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Introduction

- Estuarine and lagoon areas of southern Benin, typical lake territory with private water property rights and stilt dwellings, that people living exclusively from fishing had taken ownership and exploited for generations (fig 1).
- With colonialism, traditional resources regulation was inappropriate as local institutions weakened;
- New institutions in colonial, post-independence and democratic periods proved unable to effectively regulate fishing activities, giving way to the introduction of high-yield management.
- This study aims to investigate how the fishing governance institutions have contributed to designing the current status of small-scale fishers' livelihood assets in the estuarine and lagoon areas of Southern Benin.



Figure 1: Stilt dwellings & Acadja

Methodology

Study area

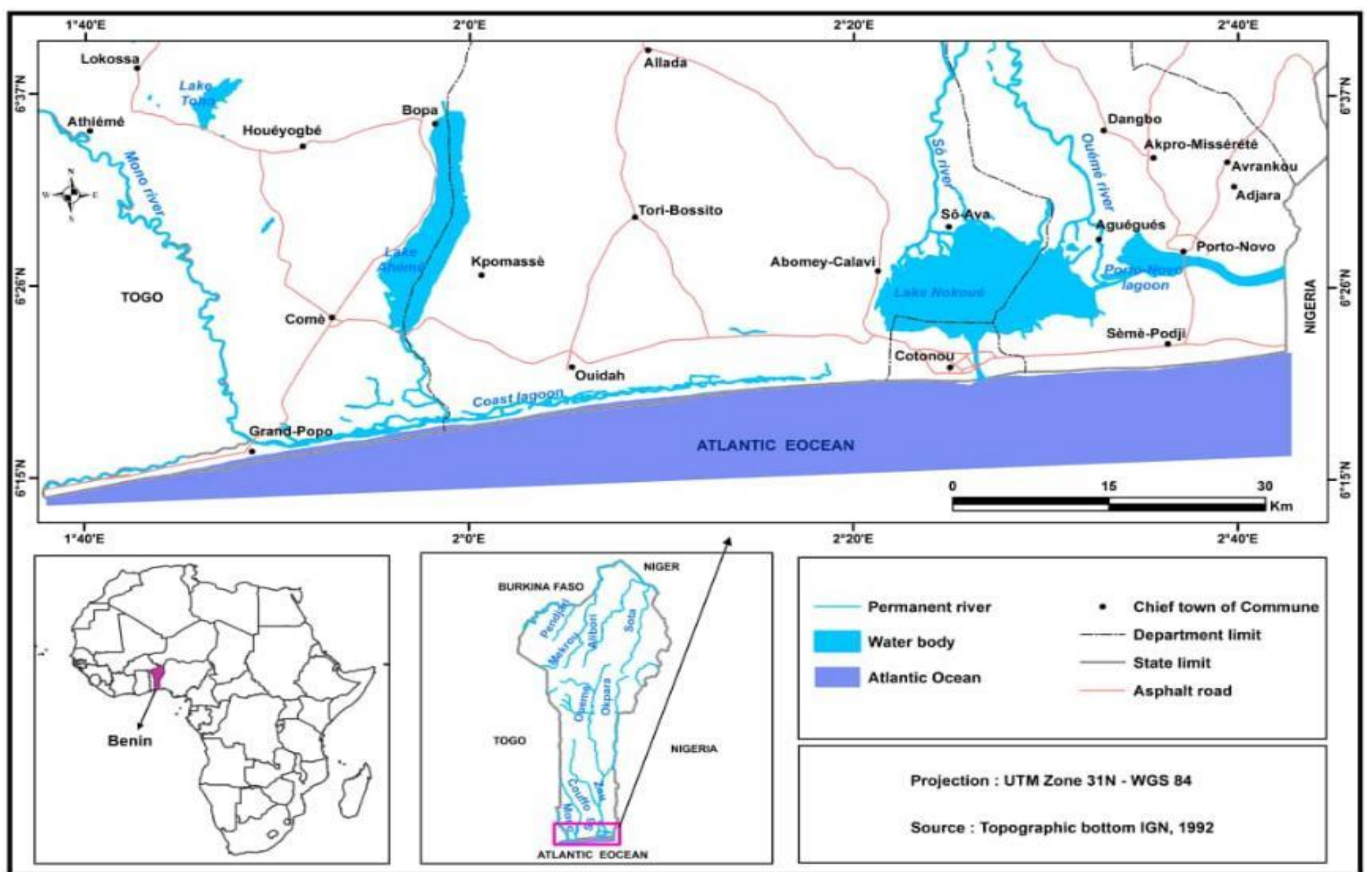


Figure 2: Complex Lake Nokoué- Porto-Novo lagoon, Benin (West Africa), 180 km² Ramsar 1018.

