

Current Status of Livelihood, Job Satisfaction and Well-being of inland Fishermen in Southern Benin



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Outline

- Introduction
- Methodology
- Results & discussion
- Conclusion



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Introduction



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Artisanal Fisheries support livelihoods, food security of more than half a billion people worldwide (Bennet *et al.*, 2018), have a strong anchorage in the family economy (Leopold, 2018), but are subject to overexploitation (Lalmalsawmzauva et Sati, 2017)



In Benin, fishing accounts 600,000 jobs, provides 30% of animal protein consumed (El Ayoubi et Failler, 2013)] and plays key role in food security.

• However, the density of fishermen in the estuarine and lagoon environments of southern Benin (ELESB) is estimated at 117/km² and remains well above norm admitted in such environments which is 9 -11/km² [Rurangwa *et al.*, 2014).

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• This situation has encouraged :

- ✓ (i) the massive use of prohibited fishing gear
- ✓ (ii) the reduction of growth time of fish species (Lalèyè *et al.*, 2003)
- ✓ (iii) high ecological stress due to hydrocarbons traffic (oil, diesel, gasoline) on water (Dovonou *et al.*, 2012; Vodougnon *et al.*, 2018)



Stoop *et al.*, (2016);(Alonso *et al.*, (2016) : Fishing communities remain highly dependent on fish stocks and are exerting increasing pressure on livelihoods by developing more productive fishing technologies

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- For fishermen, abandonment is rarely considered because their attachment goes beyond the economic and material resources generated by the activity (Bavinck et al. 2012; Cinner 2014).
- As non-monetary benefits, job satisfaction and well-being take account the attributes of adventure, challenge, and being outdoors that are rarely found in other occupations (Apostle, 1985; Pollnac et Poggie 2006, Seara *et al.* 2017).
- Conversely, the level of attachment of fishermen to their work can influence the success or failure of management plans (Pollnac *et al.* 2015; Seara *et al.* 2017).



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Analyze status of livelihood, job satisfaction and well-being that may explain the motivation and determination to continue fishing

Methodology Study area

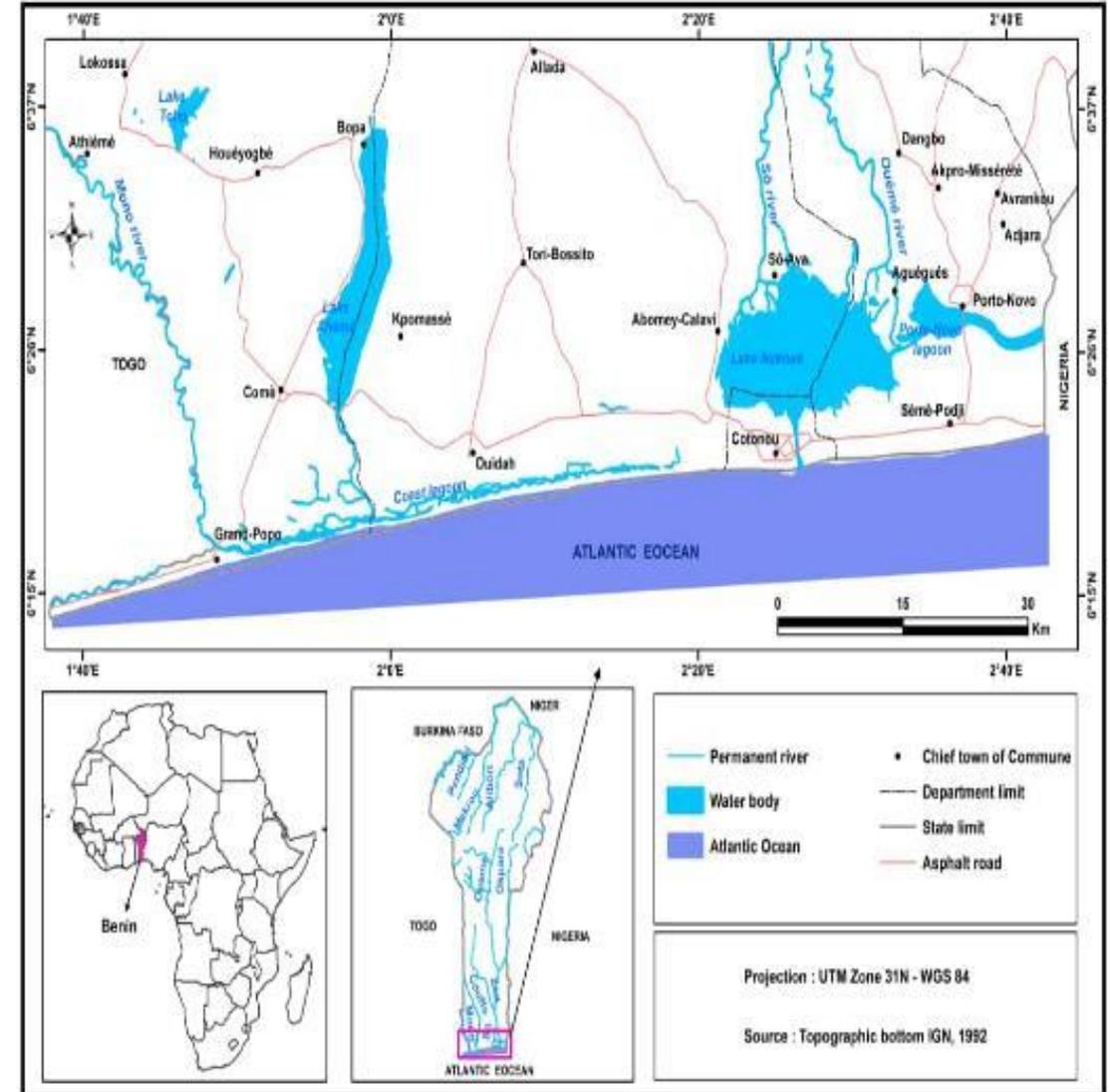
- Southern Benin: 2 large estuarine and lagoon complexes
 - ✓ Lake Nokoué-Lagoon of Porto-Novo complex covering them 180 km² and forming part of Ramsar Site 1018.
 - ✓ Lake Ahémé-Coastal Lagoon complex covering 102 km² is part of Ramsar Site 1017.
- Study focused on the 4 communes most representative of fishing activities in these two main lagoon and estuary complexes in southern Benin. They are Aguégoués, So-Ava, Comè, and Grand-Popo (figure 2).



