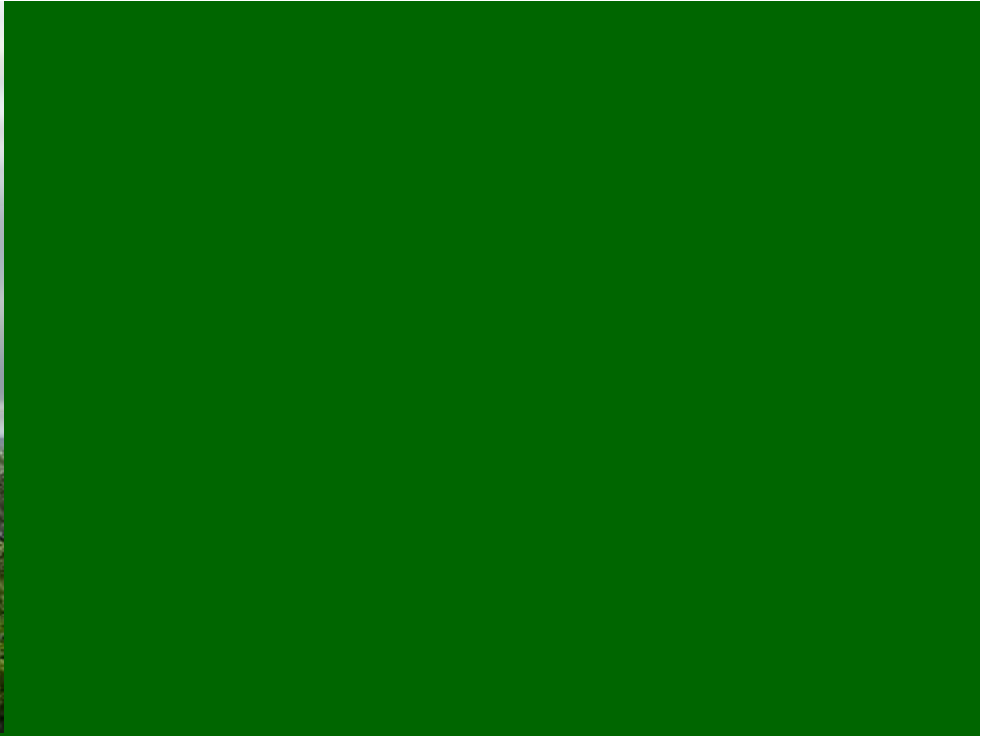
















**NO BETEL NUT**  
**IU SPITIM - IU KLINIM**

A yellow rectangular sign is mounted on a white wall. At the top center is a purple circle with a diagonal slash through it, containing two blue betel nuts. Below the symbol, the text "NO BETEL NUT" is written in large, bold, purple capital letters. Underneath that, the text "IU SPITIM - IU KLINIM" is written in smaller, bold, black capital letters.





