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SUB-URBAN GROWTH IMPACT IN THE WETLAND ENVIRONMENT. CASE STUDY: RAWA DANAU NATURE RESERVE

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Being located in mountain region, Rawa Danau Nature Reserve is the only one wetland area in the mountain region in Indonesia. which formed very important component of its biophysical and physical environment. With the decreasing control of the local government and private agencies over the years, and sub-urban growth in slowly but in respectively, many of the wetland environment area have been lost gradually. This has been converted to wet paddy field cultivation and also expansion of illegal logging. One of our greatest environmental challenges is to ensure an adequate supply and quality of water for human use while maintaining the integrity of natural ecosystems. Rawa Danau has been a main water supplier for the biggest steel industry in Indonesia for many years, especially for Krakatau Steel Industry Area. At first, the local government has not bothered to either implement the existing laws or pay attention to the suggestions of environmental challenge in this regard. Understanding sub-urban growth impact in the wetland environment is essential to understanding environmental change. Water also links and integrates natural systems with human social systems. This paper presents evaluation and asses changes in Rawa Danau wetland environment to understanding of water dynamics and vegetation, and the impacts of human interventions and changing environmental conditions on them using remote sensing approach.

Keywords: sub-urban growth, water dynamic, wetland environment, remote sensing, tasseled cap transformation-TCT, nature reserve