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Acceptance of Local Farmers towards Resource Efficient Production Methods at the Itaparica Reservoir in North East-Brazil

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Abstract

The rural areas of the north-east of Brazil are characterised by poverty, food insecurity, and rural exodus. Due to the construction of the Itaparica dam and reservoir, about 40,000 inhabitants have been resettled and agricultural production systems changed. Extensive dryland farming and livestock husbandry have been replaced by irrigation farming. The reallocated smallholder farmers were confronted with improper soils, insufficient drainage, and deficient expert consultation. The farmers' economic situation deteriorated. Consequently, tense relationships between them and the dam operator developed. Furthermore, the environment suffered from the non-sustainable farming practices.

Considering farmers' acceptance is an important step to establish resource efficient production methods as farmers' collaboration is essential for their successful implementation. For that reason the objective of this study was to assess local smallholders' perception on their current situation, their preferences regarding alternative crops, and their willingness to change their actual production methods.

Research was conducted by semi-structured on-farm interviews. Each interview contained a quantitative and a qualitative part as well as a scoring and ranking exercise. By means of this tool which is also included in the Participatory Rural Appraisal, farmer's preferences could be shown and different alternatives could be compared. Half of the interviewees were female farmers, so that gender issues could be considered and different needs and preferences of men and women could be regarded. The interviews were carried out in three irrigation projects at the Itaparica reservoir. These projects differ significantly in history, prosperity, and infrastructure. In this way possible discrepancies between farmers' preferences and opinions, but also their motivations and visions, could be compared.

First analyses show no significant differences between preferences of female and male farmers. Most of the farmers are willing to change their production methods in order to achieve improvements but they are, on the other hand, highly risk averse. As a consequence, income security was considered as the most important factor of any production method. In spite of lack of free time, farmers would substitute free time for higher income. These results can be explained by crucial constraints such as bad commercialisation, restricted access to loans, and absence of consultancy.

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