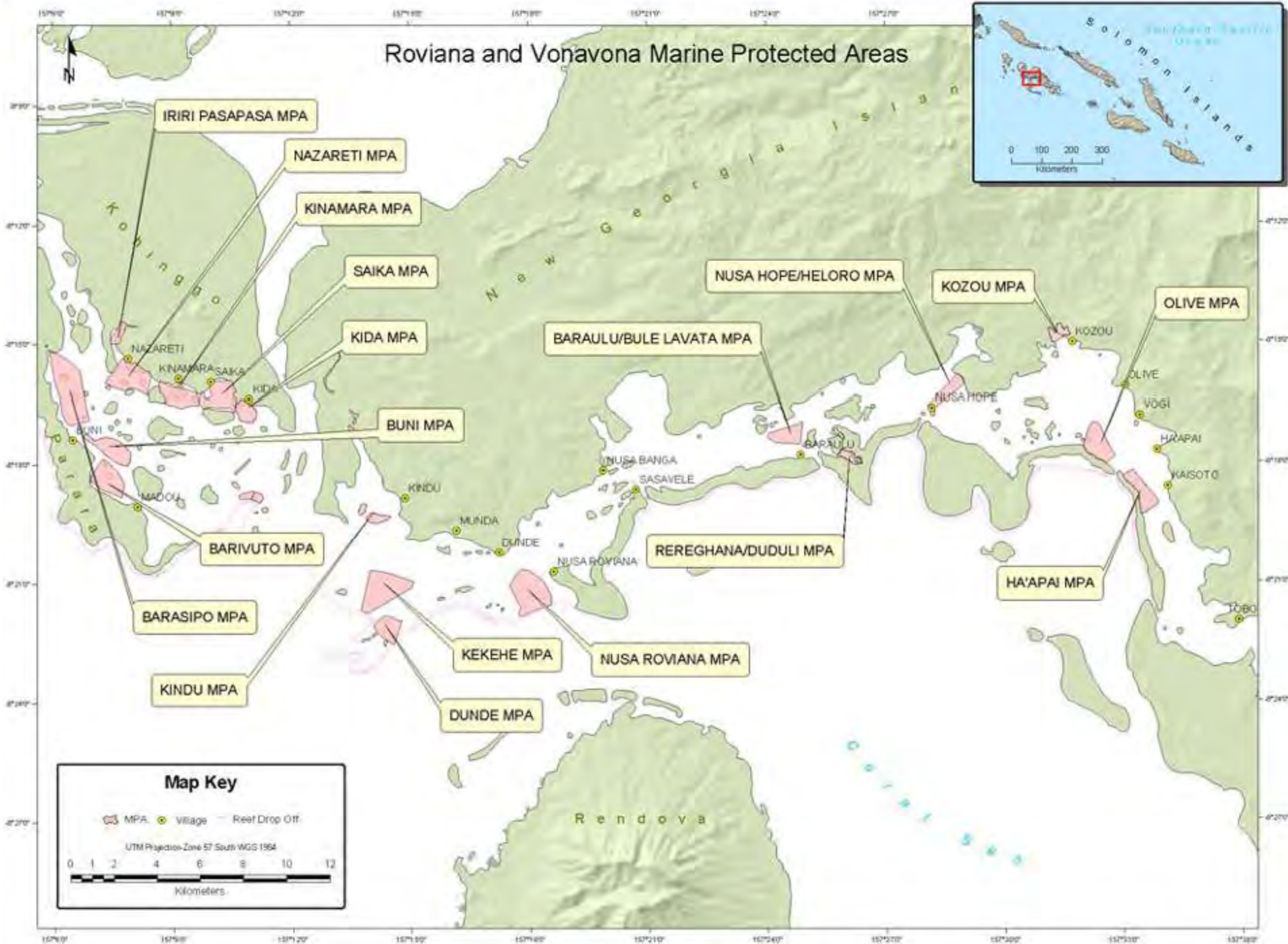






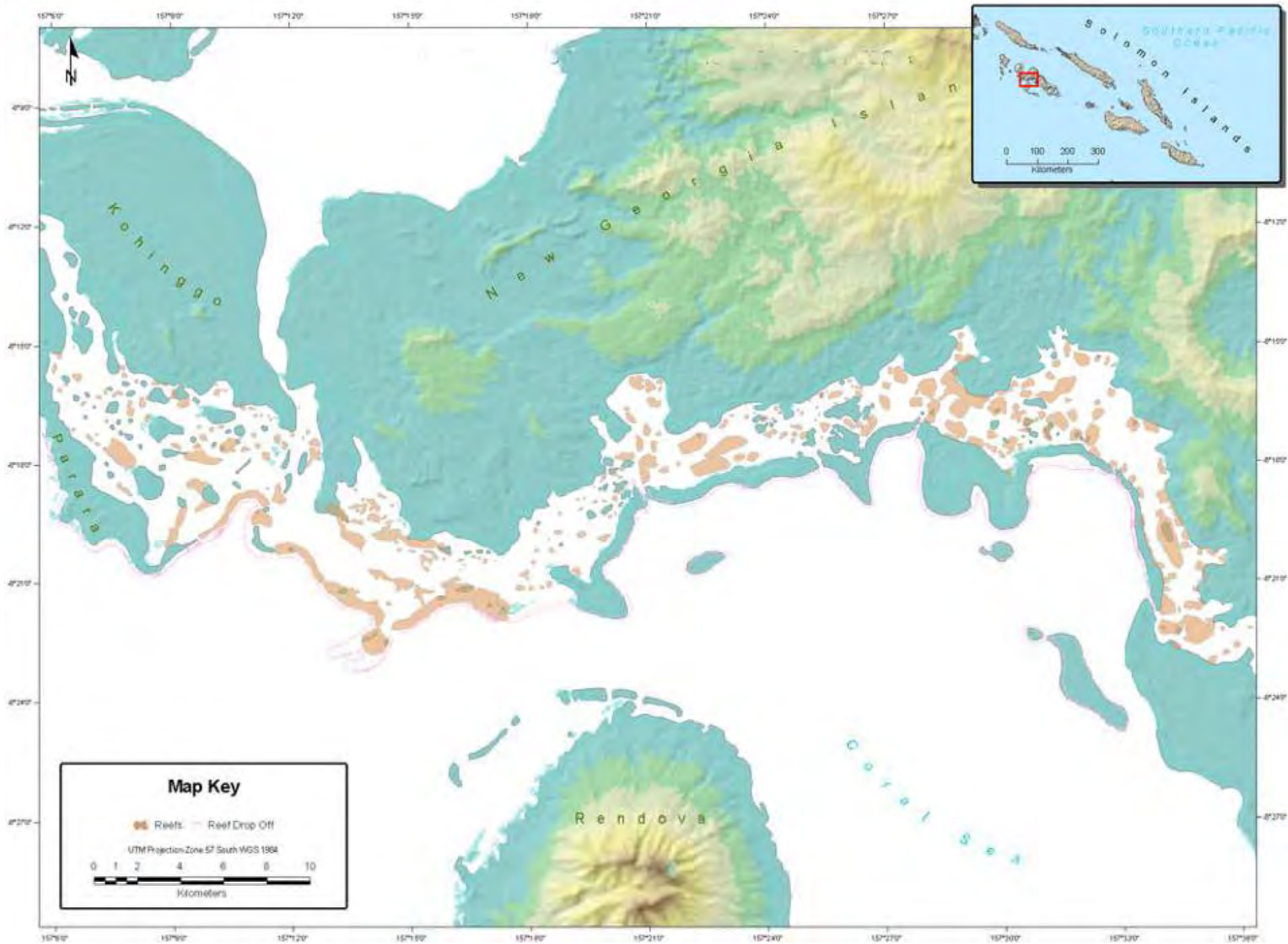


# Roviana and Vonavona Marine Protected Areas









Habitat mapping: Freehand sketch maps not detailed enough.



