

Waste Free Everest

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Abstract

Solid Waste Hazard is rampant all over the World and particularly in Nepal spread from Himalayas to the Terai. In the traditional societies in Nepal, as of today, there is no particular approach to solve the issue except dumping the waste in Nature, and that is what happening today. Realizing the issue, Zero Waste Nepal, a non-profit organization, had been advocating for encouragement and motivation for community based solutions in Solid Waste Management where the waste generators take initiatives to manage the waste they generate. Largely known as Zero Waste Approach, the communities take initiatives and management the waste through separation, composting, disposal ban, ban of burning, ban of burial and recycling.

The Waste Free Everest Program is agreed to be piggy backed with the Everest Expedition Team being organized by the Rotary Clubs of Nepal. The Team will sign an official document that they abide by the Principles of Zero Waste and in no case will dispose the Waste on the slopes of Everest and bring back to the place from where the waste is generated. This process will be officially documented and executed together with Sagarmatha Pollution Control Committee, Nepal Mountaineering Association and demonstrated through TV and mass media, and monitored by nominated volunteers.

The Rotary Centennial Everest Expedition is a remarkable project to address the issue of Solid Waste Management in the World Summit with the Everest Expedition Team taking pioneering initiatives to bring back all materials they are taking along with the Expedition. Zero Waste Nepal and Rotary Clubs of Nepal together with the various organizations as MOPE, NTB, SPCC, ICIMOD and many others will work closely with the Expedition Team to voluntarily bring back the Waste and keep Mount Everest free from Waste. This will be a contribution of the Rotary Family in Nepal and initiation of a new tradition of managing the waste at stakeholders level.

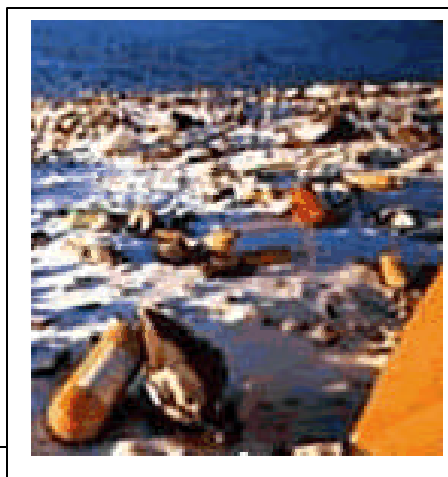
The Expedition Team will carry a message **“Waste Free Everest – Don’t Through away, Bring Back”** aimed for awareness building of the masses to adopt Zero Waste Approach with community based solution (Polluters take initiatives). The Expedition Team will fully cooperate with the SWM program established by SPCC and MOCTCA. In addition, the Expedition Team will undertake the task of bringing back the human excreta and refrain from incineration of waste as plastics, paper and cloth, and bring back to its source of generation or to market place from where they are obtained.

The Waste free Everest campaign is expected to generate a mass awareness within the country and the world at large will be helpful for motivating for taking initiatives to strive for “Waste Free Communities”, institutionalization of Waste Management efforts, will contribute towards Nature Conservation, reviving the Tourism Industry devastated by the Solid Waste Mismanagement practiced in late 1980 and 1990s, and will be a contributor for Poverty alleviation through creation of certain employment for community based waste management.

Introduction

The Solid Waste Hazard in Nepal has been a matter of concern since over a decade when the German funded Solid Waste Management (SWM) Project in Kathmandu Valley collapsed. The SWM approach based on **“Throw it Away, We Will Take Over”** principle of the project proved practically detrimental with all urban corners and junctions ultimately becoming dumping sites. The quest for new dumping sites away from city boundaries bitterly failed since nobody wanted to receive the garbage from the cities to be dumped in their neighborhood and invite environmental disaster for themselves.

