

**An Analysis of Social Costs and Benefits of Paddy Farming Sector in
Sri Lanka**

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Abstract

Paddy farming in Sri Lanka can be divided into three schemes according to the source of water availability for farming. In addition, scale of cultivation has been depending on the schemes. With the development of paddy cultivation sector in Sri Lanka, the use of chemicals, machine and developed seeds have been increased because farmers are mainly concerned about the private costs and benefits and they have to incur to achieve desirable outputs and are least concerned about the undesirable byproducts of their production processes. Negative and positive externalities in agricultural productions have occurred throughout the process of paddy farming. Several researches have shown that all agricultural practices affect the environment and human health negatively. Naturally in paddy farming, positive external affects are produced. In accordance with this environment in the paddy production process in Sri Lanka, it is important to analyze the cost and benefit of paddy farming considering externalities and then ascertain as to whether paddy farming sector is functioning socially and economically at an efficient level.

Then this study has achieved the objective of conduct a comprehensive analysis of costs and benefits of paddy production with special reference in externalities. As negative effects, human health problem and human and animal poisoning and as positive social effect flood mitigation, recharge groundwater, purification of water and increasing highland crop(s) yields are evaluated in this study

The objective was accomplished using both primary and secondary data. Primary data was collected using structured interview method and experiment method. Hundred and fifty paddy farmers were selected as a sample for the interview from the three schemes of paddy cultivation by using the method of two-stage stratified sampling. The monetary value estimation of its negative and positive effects were obtained using the mathematical formulas which were formularized based on non-market evaluation methods of cost of illness and lost output approaches,

contingent valuation, benefit transfer and replacement cost. Further, as univariate analysis, the frequency analysis and analysis based on mean and variance were employed. In addition to the above, cross tabulation and comparison of means and regression analysis were utilized to achieve the objectives of the study.

According to the analysis, considering direct costs and benefits, it is concluded that Paddy farming in Sri Lanka is a profitable farming industry. The total external benefit (TEB) was higher than the total external cost (TEC) in any scheme. In terms of that total social benefits (TSB) was also higher than the total social cost (TSC) in any scheme. These results suggested that the paddy farming process in Sri Lanka released benefits to the society than costs. Therefore, it is indicated that the social required quantity is higher than the current equilibrium quantity. Further, it is concluded that major irrigated paddy farming has plenty of opportunities to implement new projects in order to maximize the benefits of paddy farming.

Key words

Paddy farming, Non-market evaluation, kidney disease, tooth disease, two-stage stratified sampling, major irrigation, minor irrigation, Rain-fed,