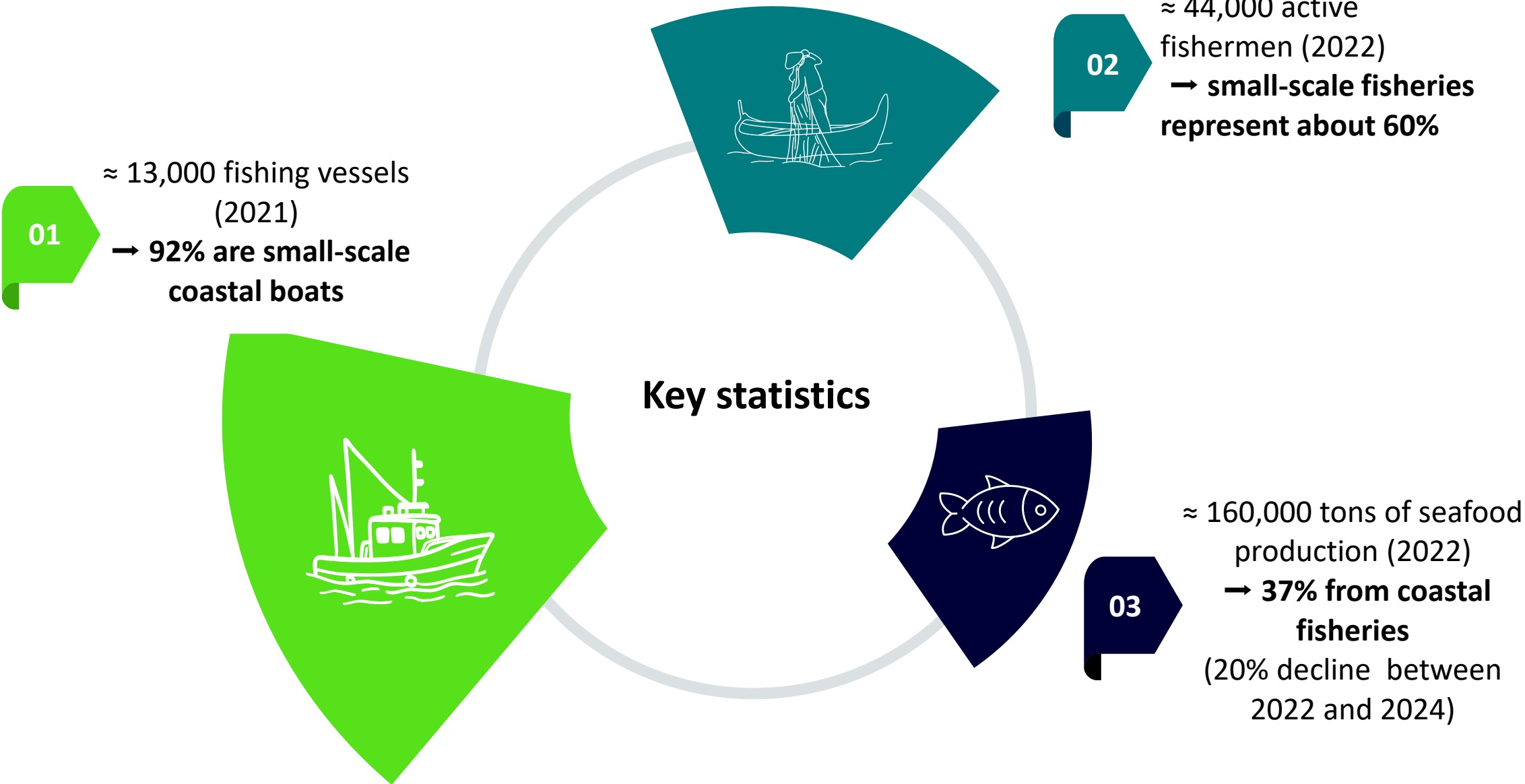




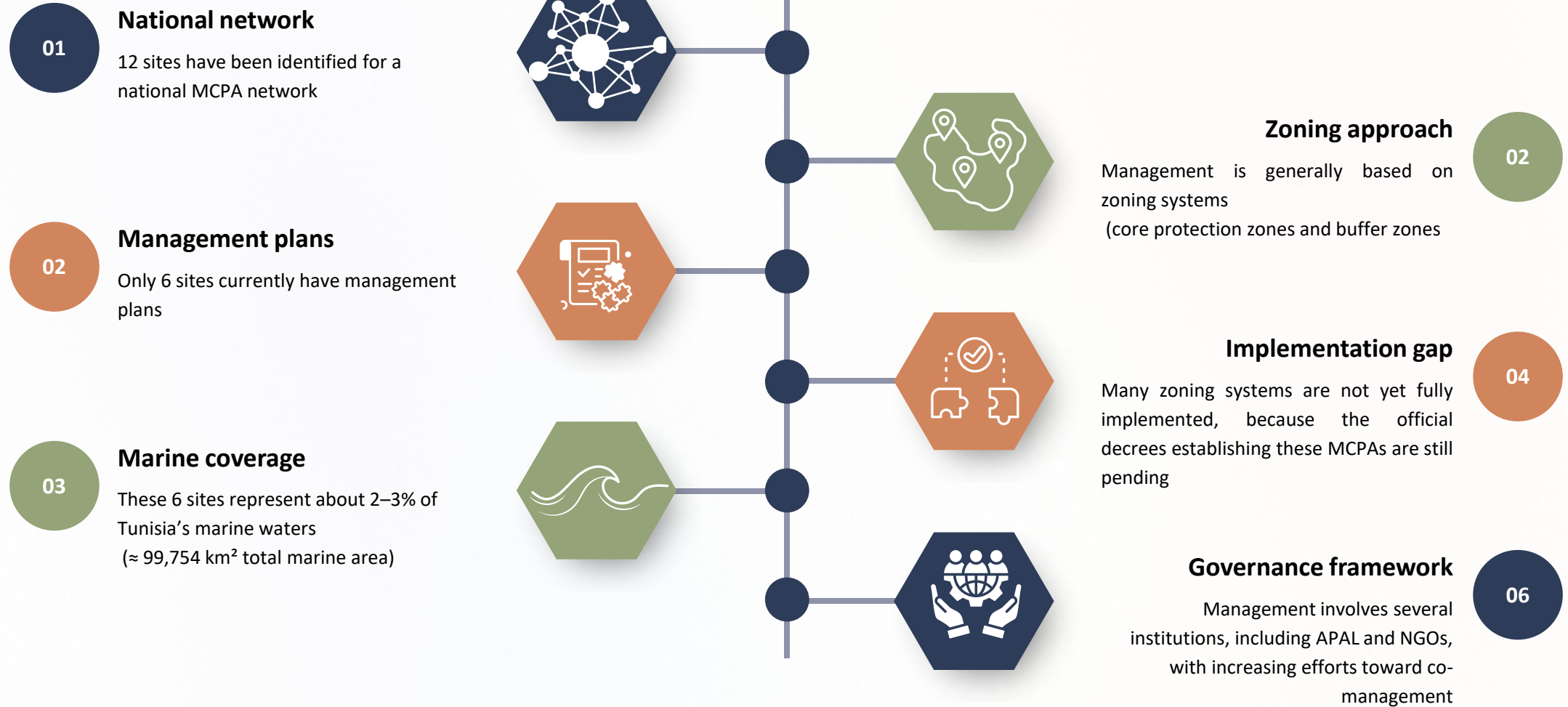
Small-Scale Fisheries and Nature Protection: Insights from Marine and Coastal Protected Areas in Tunisia

