Abstract

At the present, one of the most important environmental problem issue are wastewater and municipal solid waste that effect on livelihood on highland community especially a natural resources. Proposes of this research are (1) to study cause of environment problems discussion and ways to solve problems by cooperate with villagers to get sanitation waste management, and (2) to study and develop solid waste and wastewater management of highland community by public participation of 12 highland communities in 11 Royal Project Development Centers.

The results of 9 additional communities from 2016 shows that most of highland communities did not have a good sanitation transport and disposal of municipal solid waste. The maximum of disposal rate is 2.42 kg/person/day at Ban Pang-bong, Royal Project Development Center Pa Miang, and minimum of disposal rate is 0.79 kg/person/day at Ban Huay Kao Leep, Royal Project Development Center Mae Sa Pok, mostly are organic waste and general waste. Moreover, although all highland communities installed septic tank for black water treatment, but they still drain greywater from household as washing, showering, cooking and processing into the surface water directly. The results showed maximum of wastewater that pass the test of standard base on Pollution Control Department is 25% at Ban Mae Ka Nin Nauh, Royal Project Development Center Tung Roeng and minimum is 6.67% at Ban Hauy Hom, Royal Project Development Center Mae La Noi, that affect to end of surface water quality be lower than headwaters. After transferring the research to 12 communities, the way to solve the problems were occurred ; (1) transferring knowledge of municipal solid waste and wastewater management by properly sanitary method, (2) developing and adjusting the management process to suit with highland limitation, and (3) setting the social measures from their acceptance and behavior modification for continuously operating. The study indicated revision of municipal solid waste were consist of 5 processes as (1) separation and recycling (2) dumping by type of waste (3) collection of waste in closing bag (4) increasing the safety of transportation and (5) increasing the efficient disposal of waste by landfill or incinerator. Wet land system showed highest capacity to remove organic matter and nitrogen of waste water in average of percentage at 95.93 and 69.16 while, grease traps could remove suspended solid and oil in average of percentage at 92.76 and 92.48 respectively. So both practices were selected to install together.

Keywords : Solid Waste, Wastewater, Environmental Management, Wastewater Treatment, Highland