

## “Solving Everest’s Mounting Poop Problem”

By Katy Scott

When preparing for a climb up Mount Everest, even something as basic as going to the bathroom has to be taken into account. Yet, it has been discovered that there are some pitfalls and concerns regarding the protocols for discarding human waste on the world’s tallest peak, much to the detriment of the environment and the chagrin of other climbers. Since climbers are not allowed to simply dig a hole at a camp and go to the bathroom, although it has been known to be done, the waste created has to be deposited in specific locations. When not near that assigned area, a canister containing the refuse has to be carried by porters until the proper spot is reached. According to the Sagarmatha Pollution Control Committee, a local non-governmental organization involved in keeping Everest clean, this season alone, over 28,000 pounds of human waste has been carried from base camp to a dumping site by the porters working on the mountain; this would be equivalent to the weight of two adult elephants. At a frozen lakebed 17,000 above sea level called Gorak Shep, which has been designated as an acceptable waste location, excrement is left in an open pit to allow it to dehydrate. While having specific locations for the placement of human waste seems like a reasonable plan, that method is becoming a cause for concern. This is because there is a risk that the human waste could contaminate the water supply, and since there is no nearby waste treatment plant, there is a growing unease that this clean-up method could be causing more harm than good; furthermore, sometimes the waste does not decompose as hoped due to the frigid temperatures. Therefore, Garry Porter, a former mountain climber and engineer, along with Dan Mazur, a fellow climber, decided to take action and created the Mount Everest Biogas Project. Initiating this undertaking eight years ago, the two were determined to eliminate what they termed an “environmental hazard”. Their idea is to install a biogas digester at Gorak Shep; this device would turn human waste into methane gas as well as create an additional emission; the methane gas could be used for cooking and lighting, and the other discharge could be used as fertilizer. There are, however, obstacles to overcome before moving forward on installing a biogas digester. One aspect to contend with is the weather, as most of these contraptions are troublesome to operate at altitudes with sub-zero temperatures. Additionally, the organisms used to break down the human waste must be kept warm; therefore, solar panels will need to be installed with a battery to store energy during dark hours. Paying for everything is also a factor; it is estimated the first biogas digester will cost about \$500,000, but the hope is the price will decrease once all the materials have been transported. Once the funds have been raised and some testing has been completed, breaking ground will be the next step.

Humans have long had an impact on their surroundings. While many times that influence can be beneficial, often it is not, and actions are taken without considering or realizing the consequences to the environment. Yet, once a negative impact is clear, it is only right that steps be taken to stop the damage. In this case, the climbers who recognized the problem are role models for those in similar situations. Knowing that a plan is no longer working and then figuring out the best way to correct the situation is the right way to approach a dilemma, yet that taking action piece does not always happen. By using the scientific advancements and ingenuity, two positives are on the horizon: the Everest experience will become healthier for those interested in conquering the challenge of climbing and the treatment towards Mother Earth will become more ecologically responsible. Potentially, the developments made on Mount Everest could help other areas with human waste challenges. Yet whether or not the impact of this attempt to clean up the situation remains local or spreads to additional settings, finding a solution to this problem is essential to both the health of the people living near and climbing on Everest as well as for the environment itself.

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Should Mount Everest be closed until this situation is dealt with/solved?

Is this more of a man vs. nature conflict, a man vs. society conflict, or something else?