Lassad Neifar, University of Sfax

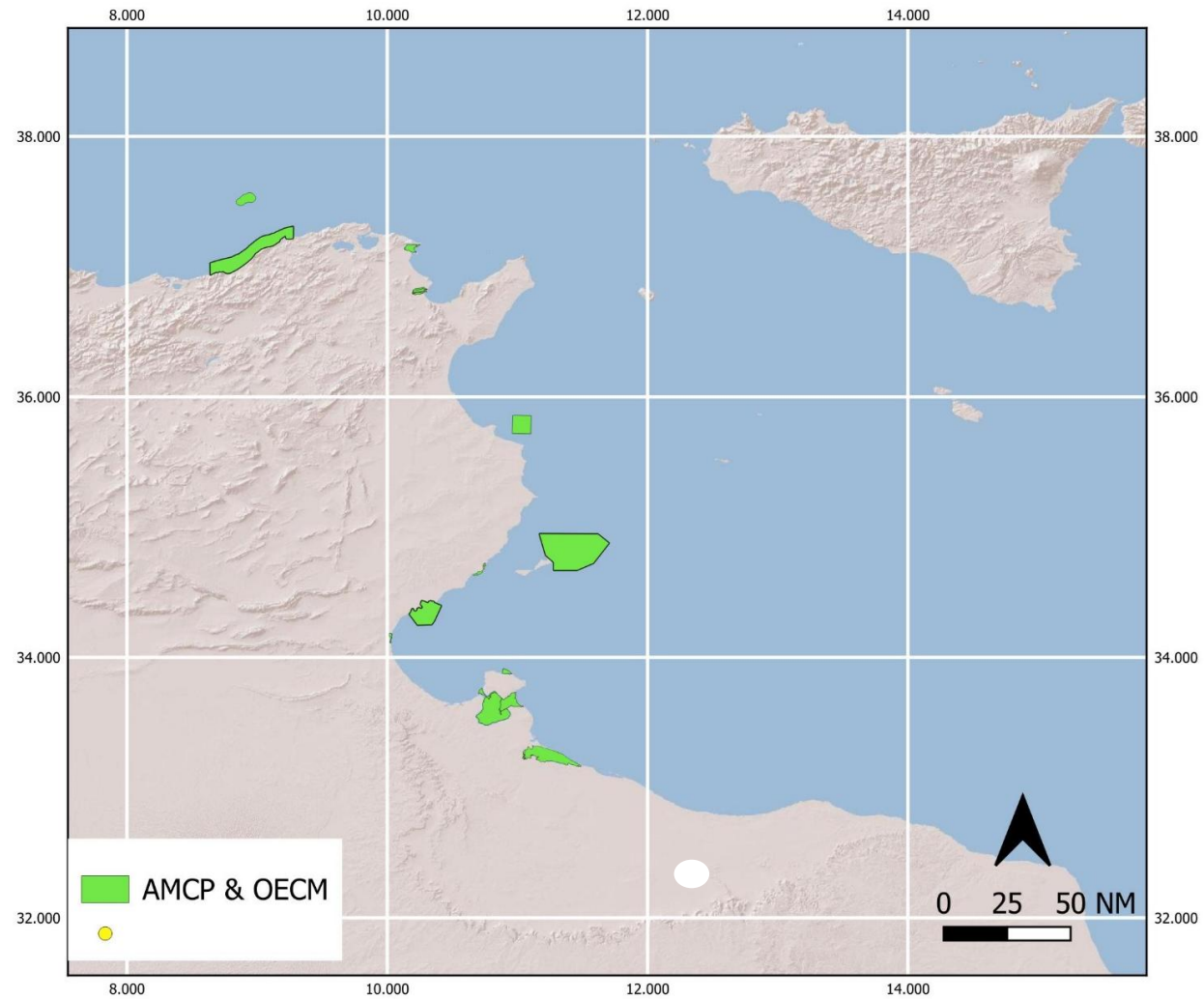
SMALL-SCALE FISHERIES IN TUNISIA: KEY STATISTICS