Since 1990, the SWM in Nepal could not bring any rational vision and sustain the pressure exerted with the growing volume of waste. The desperate minds of the municipality authorities have no other wisdom than keep the heaps of waste dumped in the streets for several weeks and dump the waste anywhere they could. As a result, the green belt



along the ring road at Satdobato and riverbanks at Guheyswori and Pashupati became the dump yards that virtually destroyed the vegetation along the Satdobato Ring road and Bagmati and Bishnumati Banks. The air traffic in the international airport in Kathmandu was disturbed with bird hazard and urban residential areas along the riverbanks suffered. The European TV channels as Panorama were very quick to denounce the filthy environmental condition and declare Nepal as unsafe for travel and bring the Nepalese tourism industry to a total collapse.



Today, the whole Nation suffers from the SW Hazard spread from south to north, from farmland to forest and Himalayas, and from rural villages to urban areas. No place is spared including the Mount Everest. It has become the culture of all the citizens and the tourists to indiscriminately “Throw Away” Solid Waste anywhere they like including the Everest Summiters who dump the waste on the slopes of the Himalayas, the abode of their own fame. In the pictures shown (Courtesy: Mountain Zone Everest ‘98) above show the most effected area with the Solid Waste dumps left by the Everest Summiters. Today, the Government and world communities are very concerned with the level of rising pollution of the Everest Area with Solid Waste, Human feces and numerous dead bodies lying between the Summit and the South Col.

Objectives

The objectives of the “Waste Free Everest” Campaign are:

- To raise the commitment of the Expedition Teams for total management of waste generated by the teams including Human Excreta and Yak Excreta,
- To raise the understanding that polluters are responsible for managing the waste,
- To find practical ways to resolve the waste problems and issues,
- To institutionalize the Community Based Waste Management Approach,
- To raise the awareness of the communities on Solid Waste Management Issues within the country,
- To raise the image of the country on environmental concerns and encourage the government to take appropriate policy decisions on Community Based SWM Sector, and
- To encourage public and private sector participation for creating “Waste Free Communities”.

Two tons of trash hauled off Mount Everest – Reuter Correspondents 1996

An estimated minimum of 290 and a maximum of 1,115 tonnes of garbage have been left in the area," Junko Tabei of Japan, the first woman to reach the Everest summit, said in 2000. The cleaning of Everest region was started in 1986 by several of the Everest Cleaning Expedition. South Col, the camp below the summit, at an altitude of 7,741 m, is the most littered spot on the most used route to the summit. A mountaineer in average dumps 150 Kg of Solid Waste per head.

According to a news, Nepalese climbers have hauled away 2,000 Kg of decades-old trash from Mount Everest in 1996. Another 1,100 Kg of garbage mostly comprising of empty oxygen bottles, abandoned tents, food wrappers, batteries and gas cans was picked up along the trail below the South Col and brought down to Camp II at 6,749 m. They also picked up a body of an unidentified climber from near Camp II and carried it to Thukla Pass at 4,900 m, where it was cremated. An unknown number of frozen bodies are lying between above the South Col.

Based on the amount spent for collection and transfer by the Korean and Japan Team in 1998, it is estimated that management of 1 Kg of Waste costs USD 400. For collection of the Total Waste accumulated in the Everest region, comprising over 2000Tons, a fund of USD 800 million will be required. This is a huge money and none of the countries will be able allocate so much of fund for cleaning the Everest Region, particularly when there is a large demand for funds for so many other important infrastructure development.