Experimental design



Results

Fishers' typology according to livelihood assets

Cluster Dendrogram

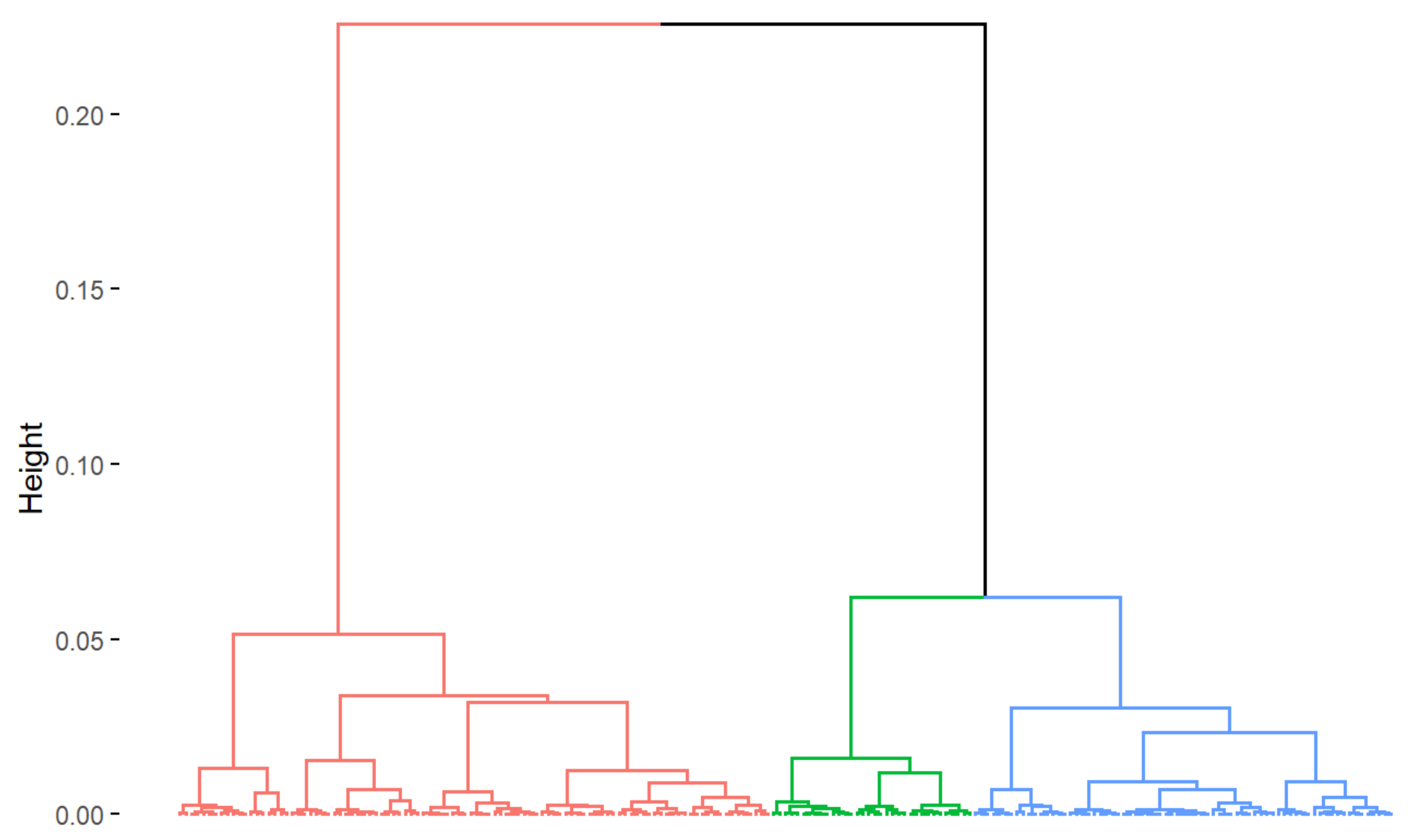


Figure 3: Hierarchical tree

- Class 1:** (red) *intensive sedentary fishers (ISF)* 50% of the sample.
- Class 2:** (blue) *semi-intensive sedentary fishers (SISF)* 30% of the sample.
- Class 3:** (green) *extensive subsistence fishers (ESF)* 20% of the sample.