MARINE AND COASTAL PROTECTED AREAS IN TUNISIA: CURRENT STATUS



CURRENT SPATIAL DISTRIBUTION OF MARINE CONSERVATION EFFORTS IN TUNISIA



BALANCING FISHERIES AND CONSERVATION

Small-Scale Fisheries

- Essential for coastal communities
- Cultural heritage



Marine Conservation

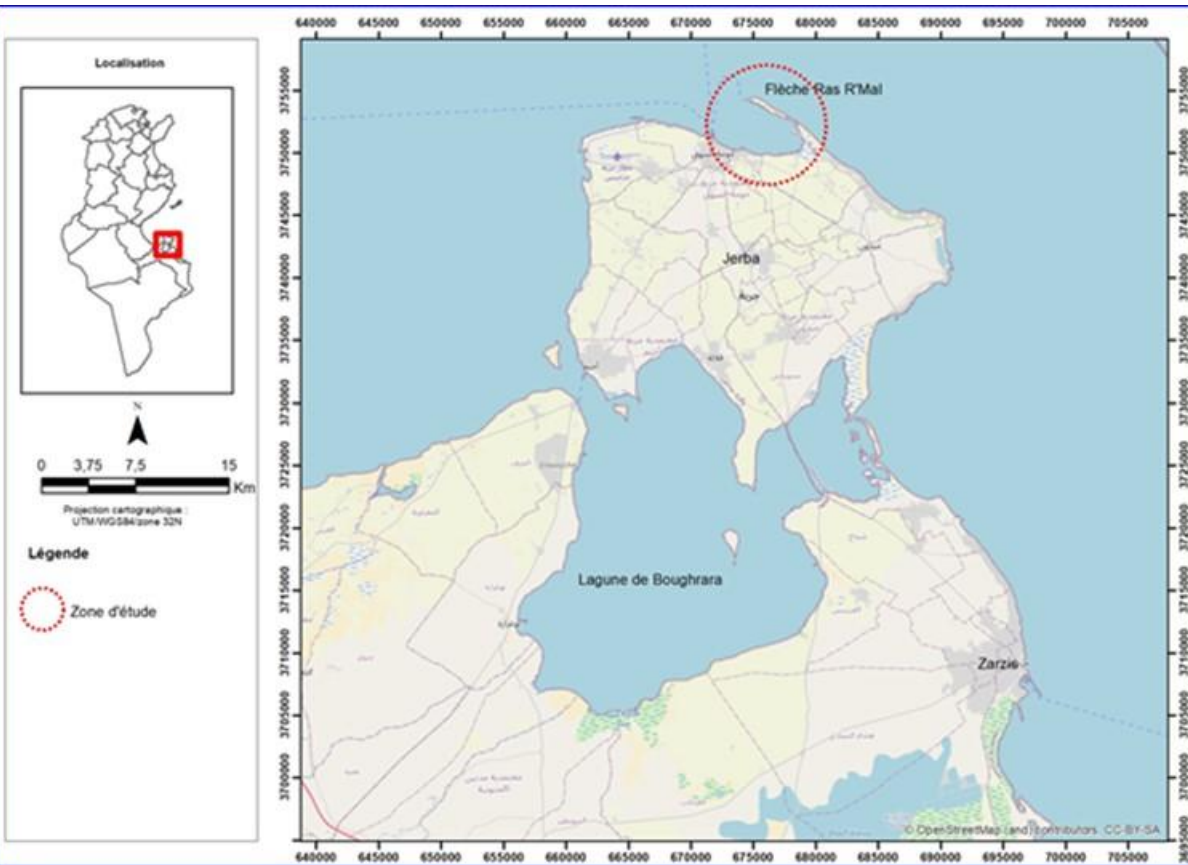
- Expansion of Marine and Coastal Protected Areas



Key question

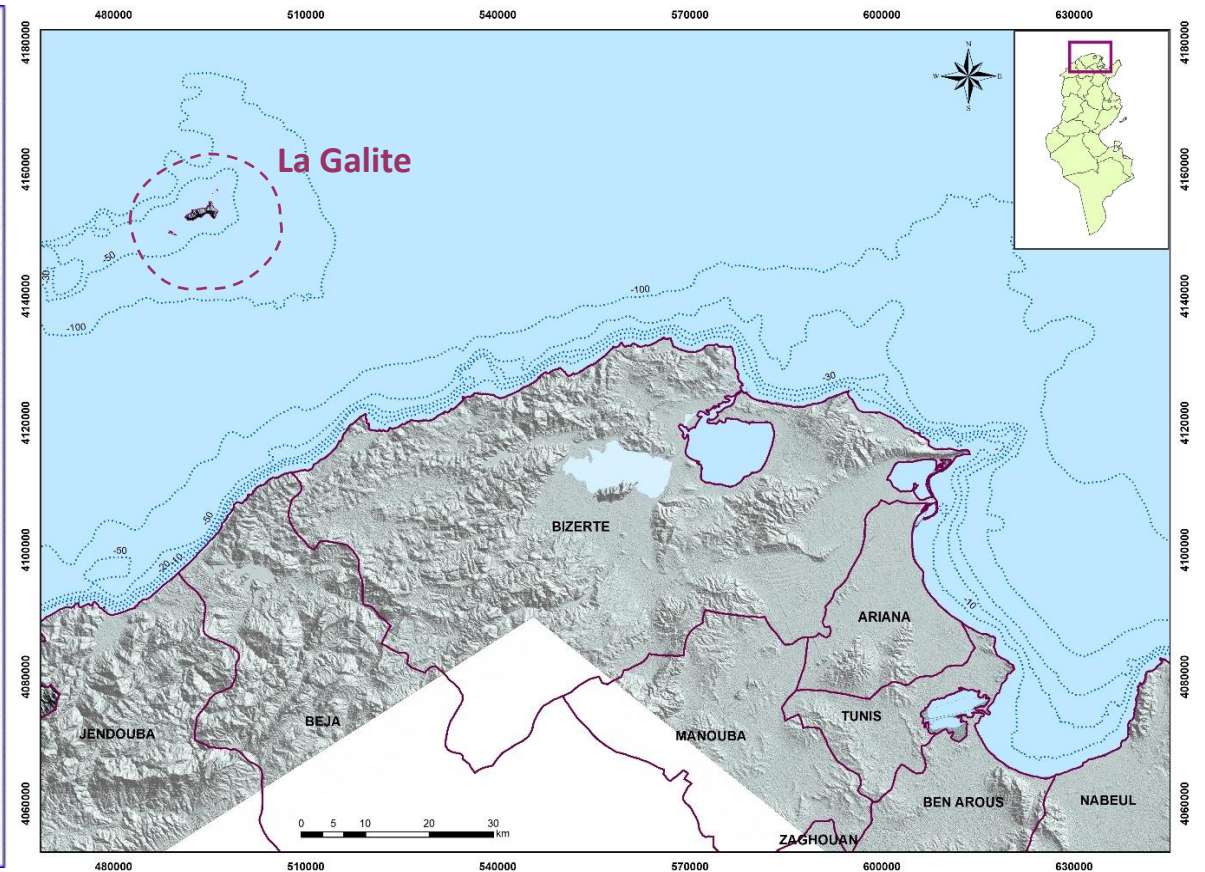
How do fishermen perceive these conservation initiatives?