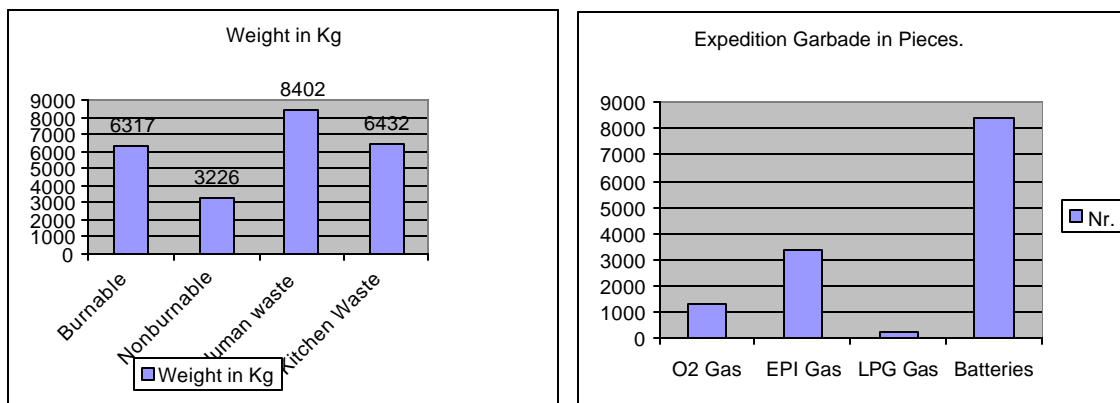
Everest Clean up Campaigns

It is but normal that every mountaineer is worried about the pollution in the area and how they should conduct to keep it clean and to clean it up. Several expeditions are dedicated for cleaning up of the area through various programs as Buy Back Schemes. Mostly, the Sherpas are paid for carrying back the waste dumped by the mountaineers. Most popular prize item is the oxygen bottles because of the high incentives paid for it and for the recycling value attached to it. The efforts made by the Nepalese Government and the Nepalese Associations as Sagarmatha Pollution Control Committee (SPCC) and the expedition teams had devoted a considerable amount of efforts to keep it clean and clean it up.

The challenge of Cleaning up and keeping the Everest clean will remain a high task. Based on the multi dimensional aspect of the waste and clean up campaigns, particularly of the efforts involved, it is desirous that a more sustainable approach is derived based on the principle of "Polluters manage themselves or Polluters must pay".

Base Camp 5300 m	Camp I 6100 m	Camp II 6400 m	Camp III 7320 m	South Col 7900 m	Summit 8848 m
Most Polluted		Highly Polluted		Polluted	
Tents, Oxygen Bottles, beverage bottles, gas canisters, food packets, sleeping pads, ropes, batteries, Paper, Plastics,		Tents, Oxygen Bottles, beverage bottles, gas canisters, food packets, sleeping pads, ropes, batteries		Oxygen Bottles	

SN	Year	Group	Waste Materials Collected	Waste Collected	Amount Spent US\$	Funding
	1989	American expedition Scott Fischer and Brent Bishop	batteries, old tents, beverage bottles, tin cans, ropes, oxygen bottles, masks, books, gas canisters, sleeping pads, stoves, pots, food packets, plastics,	2,500 Kg		Nike, Barell Mounteneerig, Timex, SPCC, NMA,
	1994/ 05	SPCC		123,737 Kg		
	1995	Everest Environmental Expedition 11 climbers+23 crew members		1,291 Kg		
	1996			3,160 Kg		
	2000	Everest Clean Up				
	2002	Japanese Team		2,600 Kg		
	2002 / 03	SPCC		319,924 Kg		
	2003	Tokyo University T. Yamamura + 8				



Current Practice

MOCTCA together with SPCC and NMA has established Garbage Collection and Disposal System in the Khumbu Region. SPCC has taken initiatives to clean up the Khumbu Region since 1994 and collected over 2023 Tons. SPCC has established the Waste Management System for the Expedition Teams to follow. The Khumbu WMS comprises of following steps as authorized by MOCTCA:

- Registration and Inventory of Waste being carried by the expedition Teams,
- Collection of a Deposit of USD 5000 by MOCTCA against guarantee for WMS to be followed by the Expedition Teams
- Inspection of Waste Status at the Base camp through Inspectors,
- Upon return from the Base camp, Inspection of Waste brought back by the Expedition Team and the Inspector's Report is made, and issue of "Garbage Clearance Certificate"
- Acceptance of Waste for segregation into disposable and non-disposable categories. The disposal waste is either buried in the landfill site or burnt in the incinerator at Thyangboche.
- The non-disposable waste is recycled back to Kathmandu for sending back to the Market Place or recycle Industries.

