

..... Tonga

Disaster Waste Management and the 3R + Return Initiative

A Cyclone Hits!

Disaster Waste Management in Tonga

The 8th Pacific Islands Leaders Meeting (PALM 8) was held in Iwaki City, Fukushima from May 18 to 19, 2018. The Leaders confirmed the importance of waste management and 3R policies, and noted the value of the Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM). Here, we report the efforts being undertaken through J-PRISM.



Shinnosuke Oda,
Kokusai Kogyo

Oda works as an expert for improving waste management in Tonga. He provides support through on-the-job training for local staff on the disposal of disaster waste brought by Cyclone Gita.



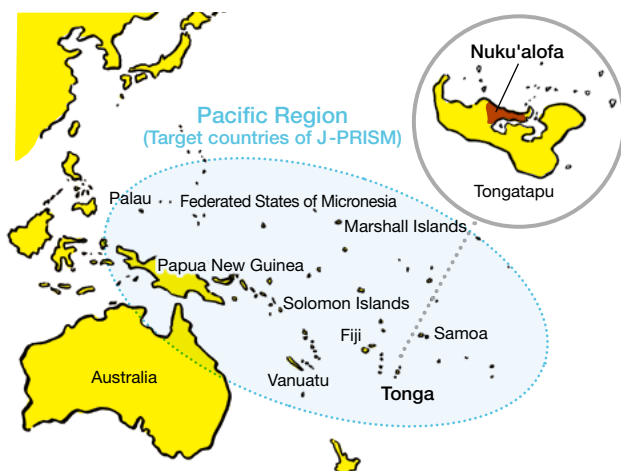
Tonga

Capital: Nuku'alofa
Currency: Pa'anga
Population: Approx. 106,000 (as of 2015)
Official Language(s): Tongan, English

[Project Introduction]

Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM 2)
(February 2017-February 2022)

This project is carried out across the Pacific region. It is centered on four themes, namely (1) monitoring of the "Pacific Regional Waste and Pollution Management Strategy;" (2) fostering waste management experts in the region; (3) preparing disaster waste management guidelines; and (4) the 3R + Return initiative for exporting valuable resources within the region.



The Pacific Islands are a disaster-prone region



Cyclone Gita hit Tongatapu, where Nuku'alofa, the capital of Tonga, is located. It caused great damage and produced an enormous amount of disaster waste.



Thorough keeping of waste records!



The Tapuhia disposal site where green waste was transported in trucks. The officer records the name of the person hauling the waste, the category of the waste, and other details.



The owner of a piece of roadside land answered the call made by the president of WAL on the radio and provided his land as a temporary storage location for green waste.

Utilizing the experience of the cyclone in future waste management

On February 12, 2018, Cyclone Gita hit the Pacific island nation of Tonga. Shinnosuke Oda, who was in Tonga as a JICA expert, says, "From what I've heard, it was the biggest cyclone to ever hit Tongatapu." Fortunately, no casualties were reported, but trees and telephone poles were knocked down throughout the area, roofs were blown off houses, and the supply of electricity and water was disrupted for more than a week. The morning after the storm, green waste (such as trees) and housing materials were scattered all over the roads, and the residents just stood in a daze in front of it all.

The public waste corporation Waste Authority Limited (WAL) contracted by Tonga's Ministry of Social Insurance began disposing of the disaster waste that had accumulated throughout the city. In addition to WAL, residents took the initiative to pile green waste and bulky waste onto trucks and take them to the Tapuhia disposal site, which is the only one on the island of Tongatapu; however, there was so much waste that long lines formed.

WAL's waste management services are provided at a monthly rate of about JPY 500 per household on Tongatapu. Oda's initial objective was to support WAL in extending the reach of these services to the remote island of Vava'u. However, the amount of damage was so extensive that he had to quickly change the activity

schedule and perform on-the-job training for WAL staff members. He kept a record of the waste disposal process, saying that the experience gained from the disaster would also be useful as WAL provides services to the island of Vava'u.

While performing on-the-job training for recovery work, Oda noticed an issue with Tonga's disaster waste management.

"There aren't enough garbage trucks, the heavy equipment at the disposal site is insufficient, and they are all poorly maintained."

WAL has eight garbage trucks for household waste; however, all of them were used to dispose of disaster waste, so the household waste collection service was suspended for a week, leaving household waste to accumulate. When the service resumed, they had to collect a large amount of household waste.

"In Tonga, under a declaration of national emergency like this, Tonga's National Emergency Management Office (NEMO) presides over all activities related to disaster management. WAL obtained the approval of NEMO to deploy the necessary heavy machinery for waste disposal, but coordination between the offices was less than satisfactory, and most of the machinery was left unused at the disposal site. I thought that an emergency channel of communication with NEMO, securing of heavy machinery and vehicles, and a plan for taking in disaster waste were indispensable."

As the situation was unfolding, a baseless rumor began to spread that the disposal site was full and could not take any more

waste. In response, the president of WAL went on the radio to tell the citizens to dispose of green waste in swamps. He assured them that it would not be considered illegal dumping, and, at the same time, instructed them to obtain permission from the landowner first. One resident called the radio station and said that the waste could be disposed of on his property, so the radio station quickly broadcast that offer; as a result, residents who could not take their green waste all the way to the disposal site were able to dispose of it in a vacant lot by the road.

The president of WAL promised to carefully consider Oda's proposal to establish temporary disaster waste storage sites in 10 places around the island, prepare a map, and familiarize people with the locations to avoid confusion during emergencies.

J-PRISM was launched in 2011, and its Phase 2 began in February 2017 and will run for a period of five years. One of the pillars of the initiative is the preparation of disaster waste management guidelines for the entire region, and the work has begun in Samoa. Tonga's waste management experience in the aftermath of Cyclone Gita is expected to be utilized in the preparation of guidelines.

Establishing a recycling association to achieve "3R + Return"

The "3R + Return" initiative is also one of the pillars of the activities for J-PRISM 2 and is tailored to the needs of island coun-

tries. It adds "return" to the 3R's of "reduce," "reuse," and "recycle." The concept of "return" involves the export of recyclable resources, valuable resources, and other materials that are difficult to process.

Associations of recyclers are being established within the region to solve the outlined challenges. In countries with small populations, it takes time to collect a certain amount of resources to return; and when fuel costs for the ships transporting them are included, they could take a loss depending on the purchase price. If not exported, this waste will end up at the final disposal site, which reduces the lifespan of the disposal site. Countries in the region are coming together in order to export and return the resources; as a result, discussions are taking place throughout the region regarding the location for facilities to serve as a base for recycling and exports.

Recyclable waste gathered from 3R activities is sent overseas

A recycling center in the state of Koror on the island of Palau where aluminum cans are packaged for recycling. Once a certain amount is accumulated, it is loaded onto a ship and exported.