STUDY SITES



RAS RMAL MCPA

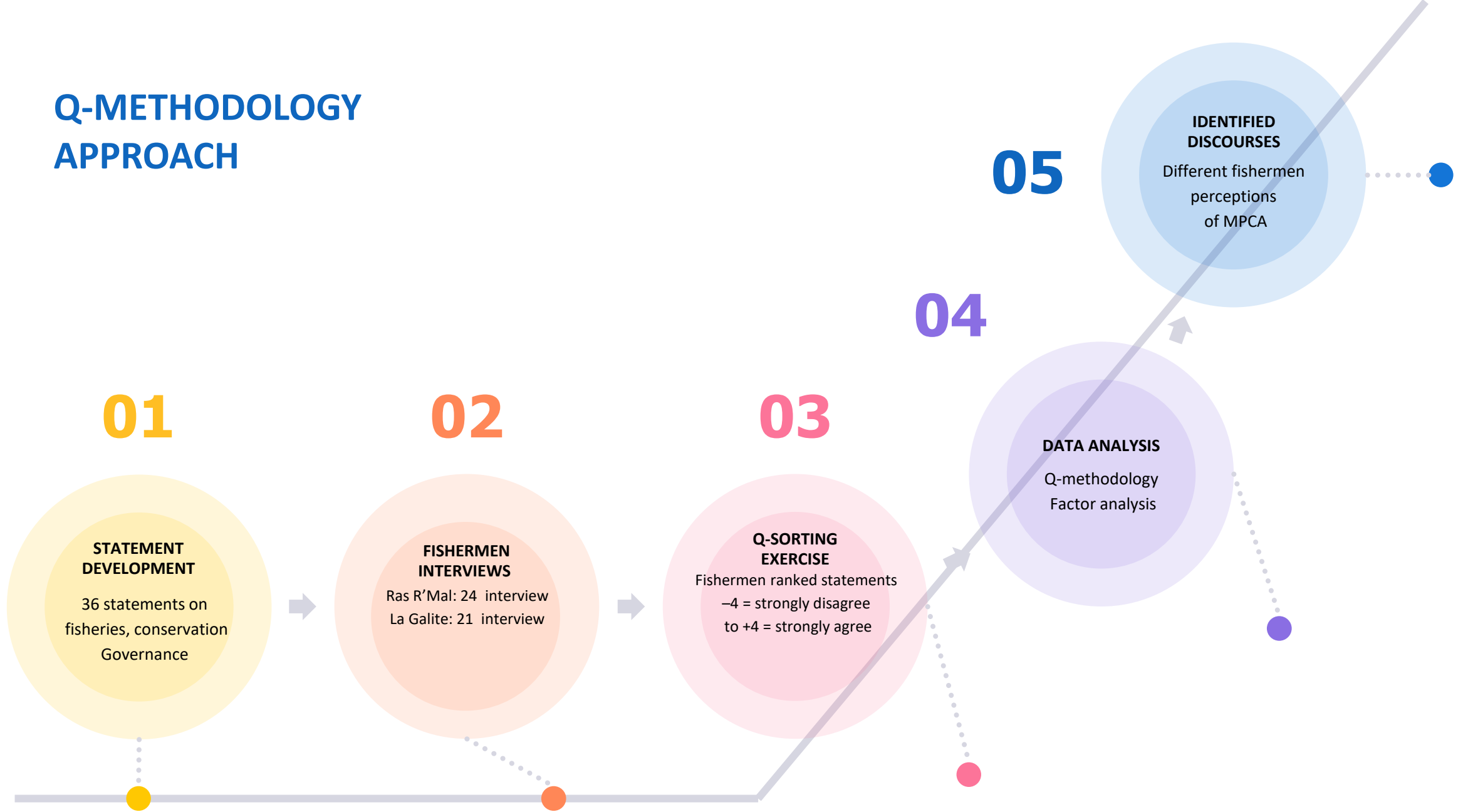
- Sand bar delimiting a **lagoon and shallow marine system with seagrass beds**
- Located **very close to the coast**
- Fishing mainly from **local coastal communities**



LA GALITE MCPA

- Offshore island system with a **mosaic of marine habitats**
- **Remote site**, far from the mainland (40 Km)
- Important fishing ground exploited by **fishermen from northern Tunisia**

