Density and fish diet effect on rabbitfish *Siganus sutor* growth in controlled systems

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Context

Fishermen using mosquito seine net catch up to 50% of juvenile fish, within which up to 42% belong to the *Siganus sutor*. This practice disturbs the structure of adult fish populations by decreasing recruitment.

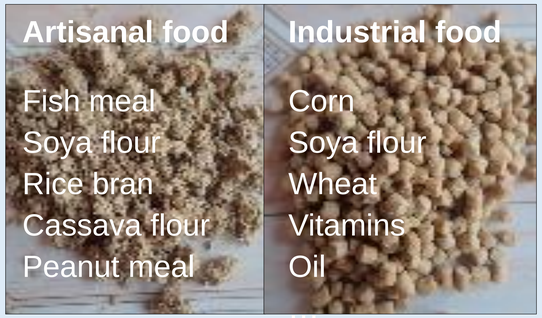
Goal

This study aims to experiment capture-based postlarvae of *S. sutor* grow-out to restock sub fish in situ, enhance fish stock and decrease the fishing pressure.

Material and Methods

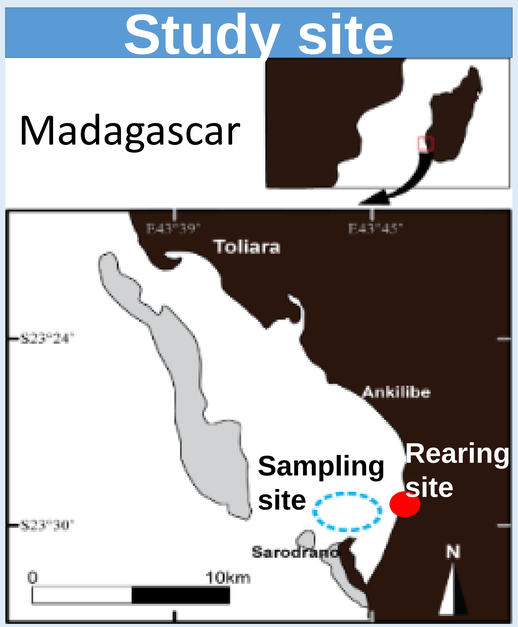
Fishermen catch were retrieved and reared at 200l outdoor basin

Three densities were tested:
D1:120 ind./m^3
D2:320 ind./m^3
D3:520 ind./m^3

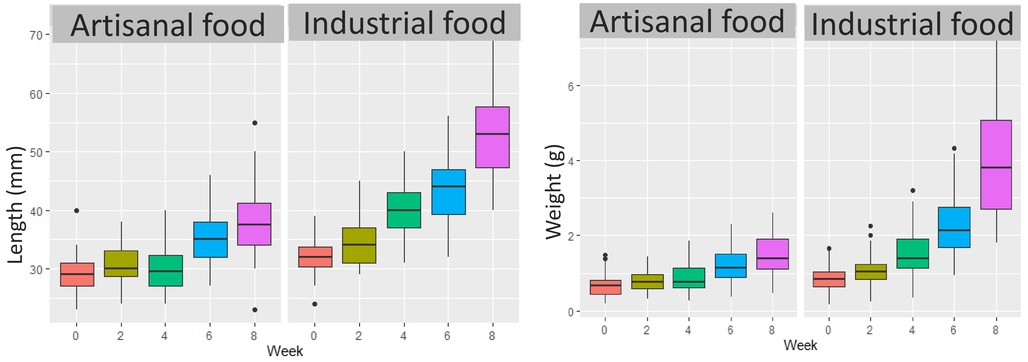


Two locally produced diets were tested at 12% of biomass per day

Study site



Results and discussion

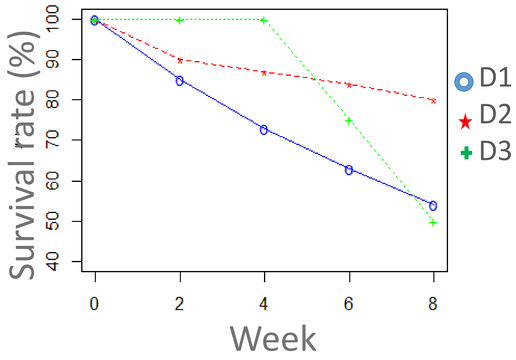


Growth in length and weight of *S. sutor* after two months of rearing

Industrial food is significantly more performant than artisanal food (ANOVA p=0.001).

We observed an increase of length and weight of 2cm and 3g for fishes fed with the industrial food and 0.85cm and 0.85g for those fed with the artisanal food.

The best survival rate was observed at the density D2: 320 ind./m^3



Fish survival rate for the two diets

Conclusion

This study shows the possibility of rearing rabbitfish post-larvae in basin, using locally produced food. It could be proposed as an alternative activity to the fishermen community.