

# **APIC Pacific Islands Journalist Invitation Programme**

**October 20-28, 2015**

**Prepared by the Foreign Press Center Japan (FPCJ)**

December, 2015

## **ABOUT APIC**

The Association for Promotion of International Cooperation (APIC) is engaged in various development cooperation projects for the purpose of promoting international cooperation and deepening mutual understanding between Japan and various countries.

Specifically, APIC is engaged in these following activities.

1. Supporting development cooperation projects in the Pacific Island Region
2. Supporting development cooperation projects in the Caribbean Region
3. Organizing lecture meetings regarding global issues
4. Organizing social meetings regarding international cooperation
5. Training young generations interested in international cooperation

APIC was established on 8th September 1975 for the major purpose of facilitating public understanding and cooperation on ODA through the provision of information regarding Japanese international cooperation including ODA.

APIC transferred into a general incorporated foundation due to the law revision on 1st April 2013, and is continuing its activities.

### **Foreign Press Center Japan (FPCJ)**

The FPCJ is a non-profit independent private organization, which was formally inaugurated in October 1976. The FPCJ is designed to provide foreign journalists, both resident and visiting, with necessary assistance and cooperation for collecting accurate and up-to-date information on Japan. We arrange individual interviews, press tours and press briefings, and publish foreign-language materials on Japan. Initial funding was donated by Nihon Shimbun Kyokai (The Japan Newspaper Publishers and Editors Association) and Nippon Keidanren (Japan Business Federation). Part of the annual operation fund is provided by some 85 private and public supporting members. The FPCJ also receives payment for work commissioned by the government. For the purpose of deepening friendly relations and mutual understanding between Japan and foreign countries, the FPCJ invites professional foreign journalists to engage in first-hand research and reporting on Japan.

## Participants

**【Fiji】**

**Islands Business**

**Mr. Samisoni Pareti**



**【Marshall Islands】**

**Marshall Islands Journal**

**Mr. Giff Johnson**



**【Papua New Guinea】**

**LOOP PNG**

**Ms. Titi Gabi**



**【Tonga】**

**Matangi Tonga**

**Ms. Linny Folau**



**【Federated States of Micronesia】**

**The Kaselehlie Press**

**Mr. Bill Jaynes**



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**Program Coordinator**

**Mr. Floyd K. Takeuchi**



## Itinerary

Date	Activity	Stay
Oct. 20 (Tue)	<ul style="list-style-type: none"> <li>➤ Arrive in Tokyo</li> <li>➤ Travel to Central Tokyo with an escort by limousine bus</li> </ul>	Tokyo
Oct. 21 (Wed)	<ul style="list-style-type: none"> <li>➤ 10:30-11:00 Program orientation</li> <li>➤ 11:00-12:00 Meeting with APIC Executive Director Amb. Shoji Sato and FPCJ President Kiyotaka Akasaka</li> <li>➤ 12:30-14:00 Briefing by the Ministry of Foreign Affairs on Japan-Pacific Relations</li> <li>➤ 15:00-16:30 Briefing by JICA on Japan's cooperation toward the Pacific region in such fields as energy, the environment and disaster management</li> </ul>	Tokyo
Oct. 22 (Thu)	<ul style="list-style-type: none"> <li>➤ 11:00-13:00 Visit to San'ya Elementary School in Tokyo's Suginami Ward to cover Japan's health promotion through Shokuiku (food and nutrition education). Journalists will try Japan's healthy school lunch.</li> <li>➤ 14:30-16:00 Briefing on Japan's tsunami warning system and facility tour at the Japan Meteorological Agency</li> <li>➤ 16:30-17:30 Pacific Islands Centre</li> </ul>	Tokyo
Oct. 23 (Fri)	<ul style="list-style-type: none"> <li>➤ 07:20-09:01 Travel from Tokyo to Nagoya by bullet train</li> <li>➤ 10:30-13:00 Toyota plant tour</li> <li>➤ 14:30-16:30 Visit to Toyota Ecoful Town, where the journalists will experience the future of green societies.</li> <li>➤ 18:14-18:50 Travel from Nagoya to Kyoto by bullet train</li> </ul>	Kyoto
Oct. 24 (Sat)	<ul style="list-style-type: none"> <li>➤ 09:00-17:00 Kyoto cultural tour including Kimono wearing and an authentic tea ceremony experience</li> </ul>	Kyoto
Oct. 25 (Sun)	<ul style="list-style-type: none"> <li>➤ 09:10-11:10 Flight from Itami, Osaka to Naha, Okinawa</li> <li>➤ 13:30-15:30 Meeting with "Okinawa Citizens Recycling Movement," a civic group in Okinawa working with JICA to share Okinawa's waste management system with Pacific island countries</li> <li>➤ 16:00-17:30 Discussion with Ms. Atsuko Isamoto, editor-in-chief of the Rito Keizai Shimbun, an online newspaper covering the cultures and industries of Japan's hundreds of small islands</li> </ul>	Naha
Oct. 26 (Mon)	<ul style="list-style-type: none"> <li>➤ 08:15-08:50 Flight from Naha to Kumejima Island, one of the larger outer islands in Okinawa</li> <li>➤ 09:00-18:00 Coverage of "Kumejima Model" project aimed to turning the</li> </ul>	Tokyo

	<p>remote island into a self-contained community by using deep seawater</p> <ul style="list-style-type: none"> <li>➤ 19:10-19:45/21:10-23:30 Flight from Kumejima to Naha, and to Haneda</li> </ul>	
Oct. 27 (Tue)	<ul style="list-style-type: none"> <li>➤ 09:30-10:30 Discussion on the appropriate use and conservation of the natural environment with Prof. Anne McDonald, Graduate School of Global Environmental Studies, Sophia University</li> <li>➤ 13:00-15:00 Visit to Toshiba's Hydrogen Energy Research &amp; Development Center</li> <li>➤ 18:00-20:30 Reception hosted by APIC</li> </ul>	Tokyo
Oct. 28 (Wed)	<ul style="list-style-type: none"> <li>➤ Travel to Narita/Haneda Airport by limousine bus</li> <li>➤ Depart from Tokyo</li> </ul>	

Tokyo Diary – Wednesday, 22 October

Traditional knowledge ain't all that bad

By Samisoni Pareti in Tokyo, Japan.

Traditional knowledge of isolated communities in the Pacific may hold lessons for disaster risk reduction experts. At least that is the view of Kiyotaka Akasaka, the President of the Foreign Press Centre Japan. Informed by Linny Folau, visiting photojournalist of the Tongan online news service Matangi Tonga that she is looking forward to visiting Japan's Meteorological Agency in Tokyo to take a closer look at its tsunami warning system, President Akasaka observed that traditional knowledge about disasters, detecting early signs of imminent disaster for example, may also hold some answers.

He made reference to Jared Diamond's latest book that is called "The World Until Yesterday." Published in 2012, the book collated lessons learnt from 39 traditional communities that the western world could very well learn from. Among these old communities studied were some remote tribes in Papua New Guinea, a country the author visited in his 20s.

"Jared Diamond made the point that mediation practices of some traditional societies could hold some very good lessons for those who live in the west," said President Akasaka. "Unlike the "I will sue you" mentality of the United States, remote communities in PNG do have their own dispute mediation system."

Giff Johnson, long time resident of Majuro, capital of the Marshall Islands and editor of the republic's sole weekly, the Marshall Island Journal concurs. Most of the island communities in the Pacific have their own traditional knowledge about early disaster warnings, but the irony of it all he says is that some of these island communities, especially those who live in urban centres no longer rely on traditional knowledge but on western based strategies to alert them of incoming typhoon or tsunami.

Johnson and Folau are part of a group of Pacific journalists currently touring Japan as part of a Pacific Islands Journalist Invitation Programme. Other journalists in the programme are Titi Gabi, general manager of Digicel's online news service in Papua New Guinea called PNG Loop, Bill Jaynes, editor of The Kaselehlie Press in Pohnpei, capital of the Federated States of Micronesia and myself. Programme coordinator is Floyd Takeuchi, a Hawaiian-based

photojournalist, who's also worked in the Pacific and Japan. Takeuchi was invited by President Akasaka's Foreign Press Centre Japan (FPCJ) and the Association for Promotion of International Cooperation (APIC) to put together a team of senior journalists from the Pacific to embark on this 8-day study tour of Japan, examining common issues of particular relevance to island communities; issues like good nutrition, waste management, renewable energy, climate change, disaster risk management and ODA assistance.

After two days of orientation and briefing in Tokyo about Japan-Pacific relations, ODA assistance through JICA, healthy diets in Tokyo schools, tsunami early warning system and greater investment, trade and tourism between Japan and the islands, our group will travel via the country's famous bullet train to Nagoya early on Friday morning, then Kyoto on Saturday before they fly right down to the south of Japan, to the island of Okinawa on Sunday. They will return to Tokyo to wrap up their study tour late on Monday next week. Toyota City's ecoful town, Okinawa citizens' recycling movement, an outlying islands of Japan's online news service and harvesting deep sea water energy are among subjects the visiting journalists will consider in their out of Tokyo visits.

In the words of President Akasaka, Tokyo today is a city so different from the one that last hosted the Olympic Games in 1964. Then, the city was polluted, overcrowded and dirty. No longer the case now. "Over the last 30 to 40 years, we have made a lot of progress in cleaning up pollution, we got a better waste management system and our traffic jams are a lot smoother. We now have a city of 30 million people, where one third of those travel out of the city after work at night to their homes in neighbouring prefectures."

Just as well too because the Olympic Games is returning to Tokyo in 2020. With the city looking cleaner and smarter, its workers too sport a casual but smart look under the national government's cool biz policy. In its attempt to reduce the national power bill, offices are encouraged to turn off their air conditioning system and male workers to come work tie-less.

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Photo caption:

## Samisoni's Tokyo Diary

By Samisoni Pareti

Day Two – Take away messages in good food, disaster ready and email etiquette

Seeing how the grade five boy was picking on each grain of rice over lunch made me so ever grateful for taking up Floyd and Giff's invitation the night before to go out of the hotel searching for a noodle restaurant. That meal started with a crash course from Floyd on how to enjoy noodles using chopsticks! So when the young man used his chopstick to pick on each grain of cooked rice, I did the same without batting an eye.

Our tour group of Pacific journalists were visiting San-ya Elementary School in one of Tokyo City's west districts. To say that we were impressed would be an understatement. Piloting a healthy school lunch initiative of Japan's Ministry of Education, San-ya teaches its 509 students of years one to six of more than just having a healthy diet. Nutritious meals are found too in wasoku, local Japanese meals comprising mainly of vegetable soup, fish and rice. Our lunch for today for example had a total of 710 in calories and 27 grams of protein.

With NCD being the number one killer of Pacific islanders, this is one impressive programme that island governments would do well to replicate; teaching healthy eating habits from a very young age, as well as giving children life long lessons.

"Through our healthy school lunch project, our students are not only learning good nutrition, but it is also teaching them to appreciate their cultural heritage," school principal Yamagishi Kazu explains through our interpreter Yoko Minato. "For example when pests attack the vegetables they grow, children will need to learn to make some hard decisions; either to let the pests be, or get rid of them."

Our group of five journalists from the Federated States of Micronesia, Fiji, Marshall Islands, Papua New Guinea, Tonga are on a study tour of Japan on the invitation of the Association for Promotion of International Cooperation (APIC) and the Foreign Press Center Japan (FPCJ). The eight-day tour allows participants to study Japanese initiatives in nutrition, tourism and trade, climate change and disaster management, energy and waste management.

Our visit to the sprawling headquarters of the Japan Meteorological Agency (JMA) in downtown Tokyo City reconfirms the seriousness this country gives to disaster preparedness. They have very good reasons to be, given the disastrous earthquake and tsunami of March 2011 that took the lives of more than 15,800 people, left 230,000 more homeless and a reconstruction bill of US\$300 billion. Never before have meteorologists at the JMA come across a 9.0 magnitude earthquake that generated killer waves towering 10 or more metres high.

At the JMA visit, I learnt two take away lessons. One is the humility of seismologists, hydrologists and oceanographers at JMA to admit that there were shortfalls in their work during the 2011 earthquake and tsunami, much of it stemming from the fact that it was a super earthquake, the magnitude of which had never been recorded. Just three minutes after the first tremor hit, JMA put the strength of the earthquake at 7.9, which was later upgraded to 8.8 then 9.0. This error also led JMA to underestimate the size of the tsunami, with initial projections of 3-metre high waves issued 28 minutes after the first tremor before it quickly got upgraded to 10 metres 16 minutes later.

The second lesson is for politicians back in the Pacific who insist that any disaster warning must not be issued until they as prime minister or president have been advised. For Japan, any natural disaster warnings, be it an earthquake, tsunami, typhoon or flooding is solely the responsible of JMA. Evacuation orders however are the prerogative of local municipalities, and politicians have no role.

Our last stop for the day was the Pacific Islands Centre, charged with promoting trade and investment between Japan and the islands. Noticing that I was eyeing the bare display stand of Nauru, Centre's deputy director Dr Takehiro Kurosaki quickly volunteered: "Oh, we keep their display of fine necklaces made from pieces of phosphate as its just too popular and visitors keep wanting to buy them." It's a similar story with Fiji Water in the Fiji display stand. The iconic water bottles are also locked away for safe keeping.

Lessons learnt from our stop at the PIC is directed at officials and entrepreneurs who want to trade with Japan – answer your emails! Being a typical Japanese, Dr Kurosaki couldn't get himself to say it, but a clear point of frustration for many Japanese importers has been the lack of communication from potential clients in the Pacific. Nothing new, of course as it is the same old story that we journalists face in our work with public and private officials in the Pacific.

## **Samisoni's Tokyo Diary:**

### **By Samisoni Pareti, Islands Business**

#### **Day 3 - Smart car, smart people**

The rise of the Toyoda family business of Toyota cars is really the story about Japan – how it rose from the ashes of World War II to become a world economic giant in our time.

Using the money from the sale of the patent of a loom his father sold to a British textile company, Kiichiro Toyoda researched gasoline-powered vehicles in the early 1930s. Eight-five years later, Toyota is a 397 billion Yen (US\$3.3 trillion) international conglomerate represented by 54 companies in 28 countries around the world. It directly employs more than 70,000 employees but this number quadrupled when workers in all of Toyota's subsidiaries and affiliated companies are included.

Few facts about Toyota that I didn't know until our group of visiting Pacific journalists toured the company's massive Motomachi Plant in Toyota City near Nagoya on Friday; Company founder didn't adopt the family name in the business so as to ensure that the family and the business were kept as separate entities. He also liked the name Toyota instead of Toyoda because unlike the family name, Toyota has 8 characters in Japanese, eight being a lucky number in Japan. Toyoda on the other hand has 10 characters. The company logo comprises 3 oval shapes, 2 of which inter-twined to form the letter T. Among its 9 subsidiaries or affiliated companies are Hino Motors and Daihatsu. Popular Toyota brands in the islands like Land Cruiser comes from the Hino line and Probox is Daihatsu's. Corolla Axio or Filder comes off the line of another Toyota subsidiary, the Toyota Motor East Japan Inc.

Since 1960, more than 17 million people have toured Toyota's plant and museum in Toyota City. Up to 23 October, more than 200,000 have been through their

Motomachi Plant in 2015. Take the tour and it will be hard not to be reminded of scenes from the Transformer movie, as huge but delicately agile robots weld and tighten car bolts or parts in a matter of seconds. Smart is the way Toyota has strike a working balance of machines and humans. While robots may weld into place 400 pieces of car parts, human workers still need to provide the final touches on the assembly line, testing and verifying that a Toyota car is ready for the market.

Two other notable features of Toyota. Its assembly line does multiple brands, and no single one. This it does to keep the price of its vehicles at a “reasonable” rate. In the Motomachi Plant that we visited for example, it assembles Toyota brands like GS, Crown, Estima, Mark X and Mirai.

Toyota is also a leader in producing eco-friendly cars. Mirai for instance is 100 per cent powered by hydrogen. The car carries a hydrogen gas cylinder and electricity is produced to power the car when the gas reacts with oxygen. There is no exhaust fume, the only discharge being CO<sub>2</sub> that can be let out from time to time. Interestingly this water discharge is not cold, deliberately so in order to avoid icing in cold climates. Toyota plans to release its Mirai brand to other parts of the world once more hydrogen gas stations are made available.

I have a confession to make. It was a bit uneasy taking a ride on the backseat of a Mirai, knowing fully well that you are sitting on top of a cylinder full of hydrogen. I comforted myself though with the thought that petrol is also flammable. But no doubt about it, the ride was smooth as it was quiet.

This time, we had moved from the Toyota Museum and Motomachi Plant to the Toyota City Ecoful Town. It is a model ‘smart’ town, built by the Toyota City Council to promote a low-carbon lifestyle. Put simply, the town attempts to show how best to live, without wasting electricity or water. Home electricity comes from solar power, and cars are either powered by batteries or hydrogen. HEMS controls power uses in homes, it being the acronym for Home Energy

Management System. Its also looking into how to use nature to produce more durable and energy efficient products, things like spider's cobwebs which are said to be more stronger than steel yet as flexible as silk, or the bubbles of a beetle that can be used for bubble baths since it is produced in normal water temperature.

Indeed, smart innovations are these in a smart town from a society of smart people, who obviously used the ruins and devastation of war and human tragedies to motivate them to work harder and yes, smarter.

## **Samisoni's Tokyo Diary – Day 4**

### **A journey of self-discovery over temples and tea**

**By Samisoni Pareti**

In a day that opened with a tour of the famous Kiyomizu Temple on the foot of a mountain range east of Kyoto and ended with an elaborate but elegant tea ceremony, day four of our study tour of Japan took on a deep spiritual dimension. And coming in a day after a peep into Japan's very advanced and highly sophisticated motor vehicle industry with its transformer-like automated robotic technology and cutting edge futuristic homes, Saturday for me became a journey of self-discovery of sorts.

It is well and good that you try to make your community a better one in the work that you do. But you are not God, which is why you should know your limits. There are things that you just can't fix. Other things are simply un-explained. Perhaps this is why people – believers and non-believers alike --- turned up in their thousands today to say a silent prayer and hit the gong at the Kiyomizu Temple. Or sit in meditation for a minute or two at the famous Rock Garden in Ryoanji Temple.