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Methodology: *Sampling*

- Two hundred and five (205) professional fishermen from 16 villages were selected study area for structured interviews.
- A random intercept survey method (i.e., at times and locations) was used
- A response rate of 90% was achieved for this study.

Methodology *Measurement of variables:*



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Fishermen's livelihoods: Sustainable livelihoods approach [Chambers & Conway, 1992)

- ✓ *human capital* (household composition, level of health, education),
 - ✓ *social capital* (membership of professional fishermen's groups),
 - ✓ *Physical capital* (access to electricity, drinking water, health care),
 - ✓ *financial capital* (source of income, monetary values of goods);
 - ✓ *natural capital* (land status, ownership of land and water).
- ANOVA and CHI² tests

Methodology: *Measurement of variables:*

Fishermen job satisfaction



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Basic needs (3-15)

Actual earnings from fishing (1-5)

Predictability of earnings from fishing (1-5)

Safety of the job (1-5)

Social and psychological needs (3-15)

Fatigue from the job (1-5)

Healthfulness of the job (1-5)

Time spent away from home (1-5)

Self-actualization (3-15)

Adventure of the job (1-5)

Challenge of the job (1-5)

Opportunity to be your own boss (1-5)

Methodology *Measurement of variables:*



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•Well-being

- Single indicator, answer to: "In general, how satisfied are you with your life ? Responses were recorded on a 5-point Likert scale.
- Kruskal-Wallis test : means comparison well-being scores 4 communes.
- Ascending hierarchical classification: relationships between fishermen's livelihood, job satisfaction, and well-being
- STATA 15.1 and R 3.6 software.

Results & discussion : Livelihoods assests



| Livelihood | | Communes | | | |
|------------------|---|----------|-------|------------|--------|
| | | Aguégués | Comè | Grand-Popo | So-Ava |
| Human | Professional experience (Year) | 37±14 | 34±14 | 30±12 | 41±17 |
| Social | no Education level | 74 | 29 | 22 | 78 |
| | Membership of fishermen organization | 70 | 39 | 2 | 69 |
| Physical | Motorized pirogue | 30 | 2 | 4 | 45 |
| | Acadja | 91 | 0 | 0 | 90 |
| Natural | Possession of estates on land | 41 | 27 | 13 | 36 |
| | Livestock | 38 | 18 | 44 | 21 |
| Financial | Access to Credit | 51 | 41 | 31 | 47 |
| | Contribution of fishing to annual income | 81 | 96 | 85 | 98 |
| | Contribution of other activities to annual income | 19 | 4 | 15 | 2 |

