

Investigation of environmental factors related to regional differences in radon concentration in Japanese coasts

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In recent years, submarine groundwater discharge (SGD) have received considerable attention in hydrology and oceanography. Radon-222 (²²²Rn) is a useful tracer to detect SGD because ²²²Rn in groundwater has extremely high concentration compared with surface waters. In Japanese coasts, many researches have been done SGD observations using ²²²Rn tracer techniques. If we compiled ²²²Rn data from many coasts with different environmental condition, we can get generality related environmental parameters to SGD. Therefore, objectives of this study are to compile the existing observed data in Japanese coasts and to evaluate environmental parameters concerning the regional difference in ²²²Rn activities. Firstly, we consolidated ²²²Rn data in coastal waters at 10 sites from the northern part to the southern part of Japan. We also prepared environmental parameters in each watershed such as precipitation, geological data and geomorphological characteristics to examine and effect of driving forces on the regional difference of ²²²Rn activity. In this presentation, we will show the regional difference of ²²²Rn activities in Japanese coasts and statistical analysis results of relationship between compiled ²²²Rn data and environmental parameters.

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