I saw droves of men, women even children threw coins into a deep timber chest before saying a silent prayer. At Kiyomizu (meaning Pure Water), adherents lined up to take a drink from one of three streams of the Otowa Waterfall in search for either longevity, academic success and good love life. Purity and respect were the lessons from the elegant tea ceremony we attended at the Kyoto Washinkan. With a small opening into the tea room, participants have to crouch and bow low to enter, symbolizing the belief that in the ceremony, all are equal.

My journey of self-discovery today also brought home the humble nature of our hosts. For a nation that is the world's third largest economy, majority of their

people stay grounded in their belief in the existence of a super Being. In a general sense, success or fame has not made them bigheaded or arrogant.

Remarkable too is the Japanese's deep sense of appreciation of their cultural and spiritual heritage. Temples like Kiyomizu for example were built in 780, but these timber structures have been painstakingly preserved and maintained. Its 13-metre high timber decking on a cliff edge was constructed without the use of a single nail. The pine tree boat that the original owner of what is now Kinkaku/Rokuon-ji Temple is said to have constructed in order to sail the lake beside Kinkaku, or the Golden Pavillion, still stands to this day. Like the Kiyomizu Temple, Ryoanji Temple and the Nijo-jo Castle, the Kinkaku/Rokuon-ji Temple are all registered World Heritage sites.

Touring Nijo-jo Castle made me realise how much we still needed to do in the islands to showcase our cultural and historical heritage. Samoa perhaps is the closest thing we have: but the Robert Louis Stevenson's museum in Apia is that of the mansion of the Scottish author, not of a Samoan. Some years ago, Fiji attempted to replicate the concept of the Polynesian Cultural Village in Hawaii, but Fiji's version does not feature an indigenous house of a traditional warlord, like what Nijo-jo Castle is. Young Pacific Islanders today therefore lacks a real model of how an indigenous house of a chief looks like, what are its key features, and the role its timber structure fulfils or represents.

In the Japanese tea ceremony, I see a lot of similarities in the Fijian kava rituals. The key challenge for both cultures is the same as well, which is ensuring that people especially the younger generation live their culture, and not just talk about it.

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## **Samisoni's Tokyo Diary – Day 5**

### **Of waste and community**

**By Samisoni Pareti**

Okinawa's tropical island image belies a battle it fought every single day 15 years ago; managing its residential and commercial waste. This fight of course was no where near the Battle of Okinawa in 1945 which claimed the lives of 200,000 and left the island in total ruin, but it was disturbing nevertheless. Local municipalities seem unable to cope with trash, most of which were being left to pile up in street corners uncollected for days.

Until Hiroshi Kogachi had enough and decided to take things into his own hands: he started a citizens' garbage recycling movement that continues onto this day. In fact so successful was his community inspired campaign that the Okinawa Citizens' Recycling Movement is now exporting its waste management ideas to other islands in the Pacific. A growing number of local and national government officials from the Pacific have since undergone training on waste management in Okinawa and in other parts of Japan

"For five years we, the citizens' movement ran the waste recycling initiative on our own," explains Mr Kogachi to our group of visiting journalists from the Pacific that flew into Naha, the capital of Okinawa Island from Osaka (near Kyoto) on Sunday. "Local government officials, despite our repeated requests and submissions were just not interested in our waste management ideas."

Using their network of community organisations around the island, Mr Kogachi and his team of volunteers mobilized to seek business sponsorships. What they basically do was to approach companies like Coca Cola, milk

companies as well as local media for help in managing waste through discarded PET bottles, empty milk cartons and old copies of the newspaper.

“ We used the local media to create awareness about our waste recycling ideas. We publicize ways garbage should be sorted, separating for example food waste from paper, bottles or cans. We then collect these and export them to recycling companies in mainland Japan or China.”

Today, the national ODA agency in Japan, JICA has exported initiatives such as Okinawa's citizens' movement on waste management to other countries. In the Pacific, JICA funded the regional environmental agency in the Pacific, SPREP (Secretariat of the Pacific Regional Environment Programme) to implement its J-PRISM project. PRISM is short for Promotion of Regional Initiative on Solid Waste Management.

Our group of six visiting editors and senior journalists from the Pacific, currently on an eight day study tour of Japan under the sponsorship of The Association for Promotion of International Cooperation (APIC) and the Foreign Press Centre Japan (FPCJ) also held a seminar with Ms Atsuko Isamoto, the young editor-in-chief of the Rito Keizai (Archipelago News) Shimbun. She launched her web magazine in 2010, and also publishes the Ritokei newspaper every four months. It's registered as a not for profit organisation, solely to service the 600,000 or more people that live in the outlying islands of Japan.

I have to admit that the meeting with Ms Isamoto drew out the entrepreneurial nature in me. Having just become the owner of a Pacific-focused magazine with three other colleagues in Fiji, I had so many questions about costs, finding the right balance between hardcopy and web-based publishing, financing models and so on. I have to agree with Ambassador Shoji Sato, the executive director of APIC who is joining us on the final leg of our study tour, when he remarked that Ms Isamoto “is clearly an idealist.”

She left her comfortable work in a business magazine in Tokyo to run Rito Keizai Shinbun. She does not use the conventional financing model: advertising is not aggressively pursued to fund her web magazine and newspaper. Advertisers are carefully screened and selected; only a few make the cut.

Revenue to pay her operational costs (printing and distribution being the most costly) come from other sources. Japan's Ministry of Education for instance pays her media organisation to publish educational materials. When I asked her about the ratio of published newspaper to online versions, Ms Isamoto replied: "To me, access is the most important thing. I want my readers to access the newspaper."

Therein lies her secret; that it's not always about the money. First and foremost, it should be the people that matters. Or as the coordinator of our study tour, long time publisher and editor Floyd Takeuchi of Hawaii puts it: "It's all about the community. You can't go wrong with the community-up approach."

## Samisoni's Tokyo Diary

### Day 6 – Kumejima, Okinawa

#### By Samisoni Pareti

When the tides are out on the sand frontaged coves of Qilaqila-The Bay of Islands back home, the receding water gradually reveals a sea bed of green carpet, actually a form of seaweed that we locals call *nama*, sea grapes to English speakers. It's eaten raw, just plucked off the sea bed and eaten. It can't get any fresher than that. Our mothers or grandmothers prefer to add a whiff of *kota*, food seasoning made from shredded coconut flesh that is left submerged in seawater for two weeks or more. Brought to the city, we tend to be more adventurous by adding a can of tuna with our *nama*. Heavenly is how many of us remember sea grapes by.

But on an island east of Okinawa, on Japan's southern sea borders, sea grapes is farmed in huge factory like production centres. Here, it's called *Kubiretsuta*, translated into English into adjectives ranging from gifts of mother sea, green diamond, or caviar of the sea. In this sea grape factory on Kume Island, tonnes of the sea weed are harvested daily and shipped out to markets around Japan. So much so that Kume sea grapes have become Japan's largest supplier of the delicacy.

On tour of the sea grapes factory, located adjacent to the Okinawa Prefectural Deep Sea Water Research Institute, we were shown tiny shoots of sea grapes, usually grown on square shaped netting beds and submerged in seawater tanks. We also were offered matured grapes to taste, using a clean chopstick to pluck a stem of sea grapes, dipping it in a sauce and into the mouth it goes. Its crispy alright, fresh, tasty, not much of a different to those I eat and enjoy in my home island back in eastern Fiji.

The close proximity to the Research Institute is significant. The sea grapes farm draws its sea water from the Institute, which in turn pipes both surface seawater and

deep sea water into its onshore research plant. There are varied uses of these piped seawater, one of which is selling sea water at the correct temperature to the sea grape farm. Water temperature is crucial, too high the plants won't grow and neither would they grow too if the water is too cold. Under the right temperature, they tend to grow rapidly.

Same technology is being applied to prawn farming. Kuruma prawns they are called and like sea grapes, Kume Island has become the largest supplier of kuruma prawns in the Japanese market. These particular species of shrimps are bred by the Institute using temperature controlled seawater, before they are sold to prawn farms on Kume. We toured Kume Prawn Farm Co Ltd, not far from the island's airport, and they have six gigantic ponds which are harvested daily.

Cosmetic is another industry that relies on deep sea water technology that the Research Institute provides. "Having spent 2000 long years circulating the globe, deep sea-water differs from surface water in that there is very little chemical or bacterial contamination," explains a brochure of Point Pyuru Co Ltd, a cosmetic company based on Kume Island. "This water is taken from a location 2.3km off the coast of Kume Island at depth of 612m by the Okinawa Prefectural Deep Sea Water Research Institute, which is located next to Point Pyuru, and then delivered into our plant by pipe with no contact with the outside air."

The US\$500,000 company now markets a long line of cosmetics based on deep sea water ranging from foaming cleanser, moisturizing lotion to essence and cream. Owner and founder Atsushi Omichi is proud to say that he is a local boy who used to work as a beautician.

Most impressive perhaps of this deep sea water technology is the link to renewable energy. Just out on the sea-side of the Research Institute is its Ocean Thermal Energy Conversion (OTEC) demonstration facility. OTEC technology uses "a turbine generator to create renewable energy (hydrogen) from the temperature

difference between cold, deep sea-water circulating in the ocean and surface sea-water warmed by the sun.”

With an island of just about 60sq kilometres in size and a population of 8,300 people, Kume is such a success story of how an island can truly become an island, self-reliant and independent when it comes to natural resources and primary industries. No wonder the island mayor Haruo Oota listed depopulation not capital deficiency when asked as to what was his biggest challenge as chief administrator of Kume Island. Quite a model equally small islands of the Pacific need to study and emulate.

## **Samisoni's Tokyo Diary**

### **Day 7 – Tokyo**

#### **By Samisoni Pareti**

Last day of our whirlwind study tour of Japan and I managed to finally connect the dots about something that intrigued me on day one. At the headquarters of JICA, the Japan International Cooperation Agency, I quietly wondered about the practicality of pursuing a strategy of optimizing the use of diesel generators when it seems in direct contradiction to the renewable energy movement. JICA's view is simple: going solar or wind energy is good, but they are hardly reliable.

It was not until we toured the massive Fuchu Complex of Toshiba today that the dots finally connected. This cutting edge company has invested hugely into renewable energy research, using solar or wind energy to power the production of hydrogen gas. Stored in battery cells, hydrogen, in Toshiba's research, is the future: it's cleaner and better than any other. On its own, solar or wind is unreliable Toshiba says, which is why with the energy it could harvest from either, it produces a more reliable, dependable and clearly efficient energy, that of hydrogen.

Touring their just commissioned Hydrogen Energy Research & Development Centre (HRDC) is like stepping into the Star Wars movie set; glass walls, electronic doors, large video screens everywhere, all operated by a touch of a button on a tablet being held by our guide for the day, Dr Tatsuoki Kono. His business card reads: Senior Manager, New Energy Solution Project. He was being accompanied by Hiroshi Morikawa, who is Toshiba's Chief Specialist in the Strategic Business Planning Group under the New Energy Solution Project of which Dr Kono also belongs.

Currently under test at Kawasaki City is a result of their work: the hydrogen smart community model, which produces hydrogen energy in place of fossil fuel or nuclear powered generators. They also have two models for businesses, the business continuity plan model and the business facilities model, and one that should particularly interest

small and isolated islands of the Pacific, the remote island model. This particular model can serve an island population of between 3,000 to 5,000 people. It produces 200KW of energy, enough to produce electricity as well as hot water.

Downside of course Dr Kono and Morikawa will tell you is the cost of producing such a hydrogen based energy supply system. But with the contamination caused by the damage to nuclear power stations in Japan's disastrous earthquake and tsunami of March 2011, the future for the world's third largest economy it now seems is anything but nuclear energy. Toshiba's research into hydrogen energy started in the 1960s and it was not until 2009 when they made their first breakthrough. Their biggest hurdle in marketing hydrogen energy has been Japan's strict regulations.

After riding Toyota's hydrogen powered car the Mirai in Toyota City near Nagoya three days earlier, I was glad to hear that both Toshiba and Toyota enjoy a good working relationship, comparing notes about this new and clean form of energy. Chairman of Toyota visited Toshiba's HRDC in Fuchu Complex early this year.

Earlier in the day, we had called on Professor Anne McDonald who teaches at the Graduate School of Global Environmental Studies at Sophia University, a Jesuit run university located in downtown Tokyo. For someone who has spent a better part of her life studying and living with local fishermen and women in Japan, Professor McDonald has become an authority on environmental conservation and traditional fisheries of Japan and has been an advisor to successive governments in the country. I liked her point about the importance of incorporating Japan's traditional knowledge on fisheries to the western concepts of marine resource management, how the west's marine protected areas should embrace the traditional Japanese's no take zone practices. This fits right in with the take away message from our tour of Okinawa on Saturday, that the bottom-up approach always works as opposed to the top-down option.

We ended the day with a farewell dinner at the exclusive Tokyo Club hosted by the chairman of The Association for Promotion of International Cooperation, Ambassador Peter Y Sato. Each of the visiting Pacific journalists were invited to give a two minute report. When my turn came, I spoke about the little I knew about Japan before I took the study tour, of the major advances it has done in hydrogen energy, in

solid waste management, in climate and disaster adaptation and mitigation measures, in trade and tourism, and good nutrition in schools. I likened myself to a cocoon of the silk worm which we saw at the Ecoful Town in Toyota City.

I also paid tribute to the women like Michi Ogawa, founder and executive director of WAK Japan in Kyoto for taking upon themselves to revive, rejuvenate and showcase the true and authentic cultures and traditions of Japan. Japan's respect for culture and religion resonates with my own, and I am all the more richer and I hope better human being as a result of the experience.

ありがとうございました

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# Japan launches \$450m aid program for Pacific

**GIFF JOHNSON**

With the hosting of a Pacific Islands Tourism Ministers meeting in Tokyo Sunday, Japan has begun launching a promised US\$450 million aid package for the Pacific region.

Prime Minister Shinzo Abe announced at the PALM7 Pacific leaders summit held in Japan in May that his government would provide 55 billion yen (US\$458,150,000) over the next three years to its Pacific neighbors in seven major focus areas ranging from climate and disaster risk response to fisheries and trade. Briefing a team of Pacific media representatives last week in Tokyo, Japan government representatives said the new three-year aid program is already underway.

Fulfilling one of the objectives of the PALM7 summit, tourism ministers from 13 island nations gathered in Tokyo last weekend to discuss opportunities with Japan. R&D Minister Mike Konelios represented the RMI at the Tokyo tourism talks. Although details of the discussions were not made public, officials said the talks focused on how Japan can help boost tourism opportunities in the region.

Among other major developments now in the pipeline:

- A climate change center that will be built in Samoa in conjunction with the Secretariat of the Regional Environment Program (SPREP). Japan will fund the building of a new facility and provide resources for training initiatives to be sponsored, said Soichiro Kojima, the senior coordinator in the Country Assistance Planning Division of the Ministry of Foreign Affairs. "We hope the center will be open in the next three-to-four years," he said.
- Establishment of a Pacific LEADS (Leaders Educational Assistance for Development of State) program that will offer graduate study at Japan universities and follow up internships in government agencies for 100 emerging leaders under the age of 40. It will start in 2016.
- The regional Japanese Promotion of Regional Initiative on Solid Waste Management (J-PRISM), which is being extended for a second five-year period. "The next five years aims to

## Region's wealth of minerals and fish extremely attractive



JICA's Masayoshi Ono and Takashi Toyama.

**'The aim of Japan's significant aid program for the Pacific region is to create a peaceful and prosperous region'**

- Hiroaki Shinohara, Senior Deputy Director for Pacific Island Affairs, at the Ministry of Foreign Affairs

duce reliance on diesel power, and one initiative is the plan to introduce wind power generation to Tonga. Although some Pacific leaders have called for entirely phasing out use of fossil fuel for power generation in the next 10 years, Ono said it won't be possible to replace diesel in the next five-to-10 years. "Renewable energy cannot be reliable for 24/7, 365-days of the year power provision," he said. "It's not possible."

In addition to the nearly US\$458 million in development grant funding, JICA is providing infrastructure loans to three nations in the region — Papua New Guinea, Vanuatu and Samoa. Loans are supporting redevelopment of the international airport in Port Moresby and the Port Vila port.

"Island nations are important partners of Japan," said Hiroaki Shinohara, the senior deputy director for Pacific Island Affairs at the Ministry of Foreign Affairs.

Japan has historical ties with many island nations that it governed or traded with in the pre-World War II period. The Pacific is also a site of natural resources important to Japan, said Shinohara.

"The Pacific is very rich in minerals and fish," he said. "About 80 percent of Japan's tuna catch comes from this region." The aim of Japan's significant aid program for the Pacific region is to "create a peaceful and prosperous region," said Shinohara.

expand, modify and strengthen the capacity of Pacific countries to handle waste," said Masayoshi Ono, the country officer for Pacific and South-east Asia Division of the Japan International Cooperation Agency. Waste management is a big issue in small islands that have "no place to put it," Ono said. J-PRISM has worked in 14 island nations, including RMI, since 2010.

• The "Hybrid Islands Initiative," focused on expanding renewable energy use and optimizing diesel power generation. Japan is providing technical expertise and other support to assist island nations to get the right balance between fossil fuel and renewables to avoid disruptions to power service. "It's important to have diesel power," said Ono. "Solar relies on good weather but it is not sunny all year around, which is why the islands still need diesel." But, he added, there is scope to further re-

## BUSINESS DIRECTORY

# Benefits of creating eco-friendly cities

GIFF JOHNSON

“The future is now” is the best way to think about the convergence of technology, vision and determination in Japan’s emerging “eco-cities.” Pacific island journalists were treated Friday to a ride in a hydrogen-powered sedan, toured “smart houses,” viewed vertical wall panels used for growing fruits and vegetables specially designed for crowded urban areas, and were introduced to one- and two-passenger electric vehicles increasingly in use for city transport.

Toyota City is one of 27 environmentally friendly cities recognized by the national government of Japan. To promote the concept, Toyota City government established “Ecoful Town,” a showcase campus where local residents and visitors can see the vision and the technology that supports it in action.

