Technical Director Attends the Steering Committee Meeting of the IUCN CEM

Kelvin represents the Oceania and South East Asia region on the International Union for Conservation of Nature (IUCN) Commission on Ecosystem Management (CEM). Apart from his responsibility for the region, Kelvin is also responsible for a number of expert groups set up within the CEM. These include the Fisheries Expert group, Invasive Species and Island Ecosystems, Mining and Deep Sea Ecosystems, Coastal Ecosystems, and Island Ecosystems. The steering committee meets twice each year, and the last meeting was in the Dominican Republic (DR) in March 2016.

Apart from the usual administrative tasks taken care of at the meeting, the small steering committee (5 members) were fortunate to go on a field trip. This was organised by the Birdlife Affiliate in DR, Grupo Jaragua. Their founder, Sixto Inchaustegui, drove the group to the Sierra de Bahoruco National Park, one of the core zones of the UNESCO Biosphere Reserve Jaragua-Bahoruco-Enriquillo. There they were shown the impacts of the aggressive expansion of agriculture, mainly avocado plantations in the park. This is incompatible with the preservation of the unique forests and their associated biodiversity. It is no surprise that those behind the agriculture are reported to be politicians, or entrepreneurs with good political connections, exploiting cheap labour from Haiti, just across the border.

The next steering committee meeting of the CEM will be held in Hawaii in September, in conjunction with the IUCN World Conservation Congress.

The FAD-Free Fab Three Conquer Corporate Triathlon

On Saturday the 19th of March three Te Ipukarea Staff participated in the annual Rarotonga
Corporate Triathlon Event. Our team name “FAD-Free Fab Three” was a reference to the ecological benefits that purse seine fishing vessels could create if they do not fish on Fish Aggregation Devices (FADs). Our team decided to split the three sports between us, so that meant Alanna swam 200 metres, Kelvin cycled 8 kilometres, and Liam ran 2km, three times each. This was the first time Te Ipukarea Society has entered this event, and we came off with a respectable time of 1 hr 49 minutes and even came first in the ‘Other’ category!

**Apii Te Uki Ou Receive Their Worm Farm**

Te Uki Ou School is the second Cook Islands school to receive their Hungrybin Worm Farm from Te Ipukarea Society’s Waste Management Project. The project aims to provide a worm farm and a three-tier compost bin for each school in the Cook Islands, as well as teaching the students and teachers how to make the most of these incredible compost creators. Te Ipukarea Society have not yet started visiting the schools as we are waiting for our compost bins to arrive. However the Te Uki Ou fundraising team expressed interest in having a worm farm alongside their environmentally friendly Rent-A-Plate fundraising stall at the Muri night market, so Te Ipukarea Society helped them out!

Te Ipukarea Society project officer Liam Kokaua met with the fundraising team, consisting of members of the parent committee and students on the 9th March. Liam gave them a run down on what needs to go in the worm farm and how to take care of the worms, before presenting the new worm farm to the school. Now as the kids clean the used plates and bowls, any fruit or vegetable scraps can be deposited into the worm farm rather than the bin. Once the fundraising ends, the worm farm can be taken to Te Uki Ou School and TIS staff will be happy to do a second training for the wider school and staff.

The worm farms and compost bins are funded by the Global Environment Facility (GEF) Small Grants Fund and 10 worm farms were funded by NZ High Commission.
Enviro Squad Still Going Strong

Araura College’s Enviro Squad is continuing to help protect Aitutaki’s pristine environment and their aim is to keep it just that.

The school is continuing to recycle all plastic bottles, cans and glass as well as composting all leaf litter and with the implementation of the donated worms from the TIS, they are also creating their own organic fertilizer that worm farm yields.

Araura College Students pose beside their new worm farm.

Biodegradable food containers were introduced to the food vendors this year and although some are resistant to the change, some vendors are now using the environmentally friendly option.

The next plan is to purchase a paper shredder so that the waste paper can be re-used as a compost material. We are also looking at the option of an industrial type shredder that can shred items such as coconut husks and turn them into bricks used for many purposes. Reducing waste remains a high priority – paper and styrofoam are by far the biggest items that can be found in rubbish bins. So, continuing to educate students about how to reduce these types of waste is a must.

The college has also introduced a new Level 2 subject, Environmental Education. This course is taught by principal Tracy Spiers (who has a background in Environmental Studies). The course focuses on sustainability and students can achieve credits from a variety of standards. The students in this course are also members of the Enviro Squad (seeing themselves as the policy makers and strategic planners).

The Science curriculum is also undergoing development so that environmental studies is taught to all year levels throughout the year. The idea is that by Senior level, students have a good understanding of sustainability.

