

**World Heritage Mount Everest National Park: Waste Management Project
Phase II completed May 2014, local core-groups continue the work**



The ecosystem is extremely fragile in the Khumbu region, target region of our *Saving Mount Everest Project*. A protected area since 1976, *Sagarmatha National Park* was declared a World Nature Heritage by UNESCO in 1979. The region has become a popular destination, with more than 35,000 visitors per year, but this also has its downside – the amount of waste has been growing in proportion with the number of tourists. For decades, expedition groups have heedlessly discarded their litter in crevasses, while the local people have had no idea of how to deal with waste in a sustainable way. The *Saving Mount Everest Project* represents an essential initiative for the region, opening the way for new approaches to waste management and biodiversity conservation.

Since 2011 EcoHimal, Society for Cooperation Alps-Himalaya, has been working – together with the local *Sagarmatha Pollution Control Committee* (SPCC) – to develop a functional waste management structure. The focus is dual: to achieve a suitable infrastructure, and to raise local awareness.

Drawing on numerous studies of high alpine waste management conducted by European universities and Nepali experts, the *Saving Mount Everest Project* (www.savingmouteverest.org) was carefully designed. Involving local initiatives in waste management infrastructure, awareness-raising and capacity-building, the overall objective is the conservation of biodiversity in Sagarmatha National Park. The project has been encouraged by the *Everest Summiters Association*, an association of Sherpas who have reached the summit of the world's highest peak – *Mount Everest/Sagarmatha*.

A study conducted by the University of Technology in Vienna found that plastic bottles (polyethylene terephthalate, PET) account for 8% of the total waste accumulated in Sagarmatha National Park. In Namche Bazar and in schools of Chaurikharka these bottles have been put to new use, as basic material in making waste containers. This has been declared as 'good practice' and has become one of the best methods of reusing waste in the project area.

In spring 2011 almost nine tons of waste – mostly old climbing ropes, discarded oxygen cylinders and expedition waste of metal and plastic – were removed from the

area, mainly by Sherpas. Using local yaks, they brought the rubbish to the new dumpsites, where it was sorted and incinerated by zero-emission methods, or recycled. Since then, also Nepalese and Indian soldiers have participated in similar clean-up actions, collecting five tons of waste. However, it is estimated that more than 200 tons of plastic and metal, glass bottles and hundreds of oxygen cylinders still remain in the region.

To guarantee a clean environment also in the long term, staff has been trained and a self-management structure has been created. A waste management concept developed by international and local experts functions as a guideline for this self-management structure, oriented towards a zero-waste concept. Glass bottles and plastic bags are now prohibited in the entire national park, and cotton bags have been distributed by local women's groups. Such cotton bags are durable and can be used for two or three years – a further achievement of the project

In Namche Bazar, tourism hub of the Everest region, a waste separation centre and an incinerator have been constructed. Waste from Everest base camp and villages in the Khumbu region is collected by SPCC staff and separated, recycled or burned in this centre. It is no longer necessary to burn waste outdoors thanks to the functional incinerator, which has a positive effect on the emission of greenhouse gases and on the environment.

The project has contributed greatly to the cooperation and capacity of local institutions. For the young population of the Khumbu region a platform for new job creation has been established. Through the project, 10 young Sherpas, both female and male, have become involved with the Khumbu Media Centre, working together with journalists from the highest radio station in the world on a radio programme about waste management and biodiversity conservation.

The project ended in spring 2014, but the work is continuing independently under the auspices of the SPCC, partly financed by the work of *icefall doctors*. A share of the funding for the highly dangerous fitting of permanent ropes on Mount Everest goes into SPCC's budget.

Today the region has become notably cleaner. Waste containers are functional, and disposal is well organized and controlled. Thanks to the *Saving Mount Everest Project*, this iconic peak is no longer classified as the ‘highest rubbish dump on earth’. It has regained its ancient dignity, revered in Tibetan Buddhism – where the integrity of the landscape is fundamental to life under the auspices of gods.

	Results
<p>Awareness-raising programmes for local population, tourists, migrant workers, porters</p>	<ul style="list-style-type: none"> - 290 regular porters and seasonal porters participated in the awareness programme organized in Namche, Toktok and Lukla. <hr/> - 153 schoolchildren from 14 schools of the Khumbu area, health-post staff and local police participated in a 2013 World Environment Day celebration programme. - Schoolchildren from 14 schools (Eco Club members) and 300+ primary and secondary school pupils have been trained in waste management and bio-diversity conservation awareness. <hr/> - 6,000 local people, Nepali and international tourists, porters and non-permanent residents of the project area attended street drama performances on waste management in three villages. <hr/> - 30,000 + people visited the photo exhibition ‘Restoring dignity to the mountain’ (Swedish photographer Martin Edström). In the course of one year, the exhibition travelled to Kathmandu, Thame (a village in the project area) and the International Mountain Museum in Pokhara. <hr/> - 90 leaders of various local institutions took part in village-level awareness workshops and cleanup campaigns at Everest base camp and Island Peak base camp. <hr/> - 200 lodge owners and other local residents attended trainings on at-source sorting of burnable and non-burnable wastes <hr/> - Two workshops on sustainable quality tourism and Sherpa cuisine have been held in Namche and Lukla
<p>Planning, designing and construction of new waste management infrastructure (collection, treatment and recycling stations)</p>	<ul style="list-style-type: none"> - 43 waste containers have been constructed and are in operation, some made out of discarded mineral water bottles (approx.. 1900 bottles reused) <hr/> - Well-managed waste containers with separate sections for burnable and non-burnable materials are in operation. <hr/> - Three permanent modern public toilets with separate facilities for tourists and locals/migrant workers have been constructed and are in use. <hr/> - One special-purpose incinerator is in operation, managed according to technical guidelines <hr/> - One waste management centre (waste collection and separation) is in operation <hr/> - 15 main waste plants are functioning in the target area, managed by SPCC

	<ul style="list-style-type: none"> - 1300 reusable cloth bags have been produced and distributed to minimize or replace the enormous number of plastic bags
Policies and procedures for solid waste management implementation	<ul style="list-style-type: none"> - A waste management plan and public guidelines for local waste management institutions have been drafted. - A revolving fund has been set up to support SPCC in implementing the waste management plan effectively.
Strengthening of local institutions in operating , handling and managing infrastructure constructed to sustain project activities and income generation for disadvantaged groups	<ul style="list-style-type: none"> - 14 SPCC staff members have been trained in maintenance and operation of waste containers - Three SPCC staff members trained in incinerator operation and maintenance - Eight highly motivated local residents participated in paper briquette and aluminium recycling training - 400 waste bins made out of bamboo produced and distributed - 35 highly motivated local young people trained for work in solid waste management and biodiversity conservation activities.
Supporting the Government of Nepal in developing and implementing new regulations	<ul style="list-style-type: none"> - National-level Himalaya Environment Conservation Monitoring and Management Committee (HECMC) established.
Media campaigns	<ul style="list-style-type: none"> - Weekly radio programme ('Chitikka') on solid waste management broadcast on Solu FM for one year - Weekly radio programme('Chitikka') on solid waste management produced and broadcast on Himlal FM for one year - Radio features on solid waste management produced and broadcast by Khumbu FM on a regular basis - Two press conferences held in Kathmandu



Further information: www.savingmouteverest.org



Society for Cooperation Alps-Himalaya, www.ecohimal.org