Results & discussion: Livelihoods assests

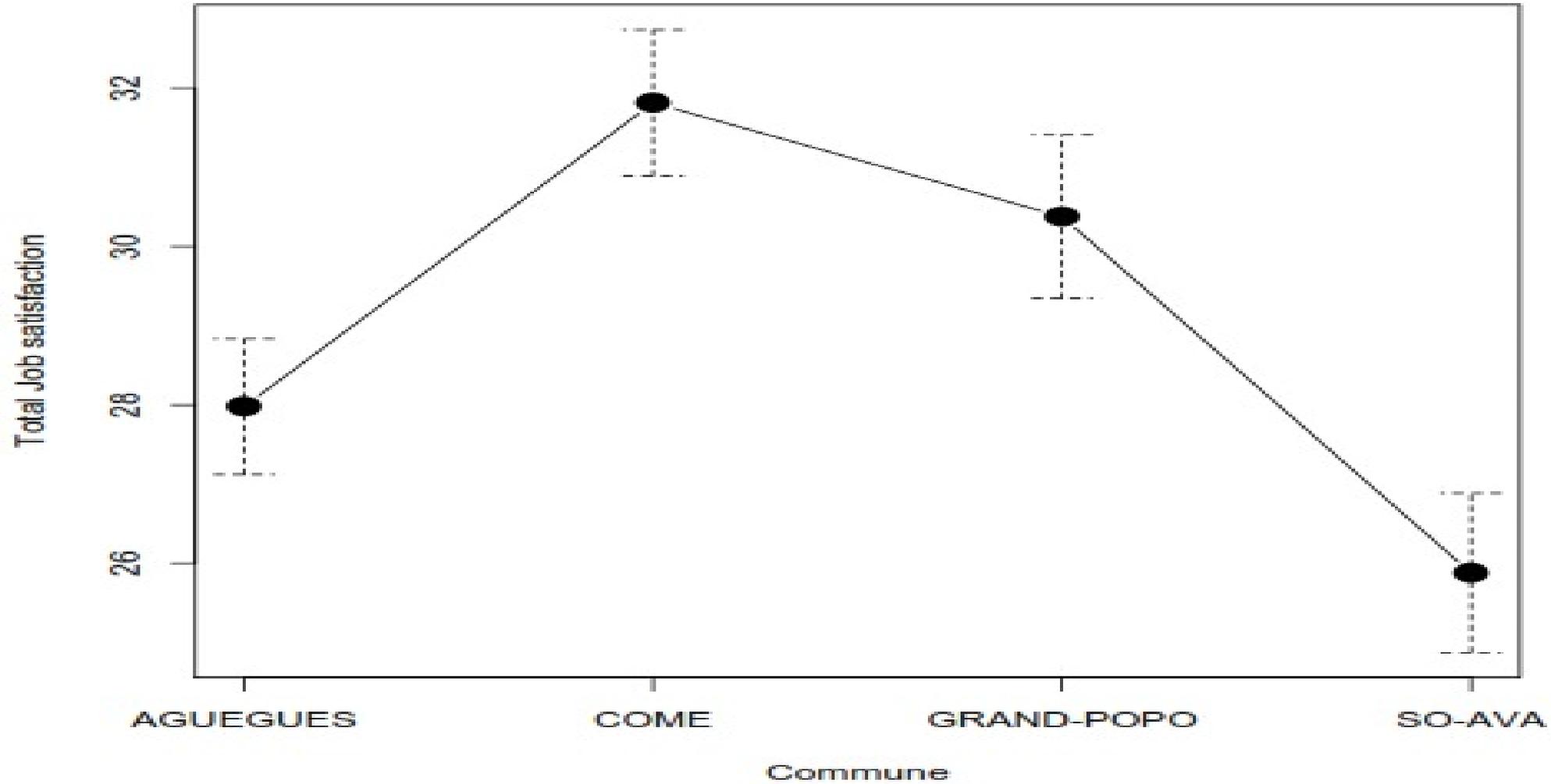


- A causal relationship could be established with the level of education that would promote compliance with fishing standards, while the associative dynamic would strengthen the ability of fishermen to go against the rules established for sustainable fishing.