Q-METHODOLOGY APPROACH

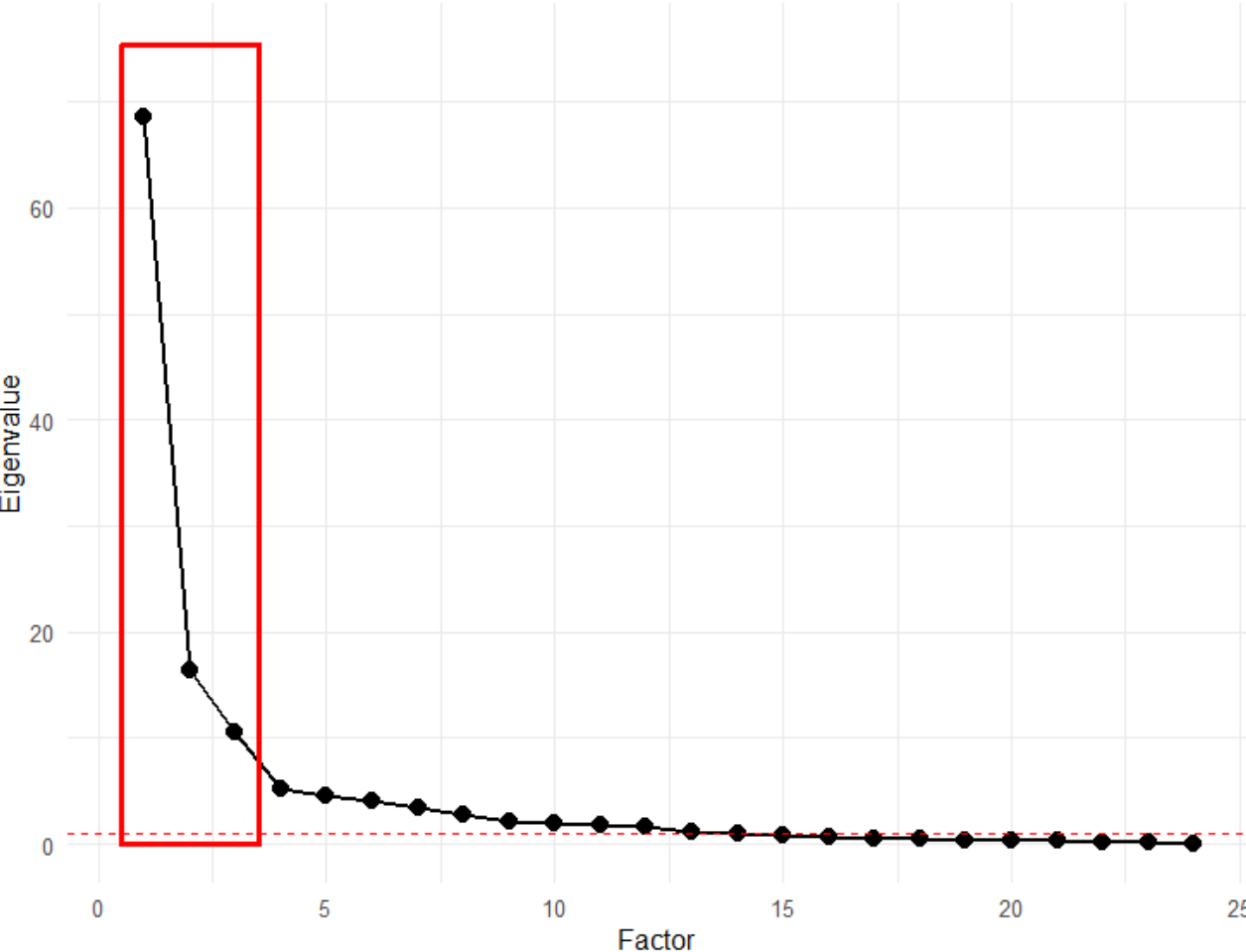


PROFILE OF INTERVIEWED FISHERMEN

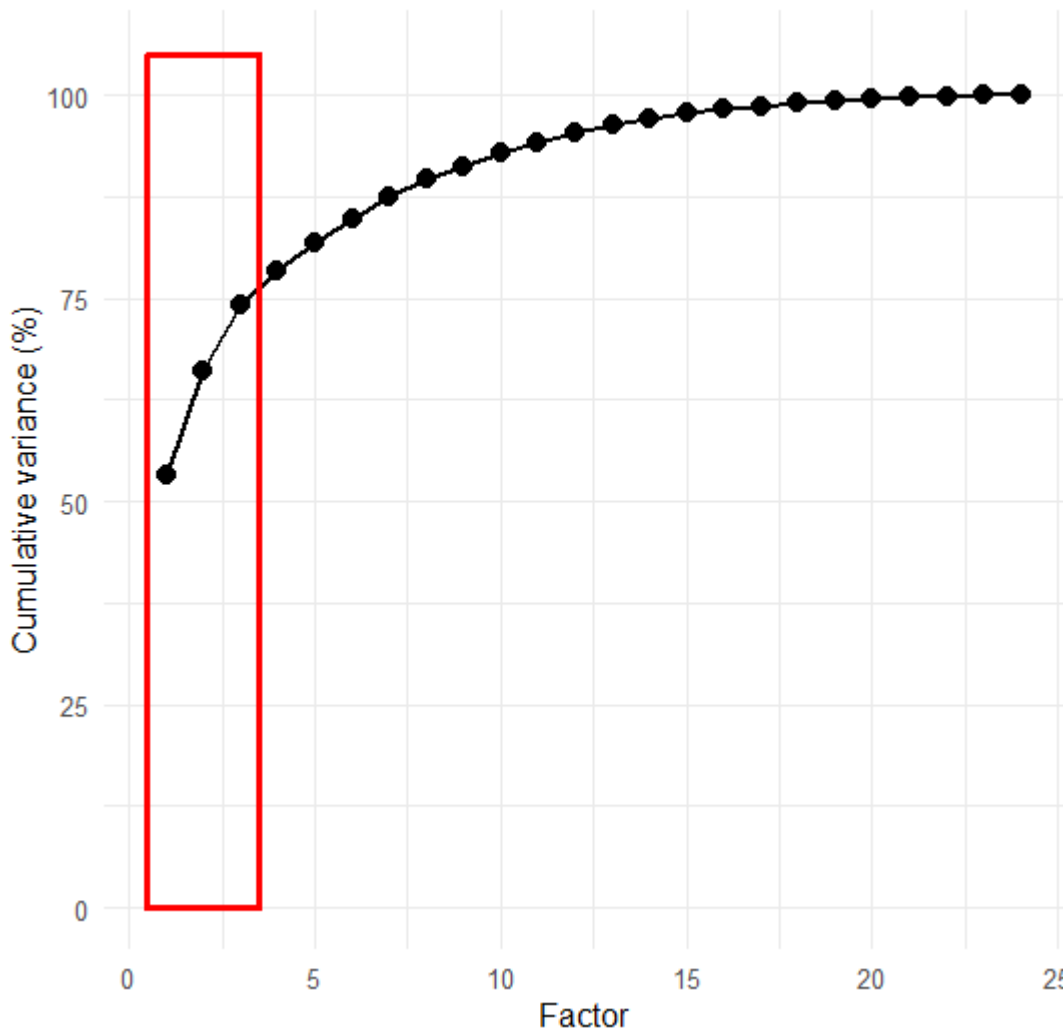
Indicator	Ras Rmal (Djerba)	La Galite
Gender	100% male	100% male
Age structure	Majority between 40–60 years	Majority between 40–60 years
Education level	Mostly primary and middle school	Mostly primary and middle school
Fishing experience	Often more than 20 years	Often more than 20 years
Typical vessel length	Small artisanal boats (<10 m)	Small artisanal boats (8–12 m)
Engine power	Generally 40–90 HP	Generally 60–120 HP
Main fishing gears	Gillnets, longlines, traps	Gillnets, longlines, traps
Fishing effort (average fishing days per year)	~180–220 days/year	~160–200 days/year

