

Modified Biosand Filter for the Indigenous Peoples of Palawan, Philippines: A Household Water Treatment.

*Mildred Palatino-Palon¹, Cesario A. Bacosa, Jr.², Mark Jason H. Germina²,
and Jerick Edgar C. Villa²

Palawan Ethno-environmental Research Center (PERC)¹
and College of Engineering and Technology²
Holy Trinity University
Puerto Princesa City, Philippines

ABSTRACT

Fresh water is the essence of life that comes from nature. It is only three (3) percent of all the water on earth. At present, fresh water is highly endangered and faces increasing threats worldwide because people failed to value the fresh water ecosystems. In Palawan, one of the problems of the indigenous people is the lack of safe drinking water because of the intrusion of excess agro-chemicals, sediment load from improperly managed quarry sites, crop/forest lands, and eroding stream banks; and bacteria and nutrients from livestock, pet wastes, urban runoffs and faulty septic tanks to the rivers. This reason motivated the Research, Development and Extension Office of Holy Trinity University to help the indigenous peoples of Palawan to have a supply of safe drinking water. In 2009, Holy Trinity University provided a water purifier to the Tagbanua of Sugod 1, Barangay Cabayugan, Puerto Princesa City and several units of Biosand Filter to the different communities of indigenous peoples. But since a lot of communities of indigenous peoples need to have potable water to drink, the institution needs more budget and partners to continue the project. The situation inspired the researchers to come up with a research on modified biosand filter which will produce biosand filter which is lighter in weight and less expensive. The method used in the study is experimental. The output is a modified biosand filter with modified outer shell and filter media which is as effective as the biosand filter available in the market but it is easy to handle and less expensive.

Keywords: biosand filter, indigenous peoples, dirty layer, outer shell, filter media