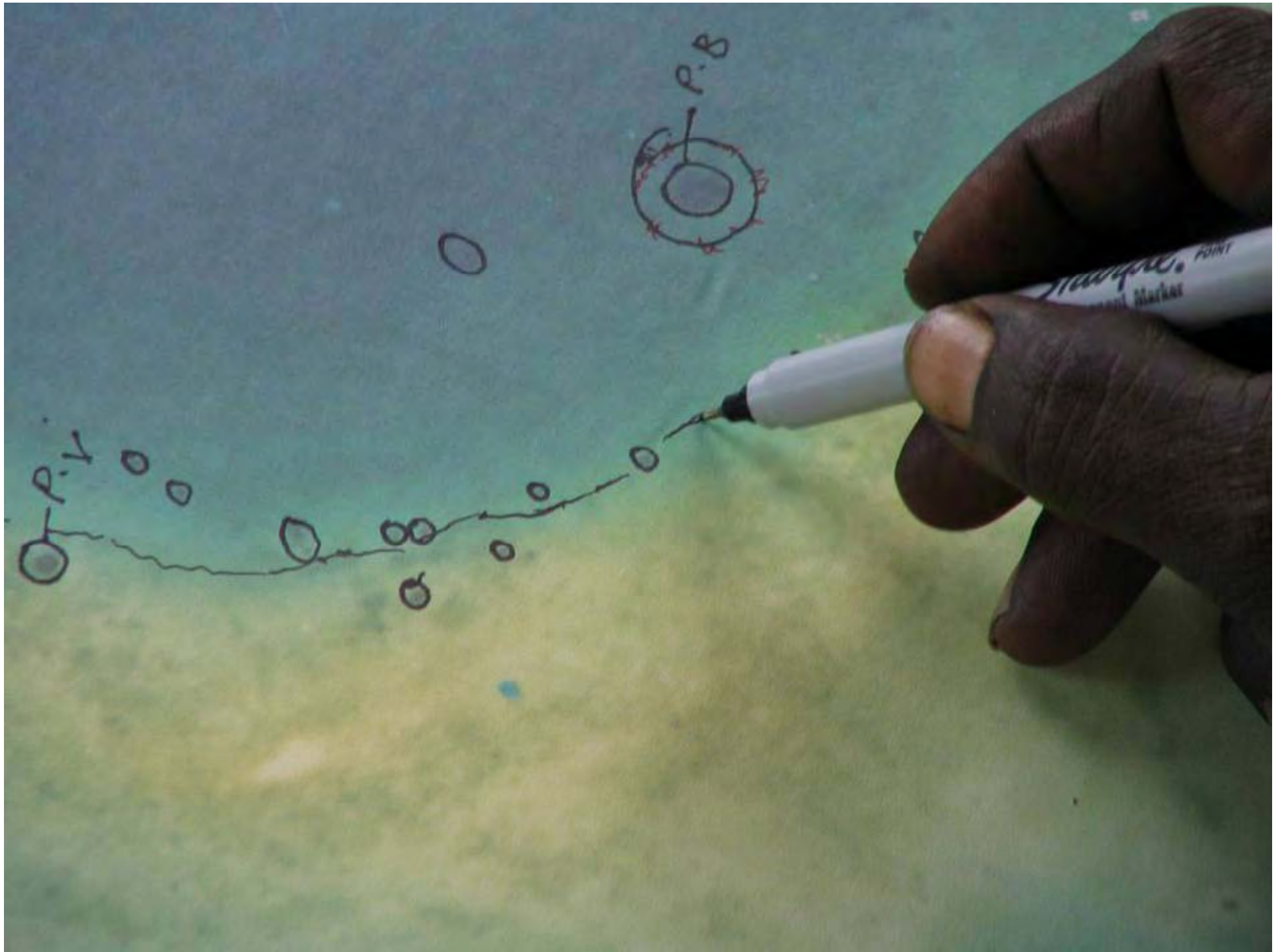


-Air photographs were interpreted by local informants and their visual assessments incorporated into the GIS.





