

A Study of the Watershed Management (Maintained and Restored) in Krueng Peusangan, Aceh Province, Indonesia

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Abstract

Natural resources such as forests, land and water are primary assets that should be maintained on the basis of the principle of sustainability and national benefits. Any development concerning natural resource management must be planned properly and directed in a watershed unit (DAS). Watersheds have different characteristics from one and another. It consists of size (area), elevation and slope (slope), aspect and orientation, the shape of the watershed and drainage network. Currently, stakeholders are not well handled by stakeholders, which is still technically (sectoral) and centralized. In line with the issue, it's important to study integrated watershed management to improve the community welfare in Aceh province, Indonesia. The purpose of this study is to identify the watershed management actions, including maintained and restored. This study is designed using cross-sectional data with a survey method which consists of four stages, i.e., preparation, preliminary survey, main survey, data analysis and result presentation. The data analysis carried out by utilizing the Classification of Watershed (e.g., criteria, sub-criteria and weighting). This study indicated that six sub-watersheds in the Krueng Peusangan must be restored, namely Krueng Celala, Krueng Meuh, Krueng Peusangan Hilir, Timang Gajah and With Balek due to watersheds are damaged, during drought and monsoon. In conclusion, this study has identified six sub-watersheds that needs to be restored across Krueng Peusangan, Aceh, Indonesia. Of these, some efforts must be made by the stakeholders, namely conserving soil on agricultural land, harvesting/ storing excess water during monsoon and utilizing it in drought. Also, promoting sustainable farming and stabilizing crop yields through improved agricultural systems management and improving ecological balance, including the relationship between upstream water management and downstream, water quality, land quality and capability and biodiversity.

Keywords

Natural Resource Management, Integrated Watershed Management (Maintained and Restored), Conservation Techniques, Watershed Classification.

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