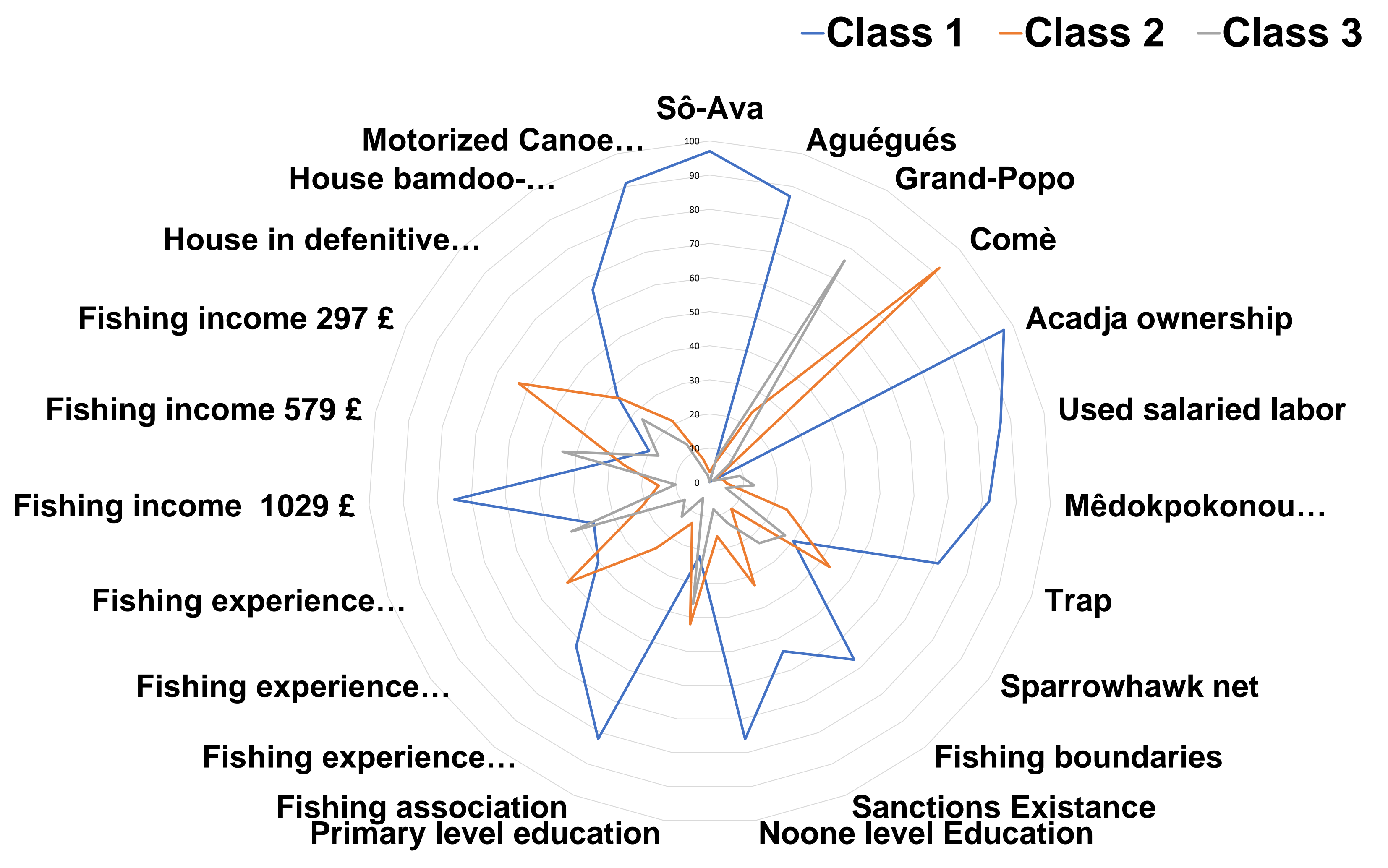


Figure 4: Fishers' classes characteristics

- ISF:** located around Lake Nokoué and Porto-Novo Lagoon Complex, + consistent financial, physical, and natural livelihoods. Do not respect public governance office rules, use high harvest, ecological damageable and prohibited gears such as Mèdokpokonou and Acadja.
- SISF:** located Lake Ahémé Coastal-lagoon complex, used authorised gears such as sparrowhawk and trap nets + but low levels of Acadja and Mèdokpokonou.
- ESF** located Lake Ahémé Coastal-lagoon complex, respects public governance office rules and uses only authorized gears.

Conclusion

Weak governance that did not involve local authorities and fishers' organisation's contributed to leading fishers to defraud and use prohibited gear, allowing the best defrauders to have the highest livelihoods while the compliant fishers are poorer. Sustainable governance rules must include fishers' livelihood satisfaction and, therefore, must involve fishers in decision-making process.