The big picture, said Kasuya Tadahiro, Toyota City’s vice director of the Model Environment City Promotion Division, is this city of 420,000 aims to reduce its greenhouse gas emissions by 30 percent of 1990 levels by 2030, and 50 percent by 2050 — an ambitious climate mitigation agenda that Pacific island leaders have called on nations of the world to adopt.

This city grew as an “automobile city” around the Toyota motors headquarters and a large vehicle production plant, which not surprisingly by the 1980s and 1990s produced a negative impact of pollution from carbon emissions of heavy vehicle use. Despite this background, Toyota City was one of the first cities in the country to tackle its environmental problems head on, produce an action plan to mitigate climate change, and begin implementing the new vision for the city, said Ecoful Town tour guide, Aiyumi Nagamatsu.

“In 2009, Toyota City was selected as a ‘smart city’ by the national government,” she said. “This is a pioneering low-carbon city.” A city government pamphlet enthusiastically describes its plan for the area as “programs to accelerate the creation of a vanguard environment city.”

At the family level, this has produced designs for a “smart house,” the centerpiece of which is the Home Energy Management System (HEMS), technology that informs residents of their energy consumption patterns at home through a wall monitor and allows them to minimize use of fossil fuel-generated power.

Nagamatsu showed how an energy-efficient smart house could operate in the evening from power provided from the leftover energy in solar-charged



**Toyota City electric vehicles: Ecoful Town tour guide Aiyumi Nagamatsu shows visitors the one passenger electric vehicles that the Toyota City government rents to residents and visitors for local transport. Photo: Floyd K. Takeuchi/Waka Photos.**

batteries of a family’s electric vehicle. As this power source declined overnight, the city’s grid power system kicks in for a few hours to ensure power stability through the night. The smart house concept integrates multiple power sources to reduce costs to the household, while reducing greenhouse gas emissions.

To date, there are 67 smart houses in Toyota City, and the city government is aggressively promoting expansion of the program to local residents through a combination of public relations and, more significantly, tax cuts and subsidies to those who adopt clean energy options. “We provide a subsidy to those who introduce HEMS to their homes as well as cutting property taxes,” said Tadahiro. Families can accumulate “eco-points” for environmentally friendly behavior, such as recycling that result in prizes or subsidies from the local government.

“The reason we created ‘Ecoful Town’ was to demonstrate to our citizens in the urban area what can be done,” said Tadahiro, whose enthusiasm for the Smart City program is obvious. The city’s action plan covers environmentally friendly planning for transportation, forestry and the every day life of local residents, he said.

Nagamatsu explained that Toyota City has established 45 charging stations for one- and two-seat electric vehicles that the city government rents to anyone who signs up to become a member. Four thousand people have joined, and the cost to use these vehicles while higher than a bus fee is less than a taxi fare, she said. “There isn’t a

lot of public transport in Toyota City,” she said. “So this is a convenient way to get around.”

The city government also has two hydrogen-powered vehicles, built by Toyota, that it uses largely as demonstration of the technology. Two hydrogen service stations service these vehicles that can drive 650 kilometers on a full tank, and take just three minutes to “gas up.” Toyota is producing three of these vehicles per day at its plant and though still in its infancy, there are about 100 hydrogen service stations nationwide in Japan.

Of particular interest to visiting Pacific journalists at the Ecoful Town area was a vertical panel system for urban agriculture production. The panels, roughly six-feet wide by 10 tall, contain space for dozens of potted plants, which offer businesses or local residents options for growing food plants in congested areas.

Now in its third year, the Ecoful Town demonstration campus has been visited by over 150,000 people from Japan and 90 nations, said Tadahiro. It is introducing visitors to the advantages and power efficiency of the HEMS system. He acknowledged that it is not yet widely used in ordinary households. But with 67 smart homes already in operation and an active program of promotion and financial incentives to those who change to environmentally friendly lifestyle, Tadahiro is confident the concept will continue to gain traction with urban residents as Toyota City marches on its plans for a 50 percent cut in carbon emissions over the coming 35 years.

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# Short takes from a Japan visit

GIFF JOHNSON

Amidst announcements of multi-million dollar energy and infrastructure aid projects for RMI and other Pacific islands, fully-paid education exchange programs for island government workers, and climate mitigation aid, seemingly small but significant bits of information from the various personalities we come into contact with illuminated life in Japan. Not necessarily material for a big story, they offer modest insights into developments in Japan.

- During Japan's booming economy of the 1980s, foreign media interest surged, with the number of foreign journalists resident in Japan peaking at about 1,000, said Kiyotaka Akasaka, president of the Foreign Press Center Japan, which sponsored the visit of five media representatives from the Pacific, including myself. "Now the number is about 500," he said. But while there are numerous television, radio, web and print journalists covering Japan for organizations in Europe, the Americas and Asia, there is not a single Pacific island media correspondent residing in Japan.

- Tokyo is gearing to host the 2020 Olympic Games, 56 years since its last hosting of the international sporting competition. "In 1964, Tokyo was crowded and dirty," said Akasaka. Clearly, Tokyo has solved the "dirty" problem as hardly a speck of litter is seen anywhere. Despite 30 million people in Tokyo during the day — 10 million of that number commute to work in the city from surrounding suburbs — public transport options reduce traffic congestion. "Traffic is now well-managed," Akasaka observed, with "traffic jams are less serious."

- While only two Japanese universities — Tokyo and Kyoto universities — make the global top 100 ranking, Akasaka said elementary, high school and adult literacy is extremely high. Our group's interpreter, Yoko Minato, said school is compulsory for children aged 7-15, which covers elementary and junior high school grades. But most students attend high school, and it is estimated that 70 percent go on to either universities or vocational training options.

- Renewable energy is still a small player in Japan's power system, with less than 10 percent of electricity produced by solar and other non-fossil fuels. In the meantime, Japan used to rely on a network of 50 nuclear power



## Being bullet proof

Best advice about traveling in Japan came from Junya Sugawara, deputy director of media relations at the Foreign Press Center Japan:

"Never miss this train," he advised as we stood inside the bullet train preparing to leave Tokyo for Nagoya to the south. We had

about eight minutes till departure and enough time to slip off the train to buy a coffee at one of the small stores on the platform next to the train — but there are no ifs, ands or buts about train riding. Whether you are a Cabinet minister or college student, the trains run on time, to the second.

**'The 2011 calamity, in which thousands died, has reshaped the thinking of the public and government. In our conversations with a range of people in Japan, they commented on people expressing greater interest in moving to rural areas and in renewable energy.'**



**This group of Pacific journalists was culturally in style during a visit to Kyoto. From left, businesswoman Michi Ogawa, Floyd Takeuchi, Giff Johnson, Linny Folau, Titi Gabi, Bill Jaynes and Samisoni Pareti.**

## Meaningful cultural moment

In Kyoto, the team of six journalists I was part of participated in a couple of cultural events, a highlight of which was being dressed in kimono and taking a walk through the park, so to speak. As we were getting done up in native attire, Islands Business Publisher Samisoni Pareti nervously asked Hawaii-based photojournalist Floyd Takeuchi if our group was going to walk down the road to a nearby temple in kimono. "Yes!" replied Floyd enthusiastically. He got the desired response from Samisoni before adding, "just kidding." To which, Samisoni let out a breath of relief.

But five minutes later, one of our kimono ladies

came into the room and announced: "Right, time to walk over to the temple!" Message: Be careful what you ask for.

What was great about our walk down a main street in Kyoto and across a traffic light to the nearby temple dolled up in kimono was the spectacle we produced: reporters from Fiji, Tonga, Papua New Guinea, Hawaii and a couple of white guys hailing from Majuro and Pohnpei in these outfits.

Equally amusing was the many Japanese at the temple and driving along the road staring at us, but trying to act natural like they weren't.

plants, but their use has been suspended with only a couple currently in operation.

- We learned of one impact of the Great East Earthquake and Tsunami of 2011 from a visit to an elementary school in Tokyo. The school, Sanya Elementary prides itself on an integrated food education program that includes a large — for a Tokyo school — garden. In years past, the school grew shintake mushrooms, but halted

their cultivation in the wake of the tsunami and earthquake, which caused a disaster at the nuclear power facility in Fukushima. Radioactive fallout from the nuclear reactor accident was carried by wind and rain the 150 miles (240 kilometers) to Tokyo. Sanya Principal Kazuyoshi Yamagishi explained that gardening activity was halted for a period of time, as the school conducted regular tests of radiation levels. Garden-

ing resumed when radiation levels subsided, he said. But mushrooms were particularly affected by the radioactive fallout from Fukushima, and are no longer being grown by the school.

- The 2011 calamity, in which thousands died, has reshaped the thinking of the public and government. In our conversations with a range of people in Japan, they commented on people expressing greater interest in moving to

rural areas and in renewable energy. It's made it easier to get funding and support for research and development of integrated energy systems to reduce use of fossil fuels, and might lead to spurring shifts in population.

- A visit to Kume Island, near Okinawa, gave us a day-long tour of an experimental OTEC energy plant and the businesses that have grown up because of access to deep sea water that is both clean and cold, producing a good growing medium for aquaculture and agriculture, as well as for cosmetic products. The two most important "take-aways" from the visit: 1) developing OTEC is still in its demonstration phase, going step-by-step to prove that the computer models work in reality. This is leading to improvements and technology fixes that are reducing the cost of future OTEC plants. At Kume, they are hoping to build a one megawatt facility, which will move the ocean thermal technology to the next level, and allow for more improvements toward making a larger plant viable; 2) to be financially viable, multiple uses of the deep sea water is essential. This is why, at Kume Island, they have developed a mini-industrial center with a prawn farm, a farm growing "sea grapes," a series of greenhouses growing lettuce, cabbage, tomatoes and other garden products, and a cosmetics business. These businesses are generating an estimated \$20 million annually, and more importantly, from the OTEC point of view, are paying to use the deep sea water for their products. This helps to underwrite the very high cost of installation of OTEC equipment, which rises exponentially as they move to large plants — and at the moment, with no commercial plant in operation anywhere in the world, the high cost of investment has prevented the building of a large, commercial level plant to date.

# Japan: Taking small steps to Proving OTEC does more than generate power

GIFF JOHNSON

Years of painstaking research into alternative energy options in Japan have produced working prototypes that could lead to a large-scale reduction in use of fossil fuels in Japan and Pacific islands.

As countries of the world prepare to convene in Paris at the end of November for a pivotal climate action summit, officials in Japan say ocean thermal and hydrogen energy products are moving beyond the experimental stage and will soon be making an important contribution to clean energy production in Japan and beyond. The north Pacific governments in the Marshall Islands and Palau have both expressed interest in ocean thermal energy to reduce their dependence on diesel-powered electricity.

The use of deep ocean water to produce energy is “on the brink” of expansion, said Benjamin Martin, the international relations coordinator for the Deep Sea Water Utilization and Ocean Thermal Energy Project (OTEC) on Kumejima, near Okinawa, Japan. Similarly, Toshiba Corporation has ramped up its research and development work on hydrogen energy, opening a showcase research facility at its main Fuchu Complex in Tokyo, while Toyota is building an estimated 700 hydrogen-powered fuel cell vehicles this year, with plans to increase to 3,000 a year by 2017.

Although demonstration OTEC power facilities have been in operation in Hawaii and Japan for decades, the high cost to build a large plant has bottlenecked expansion. Kumejima Mayor Haruo Oota is promoting a Kumejima Model that integrates ex-

**Kumejima Mayor Haruo Oota points to a map of his island, speaking about the Kumejima Model for sustainability. Below, Toshiba’s Dr. Tatsuoki Kono explains the company’s plan for small island applications for hydrogen fuel power. Photos: Floyd K. Takeuchi/Waka Photos.**

panded use of OTEC power to reduce carbon emissions while using the nutrient-loaded and cold deep ocean water to support a wide array of industries including agriculture, aquaculture and cosmetics production. A key message from officials involved in developing OTEC in Japan is that use of deep sea water beyond just providing electricity is critical to making OTEC financially viable.

“If we are successful with OTEC, we can become self-sufficient in energy use,” Oota said, adding that they see the OTEC and its business applications as a model for export.

Although the OTEC facility and pipe capacity at Kumejima is limited to 10,000 tons of deep sea water daily, it is supporting prawn, sea grape and other aquaculture products, cosmetic production, and vegetable growing that is generating \$20 million annually for businesses associated with the research facility, Martin said. “But production is tied to the capacity of the pipeline,” he said, adding that the existing businesses “have grown up around access to deep sea water” that is largely bacteria free and cold.

Cold water circulated in pipes under plant beds speeds growth time for vegetables, while the clean deep sea water offers a safe environment for growing marine products, Martin said.

The high cost to expand the pipeline to increase deep sea water availability to 100,000 tons daily “is why we need to develop the Kumejima Model to pay for it,” said Martin. It is estimated to expand deep sea water use to 100,000 tons daily will require an \$80 million investment in the pipeline.

The aim is to see business expansion so that deep sea water is used multiple times, generating revenue to cover the high cost of installation, which cannot be recovered by electricity production alone. The existing pipeline cost \$20 million to install and is helping local businesses generate to



expand. Key to paying for the \$80 million price tag for expansion is integrating multiple uses for power and water that offset the capital costs, he said.

The Deep Sea Water Research Institute was established 15 years ago on Kumejima. Operation of the Kumejima 100 kilowatt OTEC plant has generated several years of data that has been used to prove theoretical models for ocean thermal conversion, while allowing scientists to improve OTEC plant equipment, reducing costs.

“We’re on the brink,” said Martin. “It’s just a matter of time when we get funding to build a one megawatt OTEC facility.” He believes this step-by-step process is the prudent way to develop OTEC so that engineers can confirm that results seen with the demonstration plants work at a bigger scale.

“We need to build the first full-scale plant (one megawatt),” Martin said. “That’s why we are moving forward with this project to show that it is viable both for other small islands and for bigger areas.” Until they can get funding to build the proposed one megawatt plant — ten times bigger than the

existing experimental facility they operate currently — Martin believes it doesn’t make sense to attempt a larger scale OTEC plant because of the high cost. The price tag of a large facility could easily be reduced by the engineering and development work that goes into a smaller, one megawatt facility, he said.

In Tokyo, Toshiba Corporation engineers have spent 50 years researching hydrogen power. Their first commercial products were put on the market in 2009, and this year the company has stepped up its research and development with plans to roll out a series of new hydrogen energy products over the next 10 years.

“We have technology for hydrogen energy and it is more stable than photovoltaic or wind power,” said Dr. Tatsuoki Kono, senior manager of Toshiba’s New Energy Solution Project.

As the first stage of commercial use of hydrogen fuel for communities, Toshiba is placing hydrogen storage tanks in 20-foot containers so they are mobile and can be transported for emergency response to di-

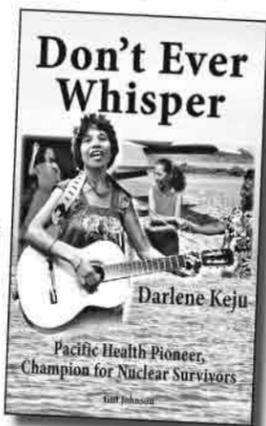
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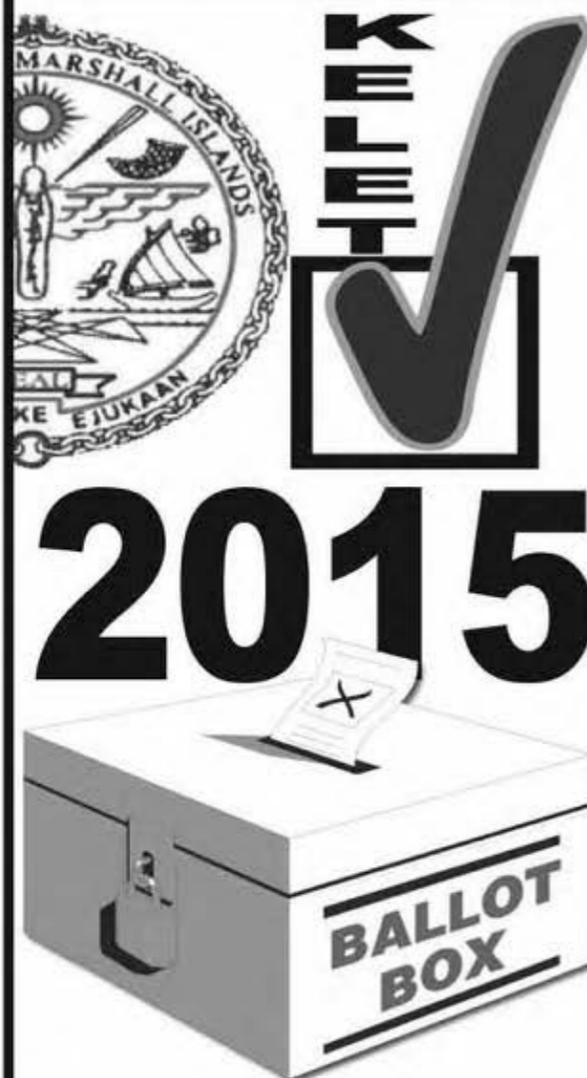
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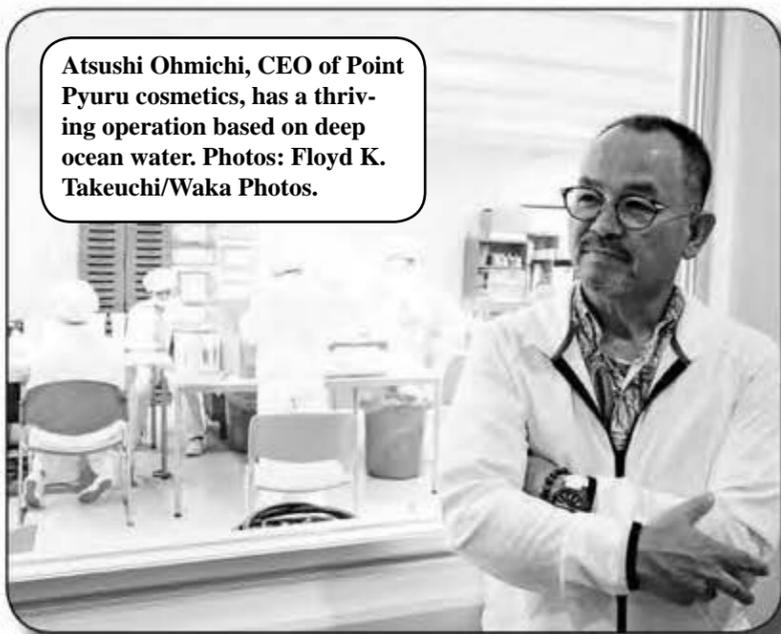
A Pacific media group gets a tour of the experimental OTEC plant in Kumejima, Japan that is using deep sea water to produce energy and to support various businesses. Photo: Giff Johnson



## MEC vs OTEC

For comparison purposes, the current Kumejima experimental OTEC plant is capable of producing 100 kilowatts of electricity, similar to a facility recently opened on the Big Island of Hawaii. Majuro's main power plant that contains the two large Deutz engines has an electricity capacity of 12 megawatts. Majuro's peak power usage is around seven to eight megawatts per day, 70-80 times more than the Kumejima OTEC plant produces.

