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Livelihood Diversification as an Enduring Form of Anticipatory Action of Flood for the Farmers of Bangladesh

Bibi Panjatul Kubra[1]*, Asif Reza Anik[1]
[1] Department of Agricultural Economics, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
* Corresponding Author's Email: bibi.panjatul.kubra@gmail.com

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Extended Abstract

In Bangladesh, flooding has become a regular disastrous event as it causes serious social and economic losses. Most parts of the country are low lying and the 80% flood plain landmass is leaving the country highly vulnerable to the threat of repeated floods & about 34 percent of its land area is submerged every year for five to seven months [1]. To mitigate the impacts of flood, FAO & some other NGOs are aiming to establish an Anticipatory Action (AA) Protocol by government agencies to attain preparedness, response, and recovery. But it is not enough as there are some demerits such as: AA is highly time-sensitive; false forecasting calls for false preparation; roads and remote communities are inaccessible during rain; cash distributions are hindered because of insecurity. For an agriculture driven country like Bangladesh, an enduring AA is needed that will sustain for a long period of time as flood destroys not only farm products but also livelihood assets of the farmers. If livelihood diversification (LD) is considered as a form of AA, it probably meets the objectives of exiting AA: to reduce or mitigate the impact of flood and enhance post-disaster response. The average arable land per capita declined from 0.13 ha in 1971 to only 0.05 ha in 2020 in the country [2]. So, the discussion of LD of all categorical farmers to mitigate flood's impact is a time demanding matter for Bangladesh as the main aim of LD is to reduce risk even if the primary activity (agricultural production) falls.

This study was carried out to explore the livelihood status and extent of LD of different categories of farmers; LD of farmers in different flood risk zones and the major determinants affecting the extent of LD to reduce the impact of flood. The study used IFPRI's BIHS-2018 database and analyzed 3849 farm household information. For a clear observation, farmers were classified into five categories namely landless, marginal, small, middle and large based on land holding status.

Table 1. Livelihood status and livelihood diversification status of different categories of farmers.

	Large	Middle	Small	Marginal	Landless
Livelihood Index	35.97	31.84	31.59	30.18	29.42
Livelihood Diversification Index (LDI)	0.56	0.52	0.42	0.32	0.21

Both the livelihood status and LD are following the same pattern which is it decreases with the decline of land holding status. The landless farmers occupied the lowest score in composite livelihood index with a low level of diversification. Except the landless farmer, there is no significant pattern found in case of diversifying livelihood at various risk zones of flood.

The values of LDI: < 0.01, 0.01 - 0.25, 0.26 -0.50, .51- 0.75 and >0.75 represent no diversification, low level of diversification, medium level of diversification, high level of diversification, and very high level of diversification, respectively.

Table 2. Livelihood diversification status of farmers at different flood risk areas of Bangladesh.

Farmers' Category	Livelihood Diversification Index at different flood risk areas					
	No risk	Very low risk	Low risk	Moderate risk	High risk	Very high risk
Large	0.57	0.56	0.51	0.61	0.60	0.52
Middle	0.49	0.45	0.56	0.51	0.53	0.54
Small	0.44	0.40	0.42	0.40	0.40	0.41
Marginal	0.36	0.32	0.32	0.31	0.31	0.31
Landless	0.25	0.23	0.22	0.20	0.19	0.17

It was found that age, education, family labor, social service, asset value (both agricultural and non-agricultural), savings, membership with different organizations, and land-to-man ratio had a positive and significant effect on the extent of livelihood diversification and the features of these determinants are connected to the existing AAs.

This study suggests that a livelihood diversification scheme, especially for landless farmers, should be approached as this particular community is living a miserable life and flood has a direct impact on them which hinders them from earning their livelihood.

References

[1].Kabir, H., and Hossen, M. N., Impacts of flood and its possible solution in Bangladesh, Disaster Adv, 12(10), 48-57, 2019.
[2].World Bank, (n.d.), Bangladesh Population 1950-2020 and Bangladesh Arable Land 1961-2020, 2021, Available online at: https://www.macrotrends.net/countries/BGD/bangladesh.