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Collaborative watershed management for better watershed function and enhanced local livelihood: a case from Buol watershed, Central Sulawesi, Indonesia

Key words: Collaborative Watershed Management, Participatory Approach, Watershed Monitoring

Abstract:

Well-functioned watershed providing good water quality, stable water quantity and soil structure sustains landscape productivity and livelihood of its people. Collaborative watershed management involving multi-stakeholders, i.e. local communities, government officers, non-government and scientific entities, is the key for a healthy watershed. But in reality, particularly in developing countries where attention towards better watershed governance is almost nonexistence, gaps and constraints for such collaboration exist. These range from lack of watershed and climatic data to measure the performance of the watershed, lack of technical capacity to record the data, to lack of awareness to ensure joint management successful. Our case study will show the lessons on how to increase the awareness and capacity of communities and government in gaining watershed data locally, and in participatory way, to explore strategies and options on maintaining good watershed functions by both adapting to extreme conditions and mitigating such negative impacts due to climate changes and human-induced problems. This includes measuring rainfall, discharge, turbidity and sedimentation that was jointly carried out with local communities and conducting a 'watershed game' to investigate various plausible options for mitigation and adaptation strategies and scenarios of interventions to improve the watershed functions and reduce the impact of hydrological issues. The presentation will bring the case from Buol watershed (1753 km²) with area encompassing one-third of Buol District, Central Sulawesi, Indonesia. The district is facing degradation due to forest conversion to oil palm plantation in upstream area. Moreover, it suffers from low human development index and low external business investments leading to high poverty rate and low education level of the rural communities. These lessons might be relevant to the Oceania countries that have similar socioeconomic conditions and where ecosystem services face degradations. The overall goal of this action research coordinated by the World Agroforestry Centre is to provide basis for operational and sustainable co-investment for ecosystem services by strengthening capacity of local communities in adapting and mitigating climatic, socioeconomic and political changes in Asia.