

Do not judge a book by its cover: ecosystem service of the Kaomei wetland

Topic: CGE and econometric input-output modelling 2

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In this study we attempted to illustrate a way of linking the value of ecosystem services with the economy and thus revealing the economic significance of ecosystem service which has long been overlooked in human economic activities. We chose as the study object the Kaomei Wetland in Central Taiwan—which is rated as ‘wetland of national importance’, based on the Ramsar Convention treaties. We first conducted field survey and experiments to identify the Kaomei Wetland as a land use type of low landscape development intensity (LDI) and assessed the latent economic value of the ecosystem services Kaomei Wetland provides, based on the conceptual framework as proposed by the TEEB. We then incorporated the latent economic value—in the form of "avoided cost" and "replacement cost" as implied by the Kaomei ecosystem services while maintaining it as a low LDI land use type—to a bottom-up multi-regional computable general equilibrium (CGE) model of Taiwan to see how far-reaching the avoided/replaced costs, if spared for other non-wastewater treatment use, could alternatively affect the economy of the local and other domestic regions through inter-region linkage and the input-output relationship in the production and consumption processes. We aim to demonstrate the significant economic contribution of the seemingly low-economic-value land use type like the Kaomei Wetland could potentially make to the human wellbeing in the perspective of economics.