



08/03/2010

2nd Newsletter was issued!!

The Waste Minimization and Recycling Promotion Project is ongoing. We are happy to share our achievements and progress in the second year of the project period from October 2009, in our 2nd project newsletter. The success we report in this newsletter could only be achieved as a result of community's cooperation and efforts. So, we say a big VINAKA VAKALEVU and THANK YOU VERY MUCH! We look forward to your continued support and cooperation. Enjoy reading!

1. Master Plan on Solid Waste Management Master Plan (M/P SWM) was developed.

The National Solid Waste Management Strategy and Action Plan 2008-2010 which was launched by the Fiji Government in June 2008 clearly stipulates the need for every local authority to prepare its own solid waste management plan.

In order to grasp current situation and planning appropriate solid waste management, the wide-ranging baseline surveys were conducted as follows;

- WACS: Waste Amount and Composition Survey
- FDAS: Final Disposal Amount Survey
- POS: Public Opinion Survey
- RAS: Recycling Activity Survey

Based on the above survey results, waste flow is formulated.

Waste flow is the most important tool to show a detailed view of the waste stream to be generated from each sector and by type. As a part of baseline survey, financial analysis of the current cleansing services was also conducted.

Series of consultation and consensus building seminars were organized with the stakeholders, the Master Plan on the Solid Waste Management was finalized in March 2010.



1st M/P SWM Workshop
(June 2009)

2. Pilot Projects launched.

As shown in the Tips column, a large portion of generated waste both in Nadi and Lautoka is organic waste, in particular green waste, and the cost of waste disposal is a burden for both municipalities, especially for Nadi, which has no disposal site and have to transport to Lautoka. It is critical for them to decrease the amount of organic waste transported to the dump site.

Also, both municipalities spend almost 20%-30% of general budget for the cleansing services. It is important to save the cost by decreasing the service frequency with public cooperation, so that they could allocate excess budget to implement 3R promotion, which normally required additional cost.

In the case of Nadi, free green waste collection service has been suspended after the flood in January 2009 due to the lack of budget. It is urgent to consider introducing new green waste collection system in order to prevent illegal dumping and open burning.

The positioning of Lautoka landfill is important not only for Lautoka City, but also to complete the waste management system for the Western Division of Fiji. In particular, the final disposal system will obviously also be an enormous influence on how 3R ought to be developed, or more specifically, how to establish goals for waste minimization and evaluate the financial resources to put towards 3R.

For these reasons, Lautoka city council and Nadi town council decided to introduce the following 3R systems in cooperation with communities in order to decrease the waste generation amount and to save the area cleansing cost.

(1) 3R Promotion pilot project

- 1) Promotion of home composting
- 2) Separate collection service for recyclables
- 3) Market waste composting
- 4) Garden waste recycling
- 5) Reduction of frequency of grass cutting service

(2) Landfill improvement pilot project

**DID YOU
KNOW?**



Tips: Key facts on Waste issues in Lautoka, Nadi.

| | Lautoka | Nadi |
|---|---|---|
| Q1. How much waste is being generated every day? | 48.1 ton/day | 22.4 ton/day |
| Q2. How much waste is being discharged per person a day? | 432 g/person/day | 374 g/person/day |
| Q3. How much rubbish is recycling now? | 8.1% | 2.9% |
| Q4. How much MSW* ¹ is being discharged per person everyday? | 1,098g/person/day | 1,902 g/person/day |
| Q5. How much money is each Council spending for cleansing services in 2008? | \$1.06 million (=20% of total Council budget) | \$1.15 million (=28% of total Council budget) |
| Q6. How much money is being paid for waste disposal per resident? | \$24.2/person | \$97.7/person |
| Q7. What type of waste is being mostly generated? | Grass and wood (37.4%) + Kitchen waste (30.1%) | Grass and wood (36.9%) + Kitchen waste (36.4%) |

Data source: Baseline survey conducted by the Project in 2008

*1: Municipal Solid Waste consists of all the waste which are as kitchen waste, paper, textile, plastic, grass & wood, rubber & leather, metal, bottle & glass, ceramic & stone, etc.

In order to examine the applicability, sustainability and expandability of these systems, two municipalities decided to conduct pilot project. As a result of series of community consultations, Field 40 in Lautoka and Matavolivoli in Nadi were selected as pilot project sites.

