

TUVALU



TIDES OF THE FUTURE



Tuvalu is sometimes described as a drowning island – 26 square kilometres of land surrounded by 900,000 square kilometres of water. With six atolls and three reef islands, the highest point is only five metres above sea level. Within the crystal clear ocean that surrounds this tiny nation there lies a wondrous underwater world. And it's here that a former NZAID scholarship student is working hard to conserve Tuvalu's marine life. **Nicole Were** talks to Vili Iese about his work.

Top: Vili Iese with a rare green turtle.

Above: Understanding Tuvalu's marine life will empower the people of Tuvalu to make important decisions about their environment – A Wheeler, DOC.

WITH UNRULY hair, a cheerful glint in his eye and a mischievous grin, Samoan-born Vili Iese is passionate about conservation. Right now, he's undertaking ground-breaking research in Tuvalu's waters to help build a sustainable future for Tuvalu's community of almost 12,000 – a community who rely heavily on fishing and farming to survive.

The former NZAID scholarship student gained a Bachelor degree in Biology in 1999 and then went on to complete a Master of Science in 2005 at the University of the South Pacific, in Fiji. Today he's the project coordinator for a large marine species research project in Tuvalu – a collaborative project between New Zealand's Department of Conservation (DOC) and the Department of Environment in Tuvalu, funded through NZAID's Government Agencies Fund.

Recognising that there was a lack of data and knowledge on marine life around Tuvalu, the Tuvalu Government asked New Zealand for assistance – and so the cetacean and large marine species project came into being. The project looks at dolphins, whales, sharks, turtles and stingrays, aiming to find out more about these large marine species in Tuvalu's seas while providing training in marine research and conservation for Tuvalu government staff, non-governmental organisations (NGOs) and community members.

There are many players involved in this project: community liaison and education is led by Department of Environment and Funafuti Island Council; field research and training is undertaken by marine scientists and DOC;

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and other regional organisations such as the Pacific Regional Environment Programme (SPREP) take part where there is interaction with regional initiatives. At the centre of it all is Vili, a hands-on coordinator, participating in both the research and education activities.

"I started off as an under-utilised plants specialist but after being approached by the Director of Environment and going out on a boat to conduct marine research for the first time, I was hooked," says Vili describing how he changed his focus to work with whales, sharks and dolphins.

The project started with a workshop in Tuvalu's capital, Funafuti, to bring together government officials from the Departments of Environment and Fisheries, along with NGOs and Funafuti community representatives to discuss what was known about marine life in the region and how they could assist the collection of data. Filling the knowledge gaps of what's in the sea that surrounds them became the over-arching objective of the project.

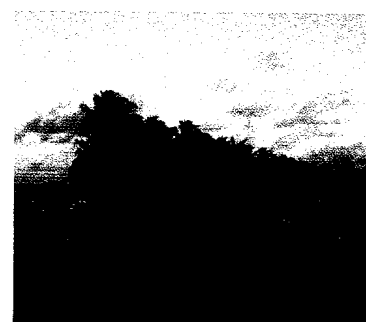
This is the first time research like this has ever taken place in Tuvalu – and the information will empower the people of Tuvalu to make important decisions about the future of their environment. It's research that is likely to lead to change.

Take whales, for example. In August 2007, a mature female sperm whale was stranded on Nui Island. "These strandings have happened in the past but there has been no proper documentation on them," says Vili. "Almost the whole population of Nui Island came along to

the stranding. Yet there is still little understanding of whales and why this might be happening."

Cultural connections are important – and a major component of Vili's work is to document connections with marine species and conserve Tuvalu's cultural icons. For example, whales in Tuvalu are believed to be ancestors and protectors, and are important cultural icons for some islanders. Sadly, the number of whale strandings and sightings so far shows that the population of whales is decreasing.

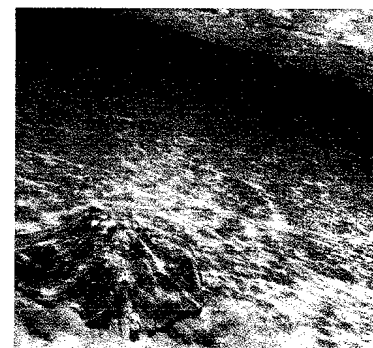
"With this knowledge we can increase community awareness," explains Vili. "One of the arguments that Tuvalu has used to justify its pro-whaling



Top: Some parts of Tuvalu are only a few metres wide.