Atsushi Ohmichi, CEO of Point Pyuru cosmetics, has a thriving operation based on deep ocean water. Photos: Floyd K. Takeuchi/Waka Photos.



## Deep sea power water aids aquaculture growth

Tsukasa Nakamichi (left), plant manager for Kumejima Deep Sea Water Development Company, said access to deep sea water piped directly from the OTEC plant to his warehouse of aquaculture tanks has made his company the leading sea grape producer in Japan.

His land-based farm is producing 180 tons a year, the majority of the 340 tons of this product produced annually on Kumejima.

"Without OTEC, we would have no water and would not be able to do it (growing) at this scale," he said.

Atsushi Ohmichi (above), CEO of the cosmetics manufacturer Point Pyuru, said use of deep sea water for his products of lotions, shampoos and skin treatments is a strong selling point with customers. "Being on a remote island could be a negative, but with access to deep sea water, we have changed this disadvantage to an advantage," Ohmichi said. "My goal is to create a clean energy factory using water and energy from OTEC. Our products might be higher priced, but we concentrate on the market that prefers this type of product."

Tsukasa Nakamichi shows off sea grapes grown in tanks.



sasters. "We have been testing this in Kawasaki City since April this year," Kono said. One tank in a 20-foot container can provide power and water to 300 people for a week.

Next year, Toshiba will offer independent energy systems for use in buses, airports and seaports. By 2017, it aims to offer a "remote island model" using a network of container tanks to power remote areas. "Isolated islands

now depend on costly fossil fuels for electricity," Kono said. "We can solve this problem by providing a stable power source for communities with 50 to 100 houses."

By 2025, the company expects to have produced hydrogen-powered units capable of generating five megawatts of electricity that can replace diesel plants. "Our aim is a zero emissions society," Kono said.

Martin said even the currently limited size OTEC facility has created the enabling environment for several businesses, resulting 140 new jobs, a not insignificant number for Kumejima with a population of 8,300.

Both Kono and Martin see these clean energy options expanding to reduce carbon emissions in Japan, and for other areas, including Pacific islands.

# Islands miss out by not linking health, culture and education!

GIFF JOHNSON

Marshall Islands public elementary school students don't have a lunch program, show consistently poor academic achievement, suffer serious nutrition deficiencies from eating large quantities of "junk food" in urban centers, and frequently miss classes, often because they leave campus in search of food. Marshall Islands Standard Achievement Test results released earlier this month show little improvement in ongoing low academic achievement, a long-standing problem for the public schools. Test results for last school year show, for example, "proficiency" levels ranging from a high of only 34 percent to a low of 19 percent in academic subjects in the third grade.

When the US government halted funding for school lunches three years ago, the Marshall Islands government largely eliminated the feeding program, although some funding for school lunches was included in the budget for the new fiscal year that started October 1 — and some local vendors have filled the gap by offering discount price plates and snacks on or next to local school campuses.

Meanwhile, Assumption and Coop schools, Marshall Islands High School and several elementary schools in the Marshall Islands have over the past several years engaged their students in school gardens that provide produce for the feeding program operated by the private schools, while providing vegetables for the students of the public schools. The correlation between the lack of a school lunch program in most public schools and academic under-achievement should be obvious. Less obvious is the lost opportunity for student learning about nutrition, island foods and food culture for lack of a feeding program linked to school gardens and school curriculum. Marshall Islands schools are missing a golden opportunity for integrating learning, nutrition, and cultural values into their ongoing programs.

A visit last month to the Sanya Elementary School in the Sugunami section of Tokyo offered serious food for thought on the matter. Sanya is showcasing a many-layered program of nutrition education and action that engages students in grades one through six in planting, managing and harvesting vegetables in the school garden, teaches them to cook using this produce, and



Marshall Islands students are missing opportunities available to their counterparts in many Japanese schools, especially in their access to healthy food. Below, a school garden in Japan. Photos: Hilary Hosia, Giff Johnson. Last week's feature on culture connections between Japan and the RMI used photos by Floyd K. Takeuchi/Waka Photos.



**'A healthy body contributes to sound academic development ... our school is above the city's academic average. Also, fewer children have a frustrated attitude. Surveys show the children enjoy farming and the participation contributes to students' life in a positive way.'**

has them studying the nutritional value of the foods they are eating. The school also engages many parents in the nutrition and cooking program.

Perhaps most important, the eating habits of the students are being shifted to a more traditional Japanese diet, known as "washoku" — which is to say, healthier fare. They are enthusiastic about the result, as a meal of fish, rice, miso soup, and mixed vegetables with Sanya fifth graders demonstrated Thursday.

As fifth grade students served food to their fellow students, one student rose to explain today's meal and its nutritional value. Next, another student stood to lead everyone in expressing appreciation for the meal and everyone involved in its preparation, using the Japanese expression, "itadakimasu." As soon as the

thanks were delivered, everyone dived into the meal. At its conclusion, another student led the group in a closing thank you, "go-chisou sama." Barely a grain of rice remained on the plates of the 25 or so students in the classroom as the lunch concluded.

"The gardening helps with emotional stability and well-being of the students," said Principal Kazuyoshi Yamagishi. "Most important for the students is through gardening, they learn to appreciate life."

The school combines a variety of physical activity, gardening, learning about nutrition, and teaching dental hygiene. The school lunch program cost is shared by parents, who pay a monthly fee for their children's meals, and the government, which pays the salaries of the school's kitchen staff.

"A healthy body contributes to sound academic development," said Yamagishi.

While the school is not at the top of Tokyo elementary schools academically, "our school is above the city's academic average," said Yamagishi. At least as important, from Yamagishi's standpoint, is that as a result of participating in gardening, food preparation, and learning Japanese food customs, "fewer children have a frustrated attitude. Surveys show the children enjoy farming and the participation contributes to students' life in a positive way."

The school is now mid-way through a one-year pilot project supported by the Ministry of Education to demonstrate the potential for this unique food education learning program.

The integrated program doesn't stop at the school gates, or limit itself to students learning to cook. Every year in the spring, fifth graders travel for an overnight visit to a village near Mount Fuji, where they plant rice in a sizeable plot. Later in the year, they return for the harvest that generates 400 kilograms (880 pounds) of rice that is used for meals during a special "harvest week" the school celebrates late in the year, bringing parents and community volunteers together for meals and activities with the students.

Sixth graders are taught the custom of washoku including the arrangement of bowls, plates and chopsticks in the traditional style of their elders. As the students gain experience in the gardens and kitchen, they begin to differentiate between imported and local foods, said Yamagishi. "The students pay attention to domestically grown foods and prefer them," he said. "I hope (through this program) the students will

learn to love their country's own food."

The permutations of this food education program at Sanya Elementary are limited only by the imagination of the teachers and students. It also offers a teaching program relevant to the Marshall Islands and other Pacific islands, particularly in the urban centers where child nutrition has deteriorated as people shift from a diet of locally grown and caught food to store-bought processed foods. An epidemic of diabetes and other non-communicable diseases is now sweeping through the islands, causing a high level of sickness impacting the workforce and placing a huge financial burden on already cash-strapped hospitals. This school-based food education program is an innovative way of getting students and parents learning about nutrition and engaged in improving their health.

Sanya Elementary offers a model that could be exported as part of Japan's technical assistance to its island allies or through a sister school approach. The Japan International Cooperation Agency already supplies dozens of math and science volunteer teachers to schools around the Pacific, in addition to its export of volunteers in medicine and other areas of expertise. Exporting the Sanya Elementary model of food education would be a brilliant extension of cooperation between Japan and the Pacific, offering the opportunity for a culturally appropriate and sustainable intervention that portends improvements in health, academic performance and appreciation and understanding of customs that have governed life for generations but ones that are being lost to urbanized youngsters.

## REGIONAL NEWS

# Japan begins \$450 million aid program roll out for Pacific region

Category: [Pacific/Regional News](#) 23 Oct 2015 By Giff Johnson - For Variety



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**MAJURO** — With the hosting of a Pacific Islands Tourism Ministers meeting in Tokyo Sunday, Japan has begun launching a promised \$450 million aid package for the Pacific region.

Prime Minister Shinzo Abe announced at the PALM7 Pacific leaders summit held in Japan in May that his government would provide 55 billion yen or \$458,150,000 over the next three years to its Pacific neighbors in seven major focus areas ranging from climate and disaster risk response to fisheries and trade. Briefing a team of Pacific media representatives Wednesday in Tokyo, Japan government representatives said the new three-year aid program is already underway.

Fulfilling one of the objectives of the PALM7 summit, tourism ministers from 13 island nations gathered in Tokyo last weekend to discuss opportunities with Japan. Although details of the discussions were not made public, officials said the talks focused on how Japan could help boost tourism opportunities in the region.

Among other major developments now in the pipeline:

- A climate change center that will be built in Samoa in conjunction with the Secretariat of the Regional Environment Program. Japan will fund the building of a new facility and provide resources for training initiatives to be sponsored, said Soichiro Kojima, the senior coordinator in the Country Assistance Planning Division of the Ministry of Foreign Affairs. “We hope the center will be open in the next three-to-four years,” he said.
- Establishment of a Pacific LEADS or Leaders Educational Assistance for Development of State program that will offer graduate study at Japan universities and follow up internships in government agencies for 100 emerging leaders under the age of 40. It will start in 2016.
- The regional Japanese Promotion of Regional Initiatives on Solid Waste Management or J-PRISM, which is being extended for a second five-year period. “The next five years aims to expand, modify and strengthen the capacity of Pacific countries to handle waste,” said Masayoshi Ono, the country officer for Pacific and Southeast Asia Division of the Japan International Cooperation Agency. Waste management is a big issue on small islands that have “no place to put it,” Ono said. J-PRISM has worked in 14 island nations since 2010.
- The “Hybrid Islands Initiative,” focused on expanding renewable energy use and optimizing diesel power generation. Japan is providing technical expertise and other support to assist island nations to get the right balance between fossil fuel and renewables to avoid disruptions to power service. “It’s important to have diesel power,” said Ono. “Solar relies on good weather, but it is not sunny all year round, which is why the islands still need diesel.” But, he added, there is scope to further reduce reliance on diesel power, and one initiative is the plan to introduce wind power generation to Tonga. Although some Pacific leaders have called for entirely phasing out the use of fossil fuel for power generation in the next 10 years, Ono said it won’t be possible to replace diesel in the next five-to-ten years. “Renewable energy cannot be reliable 24/7, 365-days of the year for power provision,” he said. “It’s not possible.”

In addition to the nearly \$500 million in development grant funding, the Japan International Cooperation Agency is providing infrastructure loans to three nations in the region — Papua New Guinea, Vanuatu and Samoa. Loans are supporting redevelopment of the international airport in Port Moresby and the Port Vila port.

“Island nations are important partners of Japan,” said Hiroaki Shinohara, the senior deputy director for Pacific Island

Affairs at the Ministry of Foreign Affairs.

Japan has historical ties with many island nations that it governed or traded with in the pre-World War II period. The Pacific is also a site of natural resources important to Japan, said Shinohara.

“The Pacific is very rich in minerals and fish,” he said. “About 80 percent of Japan’s tuna catch comes from this region.” The aim of Japan’s significant aid program for the Pacific region is to “create a peaceful and prosperous region,” said Shinohara.

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# Dateline Pacific morning edition for 26 October 2015

Updated at 5:04 am on 26 October 2015



The Governor of Indonesia's Papua province says his plan for a revised autonomy package is a solution to a critical threat; Tonga's communications minister defends plans to block some websites; Japan is rolling out a three-year aid package to Pacific Islands worth US\$450-million, and; A group of first-term Cook Island MP's are hoping to take back lessons from a New Zealand field trip.

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# Bottom-up approach works in Okinawa offering Pacific islands new waste management options

Category: [Pacific/Regional News](#) 27 Oct 2015 By Giff Johnson - For Variety



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**NAHA, Okinawa** — Japan sports the world's third biggest economy and an efficiency that borders on excessive. But even in this land of high-technology and precision, government agencies can be unresponsive to emerging problems, a group of journalists from the Pacific on a tour of Japan heard Sunday in Okinawa.

Waste management was a problem largely ignored on Okinawa in the 1980s and 1990s, said Hiroshi Kogachi, president of the Okinawa Citizens Recycling Movement.

"Our funding is not large," he said. "But we have passion." That passion produced a model waste management and recycling program in Okinawa that the Japanese government is now promoting around the world.

In the Pacific, solid waste management has been under-funded and low-priority, with much of the recent improvements in urban solid waste management the result of collaboration with donor-funded initiatives.

Growing urban populations living on crowded islands caused unsightly and unhealthy mountains of garbage, a problem particularly noticeable on low-lying atolls that have little space for landfills.

In the Marshall Islands, the unfenced and uncovered city dump on Ebeye Island doubles as the community's baseball field.

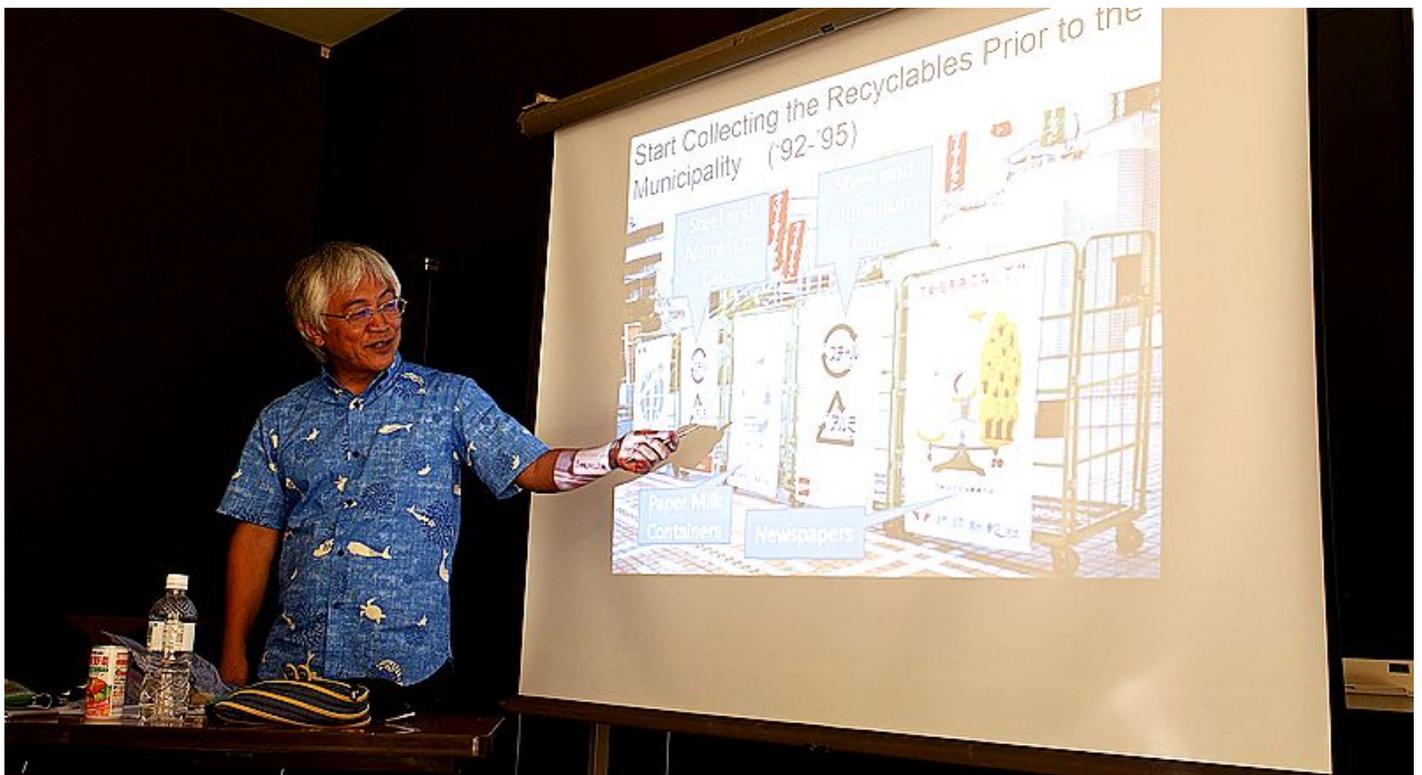
In the country's capital, it wasn't until the Majuro Atoll Waste Company was established that the government began to get a grip on the waste problem as the first refuse collection system was implemented.

Over the past five years, the Japan International Cooperation Agency or JICA has funded a major recycling and waste management assistance project on 14 Pacific islands.

"Handling waste is a big issue for Pacific islands," said Masayoshi Ono, JICA's country officer for Pacific and Southeast Asia Division.

"The project has shown how the volume of waste can be reduced and managed." JICA is now embarking on a second five-year solid waste management scheme to strengthen the capacity of island countries to handle waste.

But in the early 1990s in Okinawa, said Kogachi, "nobody shared my interest in waste management. Our island is small, but we were facing a serious waste problem."