2.1 Awareness activities

1) Committee meeting/Community meeting

To reflect community's opinions in planning of the above 3R systems, the meetings were conducted with community representatives at pilot sites. Community meetings were also held to explain the proposed 3R systems to community.

While Field 40 neighborhood watch zone was involved in the pilot project and assisted in organizing community meeting with LCC, the 3R Promotion Committee was voluntarily established by Matavolivoli community representatives to promote 3R in the community.



Field 40 Community meeting
(August 2009)



Established 3R Promotion
Committee in Matavolivoli
(August 2009)



House-to-house visit,
F.40, Lautoka
(August 2009)



House-to-house visit,
Matavolivoli, Nadi
(August 2009)

2.2 Launching

On starting of Pilot Projects, the launching ceremonies were organized by each Council inviting all stakeholders and community living in pilot sites. The project was officially opened by Mr. Samuela Saumatu, Minister of Local Government, Urban Development, Housing and Environment, and endorsed by each community leader. At the same time, the weighbridge and other equipments for 3R implementation were handed over from Mr. Juichiro Sasaki, JICA resident representative, to the Minister.



LCC F40 launching
(September 2009)



NTC Matavolivoli launching
(September 2009)

Message from community representative (F.40 in Lautoka and Matavolivoli in Nadi)



Rohit Kumar
(President of
Field 40
Committee,
Lautoka)

I am very grateful to the JICA and LCC for choosing Field 40 as the Pilot Project area for 3R. This is indeed a very important step taken by JICA in cooperation with LCC to minimize the quantity of rubbish being disposed to the dump. By using 3R (Reduce, Reuse, Recycle) concept we are able to keep back our money worth manure and at the sometime we are able to maintain the environment. Also lot of items that had reached our dump site is recycled. Field 40 residents are fully support the project. In years to come with full implementation of this 3R project, LCC will save huge amount of money in tackling solid waste problem in the Lautoka city and hence giving a cleaner and greener environment to the users of the city.



Terrence
O'Neill

The Matavolivoli Committee was formed voluntarily to beautify our environment. We thank JICA, the Fiji Government for the insight and encourage all communities in Fiji to follow the 3R concept which in-turn will protect our beautiful island and the world we live in. (President of Matavolivoli 3R Promotion Committee, Nadi)

3. Progress of pilot project

Following the above launching ceremony, each activity was initiated in both pilot sites.

3.1 3R Pilot Project

1) Promotion of home composting

It is very vital in minimizing wastes since organic wastes accounts for 70% of total waste generated in both areas. Therefore, the organic waste reduction has been given preference over other activities for waste minimization.

The plastic-made composter was locally available (made in Fiji!) but just for exporting purpose, so that it had never been utilized in any communities in Fiji.

In order to examine the feasibility and effectiveness of composter, 50 composters were distributed with leaflet to the community. BOKASHI(=a high quality fermented compost accelerator) was also provided in cooperation with OISCA Fiji Office.

Council staffs have visited households who own composter on monthly basis, and have conducted monitoring to provide technical advice for better management of composting.



Installed composter
(November 2009)



Residents using composter
(March 2010)

2) House-to-House visit

Community meeting is one of the effective measures for raising awareness, but not all residents attended in the meeting.

Hence, the Council staffs visited each household to explain the outline of system, and distributed nylon sacks for discharge of recyclables and leaflets that gave information about separate recyclable collection.



Monitoring by Council staff
(November 2009)



Turning over by kids
(November 2009)



Compost in September 2009



Compost in March 2010

As of March 2009, almost all composters have been well-managed by community, and it has been noted that home composting using composters is very effective in reducing organic waste from households. Promotion of home composters is expected to contribute to create a practical impact since residents will be practicing composting right at their back yards instead of listening to seminars etc and going back to usual open burning of such organic wastes.

Message from community (F.40 in Lautoka)



Shainaz
Rahiman,
Resident of
Field 40

I have been using compost since September 2009. Lot of organic waste have been reduced, unlike I used to put everything to the normal garbage for collection. It promotes whole families interest in gardening and maintaining our compound in a proper manner. We used to burn our Green waste before in smaller quantities but you know council doesn't permit to do this and burning creates health problems. Now I am waiting for my first compost to be used in my garden. It has reduced a huge amount of weekly garbage collection. The composter is very durable. All residents of this Lautoka city should adopt this concept of home composting. They will only know the benefit when they use and practice home composting.

