Assessing the impact of Porto Novo lagoon utilization and its sustainable management in Benin Republic (West Africa)
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INTRODUCTION AND MAIN OBJECTIVES
The lagoon of Porto-Novo is one of the most important ecosystems in Benin (West-Africa) because of its ecological function for aquatics animals and its socio-economic services for surrounding population. Over the past years, the use of natural resources of the lagoon was intensified generating social conflicts and natural ecosystem degradation. Through this study, we aim: i) to analyse the forms and the intensity of water uses at Porto Novo lagoon with regards to its regenerative capacity, ii)- to assess the consequences of the use of the lagoon and the resulting risks on the surrounding population and iii)- to propose strategies for the local population and the authorities against the risks of lagoon for a better spatial planning.

1) The different use forms of the Porto-Novo lagoon: Fishing, fish trade, sand extraction, transport of consumer goods and goods, domestics use and the processing of fish (Figure 1).

Fig 1: Different uses of lagoon

2) Intensity use of Porto-Novo lagoon: Lagoon of Porto-Novo is intensively used for Fishing (Acadja) and Sand extraction. 3.4% of the lagoon area is used for the Acadja Fishing and 2.7% for Sand extraction. Several fishing technics were used by the local population (Figure 2) but the most important is Acadja Fishing because of the harvested fish stock.

Fig 2: Fishing technics

Sand extraction and Sand trader

3) Socio-economic consequences of pollution of the lagoon and associated ecological issues: Pollution of water quality, conflicts between the users, health problems, reduction of fish stock, deforestation of mangrove and eutrophication.

RESULTS AND DISCUSSION

CONCLUSION
The sustainable management of lagoon of Porto-Novo in Benin is required through an integrated approach which combines fish productivity assessment as well as the involvement of local population and different stakeholders for an effective management and sustainable use of the lagoon resources. Moreover, this study provides useful information for policy makers to reverse the process of the lagoon overuse by promoting participation and sensitization of the population for sustainable use of the lagoon and by developing alternative activities (aquaculture) to increase population income.

REFERENCES

ACKNOWLEDGMENTS
Author would like to thank the German Academic Exchange Service (DAAD) for supporting the study and the Council for tropical and subtropical Agricultural Research (ATSAF) for financial support for our participation at Tropentag.