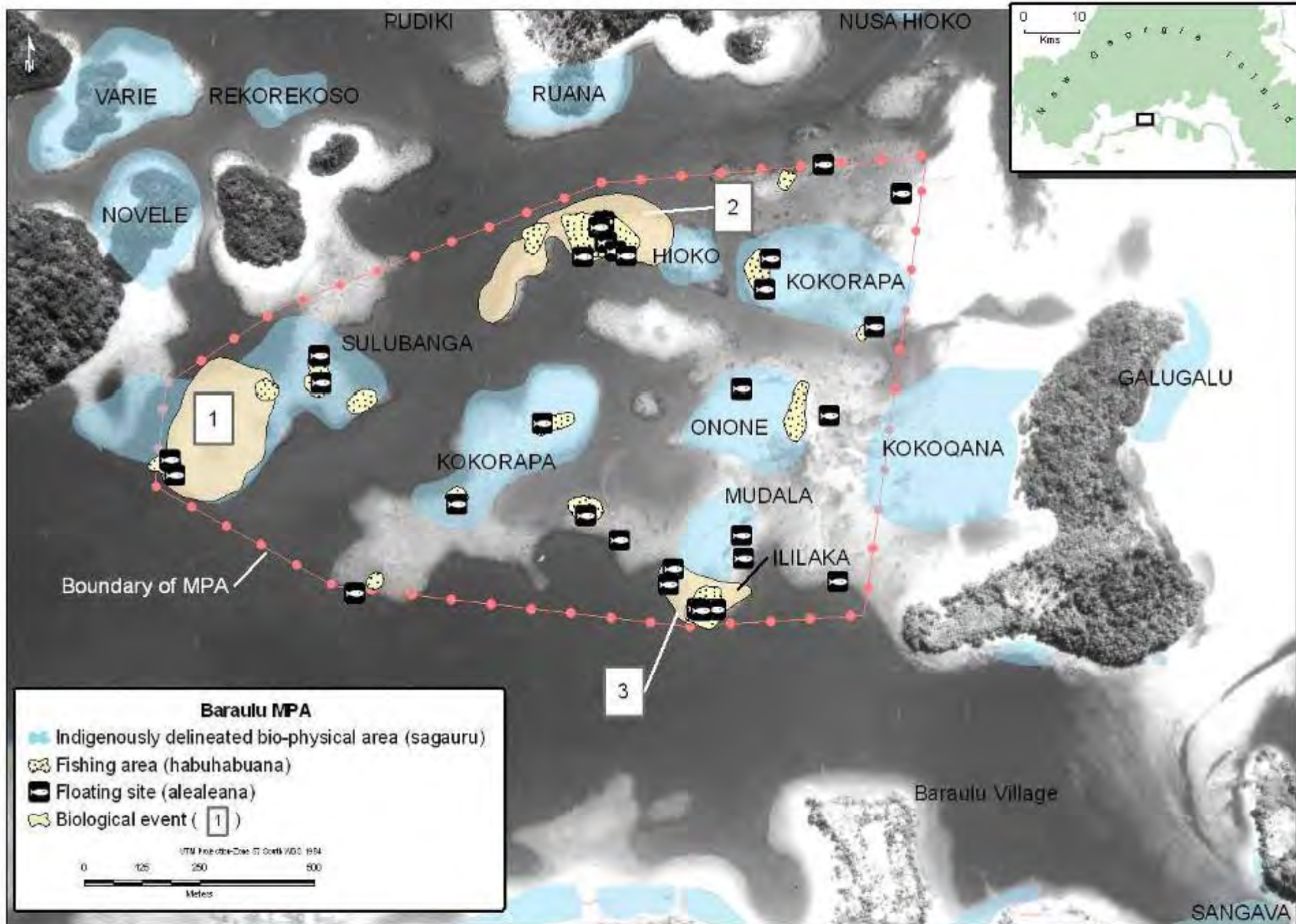




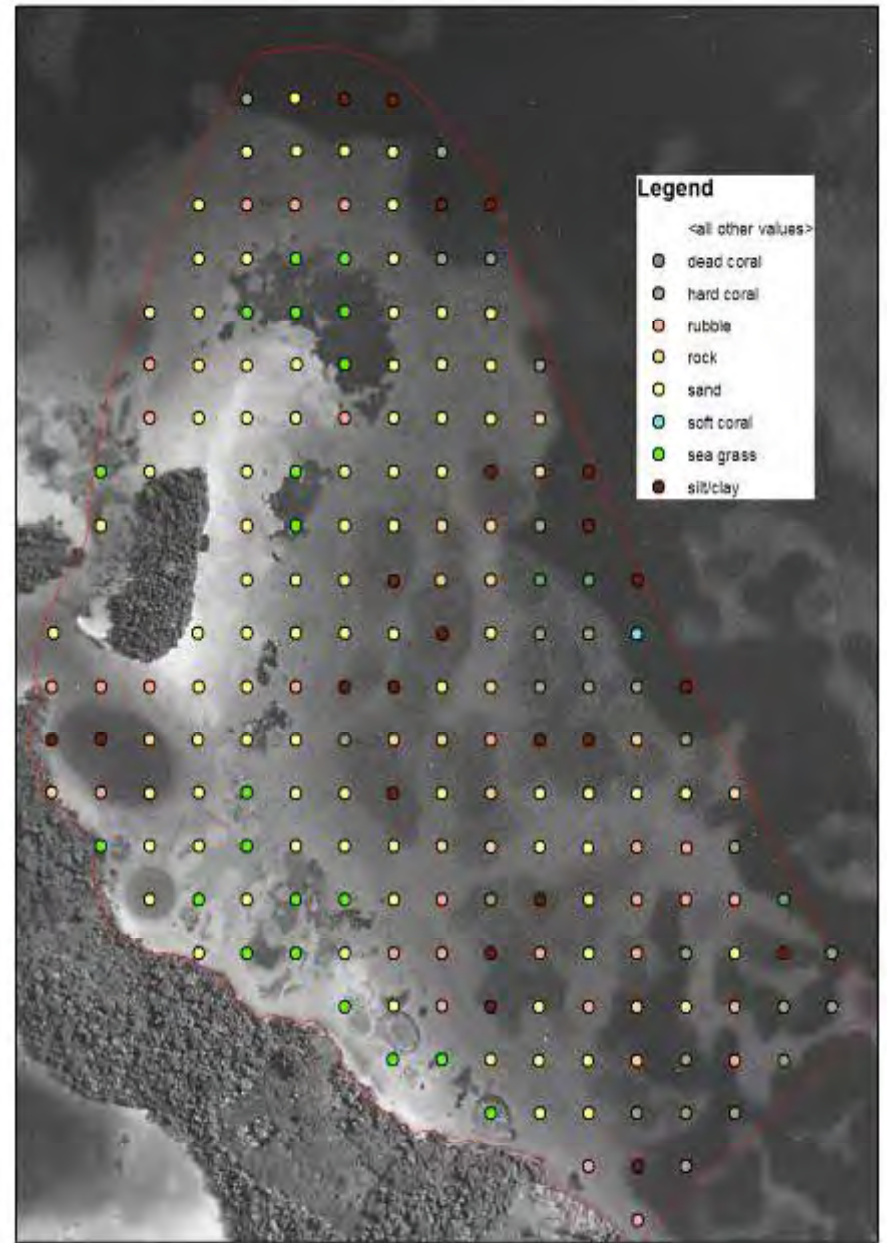
