Oral | Symbol H (Human Geosciences) | H-QR Quaternary research

[H-QR23_1AM2]Diachronic dynamics of human-environment interactions

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Thu. May 1, 2014 11:00 AM - 11:30 AM 414 (4F)

Humans have attained their specific development by indigenous cultures and evolved through environmental adaptation. The session raises issues of human-environmental interactions, views from diverse changes of climate, ocean, land and biota having made striking influence on humans. It welcomes various fields from human-environment change and their chronometric dating among Quaternary disciplines.

11:15 AM - 11:30 AM

[HQR23-P03_PG]Paleoenvironments analysis for the past 50 ka based on TOC and TN of the sediment cores INW2012-1 and -2,Lake Inawashiro

3-min talk in an oral session

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Keywords:Lake Inawashiro, TOC, TN, C/N, paleoenvironments, paleoclimate

The total organic carbon (TOC) and total nitrogen (TN) were measured at 2 cm interval for the long sediment cores (INW2012-1, INW2012-2) taken from a central site of 90 m depth in Lake Inawashiro in Fukushima Prefecture. Depth-age relationship has been established based on six 14C data, and the bottom of the drilled core, about 28 m, is estimated as old as 48 ka. Sampleinterval is 50 to100 years. The compilation of information on lithology, TOC and TN concentrations, C/N ratio and water contents of INW2012-1 and -2 enable us to reveal the paleoenvironments of Lake Inawashiro from the early stage to the present with high temporal resolution. Deep condition of Lake Inawashiro started 42,000 years ago and then the lake has been constantly deep until now.Temporal change of TOC concentration of Lake Inawashiro shows the quasi-periodical fluctuation similar to the marine isotope curve known as LR04, and corresponds well to that of TOC concentration of Lake Nojiri in Nagano Prefecture. Vegetation change revealed at theYanohara, moor in Fukushima Prefecture corresponds with the TOC fluctuation of TOC in the lake. Therefore, Temporal change of the TOC concentration in Lake Inawashiro seems to be controlled mainly by climate, probably temperature, and can be one of the useful paleoclimate records in the Tohoku region, Japan.