FISHERMEN'S DISCOURSES IN RAS R'MAL

Scree plot – Ras R'Mal



Cumulative Explained Variance – Ras R'Mal



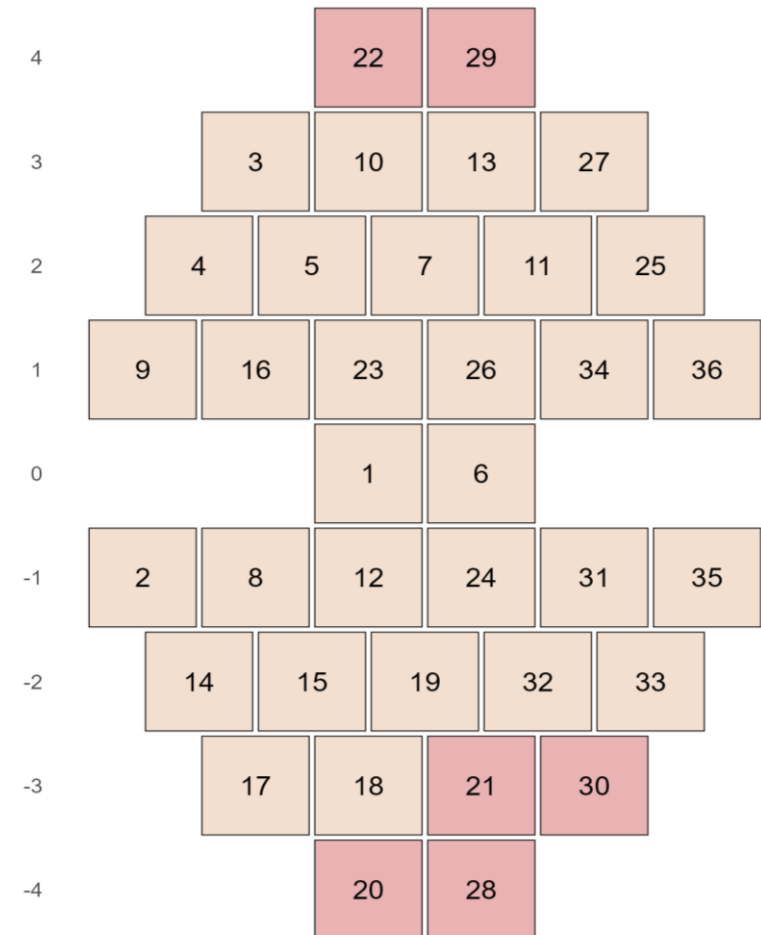
FISHERMEN’S DISCOURSES IN RAS R’MAL

Factor 1: Fisheries management and adaptation discourse

Statement ID	Label
29	New fishing practices should be encouraged to protect marine ecosystems
22	Current regulations are not well adapted to local fishing practices
21	Fishermen should be involved in decisions about the management of the protected area
30	Restoring marine habitats would help improve fish stocks
28	Local communities should play a central role in conservation
20	Tourism development is more important than conservation in Ras R’Mal

Idealized Q-sort of Factor 1

Highlighted are the distinguishing statements for Factor 1

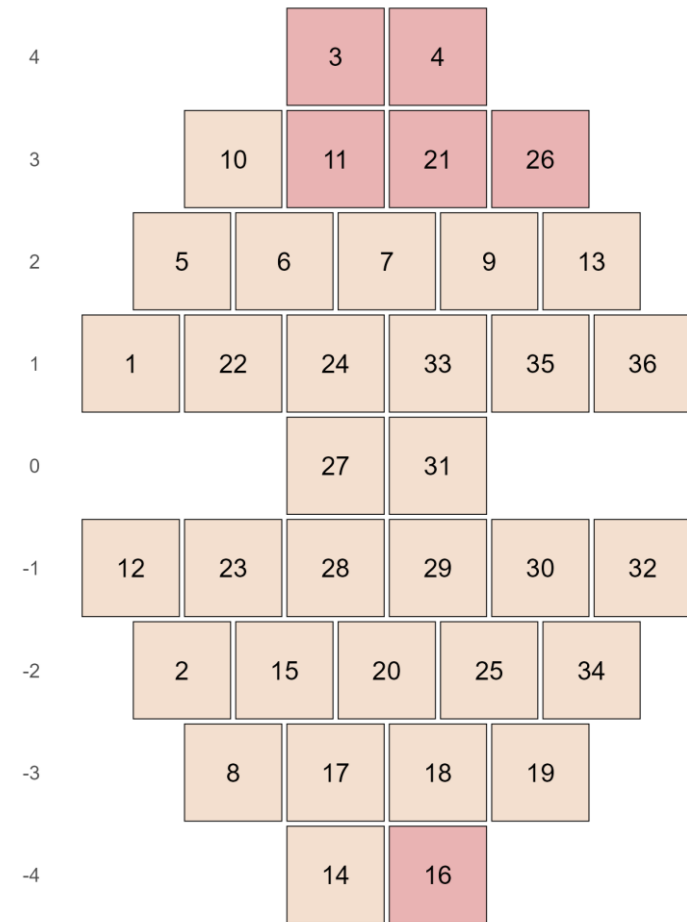


FISHERMEN'S DISCOURSES IN RAS R'MAL

Factor 2: Ecological concern discourse

Statement ID	Label
4	Fish catches are declining compared to the past.
3	Fishing pressure in Ras R'Mal has increased significantly in recent years.
26	Cooperation between fishermen and scientists can improve resource management.
11	Lost fishing gear represents a serious threat to marine life.
21	Fishermen should be involved in decisions about the management of the protected area.
16	Tourist excursions bring economic benefits to the local community.

Idealized Q-sort of Factor 2
 Highlighted are the distinguishing statements for Factor 2



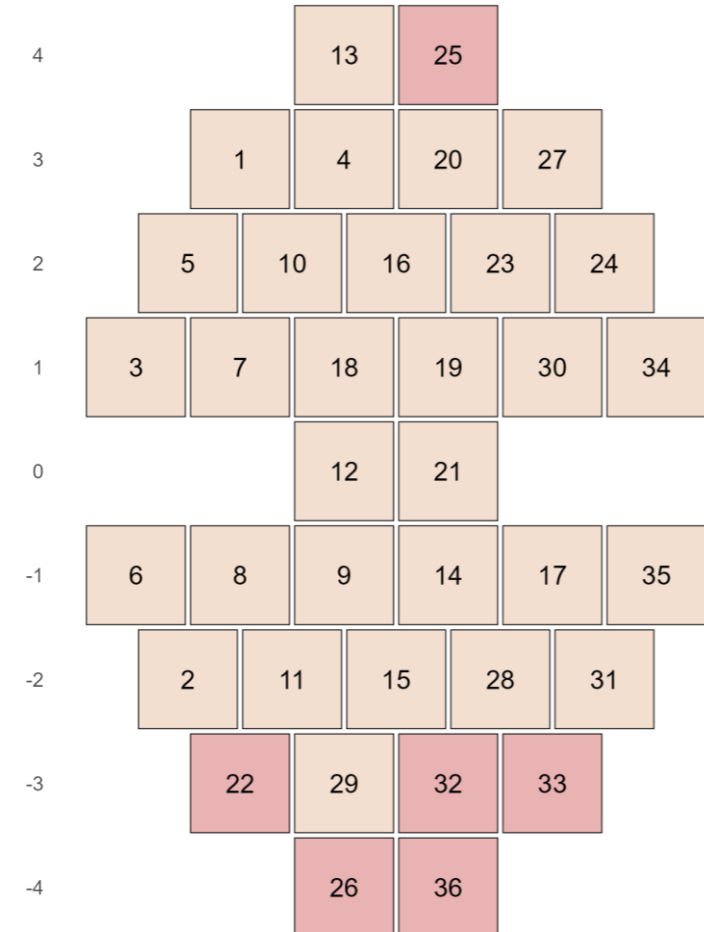
FISHERMEN'S DISCOURSES IN RAS R'MAL

Factor 3: governance and regulation discourse

Statement ID	Label
25	Stronger control is needed to prevent illegal fishing.
26	Cooperation between fishermen and scientists can improve resource management.
36	Protecting Ras R'Mal is essential for future generations.
32	Economic development and environmental protection can coexist.
22	Current regulations are not well adapted to local fishing practices.
33	Without stronger protection, marine resources will continue to decline.

