ROLES OF THE ROYAL THAI ARMY AFRIMS CONCERNING WATER CONSUMPTION IN THE MILITARY INSTALLATIONS AFTER 2011 THAILAND MEGA FLOODS

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Abstract

Background: Thailand Flood in 2011 was the biggest flood which started in July 2011 and ended in Jan 2012 but the restorations still have been going on until now. It is the fourth biggest disaster in the world. The cause of the flood was NOCK-TEN TROPICAL CYCLONE which led heavy rain fall in Thailand. There were floods in many provinces soon after that. Dams received water more than their capacities which made the flood very severe. This resulted in water crisis affecting drinking water and water for household use which are essential for all people in flooded areas.

Method: Analysis Division, Armed Forces Research Institute of Medical Sciences (AFRIMS) realized the importance of analyzing the quality of water in 7 Army forts within flood areas and collected 87 samples of water for consumption and 9 samples of natural water used for producing tap water. Samples were analyzed and then compared with the standard values.

Results: The results showed that 47 samples (54.0%) of water for consumption did not meet the standard. These included 46 samples (52.9%) with free chlorine lower than the standard and 24 samples (27.6) with color higher than the standard. Moreover, 5 samples (5.7%) were contaminated with coliform bacteria, 2 samples with *E.coli* and 3 samples (3.4%) had more turbidity than the standard. For natural water, 5 samples (55.6%) that did not meet the standard values consisted of 5 samples (55.6%) with color higher than the standard, 2 samples (22.2%) with more turbidity than the standard and 3 samples (33.3%) with coliform bacteria.

Conclusion: From the study of the quality of water in 7 Army forts affected by flood in 2011, we discuss that natural water used for producing tap water in these forts was affected by the flood. Tap water and water for consumption also got the effects from flooding because the flood entered the tap water production system. Another reason may be because of lack of chlorine for eliminating microorganism in flood situation.