

SRI LANKA

The Effect of Floods on Livestock in Ampara District in Sri Lanka

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The monsoonal rainfall is the predominant aspect to cause flood disaster in Sri Lanka. With respect to spatial distribution, floods are most frequently occurring in eastern province. Ampara is one of the three districts of the Eastern province effected by floods with increasing losses to life and socio-economy of the inhabitants in the past few decades. According to the report stated in Flood Impact Assessment, by 19th January 2011, flatter areas of Ampara affected by flash flood and highly destructive, riverine flooding has been a very destructive phenomenon, although with a slower onset, affecting densely populated cultivated areas and livelihoods. The main livelihood opportunity of the people in the district is agriculture and livestock farming (UNDP, 2016). According to mentioned above, the livestock sector plays a multiple role in the livelihood development of the people and comprises mainly with dairy, poultry, swine, goat and sheep. Ampara district through the livestock sector contribute to district GDP about 14 percent and this district having three communities to gather (Ifham Nizam, 2016). There are number of families engaged in livestock in Ampara district. The livestock population of Ampara district were about 103,508 cattle, 30,687 buffaloes, 320 swine, 24,526 goats and the annual milk production was 22,033,244 litres (DAPH, 2015). Poultry sector is a very important livestock sector in Ampara district. Some 20,941 families are involved poultry rearing in this district.

The need to study the effects of floods on livestock has begun since flooding has become a problem to society when people and their valuables become affected. Historically many solutions have been proposed to mitigate the effects of flooding by government. Mitigating flood effects requires information on the flooding characteristics and how such characteristics

propagate. Therefore, the objectives of this study are to study the economic losses on livestock and the mitigation measures implemented by government and to suggest technological measures to minimize the losses by the flood.

Ampara district is located in eastern province of Sri Lanka and situated within the range of the north latitude 7° 25' to 7° 27' and the east longitude 81° 45' to 81° 50' experiencing flood event frequently during north-east monsoonal season. The mean sea level of this area is 9 m. Annual rainfall 1577 mm reported in November and December due to the North-east monsoon. The major economic activities in this region were farming and animal husbandry. As study area Ampara district consists of Thirukkovil, Sainthamaruthu, Pothuvil, Ninthavur, Karativu, Lahugala, Kalmunai, Alayadiwembu, Akkaraipattu and Addalachchenai divisional secretariat divisions. Secondary data were collected to conduct this study. Secondary data was obtained from reports of Ampara District secretariat, Disaster Management Centre and Department of irrigation, magazines about Sri Lanka's Floods, previous researches, and websites from various sources. The result was derived using the analysis with the application of MS office.

Results showed that In Batticaloa district, damage to livestock has been estimated at Rs. 1,230 million (nearly 92%) due to deaths of cattle, buffalos, goats, poultry, other livestock and infrastructure damages. In Ampara district, damage to livestock is estimated at Rs. 106 million (nearly 8%). While these are initial estimates hand-overed by the Provincial Line Ministries and Directors of Planning in the affected districts. The number of animals were severely affected in eastern province. Ampara is the second most affected district brought higher economic damages to livestock next to batticaloa. About 21,000 cattle, 6,750 goats and 125,000 poultry were reported to be killed. Livestock was severely impacted with an average 40% of livestock lost by flood affected households. As a consequence, it increased the cases of diseases such as pneumonia and other flood-induced sicknesses. Thus, it reduced quantity of food available due to livestock death and injuries during disaster. Therefore, The Department of Animal Production and Health has requested emergency veterinary medicine to effectively treat the large numbers of livestock suffering from the floods (United Nations, 2011). Meanwhile, the impact of floods on livestock have the potential to affect indirectly feed suppliers and markets, reduce human food security, reduce

ability of governments and firms to provide services to the public, rising food prices, reduce wages of milk producers, loss of livestock as an input to some industries, reduce availability of manure for agricultural farmers and increase level of malnutrition due to reduced animal sourced foods etc.

The data showed the damage to overall livestock sector is not significant, although poor families have lost their domestic livestock. The largest damages were reported from Ampara district compared to Colombo, Kalutara, Galle, Batticaloa, Trincomalee, Mulaitivu, Kilinochchi and Jaffna. It is about 29,520 poultry, 3,420 cattle and 1,110 goats are reported to be killed. Pothuvil milk collecting centre and veterinary dispensary were fully destroyed. This is significantly higher than the estimated damage to the crop fields (World Bank, 2005).

According to above, Ampara district is considered as a densely populated and cultivated areas in eastern province badly affected by flood devastation. The occurrence of flooding seems to be most periodic in the latter years, with the most flooding occurred in the year 2011 in Ampara District. However, during the flood, this district suffered huge set back interms of the economic development. Livestock have been heavily affected directly and indirectly such as goat, cattle, buffalo, poultry and cows. People have become increasingly lost their livestock by floods with the highest number recorded in 2011. However, the occurrence of economic damages due to floods were quite high where it recorded of 21,000 cattle, 6,750 goats and 125,000 poultry. It has been found that the flood disaster in Ampara district has caused Rs. 106 million direct losses to livestock. Thus, in the light of above analysis following conclusions can be made from this study. Viz, Mitigation measures such as drainage improvement projects and district disaster management plans were implemented by government to minimize flood hazards, DMC and UNDP has also increased development projects on floods, Government introduced the livestock Insurance schemes to compensate for loss of animals or reduced productivity, Some measures were suggested to protect livestock due to floods in Ampara district, Technological measures were suggested with aid of technology such as flood plain modelling management, hazard mapping using GIS, emergency request for satellite observation, usage of special devices to monitor rainfall data in real time etc.