HIROSHI KOGACHI, PRESIDENT OF THE OKINAWA CITIZENS RECYCLING MOVEMENT, DISCUSSES THE SUCCESSFUL WASTE SEPARATION PROGRAM USED IN OKINAWA AND BEING PROMOTED IN THE PACIFIC ISLANDS. PHOTO BY FLOYD K. TAKEUCHI/WAKA PHOTOS

The 2,200 kilometer (1,300 mile) distance from Tokyo didn't help get attention to the problem as the building of infrastructure for waste management lagged behind the rest of Japan, he said.

Garbage piled up outside apartment buildings, spilling onto sidewalks and streets.

He showed a photo of kitchen waste, cans, bottles, boxes and appliances piled around a city government sign warning residents that illegal dumping would result in fines.

"This scene was the same all over Okinawa," he said.

The Okinawa Citizens Recycling Movement began pushing for change, proposing various projects to Naha's city government to reduce waste through aggressive recycling.

"When these were rejected for political reasons, we decided to take our own action," Kogachi said. The bottom-up approach worked. Their community volunteers solicited business sponsorship, launched public education campaigns in the media and schools about recycling, and set up a collection system for separating cans, bottles, newspapers and other recyclables.

Government officials initially refused to buy into the waste separation and recycling program, saying it would take many years to change people's attitudes about dumping garbage, Kogachi said.

"We conducted a campaign to introduce separate collection and recycling to ordinary citizens," he said.

Five years of grassroots efforts saw the citizens group collecting up to three tons of recyclable garbage daily.

Recycling companies existed on Okinawa, but were limited to handling World War II materials.

"At first they were skeptical of our recycling plan," said Kogachi. "But over time, they became more enthusiastic, providing trucks and human resources to assist the collection of recyclable waste."

This action by local residents finally won over government officials to the concept. "After five years, the municipal government decided to introduce separate collection of waste and we handed the program over to the city," he said.

With Okinawa's waste program under control, JICA engaged Kogachi to work in Vietnam, Tonga and the Caribbean to share the method for refuse management.

Key to resolving Okinawa's garbage problems and those in the Pacific islands is gaining the understanding of citizens, businesses and government officials that much of what is thrown away has value.

His first visit to Tonga in 2011 showed that "precious resources were just being thrown away as garbage," he said.

Because transportation to Asian and other recycle centers is costly from remote Pacific islands, Kogachi said it is important to make sure separation of different recyclables is done properly to maximize financial return.

Vehicle mufflers, computer motherboards, mobile phones and air-conditioners all contain rare metals of high value. "Knowledge of rare metals enhances recycling value," he said.

Training supported by JICA and delivered by Kogachi and other experts from Japan have educated island waste management workers so they know how to collect valuable items from consumer waste, Kogachi said.

Ultimately, to implement effective and sustainable recycling programs that reduce the waste stream going into landfills in Okinawa and Pacific islands, the “one way logistics” of the modern business import system has to change, he said. “We have to change from businesses selling products that the consumer buys and then throws away,” Kogachi said.

“Producers” — businesses making and importing goods for sale — have a responsibility. “The problem cannot be solved by citizens alone,” he said. “A sustainable society requires citizens and businesses to fulfill their responsibilities.”

The Okinawa Citizens Recycling Movement showed the power of bottom-up action from the community. The organization’s recycling action strategy is beginning to make some headway in the Pacific through ongoing exchanges between Japanese waste and recycling experts like Kogachi and their Pacific island counterparts.

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## REGIONAL NEWS

# Time, money invested in alternative energy beginning to pay off in Japan

Category: [Pacific/Regional News](#) 03 Nov 2015 By Giff Johnson - For Variety



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KUMEJIMA, Japan — Years of painstaking research into alternative energy options in Japan have produced working prototypes that could lead to a large-scale reduction in use of fossil fuels in Japan and Pacific islands.

As countries of the world prepare to convene in Paris at the end of November for a pivotal climate action summit, officials in Japan say ocean thermal and hydrogen energy products are moving beyond the experimental stage and will soon be making a major contribution to clean energy production in Japan and beyond.

The north Pacific governments in the Marshall Islands and Palau have both expressed interest in ocean thermal energy to reduce their dependence on diesel-powered electricity.

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The use of deep ocean water to produce energy is “on the brink” of expansion, said Benjamin Martin, the international relations coordinator for the Deep Sea Water Utilization and Ocean Thermal Energy Project or OTEC on Kumejima, near Okinawa, Japan.



Similarly, Toshiba Corporation has ramped up its research and development work on hydrogen energy, opening a showcase research facility at its main Fuchu Complex in Tokyo, while Toyota is building an estimated 700 hydrogen-powered fuel cell vehicles this year, with plans to increase to 3,000 a year by 2017.

Although demonstration OTEC power facilities have been in operation in Hawaii and Japan for decades, the high cost to build a large plant has bottlenecked expansion.

Kumejima Mayor Haruo Oota is promoting a Kumejima Model that integrates expanded use of OTEC power to reduce carbon emissions while using the nutrient-loaded and cold deep ocean water to support a wide array of industries including agriculture, aquaculture and cosmetics production.

“If we are successful with OTEC, we can become self-sufficient in energy use,” Oota said, adding that they see the OTEC and its business applications as a model for export.

Although the OTEC facility and pipe capacity is limited to 10,000 tons of deep sea water daily, it is supporting prawn, sea grape and other aquaculture products, cosmetic production, and vegetable growing that is generating \$20 million annually for businesses associated with the research facility, Martin said.

“But production is tied to the capacity of the pipeline,” he said, adding that the existing businesses “have grown up around access to deep sea water” that is largely bacteria-free and cold.

Cold water circulated in pipes under plant beds speeds growth time for vegetables, while the clean deep sea water offers a safe environment for growing marine products, Martin said.

The high cost to expand the pipeline to increase deep sea water availability to 100,000 tons daily “is why we need to develop the Kumejima Model to pay for it,” said Martin.

The aim is to see business expansion so that deep sea water is used multiple times, generating revenue to cover the high cost of installation, which cannot be recovered by electricity production alone.

The existing pipeline cost \$20 million to install and is helping local businesses generate to expand.

Martin said a new pipeline to increase deep sea water intake ten-fold will cost \$80 million.

Key to paying for this is integrating multiple uses for power and water that offset the capital costs, he said.

The Deep Sea Water Research Institute was established 15 years ago on Kumejima.

Operation of the Kumejima 100-kilowatt OTEC plant has generated several years of data that has been used to prove theoretical models for ocean thermal conversion, while allowing scientists to improve OTEC plant equipment, reducing costs.

“We’re on the brink,” said Martin. “It’s just a matter of time when we get funding to build a one megawatt OTEC facility.”

He believes this step-by-step process is the prudent way to develop OTEC so that engineers can confirm that results seen with the demonstration plants work at a bigger scale.

“We need to build the first full-scale plant,” Martin said. “That’s why we are moving forward with this project to show that it is viable both for other small islands and for bigger areas.”

Tsukasa Nakamichi, plant manager for Kumejima Deep Sea Water Development Company, said access to deep sea water piped directly from the OTEC plant to his warehouse of aquaculture tanks has made his company the leading sea grape producer.

His land-based farm is producing 180 tons a year, the majority of the 340 tons of this product produced annually on Kumejima Island.

“Without OTEC, we would have no water and would not be able to do it (growing) at this scale,” he said.

Atsushi Ohmichi, CEO of the cosmetics manufacturer Point Pyuru, said use of deep sea water for his products of lotions, shampoos and skin treatments is a strong selling point with customers.

“Being on a remote island could be a negative, but with access to deep sea water, we have changed this disadvantage to an advantage,” Ohmichi said.

“My goal is to create a clean energy factory using water and energy from OTEC. Our products might be higher priced, but we concentrate on the market that prefers this type of product.”

In Tokyo, Toshiba engineers have spent 50 years researching hydrogen power.

Their first commercial products were put on the market in 2009, and this year the company has stepped up its research and development with plans to roll out a series of new hydrogen energy products over the next 10 years.

“We have technology for hydrogen energy and it is more stable than photovoltaic or wind power,” said Dr. Tatsuoki Kono, senior manager of Toshiba’s New Energy Solution Project.

As the first stage of commercial use of hydrogen fuel for communities, Toshiba is placing hydrogen storage tanks in 20-foot containers so they are mobile and can be transported for emergency response to disasters.

“We have been testing this in Kawasaki City since April this year,” Kono said. One tank in a 20-foot container can provide power and water to 300 people for a week.

Next year, Toshiba will offer independent energy systems for use in buses, airports and seaports. By 2017, it aims to offer a “remote island model” using a network of container tanks to power remote areas.

“Isolated islands now depend on costly fossil fuels for electricity,” Kono said. “We can solve this problem by providing a stable power source for communities with 50 to 100 houses.”

By 2025, the company expects to have produced hydrogen-powered units capable of generating five megawatts of electricity that can replace diesel plants.

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“Our aim is a zero emissions society,” Kono said.

Martin said even the currently limited size OTEC facility has created the enabling environment for several businesses, resulting 140 new jobs, a not insignificant number for Kumejima with a population of 8,300.

Both Kono and Martin see these clean energy options expanding to reduce carbon emissions in Japan, and for other areas, including Pacific islands.



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# Information gap in PNG/Japan cooperation



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**J**apan's interest in the Pacific Islands region remains steadfast.

But Japan to many Papua New Guineans and the rest of the Pacific is synonymous with the World Wars and to the newer generation, fast cars and cool mobile phones.

And that's perhaps where it ends.

Papua New Guineans are perhaps one of Japan's biggest clients in its used car business. This is one subject well to do Papua New Guineans are well versed with.

Owning a car is about status, lifestyle on the high end. Japan not only makes it possible for first time buyers, it also offers by far the cheapest rates there is using the best marketing strategy there is.

The capital, Port Moresby suffers horrendous traffic congestions during peak hour traffic.

Our roads have become flooded with cars Japan no longer needs, compounding a poor road system left largely unimproved since Independence.

During one Climate Change meeting in Bonn, Germany in 2010, Japan was commended for lowering its carbon emissions in the transport sector.

But that was short-lived when others said it “merely exported it to third world countries.”

A sheer lack of awareness and thereby very little understanding of something as simple as a car and climate change mean Papua New Guineans cannot connect the dots...at least not yet.

But its business as usual for second hand car dealers and their happy customers just as it is on the regional front between Japan and its Pacific Island friends.

In Tokyo this week, the Association for Promotion of International Corporation (APIC) is hosting senior journalists from Pacific Island countries in an effort to bridge the information gap between the region and itself.

Papua New Guinea is represented by the General Manager of LOOP PNG, Titi Gabi. Other participants are Islands Business Owner and Publisher and one of Fiji's veteran journalists, Samisoni Pareti. Tonga's Linny Folau from Matangi Tonga, Bill Jaynes – Managing Editor of the Kaselehlie Press in the Federated States of Micronesia and Giff Johnson, Editor of The Marshall Islands journal.

The program is coordinated by seasoned journalist and photographer, Floyd Takeuchi and the Foreign Press Center of Japan (FPCJ), the equivalent of the PNG Media Council.

The ultimate objective of this program is to give Pacific Island journalists the right information on its programs in the region and how much it will cost tax payers.

For a country that shares strong ties with the region and whose key commercial interest lies in our vast ocean and rich minerals, information on its development programs aimed at improving the lives of a population whose majority still live in villages as subsistence farmers is almost nonexistent.

Media coverage of PNG and Japan's cooperation is limited to press releases by Government spin doctors.

At the Pacific journalists first media briefing on Wednesday, APIC Executive Director, Ambassador Shoji Sato said there are no Pacific correspondents in Japan although foreign media here number about 600 about half of whom are foreigners from 1,000 previously.

Its role is to put foreign journalists in touch with government officials for interviews, press briefings, expert opinion on key issues sought by respective journalists on matters of public interest.

That opportunity has been extended to visiting Pacific Journalists whose engagement from hereon will be confined to emails.

Japan's work in the region is a silent one yet it focuses on key areas vital to the wellbeing of the population: Climate Change, Solid Waste Management, Disaster Risk Management, Renewable Energy, Education and Infrastructure.

Pacific Journalists were told the processes involved in applying for assistance on offer. That is a government responsibility. The government's process of application and choice of location is an area worth pursuing by local media with the aim of getting as many Papua New Guineans involved in the decision making process.

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# Transport Efficiency



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**P**apua New Guinea's rugged terrain is such that air transport is the only option for people's movement around the country.

The Highlands Provinces though are linked by road to Madang and the country's second largest Province and Industrial capita, Lae through the Highlands Highway.

But that link takes care of PNG's internal Provinces only and sections of the Highway have proven impassable many a time due to tribal warfare in the Highlands or deterioration from a lack of proper and timely maintenance.

Natural disasters have also played a part in the efficiency and safety of this highway over the years.

Constant air travel for Papua New Guineans is a costly exercise. In fact, it is cheaper to fly from Port Moresby to Cairns than most domestic travel.

The return fare for Port Moresby to Lae is K978.20.

Madang to Alotau return will set you back K2029.20

Wewak to Goroka is a staggering K2522.00

Public road transport is disorganized and left in the hands of private citizens.

Fiji by comparison appears to have a superior public transport system than PNG which many of us have sampled over the years.

The PNG government has mooted an ambitious plan to connect the country via roads under a proposal called the Trans National Highway.

The plan is to connect the Highlands to the coast by road or open up the Southern region to the rest of the country.

Prominent members and interest groups from the Southern region have opposed any moves to build a highway citing a migration of crime and outsiders to an otherwise peaceful region.

There will be stiff challenges for the Government to get this off the ground both technical and physical.

One key area of cooperation between Pacific Island countries and Japan is infrastructure.

Papua New Guinea can look to Japan's example and invite technical experts for the proposed Trans National Highway.

Japan's commitment to providing its citizens with a quality life is evident in its highly technical and advanced public transport system.

Last week, visiting Pacific Journalists travelled from Tokyo to Nagoya via the *Shinkansen* or bullet train.

This alone, a mind blowing experience for most whose countries deal with different issues and challenges on public transport.

The distance between Tokyo and Nagoya is 258.57 kilometers. The Bullet delivers you to Nagoya in 1 hour 40 minutes. By airplane with a speed of 560 kmp takes 29 minutes.

Locals say that bullet cuts travel time by more than half.

*According to the ACP Rail International website, Japan's high speed bullet trains, offer visitors an experience like no other with speeds reaching up to 320 km/hr!*

*The main Shinkansen lines with bullet trains include Tokaido, Sanyo, Tohoku, Joetsu, Nagano and Kyushu. Popular routes include Tokyo to Osaka and Tokyo to Nagano with frequent and punctual departures.*

*To travel on Japan's bullet trains you can choose from 3 different rail passes. The Japan Rail Pass covers the entire country of Japan whereas the JR East Pass allows for travel in Eastern Japan including Tokyo, e Nagano and Mount Fuji. Kyushu Rail Passes offer the flexibility of exploring the entire island of Kyushu, or only the Northern part of Japan's third largest island.*

The efficient service of the Bullet train is backed by an equally efficient workforce from cleaners to ticket sellers and inspectors.

Japan has 100 years' experience dealing with trains and railways and Papua New Guinea has a lot to gain from exploring the opportunity under existing cooperation arrangements.



**Tags:**  
Japan-Trans National Highway-Papua New Guinea (/tags/japan-trans-national-highway-papua-new-guinea)  
**Author:**  
Titi Gabi

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# Look at Kumejima



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**P**apua New Guineans living on atolls and other islands off the mainland continue to face hardships many of us can never really understand.

Tasman, Cartarets and Mortlock islands in the Autonomous Region of Bougainville are still doing it tough as climate change, caused by global warming, continues to threaten their existence.

Tasman Islanders continue to get rations of water, rice and canned meat from the Government.

Their survival rests with landowners from Bougainville who have agreed in principle to allocate land for a resettlement program.

High tide inundates these atolls. Native food crops including coconuts no longer yield, fresh water sources are no longer fit for consumption and burial grounds have been destroyed by wild weather.

Sand bags, tree stumps, bricks and oyster shells line the shores as a barricade in a futile effort to stop further shoreline erosion.

Manus Island on the northern tip of Papua New Guinea is the largest of the Admiralty Islands and the fifth largest in the country.

Smaller islands including Rambutso report alarming changes caused by wild weather and rising sea levels.

Sea water has reached houses built near the beach, threatening farming and livelihoods. Creeks and rivers are drying up and the only source today is the rain.

Across the mainland, coastal provinces are seeing the disappearance of their shoreline, fish stocks have reduced drastically and traditional food crops are not yielding as well as they used to.

Local NGOs have played a large part in implementing adaptive measures while the National Government is yet to give this situation the attention it deserves.

These include planting mangroves in drums and introducing the African yam.

Medical emergencies can only be treated on mainland Manus or Bougainville; weather, money and banana boats permitting.

Given the scenario, anyone from the Pacific Islands who is given the opportunity to witness the model of Japan's Kume Island (Kumejima) can expect a flood of mixed emotions.

Joy, because there are some solutions available out there; sadness, that the hardships faced by islanders have gone on too long, anger, that existing relations with countries like Japan are not explored fully.

Kumejima is a 25 minute journey from Hana in Okinawa.

Its physical features are very similar to Papua New Guinea and the rest of the South Pacific.

Senior Pacific journalists touring Japan saw first-hand the host country's efforts in making this island of 8,300 people, sustainable.

Cornfields and greenhouses indicated food security is being addressed.

Hotels, spas, beaches and the peace and tranquility told us, tourism is well and alive.

The establishment of a world class research station with the primary focus on producing clean energy was further testament to Japan's determination to sustain the lives of its island people.

Coral reef reconstruction, aquaculture and animal husbandry also make the list.

Mayor Haruo Oota has helped plan and execute a sustainable model for Kume Island that could be applied in Pacific countries.

**Tags:**

Kumejima Japan (/tags/kumejima-japan)

Climate Change (/tags/climate-change)

**Author:**

Titi Gabi

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# Preserving our cultural heritage



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**W**hen authorities pulled down the United Church building in the heart of down town Port Moresby several years ago, some sectors of the community complained bitterly, suggesting it be preserved.

Not far from that church building on the hill adjacent to Qantas House, the National Museum and Art Gallery was fighting a losing battle to prevent the demolition of another building.

