

# Characteristics of the suspended and dissolved material transport in snowy and volcanic basin

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<http://www.pwri.go.jp/japanese/organization/niigata/niigata.htm>

## 1. Introduction

There is a little quantitative investigation in comparison with the phenomenon of rain in the volcanic area and many unclear points exist about the material movement in the basin of high, snowy and volcanic area for one hydrological year.

So quantitative evaluation about the degree of a contribution to the material movement by snow and rain is necessary to grasp solute and non-solute material.

## 2. Outline of the investigation area and investigation methods

The investigation area are two basins (Iougawa River:catchment area is 13.2km<sup>2</sup>, Koakazawa River:catchment area is 7.8km<sup>2</sup>) which locate at the west foot of Mt.Naeba in Tsunan-Town, Niigata Prefecture and Sakae-Village, Nagano Prefecture. These basions are mainly composed by basalt, and tuff is distributed in Iougawa River basin. Many landslides which erode Naeba volcanic body develop in these basins as well.

Maximum day precipitation is about 150mm and maximum snow depth is 2.5-3m according to the weather observation in the past 4 years in the end of Koakazawa River basins. Snowfall term is from December to April and rainy season is from May to November.

The continuously observation of water level, water temperature, turbidity, electric conductivity and pH and sampling river water have been carried out at the end of the basins. General water quality, degree of grain size and turbidity of the drifting sand were analyzed in the laboratory.

## 3. Results

1)Electric conduction of Iougawa River water was 0.01-0.06S/m, and pH was 4.5-5.4 for one hydrological year. Water formation is CaSO<sub>4</sub>-type on trilinear diagram. Electric conduction of Koakazawa River water was 0.005-0.1S/m, and pH was 6.2-7.8. Water formation changed from CaSO<sub>4</sub> to Na<sub>2</sub>SO<sub>4</sub>/NaCl-type on the trilinear diagram.

2)Bedload and washload were contained in river water and suspended load was contained together for the time of flood.