

BOTTLE-NET LIFE JACKET: A PERSONAL FLOATION DEVICE FOR EVERY FAMILY

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Abstract

Bottle-Net Life Jacket, “A floatation device for every family,” is an innovation developed as an alternative to expensive commercial life jackets, which most Filipino families living along the coastlines and river systems lack. The study aimed to develop and produce cheaper personal floatation devices (PFD) or life jackets made from fishnet and discarded plastic bottles lined with plastic litter and other materials as floaters. Embedded in the design is the do-it-yourself scheme, which every family can produce as a disaster-preparedness equipment tool. The project used fishnets as a vest with several holsters to hold the 500 ml plastic bottles lined with plastic waste as floaters. It has provision for potable water, which the users could gulp while floating and waiting for rescuers to arrive. The proponents solicited feedback from the users to pivot in the design and attain new and improved ones. It was observed that a 500 ml plastic bottle could carry 7.5 lbs of human body weight in seawater and served as the basis for the design of different sizes of vests for users of different weights. Testing was done at sea and in rushing water to simulate actual flooding with the participation of the Tuklas Innovation Labs, Philippine Coast Guard, CDRRMO, Philippine Life Saving Society, and other stakeholders. The project was able to develop customized floatation devices for domesticated animals such as dogs and pigs. It enabled the youth, PWDs and elderly to participate in the testing and its assembly that they used during testing. The Bottle-Net Life Jacket costs 75% lower than commercially available ones and is considered “A lifeline from floating waste: a social enterprise to save lives, generate income, and clear up the coastline.”

Keywords: lifeline from floating waste, customized life jacket, life-saving device