

**B502**                      Classification of Wetlands in Korea

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A primary goal of wetland classification on a national scale is to impose boundaries on natural ecosystems for the purpose of inventory, evaluation, and management. We tried to define the different type of wetlands in Korea and to construct a hierarchical classification system based on hydrological condition, soil characteristics, and vegetation structure. At the broadest level Korean wetlands investigated at 145 sites were grouped into coastal wetlands and inland wetlands by salinity. The coastal wetlands were classified into salt marshes, lagoons, and estuarine wetlands and the inland wetlands into riverine, lacustrine, and palustrine wetlands. Detrended canonical correspondence analysis by species and environmental factors showed spatially distinct pattern; wetland vegetation structure was significantly correlated with water content, organic matter, total nitrogen, electric conductivity and cation exchange capacity.

**B503**                      Environmental Factors Affecting Methane Production from  
Wetland Sediments in the Littoral Zone of Reservoir Paltangho,  
Korea

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Methane emission from wetland sediments makes an important contribution to the enhanced greenhouse effect. Methane production rate from sediment slurries incubated at 30C had a considerable range of 0 - 0.19 nmolg<sup>-1</sup>hr<sup>-1</sup> at 21 sampling sites of the littoral zone of Reservoir Paltangho. Contents of organic matter and clay in sediments were important physicochemical factors on methane production; the former had a positive correlation with methane production rate and the latter a negative correlation ( $p < 0.01$ ). An important source of organic substrate for methanogenesis was interrelated with other environmental factors such as soil texture, redox potential, Fe<sup>2+</sup> and total nitrogen in sediments. Vegetation types dominated with *Phragmites australis*, *Typha angustifolia*, and *Zizania latifolia* had no significant effect on methane production rate.