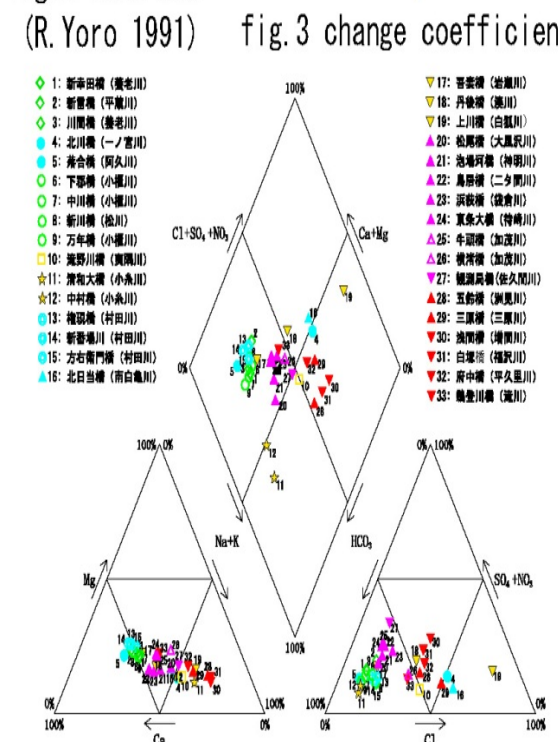
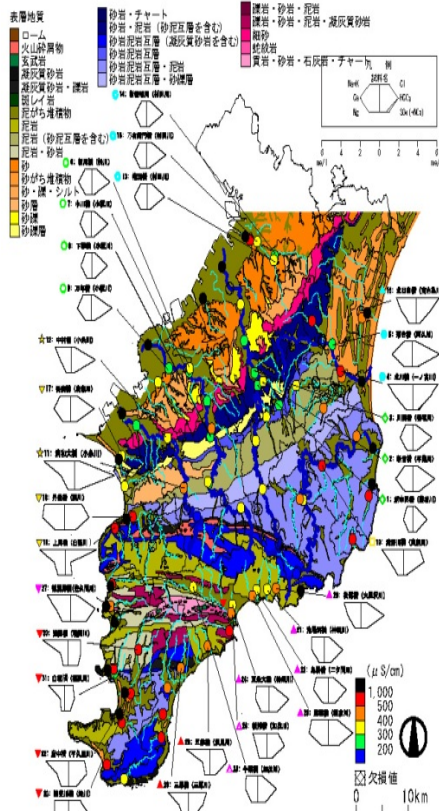
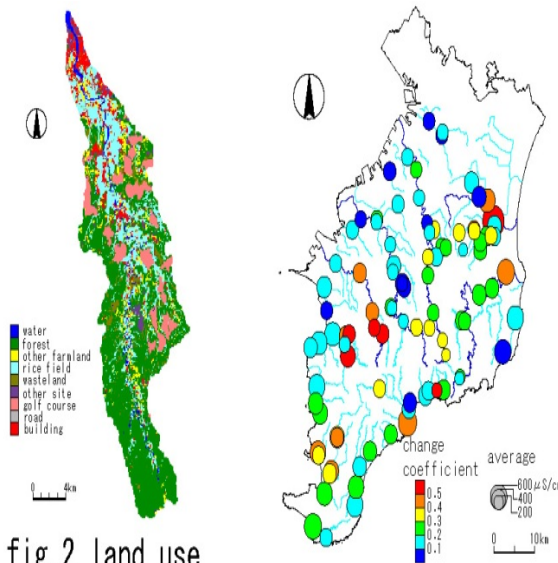
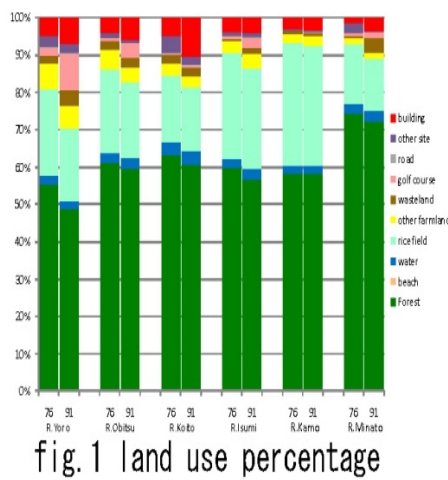


Water quality variation and basin characteristics of river basin in Boso Peninsula

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1. Introduction

The material flowing out from the river has an influence on not only the downstream area but also the ocean area along the shore, but, by various basin characteristics such as geological feature / the topography / the land use, the property is different. So it is important to grasp characteristic of basin it is resource. In addition, the degree of the influence is different by the conditions of the place to flow out into such as a bay or the open sea. To compare them, the purpose is clarifying a basin characteristic and a difference of the influence on ocean for the many rivers of Boso Peninsula

contacting with the different sea area Tokyo Bay and the open sea.

2. survey area

Boso Peninsula is the peninsula which It pushe out in the Pacific, and it is warm oceanic climate because the Black stream of the warm current flows through the coast, and the precipitation is 1400-2400mm in a year. The geological feature consists of mudstone, a sandstone, conglomerates mainly. There is not so high mountain. It is characteristic that ups and downs are intense, disagrees with the geological feature structure to be postponed till the east and west, and many water system continue north to south. There is not the first-grade river, and comparatively big scale river are R.Yoro,R. Obitsu , R.Koito, R.Ichinomiya, and R.Isumi.

3. methods

I performed water sentence observation in 55 river and 6 springwaters, total 132 spots in Boso Peninsula in Feb.2010 and in Nov. Sep. Jul. and May, 2009. The observation item was AT, WT, pH-RpH, EC, TURB, DO, TDS, and the sample performed measurement of the alkalinity and major dissolved components measurement with the ion chromatograph, all dissolved carbon quantity analysis with the TOC analyzer.

4. result

In Boso Peninsula, it was characteristic of that EC was high the whole area, and especially high locations were Uchibo erea where there are small scale river and the mean of the EC was 450uS/cm more than it. While in big river it is lower. Variation indexes are more than 0.7 greatly in the R.Koito upper basin, and influence of the discharge water of the dam is suggested so that there is it right under a dam. While a variation index was small any place expect for the spot of the dam direct top in R.Obitsu, and it was 0.1-0.2 at many spots and showed the opposite tendency to R. Koito. A lot of fields are distributed over all basins along a river, but EC is not always high in the river which flow farmland. On the other hand, there is the high spot of the EC in forest of the upper basin, and it is the characteristic of the one of the rivers which flow Boso Peninsula. In land use, forest are decrease, while building and golf course are increase expect Kamo river basin but percentage of fields and farmlands do not change. Many golf courses are locate in R.Yoro basin from 1990's, and major dissolved components of the R.Yoro are Ca - HCO₃type and shows water composition like R.Obitsu and R.Murata so, as for major dissolved components, it is not showed the influence of the golf course. Only R.Koito shows characteristic composition in the river flowing out into the bay, and a ratio of Na and HCO₃is very high. In the South, there compositions are Na-HCO₃type and Ca-Na- HCO₃type. Ion contents are characteristic every area.

5. Conclusion

I considered the characteristic of the river in the Boso Peninsula many rivers based on a field work result in this study. The material outflow from the basin and the change of the water add influence such as a geological feature or precipitation on water quality every river together with a basin to be

different, and it is necessary it will depend in future, and to grasp a detailed basin characteristic.

Reference

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