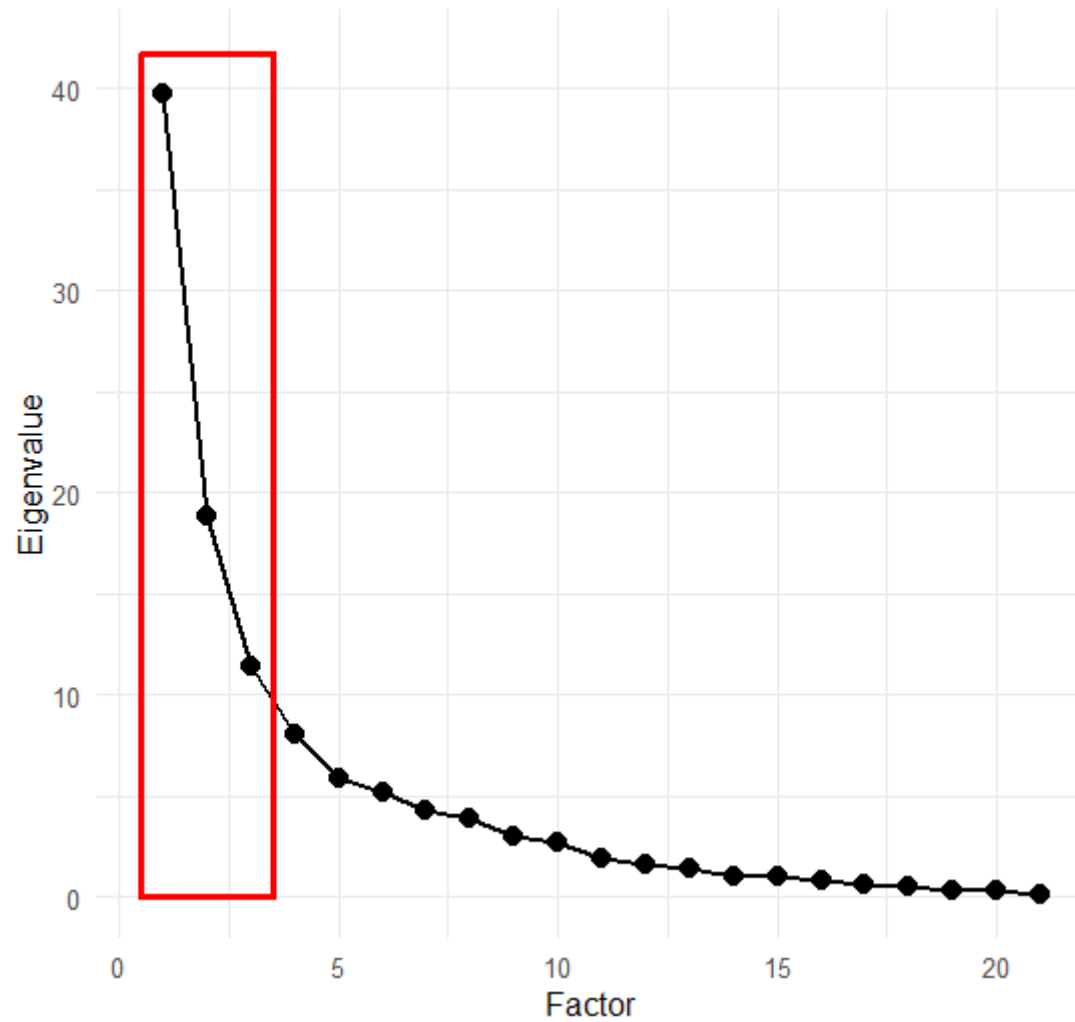
Idealized Q-sort of Factor 3

Highlighted are the distinguishing statements for Factor 3

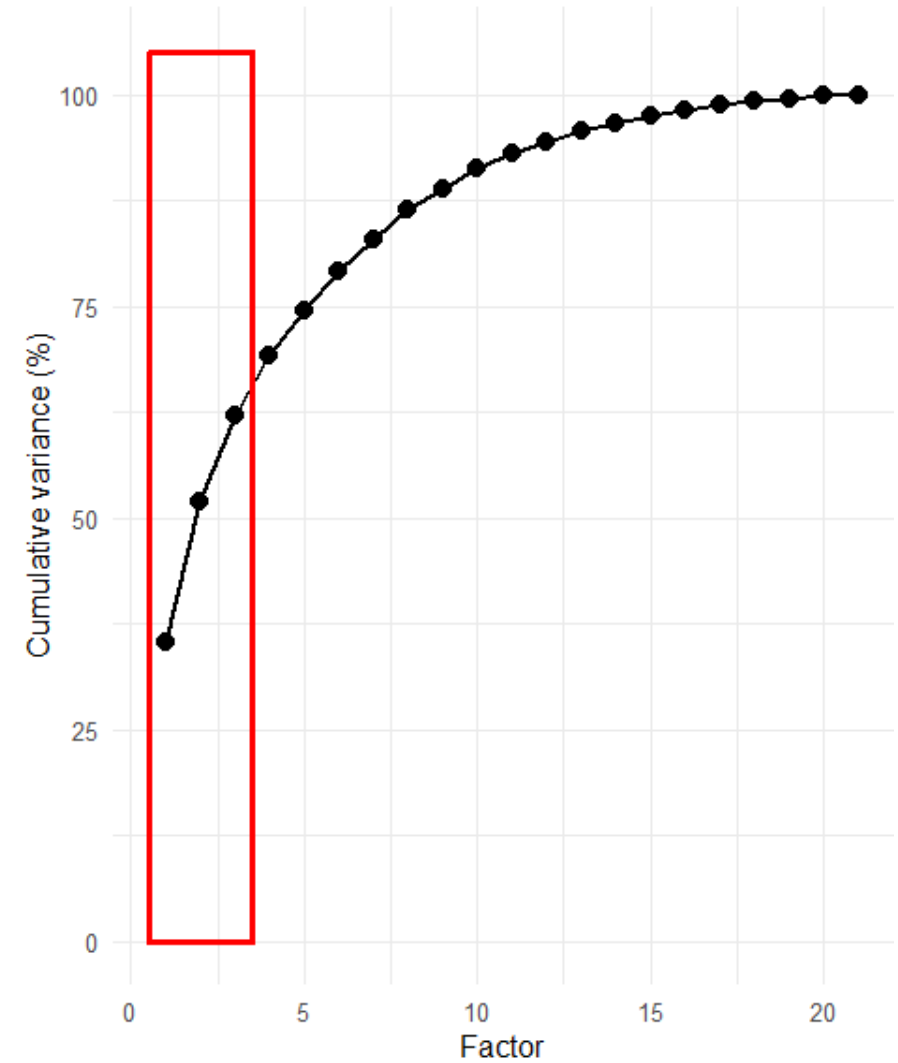


FISHERMEN'S DISCOURSES IN LA GALITE

Scree Plot – La Galite



Cumulative Explained Variance – La Galite



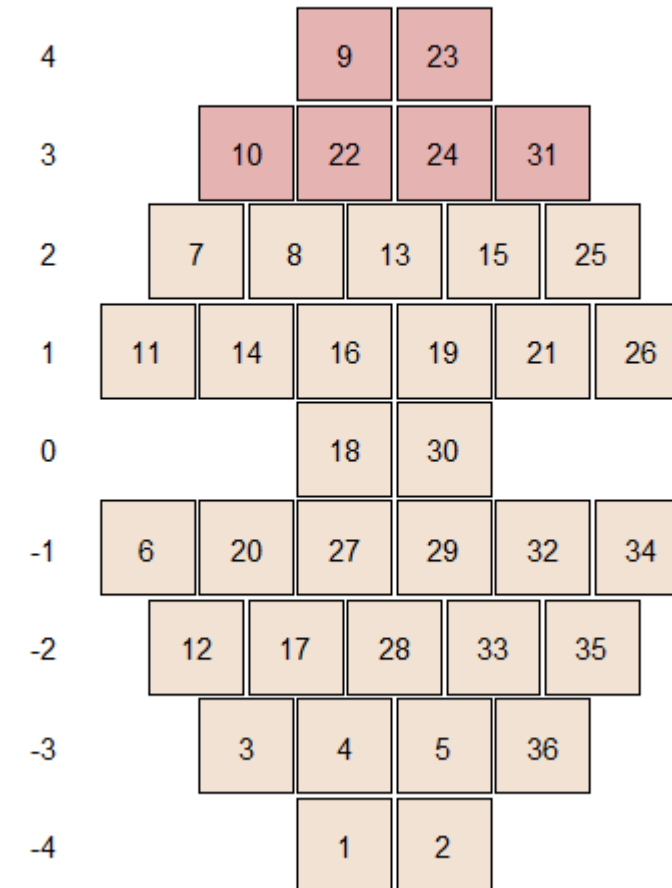
FISHERMEN'S DISCOURSES IN LA GALITE

Factor 1: Governance and Participation Concerns

Statement ID	Label
9	Marine protected areas help restore depleted fish populations.
23	Authorities do not sufficiently consult fishermen when making decisions.
