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Social Factors Affecting Wetlands Utilization for Agriculture in Nigeria: A case study of sawah rice production

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Abstract: Wetlands have immense poverty-fighting potentials and in Nigeria, more and more people are dependent on wetlands for their livelihoods. To examine the social factors affecting the current status of the wetlands utilization for agriculture in Nigeria, a simple random sampling technique was used to select 200 farmers cultivating wetlands and a structured questionnaire was applied to elicit the information on the social factors. Data collected were described using frequency and percentage and a multiple regression analysis was used to identify significant variables that are determinants of wetland utilization. The results of the analysis showed that significant variables included crop preferences, farming system, culture, taste, land tenure, knowledge of wetland cultivation, perceived suitability, farmers' tribe, location of wetland, and farmers' age. It was concluded with suggestions for the right combination of policies, public awareness, and appropriate farming methods in order to improve wetland utilization in Nigeria.
Key words: social factors; current status; wetlands utilization; agriculture; sawah rice production

Wetlands are areas where the water table is either seasonally or permanently high. Wetlands may be used for agriculture, forestry or amenity purposes that can tolerate intermittent high water tables, and closely related wetlands are floodplains. Floodplains are areas through which watercourses run and over which floodwater naturally extends. The extent and depth of flooding over a floodplain will vary and depend on the severity of the flood. Human activity can have considerable impact on the local mechanisms of flooding within these areas during minor floods but the scale of major floods usually overwhelms artificial controls and natural processes then dominate.

Kangalawe and Liwenga [1] reported that wetlands contribute in diverse ways to the livelihood of many people in Africa. One of the major constraints to the wise use of African wetlands is lack of knowledge by planners and natural resource managers on the benefits that they provide and techniques by which they can be utilized in a sustainable manner. The FAO-Netherlands Partnership Programme (FNPP) project on sustainable development and management of wetlands in the Southern Africa Development Community (SADC) region focused on how to improve food security and environmental security of wetland dependent communities in a number of SADC countries through the increase of knowledge, the evaluation of wetland interventions and the building of local capacity.

According to Kangalawe and Liwenga [1], rice is the most prominent crop for the inhabitants of the Kilombero Valley of Tanzania. They utilize wetlands to grow rice either during the rainy season or in the dry season. Also, over the last two decades the use of wetlands for agriculture has increased because of increasing population and the resultant need to produce more food [2]. This highlights the importance of the wetlands to local livelihoods and economies. As such, the wetlands are very important for poverty reduction and/or wealth creation to the local communities. However, in order to harness this opportunity there is a need for sustainable management of these wetlands. West Africa Rice Development Association (WARDA) [3] reported that rice production dominates the inland valleys of Nigeria. It also portrays rice production as more productive than the upland production.

Sawah rice production system was introduced to the inland valley of Bida, Nigeria because it can overcome soil fertility problems through enhancing the geological fertilization process, conserving water resources, and the high performance multi-functionality of the sawah type wetlands. The term sawah refers to leveled and bunded rice fields with inlet and outlet connecting irrigation and drainage. Despite the predominance of rainfed agriculture in Nigeria, the sawah system uses of inland valleys will enhance continuous cropping and less disruption of the production activities. Fashola et al [4] noted that the sawah system offers the best option for overcoming constraints associated with rice production in Nigeria due to the utilization of the inland valleys which are reported to be high in fertility and enhances water management for rice production. Sawah-based rice production took off through the establishment of a demonstration farm (1.5 ha) at Ejeti village in 2002.

In this study, a case study of sawah rice production was conducted to determine the social factors affecting wetlands utilization for agriculture in Nigeria.

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