

Microbes at Work: An Assessment on the Use of Microbial Inoculants in Reforestation and Rehabilitation of the Forest Ancestral Land of Magbukun Aytas of Morong, Bataan, Philippines

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Abstract : A technology impact assessment on the use of microbial inoculants in the reforestation and rehabilitation of forest ancestral lands of the Magbukun Aytas in Morong, Bataan was conducted. This two-year reforestation technology aimed to determine the optimum condition for the improvement of seedling survival rate in the nursery and in the field to hasten the process of forest regeneration of Magbukun Aytas's ancestral land. A combination of qualitative methods (key informant interviews, focus groups and participant observation), participated by the farmers who were directly involved in the project, community men and women, the council of elders and the project staff, was employed to complete this impact assessment. The recorded data were transcribed, and the accounts were broadly categorized on the following aspects: social (gender, institutional, anthropological), economic and environmental. The Australian Center for International Agricultural Research (ACIAR) framework was primarily used for the impact analysis while the Harvard Analytical Framework was specifically used for the gender impact analysis. Through this technology, a wildling nursery with more than one thousand seedlings was successfully established and served as a good area for the healthy growth of seedlings that would be planted in the forest. Results showed that this technology affected positively and negatively the various gender roles present in the community although household work remained to be the women's responsibility. The technology introduced directly added up to the workload done by the men and women (preparing and applying fertilizer, making pots etc.) but this, in turn, provided ways to increase their sources of livelihood. The gender roles that were already present were further strengthened after the project and men remained to be in control. The technology or project in turn also benefited from the already present roles since they no longer have to assign things to them, the execution of the various roles was smoothly executed. In the anthropological aspect, their assigned task to manage the nursery was an easy responsibility because of their deep connection to the environment and their fear and beliefs on 'engkato' and 'anito' was helpful in guarding the forest. As the cultural value of these trees increases, their mindset of safeguarding the forest also heightens. Meanwhile, the welfare of the whole tribe is the ultimate determinant of the swift entry of projects. The past institutions brought ephemeral reliefs on the subsistence of the Magbukun Aytas. These were good 'conditioning' factors for the adoption of the technology of the project. As an attempt to turn away from the dependent of harmful chemical, the project's way of introducing organic inputs was slowly gaining popularity in the community. Economically, the project was able to provide additional income to the farmers. However, the slow mode of payment dismayed other farmers and abandoned their roles. Lastly, major environmental effects weren't that much observed after the application of the technology. The minor effects concentrated more on the improved conditions of the soil and water in the community. Because of the introduced technology, soil conditions became more favorable specifically for the species that were planted. The organic fertilizers used were in turn not harmful for the residents living in Sitio Kanawan. There were no human diseases caused by the technology. The conservation of the biodiversity of the forest is clearly the most evident long-term result of the project.

Keywords : ancestral lands, impact assessment, microbial inoculants, reforestation

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020