

Possible effects of the global warming on fish species diversity and production through submarine groundwater in coastal areas

\*Jun Shoji<sup>1</sup>, Ryo Sugimoto<sup>2</sup>, Hisami Honda<sup>3</sup>, Osamu Tominaga<sup>2</sup>, Shiho Kobayashi<sup>4</sup>, Makoto Yamada<sup>3</sup>, Makoto Taniguchi<sup>3</sup>

1.Hiroshima University, 2.Fukui Prefectural University, 3.Research Institute for Humanity and Nature, 4.Kyoto University

In order to forecast possible effects of the global warming on fish species diversity and production through changes in submarine groundwater discharge, physical and biological surveys were conducted at three sites in Japan (Yuza, Yamagata Pref., Obama, Fukui Pref., Takehara, Hiroshima Pref.), where submarine groundwater discharge has been observed.. Number of fish species, fish abundance and biomass were compared between areas of different levels of Radon concentration at each site. Contribution of nutritional matters of terrestrial origin through submarine groundwater was evaluated by analyses of stomach contents and stable isotopes of fishes.

Keywords: submarine groundwater, fish, distribution, species diversity, biomass, wood web