Below, left and right: Traditional hunter Misi Alotu (turned conservationist) assists the team to catch foraging turtles for tagging and measurements and releasing – Lui Bell, SPREP.

Bottom: A stingray in the crystal clear water – Lui Bell, SPREP.

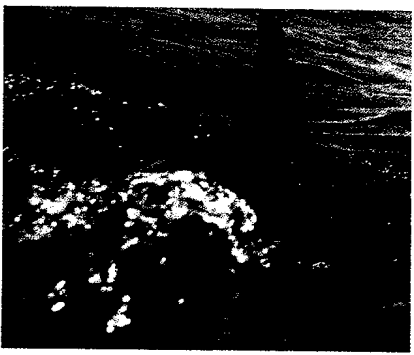




Above, left: Cetacean researcher Marc Oremus with Tuvalu villagers looking for dolphins – A Wheeler, DOC.



Above, top right: Tuvalu's Director of Environment, Enate Evi, at one of the marine conservation areas – A Wheeler, DOC.



Above, bottom right: Darts are used to collect tissue sample from dolphins at Funafuti – A Wheeler, DOC.

Below: Both mother turtles and their eggs are considered to be a traditional delicacy.



stance is the impact of large whales on tuna stocks, but that is not a fact," he says.

The project provides training for government officials in research techniques including documentation, sample collection and information technology, says Vili. "I've received training in marine research methodologies, photo-identification and genetic sampling techniques. In addition we also confirmed sightings of spinner and pantropical spotted dolphins in Tuvalu."

Vili and the team work closely with the fishing community and monitor their interactions with large marine species. "We rely on them to report sightings and share information," says Vili. "Sharing information and helping fishermen with shark survival tips works really well."

Another component of the project is the monitoring of sea turtles. Tuvalu is home to the green turtle, a species with a population that is now seriously under threat. The decrease

in numbers can be attributed to environmental degradation, trade and an increase in hunting and eating both mother turtles and eggs, a traditional delicacy.

With the help of Kaunatu Kilisi (who sits on Funafuti's council or Kaupule) and Misi Alotu, a traditional hunter, more than 20 turtles have been tagged. "Misi Alotu used to kill between 50 and 150 turtles a year and now he tags and releases the turtles. He's learnt turtle research skills and is playing a valuable role in our research," says Villi.

A key component of the research project has been building awareness and knowledge within the community. Vili provides regular press releases on the findings of the research on Radio Tuvalu and presents the findings in schools and to fishermen. "We're also planning to apply satellite tags to our turtles to inform everyone of their whereabouts. In doing this, our people will feel connected to the turtles and help to monitor problems. We are relying on the fishing

communities to provide us with extra data – if someone sees something, they give us a call. Everything is in the hands of the community,” says Vili, praising the community-based approach.

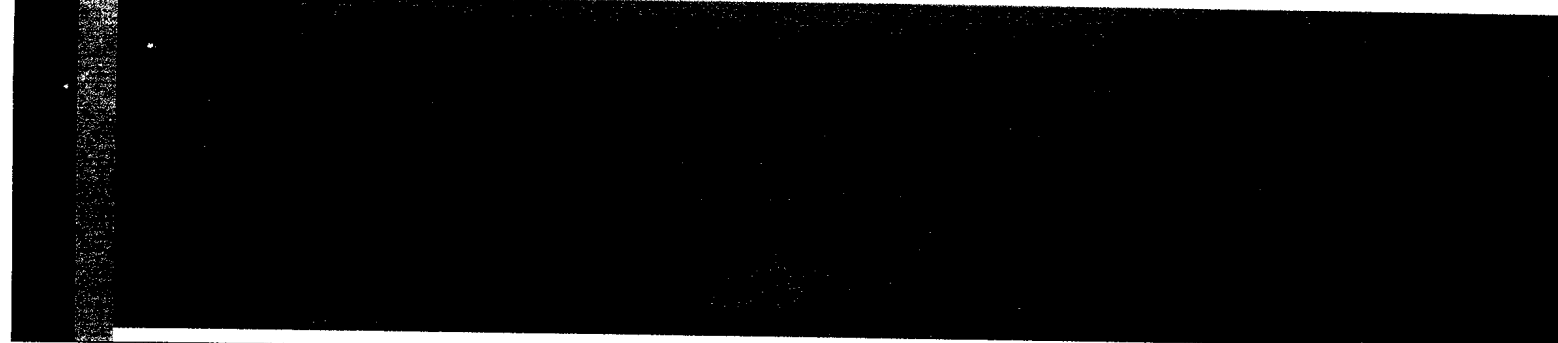
Unfortunately it’s not always easy. “There is a clash between conservation and everyday life,” he says. “You can get \$500 for a turtle. It’s a source of income. I am trying not to tell people what to do, but to provide them with sufficient scientific and emotional data for them to make up their own conservation initiatives. I believe this approach will work, because it’s a decision that comes from the heart, as opposed to a forced directive.”

