

Rain Water Harvesting for Sustainable Biodiversity Conservation at Lawachara National Park in Bangladesh: A Study on Policy Challenges

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Abstract: An assessment on the rain water management policy at a protected area for conserving biodiversity was undertaken. The study focuses on the current status of biodiversity with respect to ecological changes and community environmental awareness at the Lawachara National Park (LNP) in Moulvibazar district of Bangladesh. The contemporaneous era of modernization and globalization indicates a lot of comfort and luxurious life where lead to an alarming situation of huge environmental degradation integrated with all the apprehensive activities. Now a days the entire sectors in the world economy is facing massive challenges to deal with the global warming, climate change, environmental problems, loss of biodiversity and its consequences present one of the most important threats to the protected areas. Due to all these reasons, the Convention on Biological Diversity (CBD) have started modifying its activities and strategies through Aichi Targets to ensure protection to our natural resources and environment, particularly biodiversity conservation at protected areas. Everyone exploits them but none can conserve profoundly due to lack of scientifically effective policies, tools and methods in national park areas. The study explores the present uniqueness of inland water management, land use, environmental and forest policy towards Lawachara National Park for Biodiversity Conservation according to Aichi Target 11 of the CBD. The study examined the exclusivity of the tools to enhance conservation through existing approaches, technology, literature reviews, observations, reconnaissance findings and undertook interviews with park managers, Team Leader of Co-management Committee, Indigenous Community Leader, Academics, Biodiversity Specialists, Water Management Officer, Botanists, Zoologists, Researchers, Environmental Lawyers, land user, Learners, Policy-Maker, Local Government Leaders, NGOs and effective key stakeholders. All data were sorted and analysed using SPSS software for development of priorities Logic Model. About 55% of the respondents agreed that rain water should be harvested at LNP during rainy season as for importance of biodiversity information. The study showed that 42% and 55% of the respondents respectively stated that it is essential and very essential for the authority to undertake the necessary action to fulfill the Aichi Target of CBD at the existing protected area management. During winter and summer season water scarcity tends to highly ecosystem services at LNP. This scarcity assessment will support policy and decision-makers in assessing options to modify existing policies which will develop initial long-term strategic plans for rain water harvesting and implement effective policies for sustainable biodiversity conservation. The study also highlights on the steps, initiatives, benefits and future of rain water harvesting technology in Bangladesh context. Moreover, the study regarded the need for protection of biodiversity at LNP while reducing the water scarcity, removing illegal hunting and loss of biodiversity issues during dry and winter seasons. Overall, the research revealed that terrestrial water harvesting at protected areas requires policy improvement for sustainable conservation. However, policy makers and relevant