Effects of submarine groundwater on fish growth evaluated by cage experiment for juvenile flounder

*Jun Shoji¹, Ryo Sugimoto², Hisami Honda³

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

In order to detect the possible effects of submarine groundwater discharge (SGD) on fish growth, a cage experiment were conducted in coastal waters of central Seto Inland Sea, Japan. Growth of juveniles of marbled sole, a flatfish species, temperature, prey availability in water and stomach contents of the juveniles were compared between sites with high and low SGDs monitored by the use of radon concentration. Juvenile growth rate, prey availability, stomach content weight per fish were higher at the site with high SGD while temperature did not differ between the two sites. The SGD was suggested to promote growth and feeding the juveniles in the tidal flat.

Keywords: Water-food NEXUS, Fisheries resources, submarine ground water, flatfish, feeding, growth