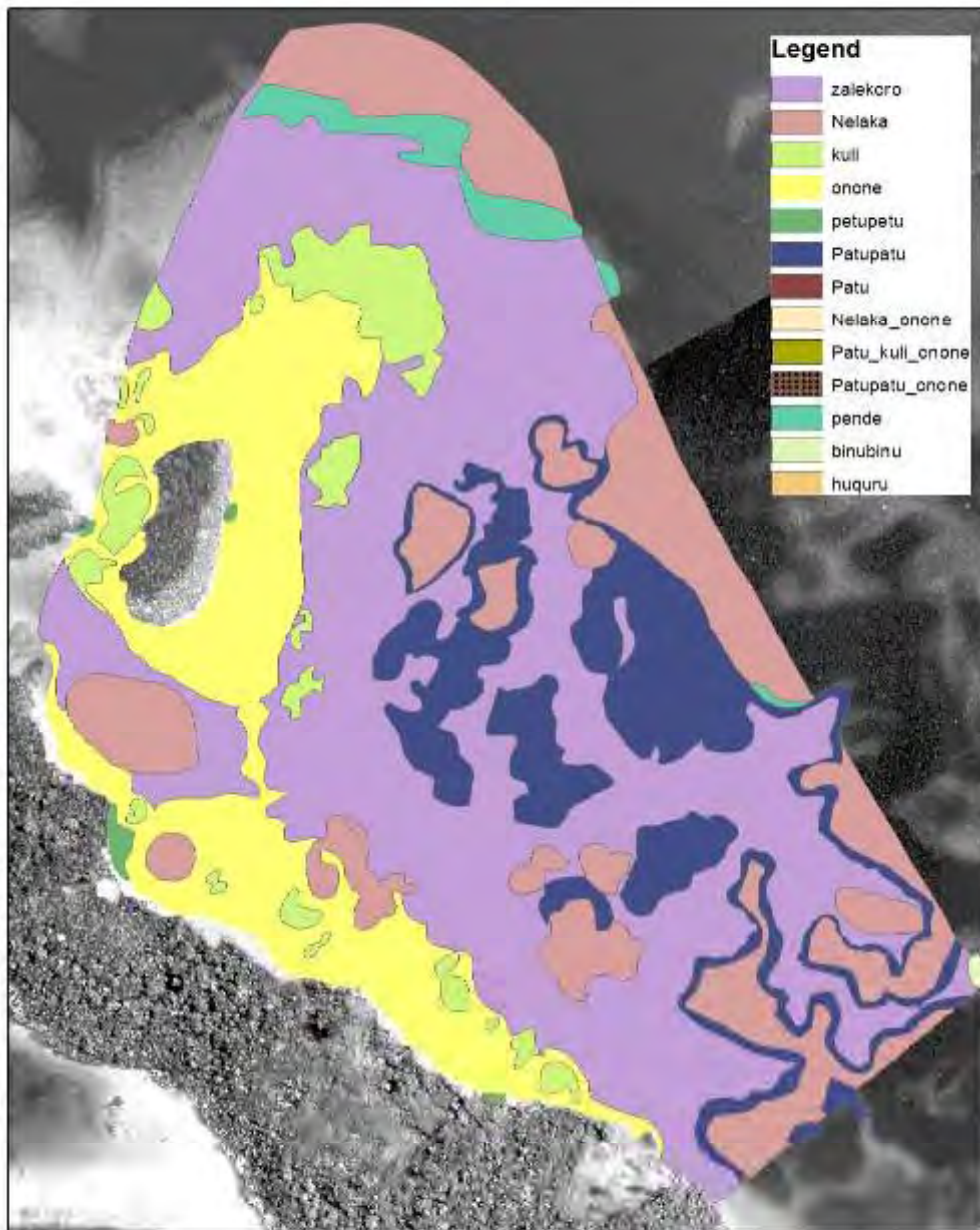
















How are we to interpret these results?