When bulldozers finally went to work, they crushed 100 years of religious history for the United Church. The Church's first ever building, erected shortly after the arrival of missionaries, came tumbling down and its remnants were carted off to the dump.

The United Church said then, it had no funds to maintain the building.

It was the same story for the structure further up the road. The National Museum and Art Gallery could not produce the required funds to convince city authorities to prevent its demolition..

This building had over the years crumbled from a lack of care and maintenance and became the subject of termite infestation until it was condemned by City Hall.

Bulldozers tore down what was left of Papua New Guinea's history. This was the first House of Assembly, the corridors of which hosted a handful of brave, young Papua New Guinea men who plotted vehemently for Papua New Guinea's Independence in 1975.

The meeting rooms,, the chamber where history was made, came tumbling down in one big pile of rubble in a matter of minutes.

There was a section of the public that criticized the country's inability to preserve its history for future generations.

Preserving history for most Pacific Island countries including Papua New Guinea has always been through story telling.

But 40 years on, the number of story tellers is diminishing.

In an interview with reporters in September this year, PNG's founding Prime Minister, Sir Michael Somare said, "the story of Independence is my story too."

The story of Independence is one of courage and determination.

But children learn of this at university if your field of study is Political Science.

Sir Michael is synonymous with Independence. But the story is fading fast and the younger generation knows little to nothing about how those significant events unfolded.

Prince Charles flew into Port Moresby to declare PNG's Independence at the Sir Hubert Murray Stadium in Port Moresby which has since been demolished to make way for a new sports stadium for the July Pacific Games this year.

The opportunity to teach our children an important part of the country's history may have been lost forever.

A lesson to have been learnt and felt in the conservation of a building as vital as its' first House of Assembly.

Pacific journalists touring parts of Japan this week were taken to some of its ancient treasures in Kyoto today.

The Nijo-jo castle is one of UNESCO's world heritage sites. There were throngs of visitors to this ancient piece of Japanese history, built in 1603 as the official Kyoto residence for the first Tokugawa Shogun, Iyasu.

As we toured, maintenance work was being carried out at different sections of the castle and people paid a fee to tour the grounds and learn its history.

More than half the visitors there were Japanese locals including school children.

These sites are well guarded, well-kept and revered by locals.

Two other sites toured today were the Golden Pavilion, built in 139 and the Ryoanji Temple acquired in 1450, destroyed by fire during the Onin War and rebuilt in 1499. It too was registered as a World Heritage site in 1994.

For us it was a spiritual journey back in time – every tree, every timber, every wall, every painting and paving – a reminder of Japan’s rich beginnings captured forever in what is perhaps a costly yet worthwhile conservation program.



**Tags:**

cultural heritage (/tags/cultural-heritage)  
papua new guinea (/tags/papua-new-guinea)  
Japan (/tags/japan)

**Author:**

# Pacific journalists join invitation program in Japan



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From left, Kiyotaka Akasaka (President Foreign Press Centre Japan), Titi Gabi, Amb Shoji Sato (Executive Director APIC), Bill Jaynes, Floyd Takeuchi, Samisoni Pareti, Linny Folau and Giff Johnson. Tokyo, Japan, 21 October 2015.

Matangi Tonga Online photo-journalist, Linny Folau, has joined four senior journalists on the first APIC - Pacific islands Journalists' Invitation Program in Japan from October 20-28, aimed to deepen their understanding on some national and regional issues facing Japan.

During the working program the invited journalists will carry out interviews in Tokyo, Nagoya, Kyoto and Okinawa, looking at Japan's tsunami warning system at the Japan Meteorological Agency in Tokyo, and attending a briefing on Japan's foreign policy in the Pacific region. They will also learn about the issues of investment, trade and tourism promoted by the Pacific Islands Centre in Tokyo.

JICA will brief the journalists on Japan's cooperation toward the Pacific region in such fields as energy, the environment and disaster management. The journalists will travel by bullet train to Nagoya to visit the Toyota Ecoful Town to experience the future of green societies. In Naha, Okinawa they will meet the Okinawa Citizens Recycling Movement, a civic group working with JICA to share the waste management system with the Pacific islands. A cultural tour introduces Kimono wearing and tea-making in Kyoto.

This is the first Pacific Journalists' Invitation program sponsored by the Tokyo-based Association for Promotion of International Cooperation (APIC), which supports various development cooperation projects to promote mutual understanding between Japan and other countries in conjunction with the Foreign Press Centre, Japan.

The program is led and coordinated by Floyd Takeuchi. Invited journalists are Samisoni Pareti, Group Editor *'slands Business*, Fiji; Titi Gabi, General Manager of Loop News Digicel, Port Moresby; Giff Johnson, Editor, *Marshall Islands Journal*; Bill Jaynes, Editor, *Kaselehlie Press*, Federated States of Micronesia; and Linny Folau, senior journalist, *Matangi Tonga Online*, Tonga.

Energy

# Japan looks at wind power generation for Tonga

Tuesday, November 24, 2015 - 16:19. Updated on Tuesday, November 24, 2015 - 17:33.

Nuku'alofa, Tonga

Wind power energy may be the next big source of renewable energy, after solar energy, to help reduce Tonga's heavy reliance on diesel for power generation.

Japan's International Cooperation Agency (JICA) will carry out a six-months feasibility study soon.

The wind power study follows close behind the opening of Tonga's third solar plant. The plant which has the first Stabilising Capacitor and Micro-grid Control System was funded by JICA with USD\$14.7 million and handed over to the Government of Tonga.

Wind power generation, if feasible for Tonga, will also help contribute to the Government's ambitious goal to reduce its reliance on diesel fuel for its power generation by 50-percent by 2020.

Masayoshi Ono, the Country Officer for the Pacific and Southeast Asia Department, at the JICA headquarters in Tokyo, said on 21 October a new Hybrid Islands Initiative is aimed to provide smart energy integration for resilient countries.

JICA administers Japan's Official Development Assistance including technical cooperation, ODA loans and grant aid. During PALM 7 this year, Japan specially focused issues included energy through the Hybrid Islands Initiative.

Takashi Toyama the Director of the Pacific and South East Asia Division, JICA HQ, confirmed they will start a study this year or early next year for about six months, using JICA officials.

He said Pacific Island countries are exposed to economic and environmental instabilities such as rises in the prices of crude oil, food and natural disasters affected by climate change.

In the 2012 fiscal year (reported in 2013), JICA's operational costs amounted to \$1 billion yen for the Pacific region, with technical cooperation at \$4.2 million yen, ODA loan \$4.9 million and grant aid newly distributed at \$7.4 million.

JICA is the largest bilateral agency in 150 countries and regions and has some 100 overseas offices including Tonga.

[Tonga](#), [Japanese aid](#), [wind power](#), [JICA](#), [solar energy](#)



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## Pacific Islands

# Pacific Islands Centre promotes Tongan products in Japan

Tuesday, November 24, 2015 - 17:59. Updated on Tuesday, November 24, 2015 - 18:01.

Nuku'alofa, Tonga



Takehiro Kurosaki and Pacific journalists, including Linny Folau, visit the Pacific islands Centre, Tokyo. October 2015. Photo FKT.

By Linny Folau

Tongan products such as vanilla and Japanese taro have been successfully promoted in the Japanese market, facilitated by the Pacific Islands Centre (PIC) in Tokyo.

Squash has been Tonga's only export to Japan, which boomed since it started in the 1980s, only to decline after a peak in the 1990s.

Pacific Islands products, including Tongan products have been showcased at the Pacific Islands Centre in Tokyo. The PIC, which relocated to the Meiji University in 2009, promotes trade, investment and tourism between Japan and the Forum Island Countries.

Mr Takehiro Kurosaki PIC Deputy Director told Pacific journalists in October that Tongan produce and products such as the Japanese taro and vanilla from Vava'u have been successful in securing Japanese markets. He said this was partly due to some of the Polynesian private sector people being very aggressive when connecting with Japanese businesses.

Tonga is one of the successful countries since Pousima Afeaki started growing and exporting Japanese taro. "Vanilla is also popular here," he said.

Takehiro said guaranteeing that Pacific products meet Japan's high quality standards is vital.

In Tonga's case it has meant that people are studying in Japan, some for their doctorate degrees in universities, so they know what the Japanese characteristics in business are, he said.

One of the biggest events to showcase Pacific products is the Pacific Islands Leaders Meeting (PALM) and this year Tongan vanilla ice cream was sold out during the FESTA festival that was held in conjunction with PALM 7.

He said another success for Tonga is that grower and exporter Minoru Nishi has started negotiations on exporting breadfruit to Japan, Australia and New Zealand. While each Pacific Island country has one or two successes, like Vanuatu with its tamanu oil.

"Although our centre is a small operation with three staff it caters as an important focal point of contact for Japanese businesses and Pacific businesses to connect and network. However, some Pacific businesses need to step up their game and become more proactive and respond timely to Japanese business enquiries, which have not always been the case."

He said when the centre explains to Japanese people what they are about most Japanese people are quite eager to make the connection or they visit the Pacific and meet private companies.

"The centre's advice is free and every day we talk to Japanese investment companies that are interested and most recently there have been solar energy companies," he said.

#### Tourism

At the same time, this year has been an important year for tourism in regards to Japan and the Pacific, because more Japanese people are learning more about the islands from visits by the Emperor to Palau and by the Crown Prince and Princess of Japan to the Coronation in Tonga this year.

However there are challenges especially with the younger Japanese generation not attracted to visiting foreign countries due to their busy life.

University students said they are willing to go to foreign countries but they do not have the time due to school or during their break they go job hunting nor do not have enough money, he said.

The centre aims to make a guide book of Pacific Forum countries and to help promotion of tourism, as one of the initiatives they are looking at assisting in tourism.

[Tonga](#), [PIC](#), [trade](#), [Japan](#), [Tongan vanilla](#), [Pousima Afeaki](#), [Minoru Nishi](#)



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# Japan and Pacific Islands Countries face similar problems—self starters solve them

This very different issue of The Kaselehlie Press contains six articles based on a visit to Japan by five Pacific Islands' senior journalists who were invited by the Association for the Promotion of International Cooperation (APIC). Details of the trip were organized by Japan's Foreign Press Center.

Though many of Japan's challenges are similar to those of Pacific Island Countries, their responses are also quite different.

For instance, Japan is the home of square watermelons grown specifically to fit more conveniently into refrigerators.

Japan's advanced public transportation system can get a passenger almost anywhere they need to be precisely on time. The sidewalks around those transportation centers have raised bumps, a sort of "Braille for the feet" for passengers with visual impairments.

Journalists heard a robot play a convincing performance of "Pomp and Circumstances" on a violin at the Toyota Plant in Toyota City. We later watched other robots performing the hundreds of repetitive welds necessary to build several different models of Toyota vehicles.

Japan has smart cars, smart houses, and even smart parking meters.

Some of the technology you will read about in this issue may someday help the FSM with problems like fossil fuel importation, the same problem that Japan faces.

If the APIC tour had been about Japanese braggadocio, the stories in this issue might be interesting only in a, "Hmmm, I didn't know they could do that," sort of way, but none of them would have mattered to you much.

But the journalists also had visits with people who thought big and who took one small step, and another, and another until their dreams were realized for the good of their people and for themselves.

You will read about Michi Ogawa and her business, Kyoto Association of Women which teaches interested foreigners about Japanese tradition and culture, including international Heads of State and Hollywood actors along with "regular" people.

You will read about Hiroshi Kogachi and his organization that decided in the 1990's that if the Okinawa government wouldn't do recycling, they would, and they did.

The FSM has its own self starters; people who have decided to do whatever is needed in order to get things done. Like Japan's self starters, even the big technological self starters, those people had a dream and started taking small steps with or without government support. They didn't sit around waiting for someone to do it for them. They did it themselves by taking baby steps.

In the FSM, schools, river restoration projects, domestic violence and gender education programs, conservation projects, trash projects, and many others have begun because self starters didn't wait for someone to do it for them. Those "projects" may have needed help from "the outside" but they have started.

If the APIC visit had one overriding message it would be that sometimes all it takes is a big idea and baby steps.

I hope this issue serves as encouragement for all of the self starters in the FSM.

*Bill Jaynes  
Managing Editor  
The Kaselehlie Press*



**ALSO in this issue:**

**FSM boxer awarded ANOC 2015 Pacific Games Female Athlete of the Year**

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**FSM Infrastructure Development Plan, FY2016 – FY2025**

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**The Nature Conservancy Celebrates 25 Years in Micronesia and Asia Pacific**

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**TALKING FISH: How does FSM manage its fisheries?**

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# Toyota City town a showcase for ecologically sustainable community living



By **Bill Jaynes**  
The Kaselehlie Press

October -23-15

**Toyota City, Japan**—Pacific Islands journalists may have been the first from the Pacific Islands to have ridden in a hydrogen powered car, a Toyota Mirai. The unique opportunity came during a visit to the “Toyota City Ecoful Town,” which serves as a showcase for ecologically sustainable community living.

The visit began at a restaurant on the grounds. All of the vegetables that were served were grown in a hydroponic green house on the grounds. The herbs and spices came from a unique vertical garden, which is also on the grounds. Both systems are self watering.

Toyota City is a town of 420,000 people. Kasuya Tadahiro, Toyota City’s vice director of the Model Environment City Promotion Division, said that the town has set an ambitious carbon emissions goal that goes even beyond what the national government has committed to doing. By 2030 they will decrease their carbon output by 30% of the 1990 levels. By 2050 their goal is for a 50% reduction in carbon emissions from the 1990 levels. They’re very serious about the goal.

Tadahiro said that in 2008 the city developed a master plan with the environment at the center of the plan. In 2011, the National Government selected the city as a model city and established the ecoful town as a showpiece of their efforts. It’s one of several across Japan.

In the last three years 150,000 people from 90 countries have visited the sample “town”.

Ayumi Nagamatsu, an employee who works for Toyota the car manufacturer, has been assigned to the town and gave the Pacific Islands journalists a tour. She explained the “smart home” concept and HEMS (Home Energy Management System) that is behind it. HEMS monitors every aspect of energy management and consumption in the homes where it is installed.

Smart homes have solar power systems that store the power the cells generate from the sun in a battery bank.

The HEMS monitors power consumption and know when to switch to the public utility system grid if necessary. If the home owners choose to drive a plug in electric vehicle, the batteries in those cars can also be used as extra power storage for the home. Not only would the home charge the

vehicle from a photovoltaic systems but the car could be used to power the home if the main battery bank becomes low.

At 35 million yen (approximately \$301,000) the systems are not cheap and for existing homes, substantial renovation would have to be done. The city representatives say that the city is offering incentives such as property tax breaks for home owners who install the system. They also provide a subsidy for the purchase of the system.

Nagamatsu also showed the journalists a charging station for small electric vehicles on the compound. She said that Toyota City has 45 similar charging stations and members of a special coop can rent the vehicles in a scheme similar in design to the bicycle rental programs that are in operation in large cities. Members can leave the vehicle at any of the charging stations when they are done with the vehicle and they need not return in the exact same vehicle in which they left.

Members pay 200 yen for the first 10 minutes and 20 yen for each minute thereafter. “It’s more expensive than a bus,” the enthusiastic tour guide said,

“but less expensive than a taxi.”

Tadahiro said that Toyota City runs and manages the displays at the “Ecoful Town” but that several corporations are also taking part in the project.

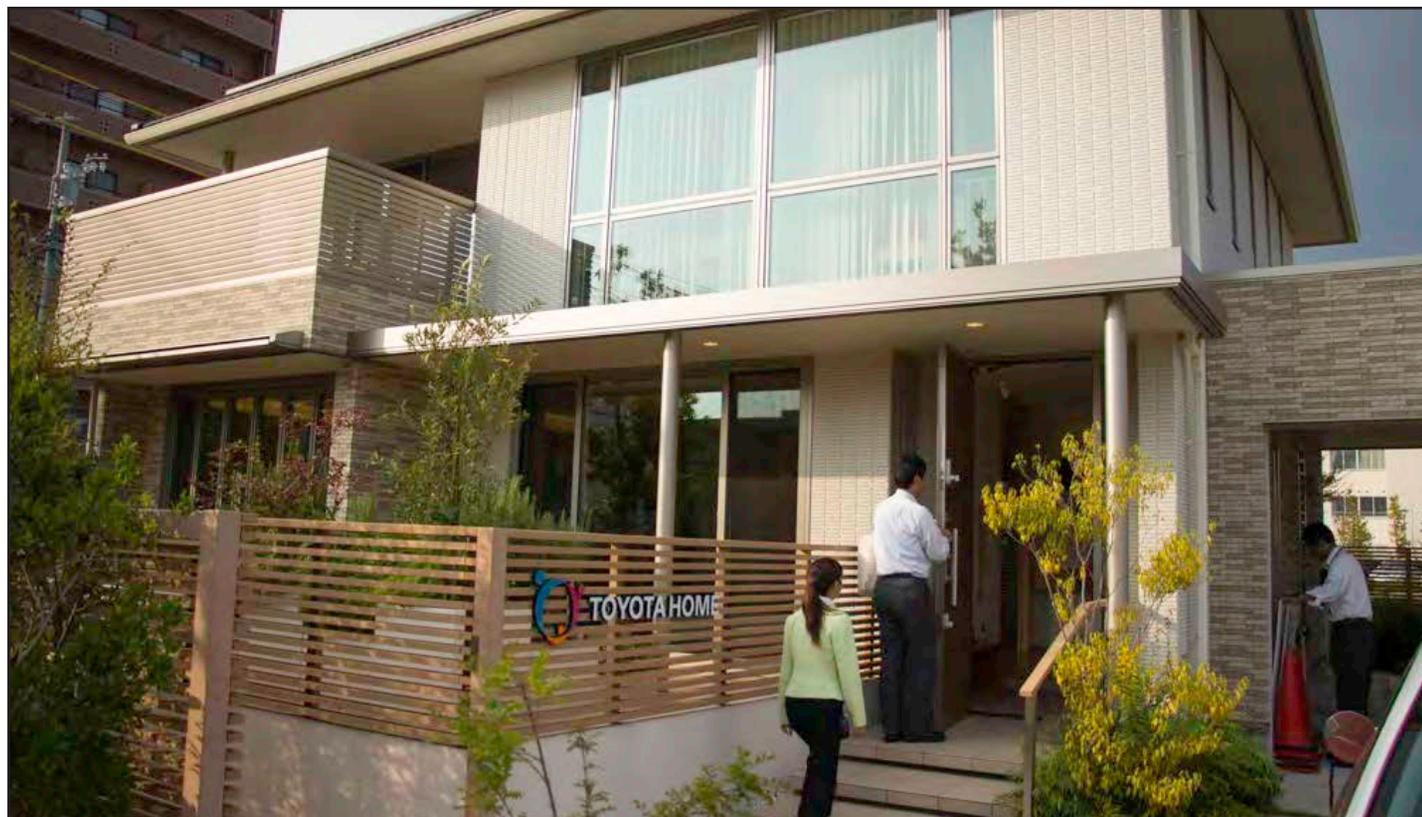
The last demonstration was of the Toyota Mirai. Each of the journalists was treated to a ride in the car that uses hydrogen to produce the electricity that runs the car. The Ecoful Town produces its own Hydrogen and operates a hydrogen fueling station as well. Like the electric cars that are increasing in popularity in Japan where buyers can get subsidies to purchase one of the expensive vehicles, the Mirai makes very little sound. It produces no exhaust other than water vapor. It can handle highway speeds without breaking a sweat

Unlike the standard vehicles that Toyota produces, Toyota can only make three Miraies a day because it requires a significant amount of hand assembly. There is currently no international market for the vehicle because other than in Japan there are few hydrogen refueling centers. Japan’s central Government hopes to have completed the construction of 100 such filling stations by the end of this fiscal year.

