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AHW30-P18 Room:Convention Hall Time:May 22 18:15-19:30

Variation characteristics of stream water quality in the Shiribetsu River basin

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1 Introduction

Shiribetsu river is known as a clear stream in Japan. It is a valley it has Mt.Yotei and the Niseko federation in the head of a river, and with abundant eminences. In the valley, it is a farm area in eminent Hokkaido, and there are a lot of use as the agricultural water. The Ministry of Land, Infrastructure and Transport is continuously doing the water quality observation. However, the water quality observation intended for the entire valley including the branch doesn't have the example. In this study,Shiribetsu river basin was observed, the point change in the river quality and the season change were clarified, and the understanding of the stream water quality change characteristic of the valley was tried in the present study.

2 Shiribetsu river basin

The Shiribetsu river is originated the source in deflection Gaku, and flows to the west aiming at the Sea of Japan. It is a class A river that flows into the Sea of Japan. They are 126km in the length , and 1,640 km2 in the valley area.

3 Research method

The stream water quality observation was done every other month in March, '3-2013 2-2012, and 63 points or less (fixed point 44) were investigated. The observation item is AT,WT,EC,pH,RpH flowing quantity.It analyzed IC,TC,TOC,and the ion chromatograph was analyzed (Na+,K+,Ca+2,Mg+2,Cl-,NO3-,SO42-),and it made to figure by GIS and it analyzed it.

4 Result and consideration

The water quality of the main stream showed the water quality of the Na-HCO3 type, and EC changed from the upstream to the downstream in 43-95microS/cm when diluting it with snowmeltwater. It is thought that it is because the amount of the base flow is large 51-126microS/cm in July that was the highest. It returns normally by the confluence of the branch though pHs rise temporarily up to 8.4 by manure in the middle reaches of the main stream part.

5 Summary

Geological features and the land use's analyzing hydrology characteristics from the main dissolved matter necessary, and influencing the river quality greatly became clear in the present study. It wants to calculate the loading dose in using small and each middle reaches region, and to tie to further clarification GIS of the water quality formation mechanism in the future.

Keywords: Shiribetu river basin, stream water quality, seasonal variation, spring, Mt.Yotei

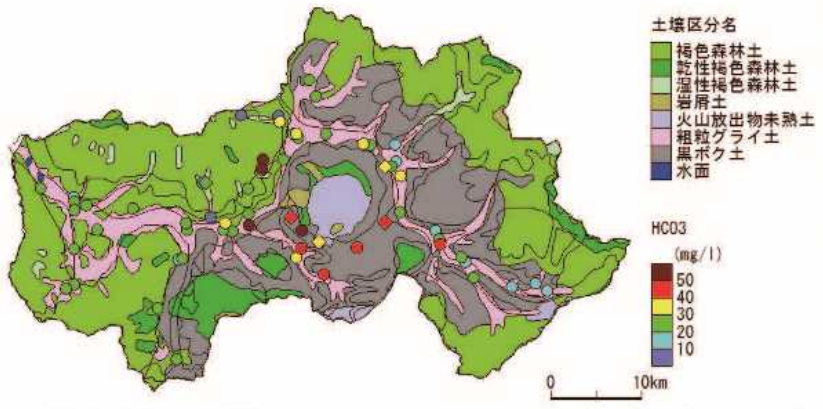

Fig. 1 Soils and HCO3 concentration on the stream water (september)

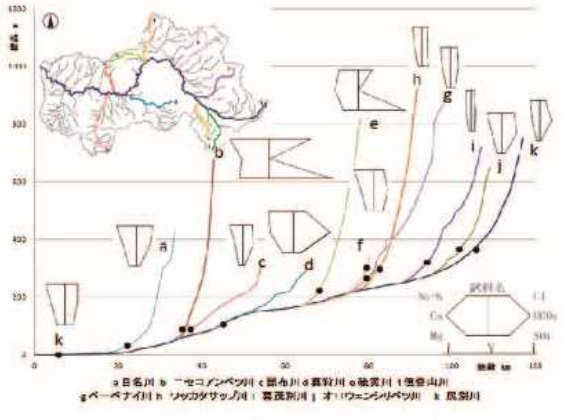

Fig.2 Longitudinal Profiles of the Rivers and water quality composition