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Flood Management Strategies and Economics of Stress-Tolerant Rice Varieties in Assam

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Assam experiences chronic floods every year that cause havoc to farmers in particular and to the villagers in general. Farmers suffer the most due to crop and livestock losses during floods. Different stakeholders take various measures to face the challenges of floods in the State. Using the data from 150 households representing all five flood-prone agro-climatic zones of states, this study aimed to identify the different flood management strategies adopted by the farmers and assess the economics of major flood-tolerant rice varieties grown in the State. The findings indicated that farmers adopted diversification (varieties, crops and enterprises), green manuring for increasing yield, and alteration in date of sowing were the most common strategies. Nearly 77 per cent of the area under rice is either traditional or high-yielding flood-tolerant rice varieties. Adopting deep water rice and high-yielding varieties (Swarna Sub1 and Ranjit Sub1) was more common among large farmers. In contrast, small and marginal farmers resorted to traditional flood- tolerant rice varieties (mainly bao-dhan) because of low input and management practices requirements. The variety is rich in iron, protein and anti-oxidant elements and mostly grown organic, has high potential in the international market. Linkages with global markets by strengthening the value chain will not only help in coping with a flood but also increase the income of the farmers in the State. Net cage fishery and agro-eco tourism are suggested as some profitable ventures for income enhancement. Besides a well-concerted effort on the part of the stakeholders is necessary for the development of the farming community of the district.

Wetlands and Livelihood: A Case Study of Deepor Beel, Assam

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The paper primarily concentrates on the provisioning services of wetlands with particular focus on cropping and is conducted in an adjacent village of Deepor beel (Mikirpara Chakardoe) in the state of Assam, which has the highest number of

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wetlands as compared to the other NE states. In other words, an attempt has been made to explore the dependence level of farmers on the wetland for their cropping activities. A total of 80 farming households were selected and data regarding socio-economic and livelihood patterns have been collected through structured schedules. Cost estimation of paddy was found to be higher in kharif season as compared to rabi season. Due to lack of expected returns farmers were seen retreating from cropping activities. Perception of the farmers towards the causes of low returns and retreating from cropping were measured through Likert scale which ranked better paid jobs outside the farm as the key reason. Proper support to these small and marginal farmers, conservation of the beel, active involvement of both public authorities and locals, proper supervision and regulation of the fishing activities are some of the measures suggested for sustainable management of wetland ecosytems. The study concludes that only a holistically taken approach would help to understand the complex ecological system of the wetlands that would benefit both the wetland and the people dependant on it.

Production and Consumption Pattern of Fish in India with Special Reference to the Northeastern States

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India is self-sufficient in fish production as a whole but the food and nutritional security has been a challenge over the years. Being one of the top producers and exporters of fish in the world for many years, our country lagged behind in reaching self-sufficiency in many states, especially in north-eastern states where the overall per capita fish consumption in the region is 12.29 kg which is quite high as compared to 9.57 kg in India during the year 2019-20. The findings indicate that the fish production in India has been continuously rising at CAGR of 4.83 per cent with a very low instability in the range of 1.74 to 5.25 during 2000-01 to 2019-2020, i.e. the study period. Inland fish production has shown a very impressive growth rate of 6.85 per cent during the study period, which indicates its scope in achieving food and nutritional security. In India, the CAGR in fish consumption availability and per capita fish consumption has been found to be 4.73 per cent and 3.37 per cent, respectively during the study period which indicates that the population is growing at a higher rate than total consumption availability. The highest CAGR in fish production in the north-eastern states has been observed in Sikkim followed by Tripura and Mizoram and high instability in fish production has been observed in Meghalaya, Mizoram and Arunachal Pradesh during the study period. A wide gap has been observed in the demand and supply of fish in the north-eastern states. This

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excess demand indicates scope of increase in inland fish production in north-eastern states. All the north-eastern states have been found to be struggling to reach the state of self-sufficiency. The lowest self-sufficiency has been observed in Meghalaya, followed by Sikkim and Nagaland. The study suggests the need to formulate appropriate policies and measures to increase the production, especially in major fish consuming states like north-eastern states to cope up with this increasing fish consumption demand as well as to provide livelihood opportunities to the fish supply chains.

Wetlands of Tripura – Status and Development Strategies

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The paper attempts to analyse the trends in areas of different types of wetlands of Tripura from 1997-98 to 2010-11and bring to the fore the main causes for degradation and decline in wetlands in Tripura, suggest management strategies and policies for management and development of wetlands in Tripura and other states of NEH region. The study relied on secondary data collected from the reports on National Wetlands Atlas 1997 and 2010 published by Space Application Centre (SAC), Ministry of Environment and Forests, Government of India under the project National Wetland Inventory and Assessment (NWIA). The analysis indicates that the number as well as area wetlands of the Tripura are gradually declining over a period of time. There are number of factors responsible for degradation and decline wetlands in the state. Degradation in wetlands is adversely impacting biodiversity and livelihood of the fisheries dependent on these resources. Hence, suitable policy measures such as promotion of local functional institutions for the management of the fisheries resources, strict compliance of provisions made under Indian Fisheries Acts and proper valuation of wetland ecosystems and scientific interventions are utmost necessary for the restoration and management of this sector.

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