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 [JJ] Evening Poster | A (Atmospheric and Hydrospheric Sciences) | A-CG Complex & General

## [A-CG42]Coastal Ecosystems - 1. Water Cycle and Land-Ocean Interactions

convener:Ryo Sugimoto(Faculty of Marine Biosciences, Fukui Prefectural University), Jun Shoji(Hiroshima University), Makoto Yamada(龍谷大学経済学部, 共同), Masahiko Fujii(Faculty of Environmental Earth Science)

Thu. May 24, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Substances from land which are brought by river and/or submarine groundwater discharge are important for the process of biological production in coastal areas. This session focuses on land-ocean interactions through water cycle. The aim of this session is to create interdisciplinary discussions on the research of connectivity of ecosystems, water cycles in terrestrial and coastal areas, fishery resources and biodiversity. Comprehensive discussion on the mechanisms that promote productivity and biodiversity in coastal ecosystems will be made from the viewpoint of land-ocean interactions. Presentations on water-material cycle in terrestrial and coastal areas, fishery resources, biodiversity and connectivity of the ecosystems are encouraged.

A companion session proposed as "Coastal Ecosystems - 2. Coral reefs, seagrass meadows, and mangroves" focuses on benthic communities in shallow-water ecosystems such as coral reefs, seagrass meadows and mangroves and is dedicated to promote researches on comprehensive assessment and monitoring of ecosystem functions and development of effective means for conservation and restoration. Main focuses of these two sessions are different. However, there are much of information that covers both sessions. Scientists who work on the related field will be able to obtain information and share them with other scientists if they attend to both of these sessions.

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## [ACG42-P05]Effects of ammonium derived from hot spring drainage on riverine ecosystem in the Beppu area

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Keywords:Hot spring drainage, ammonium, attached algae, Nile tilapia

In the Beppu area, large amounts of ammonium are supplied from hot spring drainage to the river systems. However, it is difficult to evaluate the effect of ammonium derived from hot spring drainage on riverine ecosystem due to a contamination of nitrate supplied from sewage. Using the stable isotopes of ammonium and nitrate, we have evaluated quantitative effects of ammonium on riverine primary producer as well as dominant fish, *Oreochromis niloticus* (Nile tilapia), in the Hirata and Haruki Rivers. Although majority of dissolved inorganic nitrogen was dominated by nitrate in the Hirata River, ammonium supplied from hot spring drainage was most important nitrogen source for attached algae as well as Nile tilapia. Contribution rate of ammonium on algal assimilation reached to around 65%. On the other hand, attached algae assimilated 96% of nitrate derived from sewage in the Haruki River, because there was little influence of hot spring drainage.