Problems and Issues

Apart from the waste brought back by the expedition teams, the expedition teams, and a lot of waste as human excreta and yak excreta are left and dumped in the ravine and slopes of Everest by the Expedition Teams. A lot of waste as paper and plastic is incinerated. The burial, incineration and dumping of waste have serious environmental and health concerns. The incineration produces green houses gases as carbon dioxide, carbon monoxide and carbon soot. The waste dumped in the slopes and ravines are gradually transferred to the natural system. These waste finally arrive in the river system, farmland, and forest and ultimately come back through the food chain producing a considerable health hazard and warming effect to the region.

Decency for Everest

With consideration of the fact that Everest deserves a decent treatment by the mountaineers and the climbers shall be self-motivated for keeping it clean. It is humbly proposed that the proposed Expedition to Everest lead by Ms. Moni Mulepati with support from the Rotary Clubs of Nepal shall adopt a value addition to the objectives of the Expedition by promoting and adapting Zero Waste Approach in the conduct of Expedition Team members.

Image Building

It will carry several benefits:

- Create opportunity for massive awareness across Nepal and the globe on importance of community participation in Solid Waste Management,
- Help to develop new attitude of the stakeholders towards waste management,
- Encourage other expeditions to adopt the new approach,
- Establish a pioneering action on the part of the expedition,
- Save resources required for cleaning of the area and save efforts of Clean up expeditions;
- Help to recover resources from the waste erstwhile dumped and lost,
- Save Nature from potential environmental damage and Hazards;
- Adopt a policy for follow up programs for continuity of CBSWM by the expeditions and the local community,
- Build Image of Rotary and the Country as a whole,
- Image building of the Expedition Teams, if Waste Free Everest concept is accepted. This will also give more value to the objectives of the Teams and help to raise more support.

Zero Waste Approach

Zero Waste Approach advocates for adopting a new approach with community based solution (Polluters take initiative). The ZW Approach requires reversal of the current human attitude and behavior from “Throw Away” to “Don’t Throw Away” principle.

Proposed Actions

The Actions required on the Part of the Expedition Team would be as follows:

1. Adopt an additional objective to refrain from waste disposal on the slopes of Himalaya by the Expedition members
2. Plan how to avoid taking unnecessary items and materials and to Bring back all waste materials, equipment and logistics along with the Team including human and yak excreta;
3. Carry message of mass education on the back or front of the expedition team members e.g. Stickers;
4. Publish leaflets or Brochures and provide information in Internet on Waste Management Approach adopted by the Expedition;
5. Preparing inventory of Waste materials being carried by the expedition,
6. Develop methods to bring back the waste materials generated;
7. Register with the authorities on ZWA being implemented by the team and disclose the list of Equipment and Materials being carried by the team;
8. Develop methods of demonstration and monitoring of waste management method as verification by public authority and certification of bringing back of the waste upon their return by independent groups;
9. Performance Reporting and Documentation of waste brought back, and
10. Record the Waste dumped on the slopes of Everest by previous Expedition Teams.

Specific Actions

- **Endorsement of the Concept by MOCTCA, NTB, NMA, Expedition Team,**
- **Agreement with SPCC for implementation of the Program (Collection of Expedition Materials, Human Excreta and Ban on Incineration of Waste)**
- **Detailed Planning with Expedition Team**
- **Developing Stickers/Batches and other awareness building materials**
- **Printing of Pamphlets and Brochures, hosting information in Internet**
- **Installing Hoarding Boards in Lukla, Namche and Base camp**
- **Assisting SPCC for Waste Registry and Clearance Certification and Transfer, and disposal ban in Land, Air and Water including incineration and burial**
- **Arrange for High Altitude Porters for Collection and Transfer of Human Waste to Lower Areas for composting or Recycling or Reuse,**
- **Collecting market waste and Transfer to Lower altitude for recycling)**
- **Photographic Documentation of Waste dump in Everest Region**



Potential Partners

This Action will require additional resource. Some of the Sources of Funds may be as follows:

- Ministry of Tourism (MOCTCA), Ministry of Environment (MOPE) – For Policy and Regulatory Support on Waste Management in the Everest Region,
- Nepal Tourism board (NTB), Solid Waste Management Centre – For Policy and Financial Support
- Everest National Park (SNP), King Mahendra Trust for Nature Conservation (KMTNC), IUCN, ICIMOD, WWF – For Policy support, motivation and implementation of the Zero Waste Concept in their Programs and sponsoring the program,
- Sagarmatha Pollution Control Committee (SPCC) – for support for implementation of the ZW Concept
- Nepal Mountaineering Association (NMA), HRA, KEEP, TAAN, HAN, AAN – for support for implementation and Finance
- Rotary Clubs of Nepal – Main organizer/ Assist SPCC and the Expedition Team

- Zero Waste Nepal/RCME – Promoter and facilitator of the Program, Technical Support.

Funds Required

Description	Amount, USD	Sources of Funds committed
Stickers/Batches/Cap/T-Shirt	200	Roatry Clubs of Nepal
Hoarding Boards in Namche, Lukla and Base Camp	500	
Brochures/Pamphlets	100	Zero Waste Nepal
Waste registration Inventory and Documentation	500	Expedition Team
Collection/Transfer of Expedition Materials and Human Waste	15,000	Expedition Team
Transfer of Recycling/Composting /Disposal materials	2,000	
Follow Up and Certification	700	Rotary Clubs of Nepal
Documentation	2,000	
Transportation/Travel	1,000	
Total	22,000	
Committed Funds	14,500	
Open for Sponsors	5,500	

Benefits to the Sponsors

The Sponsors will have following Benefits:

- Disply of Banners and Logo in the Brochures, Leaflets, and Internet Page
- Certification for Sponsorship as supporter for “Waste Free Everest” Campaign
- Copy of Documentation and Reports

General Benefits

- Establishing Pioneering Activity
- Contributing to Comprehensive Environmental Conservation
- Direct Saving of Cost for Cleaning of Everest Region
- Enhancing Image of the Country, and the Partners
- Creating Mass Awareness on SWM across Nepal and the World
- Contributing for a new Regulation for Waste Free Everest
- Contribution towards creating “Waste Free Communities”.

Cost Saving

The Korea-Japan Everest Cleaning Expedition in 1998 spent around USD 400/Kg. This means for cleaning the quantity of waste dumped in Everest Region alone comprising of over 2000 Tons and 125 human bodies would require around USD 500 million. If the expedition teams include the “Waste free Everest” concept in the Expedition Plan, a good Saving of resources would be achieved. It is expected in an average every expedition team will contribute to reduce cost of Cleaning of Everest to USD 10 or less, eg a saving of a huge sum of around USD 0.5 million per expedition.

Further Community Actions

Solid Waste Management today stands at crossroads and looks for large participation by the communities and stakeholders that produce Solid Waste. A change in attitude for ban in disposal of Waste to public place and Nature will bring a large change. This change in attitude towards handling the Solid Waste will bring a New Culture.

It is obvious that we must stop the current practice of “ Throw Away”. And we can. **Yes, and in simple steps, taken each day, through:**

- 1 Preventing Bringing Home Unnecessary Items (AVOID)
- 2 Separating Waste at Source and Produce Clean Waste (Separation and CLEAN)
- 3 Composting organic wastes at home
- 4 Preventing Disposal of Waste in Nature or Public Place (DISPOSAL BAN)
- 5 Supporting all no- dump, no-burn and no-burial technologies
- 6 Protesting Landfill and Dumping Sites
- 7 Use more of eco-friendly materials
- 8 Practice organic gardening or farming- at any scale and Restoring our soil

9 Encouraging Community participation (POLLUTERS PARTICIPATION)

10 Motivate through Recognition and Incentives (Rewards for good jobs).

11 Striving for “Waste Free Communities

The Urban Waste comprises mainly of Organic materials (> 60%) and is considered as the high priority item in the waste management stream. Zero Waste Nepal advocates for encouraging Domestic Composting by using various type of bins available in the market. This will help to reduce the waste dump in public places and burden in the nature. The compost and the clean waste produced could be sold in the market for a price.

If you are not for Zero Waste, How much Waste you are for?

Aim for Zero Waste. It pays.