Results & discussion : Job satisfaction



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Results & discussion : Job satisfaction



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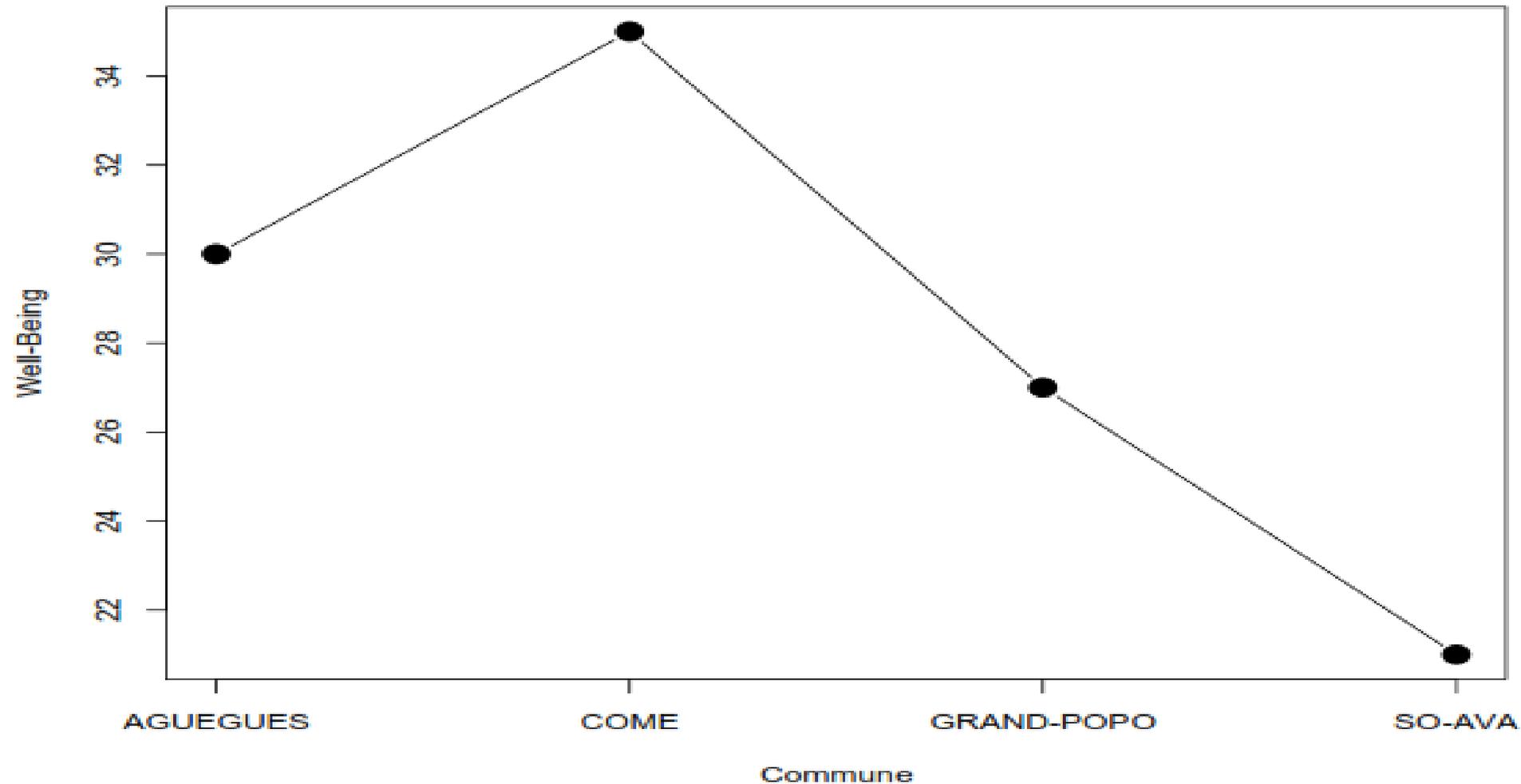
- Fishermen of So-ava in the south-east are dissatisfied with the 3 components of job satisfaction.
- The fishermen of Aguégues still in the south-east are dissatisfied only with the Social and Psychological Needs component.
- The high density of fishermen observed in south-east (Aguégues, So-ava) where the sedentary and intensity of fishing activity guarantee substantial income which could explain the rapid increase of fishermen number and could have a negative impact on job satisfaction level (Rurawanga *et al.* 2014; Seara *et al.*, (2017).

