ENVIRONMENTAL ECONOMICS OF PLANTING TEAK TREES IN ABANDONED PADDY LANDS: A CASE STUDY FROM NORTH WESTERN PROVINCE

Malik Ranasinghe
Department of Civil Engineering, Univerisity of Moratuwa

Large extents of paddy lands are abandoned in the North Western Province. Even though low productivity of paddy lands and lack of water at the correct times seem to be the obvious reasons, the economics of paddy cultivation is as or more important reason for abandoning large extents of paddy lands in this fertile province.

This paper describes, the engineering that was needed to convert paddy lands to those on which teak trees could be planted; the extended benefit cost analysis of planting teak trees in five hectares of abandoned paddy lands; the barriers and the constraints to obtaining approval for a project that could provide obvious environmental benefits; and the actual experiences and behaviour of the engineered project; as the case study.

The engineering that was needed to convert paddy lands, which were on level surfaces to those on which teak trees could be planted without refilling, is described. The levelling, design and construction of canals to provide drainage and minor irrigation to the teak plantation, and the actual experiences and behaviour of the engineered project are highlighted.

The extended benefit cost analysis considered the opportunity cost of abandoned paddy lands, the economic cost of engineered waterways that are needed to convert paddy lands to those on which teak trees could be planted, the economic cost of land preparation and planting, and the economic and environmental benefit of teak trees. This analysis clearly shows that planting teak trees in abandoned paddy lands is economically and environmentally viable option.

According to the Agrarian Services Act No.58 of 1979 it is mandatory to obtain permission from The Commissioner of Agrarian Services prior to commencing any activity other than growing paddy in paddy lands. The experiences, barriers and constraints to obtaining approval for a project that had obvious environmental benefits to society is described with suggestions on how to improve on the approval process.

As a result of the analysis of the case study, the paper concludes that planting teak trees in abandoned paddy lands in the North Western Province of Sri Lanka is economically and environmentally feasible. Therefore, it is an activity that should be encouraged as part of agricultural forestry or industrial crop cultivation in abandoned paddy lands.