

Treeranut Srisunont 2006: Mercury, Lead and Cadmium Contaminated from Forest and Agriculture in Bang Pakong River Basin. Master of Science (Watershed and Environmental Management),
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Mercury, Lead and Cadmium Contaminated from Forest and Agriculture in Bang Pakong River Basin, this study objectives are 1) To analyzed concentration of heavy metal in water and sediment. 2) Comparison of heavy metals loading in forest and agriculture representative watershed. 3) Relationship studied of representative watershed to heavy metals loading. Determination of selected sampling areas by dividing to 3 land use types were forest areas, agricultural areas and community areas. Water and sediment sampling in dry period (April and November 2005) and wet period (July 2005).

The results of heavy metals contamination; mercury lead and cadmium, found that forest watershed water contamination were between ND-0.0002, ND-0.003 mg/l and could not detected, in sediment were between 0.037-0.141, 28.7-30.8 and 1.0-3.7 mg/kg respectively. Agricultural watershed water contamination were between ND-0.0004, ND-0.009 mg/l and could not detected in sediment were between 0.034-0.144, 29.6-33.7 and 2.0-3.0 mg/kg respectively. Community area water contamination were ND-0.004, ND-0.046 and ND-0.034 mg/kg and in sediment were between 0.044-0.144, 28.3-36.7, and 1.1-3.3 mg/kg respectively. Mercury loading from forest watershed in wet and dry period were 0.0001 and 0.00002 kg/km²/day respectively, agricultural watershed were 0.0002 and 0.00014 kg/km²/day respectively. Lead loading from forest watershed in wet and dry period were 0.001 kg/km²/day and could not detected respectively, agricultural watershed were 0.002 and 0.003 kg/km²/day. For cadmium loading had not found in both period.

Heavy metal loading in Bang-Pakong river basin by GIS technique found that mercury in forest land in wet and dry period were 0.57 and 1.1 kg/day respectively, in agricultural land were 1.94 and 1.36 kg/day. Lead loading in forest land were 5.67 kg/day and could not detected respectively, in agricultural land were 1.96 and 29.90 kg/day. For cadmium loading had not found.

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Thesis Advisor's signature

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