EFFECT OF FLOODING ON THE SOCIO-ECONOMIC CHARACTERS OF PADDY FARMERS IN THE MAJOR PADDY PRODUCING DIVISIONAL SECRETARIAT DIVISIONS OF BATTICALOA DISTRICT

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Introduction

Paddy cultivation receives the highest attention in the Sri Lanka as rice constitutes the staple food of the population. Batticaloa is one of the important rice producing District in Sri Lanka. In Batticaloa, about 193,274 MT of rice was produced in 2009/2010 *Maha* season and 73,906MT of rice was produced in 2010*Yala* season(Anon, 2011a).The worst case of flooding occurred in January second week and in February first week of 2011in the Eastern Province, with Batticaloa experienced it's third highest ever level of rainfall in a single day (312.2mm) (Anon, 2011b). Due to this flooding, agriculture and livestock had been significantly affected. The Government estimated that 115,002 acres of harvestable lands were inundated and crops were destroyed, over 120 tanks including major, medium and minor irrigation tanks, and irrigation works hadbeen damaged while thousands of cattle and poultry were killed throughout the Batticaloa district (Anon, 2011c). Most of the farmers in these affected areas were socio-economically vulnerable people even prior to the floods. Therefore, the flood furtherdeterioratedthe existing vulnerabilities. Their socio economic status was affectedby flooding by the ways of high yield loss, low income, loss of properties, displacement during flood period and lack of relieves. Hence, this study was conducted to investigate the effect of flooding on socio economic characters of paddy farmers in the major rice producing Divisional Secretariat (DS) Divisions in Batticaloa District.

Methodology

Five DS divisions were selected for the survey where paddy is cultivated in large extent. These DS divisions include Koralai Pattu South, Porathivu Pattu, Manmunai South West, Eravur Pattu and Manmunai West. Twenty-five farmers from each DS divisions were selected randomly for this study. Primary data were collected from farmers through pre-tested structured questionnaires. The survey was carried out from March to April, 2011. The collected questionnaires were analyzed using SPSS.

Discussion and Conclusion

Yield reduction from last year Maha season: Farming was the main occupation for the majority of paddy farmers affected by flood in all five DS divisions in Batticaloa District. In all selected DS divisions, more than 50% of the farmers were involved in paddy farming alone. In this situation, in all DS divisions, majority of the farmers got more than 75% yield reduction from 2009/2010 *Maha*season because of heavy flood (Table 1). This caused heavy damages to the socio-economic status of the paddy farmers and food security of the district was also affected as proposed by Mubaya *et al.*, (2010). Due to the yield loss, price of the paddy was escalated drastically. The reduction in food production also led to loss of income for the paddy farmers, which further reduce their ability to purchase the inputs for next cultivation. Flood not only caused quantity reduction in paddy yield, but also reduced quality of the product(Whitening&blackening of panicles, empty &partially filled grains etc)

as stated by Narpinder *et al.* (1990). This led to price fluctuation for rice and most of the farmers faced several marketing problems to sell their products at reasonable price.During the survey period none of the farmers got any compensation for their lost. Due to the above factors, the socio economic status of farmers was badly affected and this caused more stressed life for farmers.

Table.1. Percentage distribution of farmers based on yield reduction from last year

DS division	Yield reduction from last year			
	<25%	26-50%	51-75%	>75%
Manmunai West	-	12%	20%	68%
Koralaipattu South	12%	20%	8%	60%
Eravur Pattu	4%	4%	12%	**80%**
Porathivu Pattu	4%	8%	16%	**72%**
Manmunai South West	-	8%	28%	64%

Displacement during flooding: The majority of the farmers in Manmunai West, Eravur Pattu and Porathivu Pattu DS divisions, displaced during flooding time to safest places such as schools and other common buildings in raised areas (Table 2) where they faced several problems like shortage of food and water in addition to sanitary problems. The poor health facilities, sanitary facilities and inadequate access to safe drinking water madethe livelihoods of farmers more vulnerable.The similar views were also expressed by Ali (1991) and Biswas*et al.* (2000).In addition, there was a drop in school attendance in all areas as the schools were used as refugee camps. Hence, the flood indirectly exerted an effect on education of the children in those affected areas.

Table 2.Percentage distribution of respondents based on displacement during flooding

DS division	Percentage of farmers	
	Displaced	Not displaced
Manmunai West	64%	36%
Koralaipattu South	44%	56%
Eravur Pattu	52%	48%
Porathivu Pattu	52%	48%
Manmunai South West	36%	64%

*Loss of properties by flooding:*The losses by flooding was high in Eravur Pattu and in Porathivu Pattu DS divisions compared to other DS divisionsas stated below in Table 3.

Table 3. Percentage disrtibution of respondents based on loss of properties by flooding

DS divisions	Losses due to flooding (Rs)			
	<50,000	50001-100000	100001-300000	>300000
Manmunai West	32%	20%	28%	20%
Koralaipattu South	24%	20%	28%	28%
Eravur Pattu	4%	24%	36%	36%
Porathivu Pattu	16%	16%	36%	32%
Manmunai South West	12%	36%	22%	30%

This loss was obtained from destruction of paddy fields by flooding as well as the destruction of other properties too. They invested lots of money in paddy farming by the way of loans and pawning, as it was the main source of income. But they got unexpected lose by flooding. All these impacts had further affected the already impoverished farmers,

who have limited resources and household income.Most of the farmers got relieve, but it was not enough to overcome their lost.

Awareness about membership in farmer organization and insurance of paddy lands: For above types of higher losses, surely they need compensation and relief. For that, farmers organization is important to certify the effects of flooding. However, in Porathivu Pattu and in Manmunai West DS divisions, more than 50% of the farmers did not have any membership in farmer organizations.To improve the status of the farmers, it is intended to develop farmer organizations which could function in organizing all the activities related to farming.In addition to that, the major fraction of the farmers in each DS divisions who were affected by flood did not insure their paddy lands as they could not get any insurance claim for the flood damage. In Manmunai West DS division, 92% of the farmers did not insure their paddy lands. It showed the unawareness of farmers about the insurance schemes.

Hence, due to displacement during flooding, higher yield losses, loss of properties and unawareness of farmer organization and insurance of paddy lands the socio economic characters of farmers were very much affected.

From this study it could be stated that, the flood caused by unexpected climate changes had an impact on paddy cultivation in Batticaloa district and it was directly and indirectly affected the yield as well as the socio economic characters of paddy farmers. More than sixty percent of the farmers in each DS divisions experienced more than seventy-five percent of yield reduction compared with 2009/2010 *Maha* season. Most of the farmers did not insure their paddy lands and some of the farmers still donot have membership in any farmers organization as they donot know the importace of insurance and farmers organizations. As such, awareness regarding insurance and farmers organizations should be improved. The socio economic characters of farmers were very much affected by flood in the study area by the way of displacement during flooding,unsettled loans, losses due to the flooding and lack of relief. Further, awareness about climate change should be created among the farming communities in Sri Lanka for their betterment.

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