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**Analysis of the Implementation of Governmental Programs for the
Development of Marshlands and Valley Lowlands in Southern Rwanda**

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1. Research introduction

Land scarcity due to immense population growth and high population density combined with extensive production levels as a result of a subsistence economy, has forced the Rwandan government to embark on a program which brings under cultivation the marshlands that comprises approximately 12 percent of the country's usable agricultural area. An intensive cultivation of these marshlands is meant to be achieved by introducing/nurturing community cooperatives, introducing new cultivation methods (such as multiple-cropping and agrosilvopastoral systems), and establishing micro financing institutions. Cooperatives ensure smooth cash-flow and reduce production costs to farmers as well as minimise social conflicts through common efforts. In addition to assuring food security, intensive marshland cultivation as described above can help prevent the exploitation of marginal, especially erosion-threatened hillsides, which is an important ecological consideration. These marginalised areas could then, for purposes of regeneration, be left fallow or designated as protected areas, thus guaranteeing sustainable land usage overall.

However the question remains unanswered whether the social situation of the small scale farmers already living or newly settled in the wetlands, for whom better living conditions with regard to social care and agricultural infrastructure were intended, has improved. In the first phase of the project, the lowlands were levelled; water control installations built and the fields are given to the farmers for cultivation. Further activities are under implementation while others are yet at the planning stage. It remains to be seen whether

the wetlands programme has improved the social situation of the small scale farmers in its various dimensions, including social infrastructural provisions (health insurance, education possibilities, housing conditions, road networks); agricultural infrastructural provisions (advice and education, availability of land ownership and usage rights); (non-) agricultural production, size of livestock and income. There is a need for explicit socio-economic data that could help to answer these questions.

Generating information that explores into the social structure and social capital of the farmer will not only provide a glimpse into the origin and selection of the present day farmer, but also into the potential for education, maintenance and further development of the irrigation systems and the necessary organisational structure for water management and the maintenance of infrastructure as well as for the training and continued education/consultation without which a sustainable field-structural use of land is not possible.

2. Theoretical approach

In view of the different implementation periods of the program in the different marshland areas of Rwanda, a comprehensive impact study is not yet possible. Given the scarcity of land reserves and the resultant lack of alternative choices, identifying farmer's choice and their decision to participate in the program might not warrant separate analysis. Since non-agricultural employment opportunities are not available, the farmers basically accept land provision under any conditions. For these reasons the research concept is tied to the theoretical approach of applied research. The aim of this research is to analyse the political and administrative programme implementation, respectively and as well as its social consequences. Using the sociological approach of implementation theory, the characteristics and development governmental programme will be described; the process of implementation by the responsible agencies will be analysed; and the decision framework of the farmers regarding the structure of their farm enterprises will be analysed. The political framework under which the program was developed, the role of public and private organizations as well as the addressees also plays an important role. The contributions of the different participants can lead to concretisation of the original program goal, to its modification, or to its circumvention. Whether the goals and measures planned in the program address the stated problem will be examined.

3. Empirical methods

The research is designed as a comparative study of two reclaimed marshlands. Between September and December 2005 a field work has taken place in the study area. The fieldwork has encompassed oral interviews guided with structured questionnaire in 140 households in the wetlands; 8 group discussions with community representatives, the local administration as well as technical advisors and experts (to clarify external influencing factors on the local situation) and 15 structured interviews with research centres, rural and agricultural advisory bodies (to analyse the impact through the implementing agencies and to address the question of organisational practice) were carried out. The project was conducted in close cooperation with the PASI (Projet Agricole et social Interuniversitaire)-Project Group of the University of Mainz (Prof.Jörg Grunert), with the Agricultural Department of the National University in Butare, which has a strong focus on production-technical aspects and in collaboration with German Agro Action.

Based on the out come from the assessment of the social consequences of the project on those who are already involved in the program, practice-oriented recommendations for action will be derived for the further improvement of the living conditions. The recommendations for action should contribute to the advancement of the national program with the goal of the sustainable land use. In addition, the extent to which information gained in the marshlands about cooperative work efforts, crop rotation organization, common marketing, consolidated savings communities, etc., is transferable to other landscape ranges (e.g. hillside), will be analysed.

4. Description of the research areas

The research areas are located in the province of Gitarama in southern Rwanda. The Gitarama province lies in the centre of Rwanda approx. 50 km southwest from the capital, Kigali. The climate in the province is characterised by a long, four month dry period between June and September, climaxing in July. The annual average temperature with 18°C is in the moderate range, and the average yearly precipitation amounts to 1054 mm which is distributed, as in the rest of the country, between two rain periods. The province has a marshland surface of 16,730 hectares, corresponding to 10 percent of the country's total marshland surface. 84 percent of the available lowland surfaces in Gitarama are already in use. Since the lowlands have almost completely been cultivated, natural

vegetation has largely disappeared in the research areas. An increase in food production can be attained only by more intensive and modern use of newly reclaimed marshlands.



Map of the Republic of Rwanda

In the research areas, rice is at present predominantly cultivated. It is considered to be the most important cash-flow crop. Due to the drastic price reduction of export crops such as coffee, the cultivation of rice is the best alternative since there is a very high demand for it on the local market. This however results in the displacement of other cultivated plants such as vegetables, legumes or other grains.

5. First results

The results indicate a high motivation of the implementing participants and the willingness of the stakeholders for goal fulfilment. As a result, for example, the average monthly income and the food supply of the rural population have improved. The cooperative use of the marshland areas shows positive effects on the social structure, the economic situation and the information structure of the addressees. Threat to long term success is, however, posed by a lack of follow-up program financing, insufficient legal regulations and/or information for the farmers regarding land use as well as a still largely unimproved, unsatisfactory social infrastructure.

Keywords: Implementation, Marshlands, Valley lowlands, Sustainable land use