“This (Hydrogen) could be a game changer for Japan,” Nagamatsu said, “because we have no fuel resources of our own.”

The vehicles are quite expensive but again, a government subsidy eases the sticker shock of the vehicle for consumers.

The government of Toyota City has a few of the cars and they also operate a hydrogen powered bus.



# Japan's Ministry of Education funds nutrition education campaign at Suginami School

By *Bill Jaynes*  
The Kaselehlie Press

October 22, 2015

**Tokyo, Japan**—In an effort to combat the region wide problem of non-communicable diseases like dietary diabetes, Japan's Ministry of Education has been monitoring a pilot education and nutrition program at Sanya Elementary School in the Suginami Ward of Tokyo. They've backed the campaign with a budget of six to seven million yen (about \$50 to \$60 thousand)

The Pacific Islands journalists invited by the Association for Promotion of International Cooperation had opportunity to witness the program in operation and to join one fifth grade class for lunch at Sanya Elementary.

As the journalists entered the school grounds, dozens of school children were skipping rope and running around the school's well equipped playground. When the school's principal Mr. Kazuyoshi Yamagishi gave the journalists a tour, it was easy to be distracted by the sound of children singing in their music classes or by other children participating in physical education training in the school's well stocked gym.

The school runs on a tight schedule and clocks were everywhere, even out of doors.

The government has entitled the program, "Skokuiku", the Japanese word that means food and nutrition education.

Yamagishi gave the journalists a tour of the school garden. The garden preceded the Skokuiku program but links in with the government's campaign quite nicely. It's not a large garden but every grade at the school, which runs from April to March each year is responsible for a different crop. One grade plants and maintains a curry crop. Another maintains their carrot crop. Gourds get the attention of another



grade.

The sixth graders have the special opportunity to travel to a village at the foot of Mt. Fuji each year to plant rice in the village of Oshino. In March those students go back and harvest the rice. Last year the harvest was 400 kilograms which fed the school for one week after it was processed by the locals of Oshino.

Previously, students planted Shiitake mushrooms in the shade of a tree on the school grounds, but they stopped after the 2011 nuclear disaster. Principal Yamagishi explained that mushrooms are particularly susceptible to nuclear poisoning. The risk was not worth it. However, the rest of the garden has tested as safe.

Yamagishi said that the most important mission of the school is for the children to learn about life and how to appreciate it. The garden contributes to that mission and also helps to keep the children calm.

As an example he pointed out that the leaves on the curry crop are worm eaten. The children faced an ethical and moral dilemma regarding what to do about the worms. Should they kill them so that the crop would live or should they let the worms live and potentially sacrifice the crop? Yamagishi said that the teachers did not make the decision for them but they did provide mentors to help to counsel them. Ultimately the children decided for a light pesticide treatment and for simply throwing the worms away when they found them alive.

"It helps them to appreciate their food when they work for it", Yamagishi said through an interpreter.

Journalists joined a fifth grade class for a meal of Miso soup, spinach salad, and a blue fish and rice dish. Yamagishi had earlier explained that the meal was 750 calories and also explained the exact nutritional value of the components of the meal.

Not one grain of rice was left on any plate in the room except for those of the journalists who weren't quite as adept in the use of chopsticks as the children were.

The education campaign has also involved parents for after school nutritional programs. Yamagishi said that even though parents are very busy these days, at least 100 of them have

participated in the educational programs.

Yamagishi said that once a month the children are required to prepare and take a bento box to school, a takeout meal. They have to prepare it themselves. Before they eat they talk about why they prepared the foods in their bento box. Yamagishi said that the meals they bring have become increasingly nutritious as the "Skokuiku" campaign has continued.

Yamagishi said that the school believes that healthy bodies foster greater academic performance and the studies they have conducted have shown thank thinking to be true.

The Ministry of Education's experiment seems to have been working and many of the children say that lunch is their favorite subject.



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# Deep Sea Water project in Kumejima a model of sustainability and a “go slow” approach

By Bill Jaynes  
The Kaselehlie Press

October 26, 2015

**Kumejima, Okinawa, Japan**—On the small island of Kume (Kumejima) 100 kilometers from Naha, the capital city of Okinawa, water pumped from the sea from very deep depths is being put to astonishing uses including the generation of power. It’s called Deep Sea Water, which is any water below a depth of 250 meters. Deep Sea Water is pure, full of minerals, and very cold. The deeper the source of the water, the colder it is. Kumejima draws its water from 600 meters (almost 2000 feet) below the ocean’s surface and it arrives on shore at 8 degrees centigrade, about the temperature of a fully functioning refrigerator.

Some of the Pacific Islands Senior Journalists participating in an APIC invitational tour were well versed in the concept of Deep Sea Water and Ocean Thermal Energy Conversion (OTEC) while others sat with their mouths open, completely stunned by the technology that they had somehow managed to have completely missed.

The concept is not new. OTEC projects have been ongoing around the world since the early 20th century with a few breaks when the price of oil was low. A plant in Hawaii and another in Japan are widely regarded as the most successful but there has not yet been an OTEC plant that has been commercially successful.

Straight out of Jules Verne’s novel, “Twenty Thousand Leagues Under the Sea” published in 1870, came the seeds of the idea for Ocean Thermal Energy Conversion, power generated by the differences in temperature of sea water at different depths. In that great novel of science fiction Jules Verne has his protagonist, Captain Nemo say, “I was determined to seek from the sea alone the means of producing my electricity. From the sea? Yes, Professor, and I was at no loss to find these means. It would have been possible, by establishing a circuit between two wires plunged to different depths, to obtain electricity by the difference of temperature to which they would have been exposed.” The fledgling idea that inspired OTEC was an author’s solution for the problem of powering the Nautilus, Nemo’s great fictional submarine.

A decade later, physicists were working on the idea but it was French physicist Jacques-Arsene d’Arsonval who is generally regarded as the father of the concept for using ocean temperature differences to create power. According to OTEC International, LLC, one of his students, Georges Claude, built the first OTEC power plant in 1930 in Cuba, which produced 22 kilowatts of electricity.

For engineers, the concept is simple. For non-scientific journalists it’s not quite as simple to understand or to explain.

Deep sea water is cold. Surface ocean water temperature in Kumejima varies according to the seasons but averages about 22 to 24 degrees centigrade.

In an OTEC power plant, a “working fluid” such as ammonia, propane, freon-114, or R134A, which each have extremely low boiling temperatures, travels in a long, sealed pipeline. As the working fluid travels by another pipeline of seawater at warm surface temperature it is heated to boiling point which makes steam. The steam turns a turbine which produces electricity. The working fluid then travels past the cold deep sea water pipeline which cools the working fluid back to a liquid state. The working fluid is circulated through the system over and over again producing power with each turn of the turbine.

Benjamin Martin, International Relations Coordinator for the project says that the Kumejima plant uses the refrigerant R134A which has a boiling point of -26 degrees Celsius. He explained that while the refrigerant they use has an extremely low boiling point, that boiling point is at a pressure of one atmosphere (sea level pressure) but that boiling point changes under pressure.

“Inside our system, the pressure is higher than the outside (pressure), so the boiling point of our working fluid changes, ideally right between (the temperature of) our surface seawater and our deep seawater. That’s why we need an average annual temperature difference of 20C for OTEC to work, to have enough temperature range to both boil and cool the working fluid,” Martin said in an email.

He said that many visitors ask whether or not the plant can provide “net power” if power is used to bring up the water from the deep and also to keep pressure high within the system. He explained that the drain from such pumps will account for about 30% of power produced, so for a 1MW plant, the plant would make 1.3-1.5 megawatts of power and sell 1 megawatt of net power.

For the past three years, IHI Plant Construction Co., Yokogawa Solution Services Co., and Xenosys Inc. have collected data on every second of the plant’s operation since its start up three years ago. They want to be certain that OTEC power will be continuously viable with the right external conditions and that it is environmentally safe. They have operated the plant through several seasons and through a variety of climatic conditions including typhoons, so far without failure. Japan wants to see what the effect of varying ocean temperatures on the surface will be on the continuous production of power provided by the technology.

Kumejima scientists and engineers are taking a methodical “go slow” approach to its OTEC project to be sure that it has tested every potential problem that could arise. They have not seen evidence of environmental problems that they thought could potentially arise from the system, problems like the possibility for algal blooms where the warmed deep sea water is reintroduced, or raised surface water temperatures that could result in coral bleaching.

The pipelines that are used in the plant are welded titanium in order to prevent the

possibility of rust and to keep maintenance costs low.

OTEC plants in equatorial areas like the Federated States of Micronesia will likely be more successful because of the year round stability of warm surface water temperatures but the technology is very expensive and currently requires close proximity to deep ocean water.

The onshore facility at Kumejima consists of two parts. One side of the plant tests the consistency of power generation, and has been cranking out 50kw of power for three years now. The second system is for engineering testing. It is run at a load as if it was generating 50kw but no power is produced. It is for testing every aspect of the engineering of the system.

The Kumejima project currently works because of a diversified cascading use of the water pumped in from the ocean’s deep. The Kumejima OTEC experiment currently takes a back seat to the other uses for Deep Sea Water. When demand for the other uses of the water increases, the OTEC experiment gets less but it is the sale of the deep sea water for manufacturing and other uses that is helping to fund the Kumejima experimental project.

The water pumped into the Kumejima Deep Sea Water project is put to many uses before it is pumped back out to sea at a deep level though not as deep as its source. Each use of the water is a source of revenue for the project. The idea of cascading uses is to make the project financially self sustaining.

The deep sea water is used to cool nearby buildings which have experienced a 95% savings on power costs for air conditioning. It is used to affordably keep the water temperature of aquaculture projects like sea grapes at the constant temperature of 25 degrees centigrade that is necessary for optimal growth of the delicious sea plant.

Deep Sea Water is extremely pure and is full of minerals and nutrients. Kuruma prawns hatched in Deep Sea Water are not subject to the diseases to which they are subject when hatched in surface sea water. This makes the precious commodity easier to raise. Kume Prawn Farm, Co. Ltd. sells millions of dollars of Kuruma Prawns each year in Japan’s domestic market that were hatched at the Deep Sea Water project.

Point Pyuru cosmetics company has a direct pipeline of Deep Sea Water to their plant. CEO Atsushi Ohmichi says that the water is used as the basis of most of their skin creams. He says that the water has its own positive effect on skin, helps their skin care products to penetrate the skin better, and because it comes to the factory in a pipeline, is never exposed to air until it reaches the plant. “It is very pure,” he says.

The sea water is also used for agriculture. Cold Deep Sea Water in pipes buried beneath the soil helps to keep the soil cold enough for spinach growth year round.

After desalinization the deep sea water minerals are replaced at varying levels for healthy drinking water.

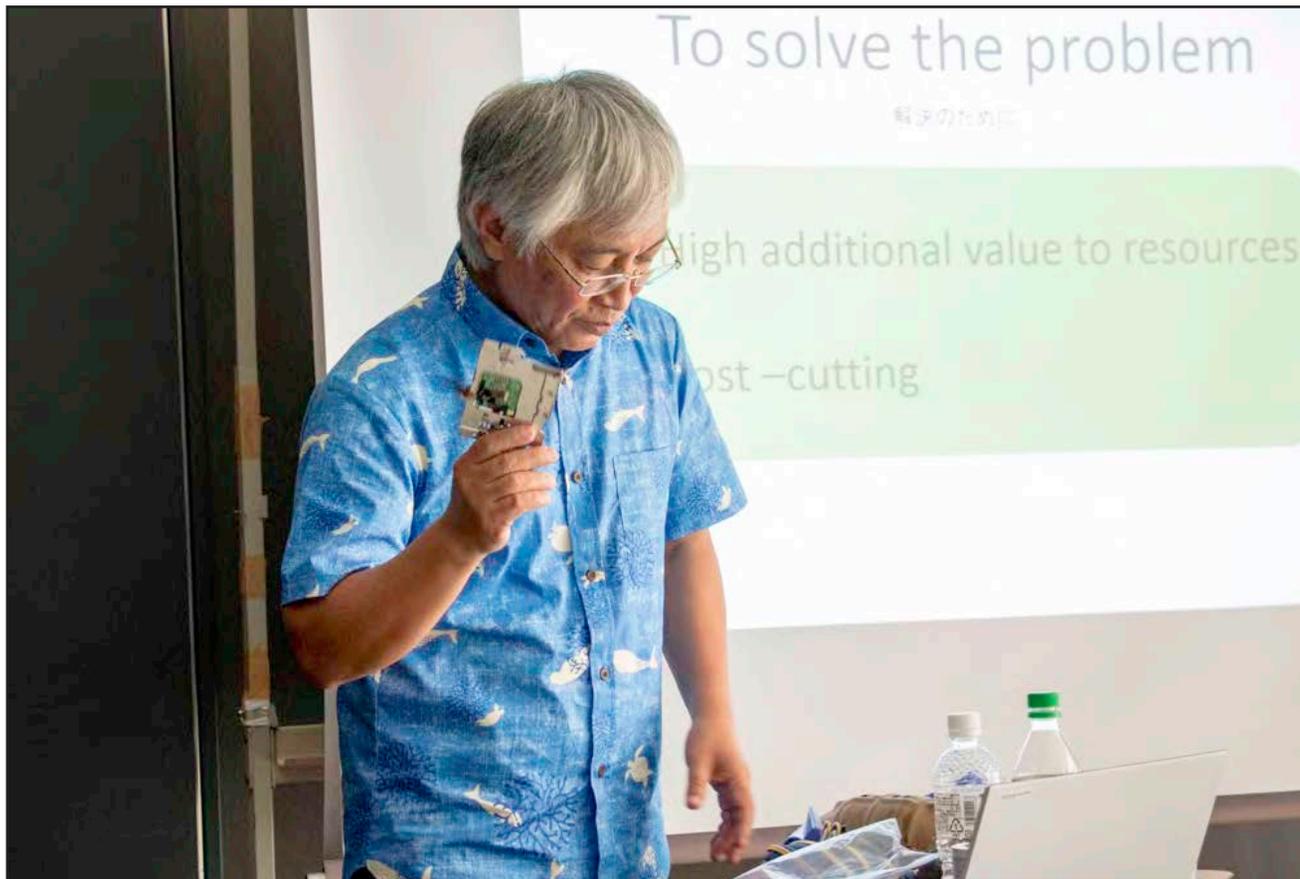
The Kumejima plant currently pumps about 13,000 metric tons of deep sea water per day. It’s about as much as their current pipeline will allow given the size of the pipeline to the plant. They could pump more sea water from the depths and potentially generate more power but the friction of the water flowing through the pipeline would increase its temperature and would diminish the results it would provide for OTEC and other deep seawater projects. One solution to that problem would be to install a much larger pipe line but organizers say that the cost of a bigger pipeline would be about 80 million US dollars.

Benjamin Martin says that onshore OTEC projects like the one in Kumejima could generate up to 10 megawatts of power. The infrastructure cost for onshore plants, while significant is less than for planned offshore plants which could generate up to 100 megawatts of power. An offshore plant could have a shorter and larger diameter pipe. An offshore plant would ultimately yield the lowest ongoing power generation cost.

Kumejima would like to one day move in the offshore direction but for now they are carefully testing.



## With JICA support Okinawa NGO talks trash in the Pacific



Hiroshi Kogachi of OCRM gives examples of items that can be recycled

By **Bill Jaynes**  
The Kaselehlie Press

October 25, 2015

**Naha, Okinawa, Japan**—Hiroshi Kogachi has been talking trash with nearly everyone he meets for over 30 years. Now he and the organization he helped to found have been talking trash internationally, including in Pacific Island countries

Kogachi is the President of Okinawa Citizen's Recycling Movement (OCRM), a non-governmental organization founded in 1983 that is dedicated to educating the people of Okinawa about the benefits of recycling both for the people and for the environment.

The Japan International Cooperation Agency decided that OCRM's program could be useful and effective in countries other than just Japan and has funded OCRM consultation visits to help other countries to start their own recycling programs.

Kogachi and his group have been recognized by Japan's Central Government. In 2003, Kogachi gave a presentation to all of the Pacific Island leaders in attendance at the

Pacific Area Leader's Meeting.

"The people used to throw to dump their trash in the streets in Naha," Kogachi said during a presentation to Pacific journalists in Naha, the capital city of Okinawa. He displayed a photo that he said was taken in the early 1990's of a mountain of trash of all types dumped outside an apartment building. He pointed out a sign that was nearly buried in the mountain of trash and said that the Japanese characters on the sign warned people that illegal dumping would result in a fine. "They just didn't care," he said.

The problem was dramatic, not only because of the awful smell but because of the health risks the mounds of trash represented for the people of Naha. The illegal dumps attracted rats, feral dogs and cats, cock roaches and other scavengers who came for a free meal.