We want our children’s children to enjoy a clean, healthy Aitutaki as we do today.

This story was provided by Araura College principal, Tracy Spiers.

Biodegradable Containers Update!

Another aspect of our Waste Management Project has been increasing awareness and availability of biodegradable containers in the Cook Islands, particularly for single-use takeaway containers sold at the Saturday Punanga Nui Market and Muri Night Market. The benefit of using biodegradable containers is that the container will break down and eventually turn into compost, compared to polystyrene containers which never break down and are filling our landfill and littering our roadsides and beaches. Biodegradable containers therefore will contribute to a healthier and more beautiful Cook Islands for both locals and tourists alike.

Te Ipukarea Society has received a stock of biodegradable containers from New Zealand and has been re-stocking the supplies of Va’ine Angaanga Toa’s stall at Punanga Nui Market (also available from the Creative Centre,) as well as giving out free samples to vendors at the Good Friday night market. TIS will also be providing these containers to the Rent-A-Plate stall at the Muri Night Market soon.

We are observing an increase in awareness and gradual shift to seeing more takeaway vendors selling food in biodegradable containers, which is
great. Te Ipukarea Society is creating a list of all shops who sell these eco-friendly containers, here is who we have identified so far:

- CITC Supermarket
- Vonnia’s
- Bounty Bookshop
- VAN’S

Primefoods is also planning on stocking them shortly. Congratulations to all of these businesses for bringing in these great products, which are alternatives to polystyrene and plastic takeaway containers!

The ever popular PHAT Kai food stall serves their meals in biodegradable containers.

The Cook Islands are fortunate to have four types of wetlands:

- Freshwater marshes and swamps: on Rarotonga, Mangaia, Atiu, Mitiaro and Mauke.
- Permanent freshwater lakes: Lake Tiriara on Mangaia, Lake Tirototo on Atiu, and Lake Rotonui and Lake Rotoiti on Mitiaro.
- Tidal salt marsh: at Ngatangiia Harbour on Rarotonga.
- Mountain streams: on Rarotonga.

The most common use of the freshwater swamps are for the cultivation of taro. Cultivation methods of taro in freshwater wetlands include raised taro beds (pa’i taro), taro swamp (repo tavari) or irrigated taro terraces (such as those found in the Takuvaíne and Tupapa valley streams). The cultivation of taro in wetlands is very important to our food security in the Cook Islands, particularly in the outer islands.

One of the irrigated taro terraces in the Takuvaíne Valley.

Rarotonga also hosts the only remaining tidal salt marsh in the country – the Aroko Salt Marsh in
Ngatangiia. This salt marsh is different to freshwater swamps where we grow our taro, as the area is covered by salt water during high tide. The Aroko Salt Marsh provides habitat to certain marine species found nowhere else in the Cook Islands such as the Koiti Raukura (Fiddler Crab), and provide shelter and safe hatchery conditions for important lagoon fish species.

The Ko’iti Raukura or fiddler crab has only one habitat in the Cook Islands – the Aroko Saltmarsh (photo from CINHP).

Aside from providing food in the form of taro, and a habitat for a wide variety of animal species, wetlands provide a number of other benefits to people, here are some of them:

- Many people are unaware that wetlands are important natural filters for sediments and man-made pollution, by preventing pollution from entering the lagoon. (This service should be valued now more than ever due to current issues of lagoon pollution on Rarotonga).
- Wetlands also provide protection from natural disasters such as flooding from extreme rain events. The wetlands act as a natural buffer, soaking up large amounts of water and reducing the frequency and intensity of floods.
- A number of wetland plant species are used in traditional maori medicine, such as mauku vai (water grass), ta’uri’au and tamore.
- Other services include coloring and hardening of wooden artefacts.

Unfortunately, our Cook Island wetlands have been shrinking for decades due to development and conversion into agricultural land. Many businesses and landowners fill in swampland with soil and coral rocks so they can construct buildings on the land. It is not just filling up the wetland, but also building around them can block off the natural drainage flows, rendering the wetland useless.

A ra’ui to protect the filling in of wetlands would be ideal, just as ra’ui are placed on lagoon areas, wetland areas are also vitally important to the health of our islands and people. People need to be aware of the importance of these ancient wetlands and the role they play not only in providing food, but in filtering our pollution, providing a home for biodiversity and preventing flooding.

Wetlands should be utilized for their agricultural potential as taro plantations, however people should refrain from filling in wetlands or dumping rubbish or pouring chemicals into wetlands. As many of these chemicals will end up in our taro patches, the saying goes: you reap what you sow! Let’s look after our wetlands so that future generations can benefit from them.

Thanks for reading this month’s newsletter,

Ka Kite!