

## Indigenous Knowledge and Practice for Waste Free Tourism in Khumbu Region

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No doubt, Khumbu is a popular tourist destination. Every visitor who comes to Nepal for the first time always tempted, excited and wants to go to Khumbu perhaps due to magnetic impression of the Everest, incomparable and magnificent mountain views the region offers uninterruptedly, unspoiled and esoteric cultural heritage along with Sagarmatha National Park (SNP)-the World Heritage Site which is synonymously known as Nepal's Unique Selling Point (USP) in tourism language.

Khumbu is home of famous Sherpas. Based on the 2001 census, Khumbu inhabits about 6000 population where majority is of Sherpa within its three administrative Village Development Committees (VDCs) viz. Namche, Khumjung and Chaurikharka (Pharakpa). Tourism was started in the region when Tenzing Norgay Sherpa and Sir Edmund Hillary for the first time successfully conquered the roof of the world-the Everest in 1953. Khumbu received highest number of visitors in 2000 which was 25,924. However, tourist's arrival in the Khumbu region did not lowered down from 13,841 (2004) even in the severe conflict in the country after 1985 which was about 8,000.

Due to high number of tourist arrivals, migration of local people from its hinterlands to the Everest trail is in increasing trend because of its business potential. Increasing trend of building tourist hotels/restaurants, lodges and teashops along the trail has invited various sanitary problems e.g. shortage of drinking water, sanitation and waste management in cold climate where decomposition is too slow or non-existent in some places particularly during winter. However, sanitary condition is better in high cost hotels where access to all tourists and support staffs is in an unreachable distance.

Local people of interior parts of Khumbu close to the main trekking trail still are in traditional way of living and most of them use their century old practices for night soil management which was in practice before tourism starts (tourism was taken place only after 1950). People were habituated with the toilet use for the sake of good manure for their potato farming not for tourism in the early days. However, this culture kept them free from health, hygiene and sanitary problems since then and off course it helped to keep the trail neat and clean which is a prerequisite for tourism development.



Potato being the staple food of the mountain community, many people even today depends on potato for their survival in these areas so the practice of human waste use is alive. All houses in off trail villages e.g. Thame, Khumjung, Phortse, and villages at Pharakpa viz. Muse, Thulo and Sano Gumela own indigenous toilets called *Sottar Charpi*. Such toilets are more found in Sherpa houses. However, other people also have some influence of this practice.

People collect leaf litter from nearby forests and use for night soil cover after every use of toilets. Use of leaf litter for waste cover reduces likely awful toilet smells which is later used as manure in farmlands particularly for potato growing. In the early days, local Sherpa from rural backward and poor villages of the region were used to fetch the manure but now labor normally go from other districts e.g. Khotang, Sankhuwasava and lower parts of Solukhumbu do not hesitate to carry compost load to the farmlands on higher rate of wages.



In tourism, such indigenous practice itself might be tourism product for selected tourists who prefer to be aware of the indigenous knowledge and practice. However, modern system has replaced these time immemorial and sustainable practices from the region that might threat tourism in the future. Even now, Khumjung and Namche are facing problem of waste management due to heavy pressure of hotels, lodges and restaurants where modern toilets are built-up that require substantial amount of water to flush out. Building drainage systems, treatment plant and mechanized disposal in such high altitude will require unaffordable cost and introducing high tech sometimes might not work and sustain. Therefore, the day of waste hazard is not very far if we do continue. Human waste from the Everest Base Camp (EBC) now is carrying back by porter in a barrel which is being disposed off at Gorakshap where bioremediation seems unfeasible in that chilled and frozen altitude.

Overlooking of indigenous practices by modern development societies and its practitioners has created problem to properly dispose human waste along the Everest trail. Yet, some teashops have directly connected toilet outlets to nearby streams to get immediate relief instead of making compost. Increasing trend of this practice may contaminate river water and invite various water borne disease viz. diarrhea, dysentery, scabies etc. to downstream water users. Improper disposal of night soil has further reduced possible grow of organic farming and people have to import chemical fertilizer for farming.

If we could propagate this indigenous practice of waste management and composting technique with bit improvement in order to reduce bad smell along the main trekking trail wherever space is not constraint and in other culturally and socially feasible areas would

substantially help to promote organic farming and cost effective mechanism for household waste management.

For this, development partners should give priority and incentives in order to encourage/introduce and propagate improved version of such toilets to ensure its friendliness to tourists and at the same time it could produce compost for vegetable and waste free trail for visitors in other similar tourism potential areas.

This does not cost more compared to modern cistern flush toilets. One modern toilet cost might build three indigenous toilets with improvement. Hotels those have built up modern toilets can also realign their septic tanks/soak pits design and make compatible with the improved Y-shaped toilets which is familiar in Nepal's rural areas commonly known as *Sulav Charpi* at household level. If *Sottar Charpi* could be improved to *Sulav Charpi*, it will give compost for kitchen garden, household lawn and flower pots. The excess manure of the tourist hotels and lodges can freely be distributed to farmers so that farmers can grow organic vegetable which is famous in Khumbu.



This practice has multi-fold benefits because it reduces possible risk of epidemics due to improper management of toilet wastes, helps for forest management and makes avail compost for farming which is a good practice of night soil management, household sanitation and environment friendly tourism development. This will further reduce the dependency on imported chemical fertilizers then saves foreign currency. In addition, leaf litter collection from forests helps to keep forest productive, control forest fire hazard and enable forest to be diverse by allowing germination of forest undergrowth which ultimately helps to grow heterogeneous species in the forest biodiversity that is also indispensable for eco-tourism.

If a little effort is put on it and tied up with energy schemes e.g. high altitude biogas, wastes can be transformed into energy which is also known as resource recovery in term of waste management, slurry and leaf litter can be used for composting and then build up the environment for organic farming. Indigenous knowledge and practices of people from the regions has opened up new avenues for environment friendly tourism development since it helps for waste free trail, organic vegetables and local livelihood who can earn good health and income from tourism.

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