Is this evidence that indigenous people have empirically accurate knowledge similar to scientific knowledge?

Do these results suggest that environmental managers and researchers should pursue similar sorts of studies in other social and environmental contexts?

Prevailing definitions of “knowledge” in indigenous knowledge studies rest on specific epistemological assumptions.



Couzin, J. 2007. Opening doors to native knowledge. *Science* 315:1518-1519.



changing winter weather is altering the landscape.

Scientists and native knowledge can be speaking an in-depth, up-close language. Whereas scientists rely on satellite data, sea-ice extent, the more intimately—local crack—says Shari Gearhead, a geologist at the University of Colorado in Boulder. In 2003, she and local hunters crossed sea-ice hunting grounds in Alaska and Greenland. “They see ice dynamics that we can’t track out alone.” They are in the same place moving now, and the weather is not as expected,” Gearhead says.

Such attention to detail is what Gearhead and walrus biologist G. Carleton Ray of the University of Virginia, Charlottesville, do in the Northern Bering Sea. In Lawrence Island, not only do they examine hunted walrus blubber for everything from gut parasites to the texture of their blubber, they also have a far more descriptive language than biologists. *Ayvitquma*, for example, means mother, yearling, and young calf in one group. *Amitnaqut nunavager* defines a group of walrus isolated on an ice floe. Such precision, Krupnik says, makes the historical record passed through generations especially valuable.

So far, some of these recollections match up well with scientific data. As part of a project with the Sami reindeer herders around Abisko and Sami academics from northern Norway, Callaghan has found that Sami observations of how snow depth has changed over 50 years generally jibe with long-term data

Furthermore, how to use indigenous knowledge is something that dogs Arctic researchers. “Human knowledge is not scientific knowledge,” says Tero Mustonen, a subsistence fisher in the Finnish Arctic who also studies human ecology. “It’s not universal, it’s not systematic, it’s not free of biases.” And



In it together. Baffin Island locals Reema Qillag, Loralie Joanaris, and Andy Murray help install a monitoring station to assess changes in sea ice.

Gearhead does in her travels onto sea ice. The hope is that such collaborations might ease the translation of indigenous knowledge into scientific data, where that’s appropriate, and make science more useful to the locals.

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st November in which rain, ze atop the reindeer to g how the which until artists are

For their part, indigenous people and their governments are becoming ever more proactive. In Canada, they actively screen projects that fall into their geographic region. For a caribou-monitoring network called the Arctic Reindeerlands Ecological Knowledge Co-op., Inuit in Canada and Alaska conduct interviews with other residents about caribou populations. “It’s local folks running the show,” Kofinas says.

Pungowiyi, the Alaskan native, also thinks it’s time to get more involved with the “ground squirrels.” He recently submitted his first proposal to the U.S. National Science Foundation with Henry Huntington, a social scientist in Eagle River, Alaska, to examine climate change effects that indigenous people are observing on land and in the ocean. Understanding the Arctic requires more than numbers and satellite photos, he insists. There’s a need to “put a human face to the effects,” he points out. “That’s what we’re trying to get to.”

—JENNIFER COUZIN

“One Sami said, ‘The sky isn’t as blue as it used to be.’ He was talking about changing atmospheric conditions, but it was an observation I could not accept,” says Callaghan. “You can’t remember color; you can’t pass it down through generations.”

Common definition of indigenous knowledge: “cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment” (Berkes 1993:3).





How do Roviana fishers approach knowledge?

Key features:

-Organized around a central principle of pragmatism that privileges the perceived outcomes of activities over metaphysical or abstract explanations.





-*Mana*: Life fluid  
or Efficacious  
condition?



Alternative to “cognitive” approach to knowledge--  
*practice perspectives:*

- Questions cognitive bias.
- Stresses the emergent, relational, embodied, and contextual dimensions of knowledge.
- “Knowledge” is generated and sustained during context-specific activities.
- From a practice perspective, *all* knowledges are local and contextualized.
- Provides a theoretical basis to dissolve culturally-specific hierarchies of knowledge.
- Entails “situated messiness”.

Why does this approach to local knowledge matter in contexts like the US?

- Encourages exploration of forms of knowing that may be ignored and yet may be important to the success of an MPA.
- Draws our attention to the contexts of engagement in which knowledges are applied.





## Acknowledgments

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