2) Separate collection service for recyclables

Following the launch, a separate collection service for recyclables was initiated in both pilot sites.

The community has been requested that their recyclables had to be cleaned and to be discharged at curbside on specific time and day. The Council's truck collects recyclables with music.

Following collection work, the monitoring is also conducted by the Council and 3R Committee members and the sack mixed with non-recyclables and unclean recyclables were rejected by attaching notice.

Then, the recyclable materials are taken to the recycling company, Waste Recyclers in Lautoka, and are compacted and exported to overseas for recycling.

Profit by selling recyclables is given to 3R Committee.



Announcement by Council
staff, F.40, Lautoka



Discharged recyclables sack,
F.40, Lautoka



Collection work by MPT,
F.40, Lautoka



Monitoring by 3R Committee
member, Matavolivoli, Nadi



Handing over recyclables to
recycler, Lautoka



Profits given to 3R Committee,
Matavolivoli, Nadi

Message from community (Matavolivoli in Nadi)



Mereoni
O'Neill

Since 3RPP began, considerable changes have taken place. Less rubbish is thrown on the road. Matavolivoli is much cleaner than before. Discharge of recyclables by residents has been markedly improved with cleaning and sorting done at home/source. Also, huge reduction in waste disposed on normal discharge days as a large amount has gone into recyclable collection. (Assistant Secretary of 3R Promotion Committee, Matavolivoli, Nadi)

3) New green waste collection service

Green waste from parks, street pruning, residents etc has been recycled by chipping using JICA funded shredder. Chips is used for mulching on public gardens, composting and also sold to the private company such as the Fiji Sugar Corporation as fuel for boiler. Previously all green wastes was disposed as waste and it took up considerable amount of space at the dump and also costly to manage. In order to increase efficiency of Green waste collection, the Council is planning to introduce new Green Waste collection system by setting up the schedule by area.



Chipping process, LCC



Mulching using chips, LCC

4) *Reduction of frequency of grass cutting service*
 The total cost of the drain cleansing and grass cutting accounts for almost 30% (actual cost in FY2008) of total cleansing service, it has become huge financial burden for each Council. The current grass cutting has been conducted twice a month, however, the Council is now planning to reduce the frequency to once a month by 2012. The frequency of grass cutting is determined according to weather permitting. The Council will implement additional grass cutting when received the residents complaining, and will also support the beautification by community participation.



Grass cutting service, Lautoka

5) *Market waste composting*
 At municipal market, the market vendors have created a large amount of green waste that was hauled to the dumpsite. Hence, the Lautoka city council has embarked on the "recycling campaign" at the market whereby the cooperation of all market vendors is needed in separation of all types of market wastes. Awareness for market vendors and the general public is the most important thing. The council provided 2 types (colors) of bins with labels and the vendors are simply requested to put the wastes in the right bin whilst cleaning your stalls. The green waste from the market is then collected and is taken to the designed yard at Vunato dumpsite. Composting process has been monitored by JOCV of LCC, Mr. Yuki Maeda with the assistance of Mr. Tsutomu Yoshida, Representative of OISCA Fiji Office. It is expected to be turned into a rich compost to be applied for gardening.



Launching at market (September, 2009)



Awareness for market vendors



Separate bin for market waste



Collection work



Compost yard at Vunato



Composting process

3.2 Landfill improvement pilot project

Under the project, a Pilot project on partial improvement of Lautoka disposal site has been undertaken. JICA donated a weighbridge station for the Vunato dumpsite. This station was officially opened at the same time as the 3R pilot project. Dump users will be charged for disposal fees accordance to weight and the public is also advised that the fees will also be revised accordingly to meet the cost of operation of the dump and equipments. Improvement of Vunato dump is also in progress with series of improvement works in an attempt to dispose wastes in environmentally sound manner. Notable changes includes buffer zones, dividers, periphery banks, movable concrete slabs for access into disposal area, landscaping to entrance/office area and market waste compost yard. Environmental monitoring was also conducted twice in August 2009 and February 2010. These technology transfers of operational aspects, such as replacing the approach road, landfill divisions and landfilling itself, have been carried out through On-the-Job Training (OJT).



Installed weighbridge



Environmental monitoring



Improving work

Post Script

Next Newsletter (Vol.3) to be issued in September 2010!

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