The information collected so far is showing some interesting results which may hold the key to marine conservation. With the assistance of shark experts from DOC, the project team have identified five different types of sharks in Tuvalu waters, and also confirmed four species of rays. “There is the first recording of a *Himantura fai* (stingray) in Tuvalu. We also created a photo-ID catalogue for dolphins in Funafuti and Nukufetau Islands,” says Vili enthusiastically, “We’re hoping to collect more shark, ray, dolphin, whale and turtle DNA samples and photographs to confirm species diversity in Tuvalu.”

Below: Vili and the team are working closely with fishermen so information can continue to be shared – Giora Dan, International Federation of Red Cross and Red Crescent Societies.

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Scholarships: Allocation 2007/08

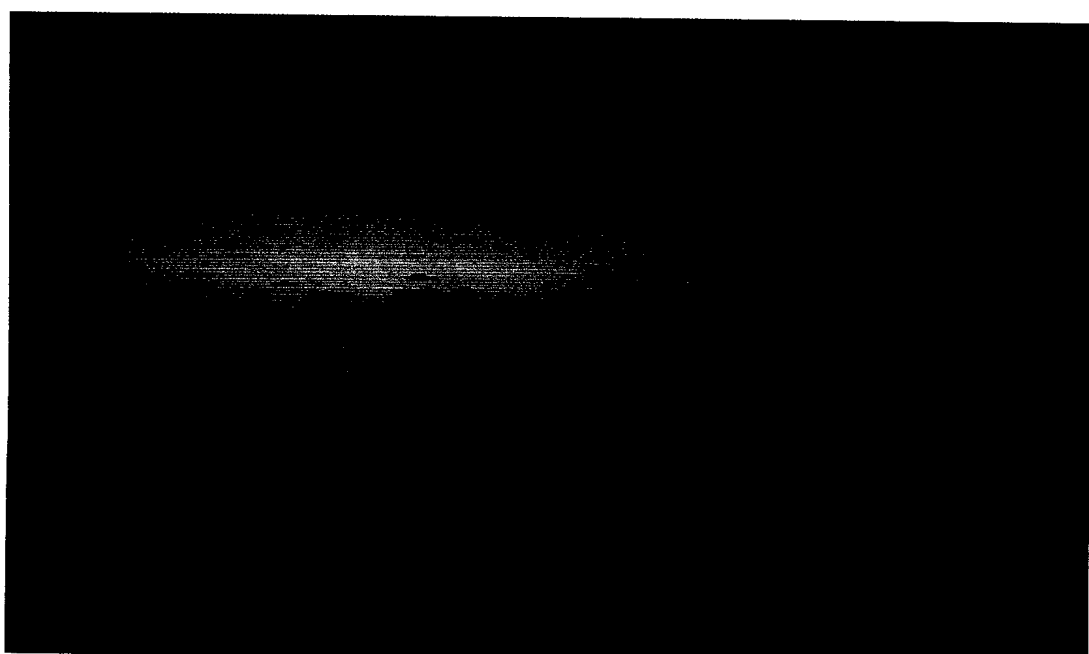
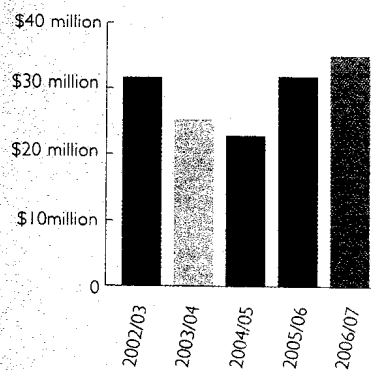
Bilateral Scholarships

