

Impact of Climate Change on Wetland Functions

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Abstract. In recent, there is a growing interest in the wetland management for biodiversity and preservation of ecosystem. One of the problems of the wetland management is climate change due to the global warming and many studies have shown that the climate change influence on wetlands. Therefore, in this study, we estimated impact of climate change on wetland functions such as hydrologic, biogeochemical, plant habitat, and animal habitat functions. The study site is the Upo wetland in Korea which is the largest natural wetland in Korea and the wetland is designated as a 'Protected Wetland' by the international Ramsar Treaty. We evaluated impact of climate change on the wetland functions using climate scenario, climate model, analysis techniques of climate change. We performed functional assessment of wetland using Hydrogeomorphic (HGM) method. As a result, we found that the wetland functions of about 10% will change in the future due to the climate change. This case study could be useful as a reference for the future wetland management planning.

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