The problem of waste removal and where Naha's waste should be put became a politically charged issue. No one wanted a garbage landfill in their own backyard. The politics surrounding the problem were so intense that one of Naha's mayors was forced to resign over his handling of it.

It was in that environment that OCRM made a proposal to the Naha government for a recycling program to be operated in Naha but the government did not have the political will to make it happen. They rejected OCRM's multiple proposals for what Kogachi said were purely political reasons.

He told the journalists that OCRM tried at least 10 times to get the government to take up a recycling program. They met face to face with the mayor who seemed to be interested but ultimately he rejected the proposal as well. Naha government representatives told OCRM that it would take at least 10 years to change public thinking. They rejected the idea as hopeless.

"It didn't make any sense," Kogachi lamented. "People were throwing away items that could make them money. He said that Naha's waste problem would not have been nearly so large if only the things that truly could not be used were thrown away."

"So we decided that we would make action by ourselves," he said. "We thought that if the city isn't going to do it we should just do it ourselves."

OCRM went on a public information campaign and built a recycling program slowly from the ground up, piece by painstaking piece. They successfully ran the program for five years. Kogachi said at the peak of the operation OCRM was collecting and selling three tons of recyclable materials to wholesalers in Okinawa.

They did it with no government funding. They created the whole program through fund raisers and corporate donations. He said that the Coca Cola Company contributed to bottle recycling efforts. Milk companies helped to fund the recycling efforts for the types of containers their product was packaged in. Newspaper companies funded recycling efforts for used newspapers.

After five years, the municipality finally got on board and took over the operation on the program. For OCRM it was fortuitous timing. About a year later the bottom fell out of the recyclables market. Kogachi said that OCRM could not have afforded to continue running the program but the government had the resources to weather the financial storm and the recycling program still exists today.

OCRM, still a non-governmental organization now focuses its efforts on promotion of recycling and on education campaigns. He said that OCRM has helped to encourage local businesses to think outside of the box in terms of recycling. OCRM helped to organize a way to recycle even food waste from hotels and restaurants. The food waste is being used as animal feed.

OCRM recently brought three private salvage business owners to Okinawa to Japan to visit Takury Metal. The employees of the company taught the business owners how to identify different types of recyclable metals and how to use simple tools to separate them from car parts, cell phones, circuit boards and other waste products for sale to wholesalers.

OCRM also helped to coordinate site visits at the Pacific business owners' places of business in the islands.

Kogachi says that it might not be easy to start a recycling operation but he counsels people in underserved countries to take a step, and then another, and another. "Just do something. Don't wait for someone to do it for you," he said.

## FSM Infrastructure Development Plan, FY2016 – FY2025

FSM Information Services

October 22, 2015

**Palikir, Pohnpei** - President Christian today publically released the FSM's updated Infrastructure Development Plan (IDP) for the period FY2016 – FY2025.

The Plan was updated in response to the need to provide overseas development partners with an update of the State and National governments infrastructure priorities. The Plan includes a realistic level of funding, representing 70% of FSM's infrastructure needs over 10 years. This sets

the challenge for the FSM governments and our development partners to work together, beginning with the Development Partners Forum that is to be convened in February 2016.

The President noted the Plan ranks with the most important and significant plans for FSM as a nation in the last 10 years. The key, he stated, is that this Plan is a truly collaborative approach to infrastructure development for our country. It clearly sets out the case for developing infrastructure across the FSM and documents the priority needs for the first time in stand-alone State Plans. He was also

pleased to welcome the inclusion for the first time of projects directly linked to climate change adaptation – these being important first steps to mainstream infrastructure adaptation programs in future Plans.

The Plan was transmitted to the Joint Economic Management Committee to unlock the \$66.5 million requested from the Amended Compact infrastructure grant to fund the FSM priority projects as outlined in the Annual Infrastructure Implementation Plan FY2016.

The President also recognizes the State

leadership and State Infrastructure Planning and Implementation Committees (IPICs) of the four States for their support and active participation in the development and finalization of this Plan. The assistance of the Asian Development Bank is also acknowledged in providing the technical assistance team that supported the Plan development.

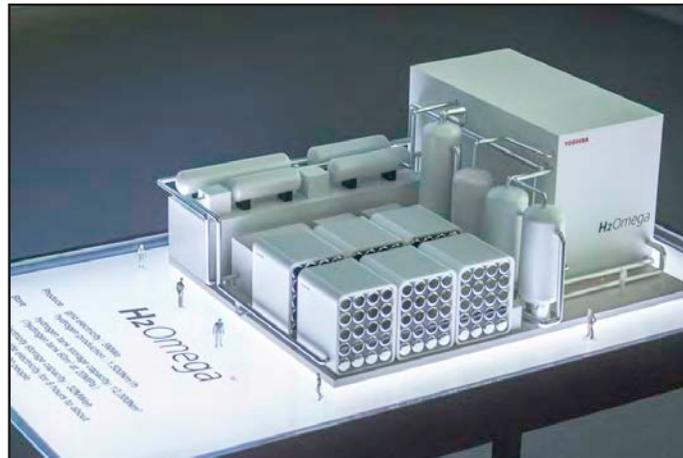
For more detailed information about the Infrastructure Development Plan FY2016 – FY2025, please contact the FSM Department Transport, Communications & Infrastructure at (691) 320-2865.

# As Japan solves its power needs it may be solving the problem for Pacific Island Countries as well

By Bill Jaynes  
The Kaselehlie Press

October 27, 2015

**Fuchu City, Tokyo**—Toshiba is famous for its electronic devices. Surprisingly, according to representatives at the Toshiba Fuchu Complex in Fuchu City, Tokyo, the company earns less than half of their revenue from sales of those devices. The rest of their revenue comes from energy technology, transportation, and other innovative product lines.



In April of this year Toshiba opened their Hydrogen Energy Research and Development Center. Dr. Tatsuoki Kono, Senior Manager for the New Energy Solution Project, and his staff members gave Pacific Islands senior journalists a tour of the facility this afternoon. Toshiba and the government of Japan are going all in for the technology and are planning to have significantly more hydrogen “fuel” capacity including power plants by the time of the 2020 Summer Olympics in Tokyo.

For Japan, hydrogen power could very well be a very big part of the solution to the problem of reducing fossil fuel importation along with the carbon emissions that come from burning them. Other than coal, Japan lacks significant reserves of fossil fuel and must import substantial amounts of crude oil, natural gas, and other energy resources, including uranium. After the great 2011 earthquake and tsunami, Japan shut down all of its nuclear reactors, which meant it had to import and burn more fossil fuels. As of today, Japan has re-activated only one of its nuclear reactors.

As the hydrogen energy process develops and becomes more affordable it may well be a very big solution for Pacific Islands Countries like the Federated States of Micronesia that also import fossil fuels in order to provide power to their people and their economies. For now the equipment is so expensive that Toshiba has so far sold only one of its self contained hydrogen plants, their H2One Business Continuity Plan model which is housed entirely in the size of one standard 20 foot container. It is pushing toward the release of a larger plant by 2016, the “Remote Island model” in the H2One series.

Japan consists of hundreds of islands and as they solve their energy problems they may well be solving those of their island neighbors.

Despite Japan’s rush to significantly increase hydrogen fuel capacity by 2020, it is being very careful. Dr. Kono, who has worked for 30 years with hydrogen technology, said that the biggest challenge for the startup of the Toshiba project was battery development for storage of renewable energy, storage for hydrogen, and government regulations.

Keeping in mind that the German airship, the Hindenburg, which famously blew to smithereens in May of 1937 as it was attempting to dock in Lakehurst, New Jersey, was filled with over 7 million cubic feet of

hydrogen, one can easily understand the government’s hesitancy to have it stored in one of its cities.

Unlike fossil fuels which as liquids pool on the floor where they are extremely flammable until they eventually evaporate away, Hydrogen is a gas. If Hydrogen leaks from a system it immediately rises into the atmosphere. Just the same, Toshiba designed and built an innovative storage unit and leak detection system that is safe and meets Japan’s regulatory guidelines. The project is now proceeding at full tilt.

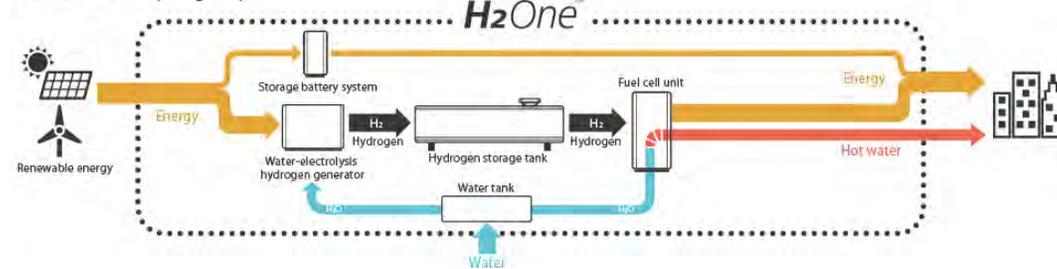
Hydrogen molecules (H<sub>2</sub>) can be extracted from fossil fuels like natural gas, gasoline and coal and the process requires electrical power. While hydrogen fuel cells produce only pure water and heat as by-products of their energy production, the process of extracting the hydrogen from fossil fuels emits Carbon Monoxide (CO) and a small amount of Carbon Dioxide (CO<sub>2</sub>).

Because of this, in the United States there is significant opposition to hydrogen power as a tool to decrease carbon emissions. One lengthy skeptic’s report quoted “Energy.gov’s” (Office of Energy Efficiency and Renewable Energy) statistic that 95% of the hydrogen produced in the U.S. comes from natural gas. He argues that the expensive technology does nothing to eliminate the carbon foot print that burning fossil fuels in combustion engines creates and is too expensive to boot. Further, the natural gas goes away in the process of creating the hydrogen.

Certainly Toshiba has products that convert natural gas or propane to hydrogen but the Toshiba facility has chosen to pour a great deal of its efforts into the extraction of hydrogen from water (H<sub>2</sub>O). They are using renewable energy sources like photovoltaic (solar or “PV”) energy or wind turbine energy to power the process of extraction when the sun is shining or the wind is blowing. It stores what PV or wind power it doesn’t use in a battery for use when the sun isn’t shining or the wind isn’t blowing. When they have to, they draw power from Japan’s fossil fuel powered electrical grid, but they are trying to minimize that need.

In an effort to minimize the power that will be needed from fossil fuel power, Toshiba

Overview of the hydrogen system



developed a revolutionary hardware and software package that helps them to monitor exactly how much power is being generated and how much is being used from each power source.

Hydrogen is the world’s third most prevalent element. But there has only ever been so much of it in the world and it cannot be created. If hydrogen was being burned in combustion type engines like fossil fuels are then it would be like pouring the world’s water down a drain pipe never to be seen again. But that’s not what is happening here.

In hydrogen fuel cells, the process of hydrogen being recombined with Oxygen in a process of reverse electrolysis releases electricity that is then used to power vehicles and other electric engines. As mentioned above, the byproducts of that energy production is pure water and heat. Essentially the system tears apart molecules of water and puts them back together over and over again producing energy, heat and water in the process. As in

the rest of the universe there is a small amount of entropy, or energy loss from the system. There is very little water loss and no Carbon Dioxide is produced at any stage of the process except for the amount that is emitted from the grid power that is used only when absolutely necessary to supplement power from renewable energy sources.

The process was first suggested in 1830 but nothing much was done with it until the early 1900’s. Toshiba is now making great strides in the development of the technology and within the next couple of years it plans to produce its H2Omega system, a fully self contained 4 megawatt hydrogen plant for delivery to customers.

Toshiba hopes to see its technology spread throughout the world as an environmentally friendly, self contained solution to the world’s power needs. They don’t hope for overnight success. “It took 20 years for hybrid vehicles to be accepted. It may take a long time (for hydrogen to be accepted),” Dr. Kono said.

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# Kyoto grass roots business employs Kyoto women and shares culture with tourists

By *Bill Jaynes*  
The Kaselehlie Press

October 24, 2015

**Kyoto, Japan**—When I looked at the detailed program for Pacific Islands senior journalists participating in an invitational tour of Japan sponsored by the Association for the Promotion of International Cooperation (APIC), it never occurred to me that I would come to think of an opportunity to wear a kimono and to participate in an authentic tea ceremony as the most profound visit of all of the many visits we would make.

As a photographer I thoroughly expected our visits to a very small portion of Kyoto's thousands of temples, shrines, and palaces to be the experience that I would cherish the most after our visit.

That was before I met Michi Ogawa, the Executive Director and founder of the Kyoto Association for Women ([www.wakjapan.com](http://www.wakjapan.com)). Her story resonated with me on a number of levels like any good story should do.

She had never had any business experience when she founded the business at 47 years of age after her children were grown. That didn't stop her. She read everything she could on how to start a business and just got started. She said that like many women in Japan, she found herself to be unemployable despite her Bachelor of English Literature degree. When she lived as a foreigner in France, she enjoyed learning about the French culture and tradition and that experience formed the basis for a business idea of helping foreign visitors to Japan to experience her own country's rich culture and tradition.

She knew several women who had expert traditional skills but who had no other skills they could use to get a job. She called on them and they excitedly joined Ogawa in her new business teaching foreigners about the depth of Japanese culture.

Today the company she founded employs 55 people and has offered cultural experiences to foreign Ministers from around the world, Middle Eastern Royals, famous writers, Hollywood celebrities, and hundreds of tourists who were able to find her business. Meanwhile she has been employing dozens of women

that might not otherwise have had employment opportunities; women who were taught traditional ceremonies at an early age and who knew them well enough to demonstrate them and teach them.

WAK Japan's elegantly printed multi-page brochure of its "luxury programs" announces that its programs offer

visitors an opportunity to "feel the essence of Japan in Kyoto". Customers can have a Kyoto wedding experience. They can have a custom kimono made for them by a Japanese dress maker. There are Budo (Japanese Martial Arts) experiences. They can have private tours of temples that are not usually open for public access and a meeting with a Buddhist monk. They can meet with a Geiko (traditional Japanese performer, also known as Geisha) who will explain her everyday life and etiquette for traditional Japanese ceremonies, or a Maiko, a Geiko in training.

WAK also provides custom experiences and sometimes extends its opportunities to Tokyo for clients who request it.

Their special "home visit" programs offer training in flower arrangement, calligraphy, origami, Japanese dance, cooking, preparation of Tempura and rolled sushi, and also specialized programs for children. It has also published several books on Kyoto culture.

WAK also provides translation services and can provide guides for arriving tourists.

Last year alone, WAK served 1800 individual clients and 3000 people participating in group experiences. In 2012 WAK had gross revenues of 49.9 million Yen. In 2013 the revenues were 64.7 million Yen. Last year the company had gross revenues of 86.1 million Yen but Ogawa says that she excluded from her calculations, "the unusually big amount of sales which rose from being involved with a two-day MICE event (Meetings, Incentives, Conferences, and Events, a type of tourism in which large groups, usually planned well in advance, are brought together for a particular purpose, according to



Wikipedia) last year since the earnings from that event were an unusual occurrence.

The gross revenues are not huge but they do represent significant growth in the business from its humble beginnings based on one woman's dream; a woman who didn't sit around waiting for someone to do something for her but instead reached out to others and formed a group that together, helped themselves while also providing a much needed service.

During our visit, WAK facilitated the opportunity for the journalists to not only properly wear a kimono with the help of female staff members who are well versed in the art, but also for the journalists to parade down a public street to a temple just over a block away. There we inadvertently "crashed" a photo session after a traditional Japanese wedding.

I was surprised that I didn't feel the least bit embarrassed. Our kimono wearing group of foreigners did attract stares from locals but I didn't gather the impression that any of them was laughing at us. Rather, I preferred to think of the attention as a form of respect that we would at least try to experience the culture of Japan even if it felt a bit odd for individual participants.

Upon our return from the temple we didn't just watch a traditional tea ceremony like an audience watching a show, we participated in it. Emiko Ashida explained the graceful "Way of Tea" ceremony, which had its roots in 9th century Japan as she demonstrated each step in the elegant ceremony and the significance of them. She explained that when participants enter the tea room through a very small door it signifies humbleness, respect, and the equality of the participants. She explained the positions of importance in the room, along with each and every movement she gracefully made as she prepared the tea. Every movement had a meaning. After the formal ceremony was completed, Ashida invited us to make our own Matcha green tea using the split bamboo whisk that is part of the ceremony.

I'm afraid that it wasn't in me to assimilate the true depth of the ceremony on a personal level. The centuries old Japanese culture is still foreign and new to me but I still came away with the feeling that I had participated in a centuries' old act of reverence, respect, and communion that was no less significant despite its foreignness.

I found myself wondering, as the story incubated in my mind, if tourists in Pohnpei would feel similarly if they were to be given the

opportunity to learn by participating in one of the many traditional types of sakau ceremonies here. Would they return home slightly changed and grateful to the people who offered them that kind of immersive experience? I suspect that they would.

"One of the eldest instructors of tea ceremony in WAK Japan is 81 years old," Ogawa wrote in an email. "She understands well and can explain the spirit of tea ceremony in English like Ms. Ashida. Always she say, 'I found this work is worth living for me.' Her words made me happy and also I can feel my work is worth living, too. Then, I try to create next new work for my colleagues."

I was so engrossed in the experience that, other than Emiko Ashida's name, I didn't take a single note. I lost myself and basked in the luxury of just participating and experiencing but the experience touched me deeply and I found myself wondering about Michi Ogawa and her group of women. The story grew bigger and bigger in my mind the more I thought about it and I found myself wishing that I could spend days watching her do her work and learning about it rather than just hours.

Kyoto boasts over 2000 shrines and temples, many of them World Heritage sites. There are over 1500 Buddhist temples of various sects and approximately 500 Shinto shrines in Kyoto. From 794 through 1868, Kyoto was the "capital" of Japan. It was the home of the Emperor of Japan during that time and from 1192 through 1867 was also the home of the Shogun, the hereditary military de facto leaders of Japan.

Certainly Kyoto is steeped in tradition and culture and the women of WAK are sharing that culture with curious people from around the world. They are a Kyoto treasure in and of themselves.