Pacific	\$18,777,000
Asia	\$3,772,000

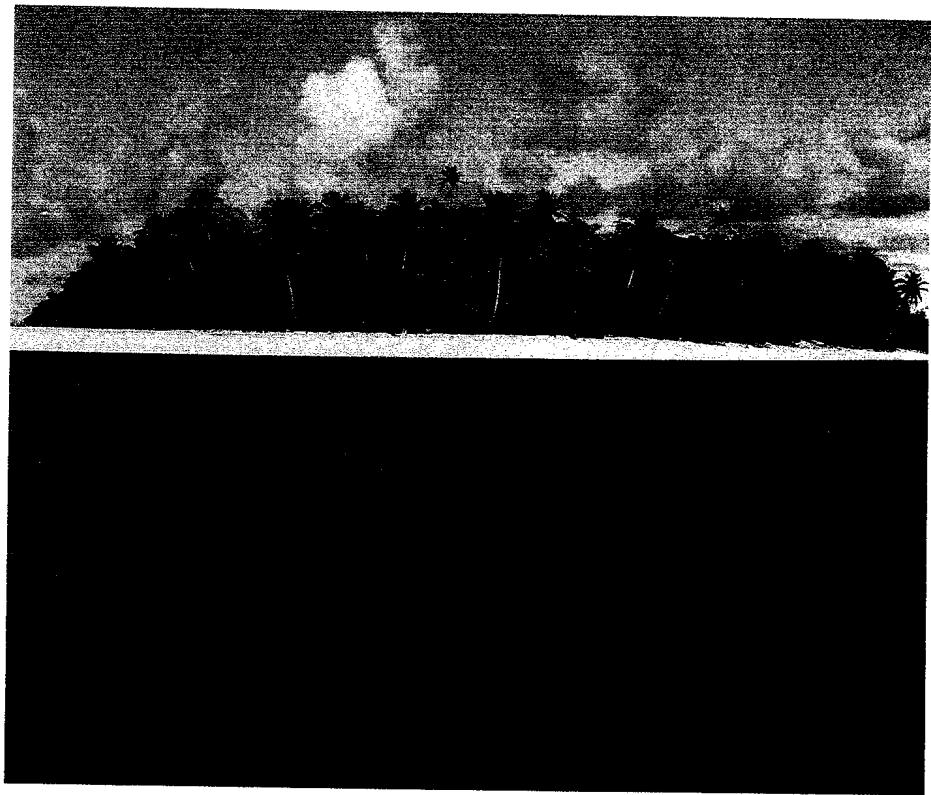
Non-bilateral Scholarships Programmes

Pacific	\$4,633,000
Asia	\$6,848,000
Africa	\$1,232,000
Latin America	\$1,555,000

Expenditure by Year



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The project plays an important role in strengthening systems and capability at a national level where there is a lack of resource and knowledge. “That’s where we come in,” explains Vili. “The government of Tuvalu is supporting the initiative and there are now training courses within the Fisheries Department and the Island Council. These people in turn take the researchers out in the water. We’re building skills and a future.”

In May, a reef research trip to Niulakita Island (the southern-most island in Tuvalu) will take place to survey the reef and establish baseline data for the government to declare the island and sea mountains around it a national reserve. This survey will be led by DOC reef experts with the assistance of officers from the Environment and Fisheries Departments, the Tuvalu Association of NGOs and Funafuti Island Council.

Now in the final stages, the project is due for completion in October 2008. A collaborative network has been set up with the Tuvalu Fishermen’s Association, the Fisheries Department, island councils, the Women’s Council, youth groups and the Education Department so data collection and information can continue to be shared.

Further plans also include building a partnership with the Fisheries Department to use their foreign and local fishing vessels to provide the Environment Department with sighting data and DNA samples of the whales, dolphins, sharks, rays and turtles that they encounter.

Armed with this information, the Government of Tuvalu will be in a better position to make decisions regarding conservation and the sustainable use of marine biodiversity. The Environment Department in Tuvalu hopes that the research will contribute to their National Biodiversity Strategy Action Plan so all government decision making in the future will be well informed.

In the future there’s also possibility of developing eco-tourism. Following the success of whale watching, swimming with dolphins and turtle watching in other Pacific Island countries such as Tonga and the Cook Islands, tourism could provide new opportunities and industry for the Tuvalu community.

“One step is the beginning of 100 steps,” Vili says enthusiastically. “We need to work together to conserve the environment and build awareness of island care for today – as well as for future generations. It’s our environment, our resources, our responsibility.”

Opposite page, all: Fishing is an important part of Tuvalu life – Giora Dan, International Federation of Red Cross and Red Crescent Societies.

Above: Crystal clear water surrounds Tuvalu – A Wheeler, DOC.

Below: The community rely heavily on fishing to survive.