Results & discussion : Total Well-being



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Plot of Means



Results & discussion : Total Well-being



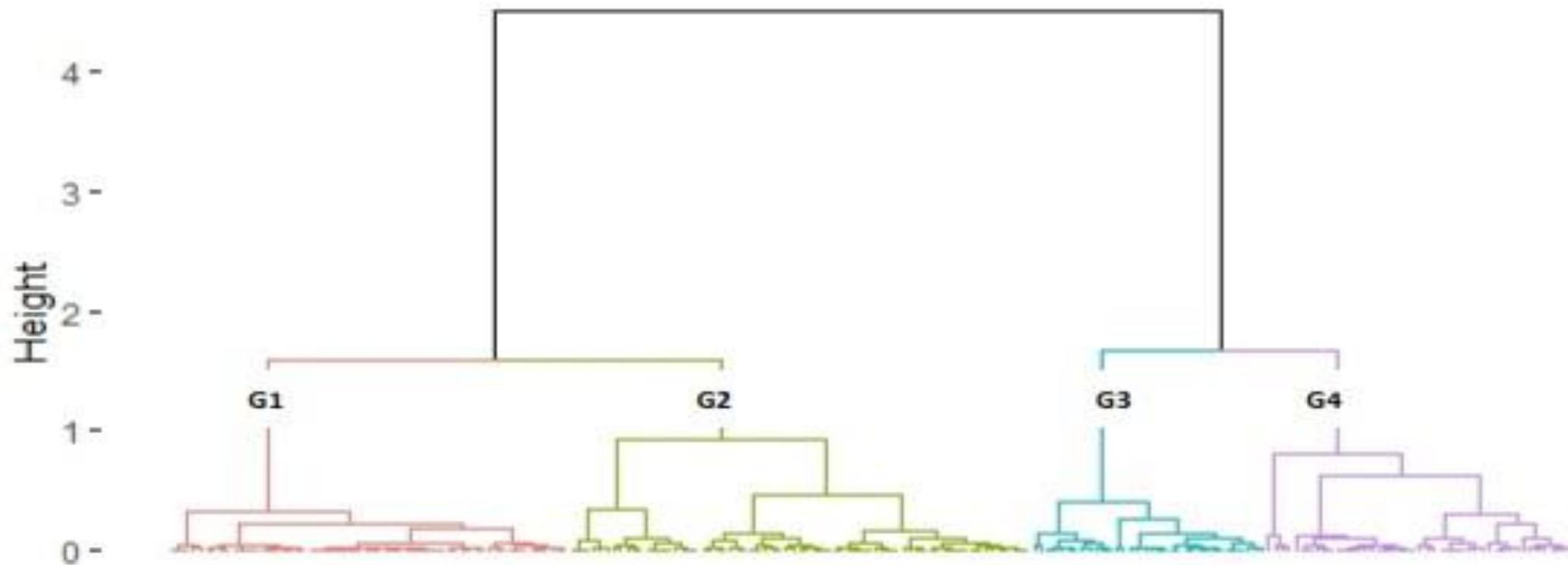
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- the satisfaction of well-being is intimately linked to that of job, particularly about basic needs and opportunities for self-actualization.
- This also explains why the fishermen of the Comè commune express the highest level of well-being, as they are the most satisfied with their work.
- Holland *et al.*, (2019) found similar results and stated that fishermen in USA tend to favor characteristics of their occupation that satisfy needs related to self-actualization and self-esteem and therefore choose fishing over occupations with higher income and lower physical risk.

Results & discussion : Link Livelihood, Job satisfaction, well-being



Cluster Dendrogram



Results & discussion : Link Livelihood, Job satisfaction, well-being



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- 4 categories of fishermen with different characteristics.
- These categories of fishermen clearly define homogeneous motivations. The fishermen with the highest capital (South-East) are more dissatisfied with fishing activity.
- Conversely, those who are satisfied (south-west) have the lowest capital. Job satisfaction is a factor that may explain the motivation of fishermen in the south-west to remain in fishing despite the drop in income and economic benefits linked to the activity.
- Paradoxically, the high level of income derived from fishing and the lack of alternatives to fishing could explain the persistence of south-eastern fishermen to perceive fishing as their main activity.

Conclusion



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Efforts to sustainably manage inland fisheries and the resilience of coastal communities could and should benefit from the use of comparable and robust indicators, in addition to livelihood and job satisfaction scores, to assess and compare the effects of environmental and governance changes on the well-being of fishermen and to inform more effective and adaptive policy and management strategies



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