22	Current regulations are not well adapted to local fishing practices.
10	Environmental protection sometimes conflicts with fishermen's interests.
24	Marine protected areas are often imposed without considering local realities.
31	Ras R'Mal should become a model for sustainable coastal management.

Idealized Q-sort of Factor 1

Highlighted are the distinguishing statements for Factor 1

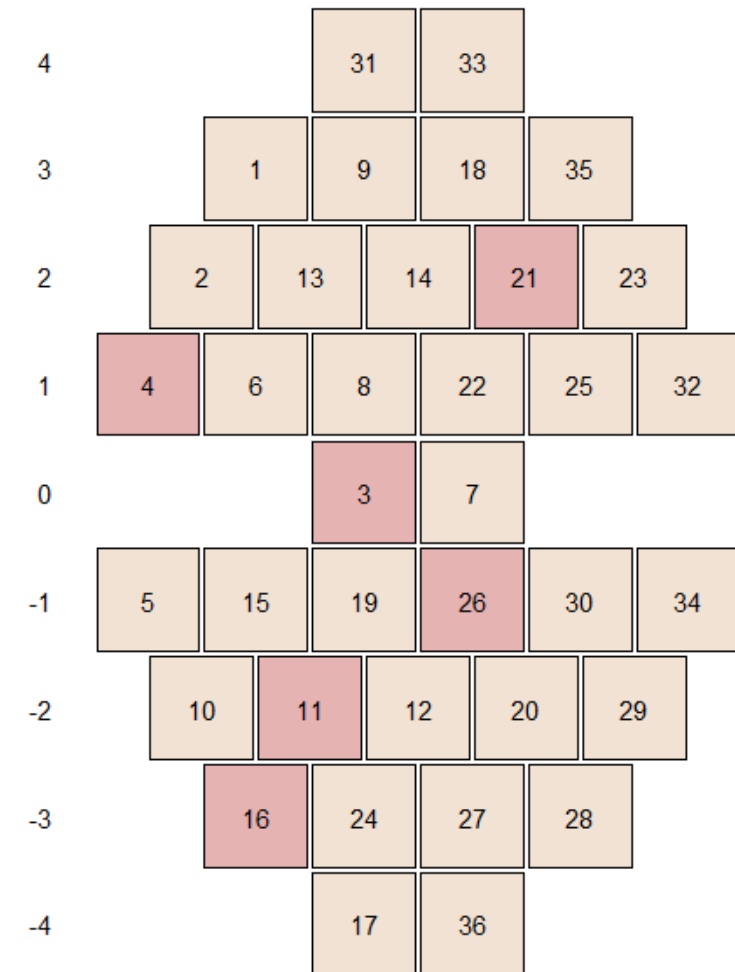


FISHERMEN'S DISCOURSES IN LA GALITE

Factor 2: Resource Decline and Collaborative Management

Statement ID	Label
3	Fishing pressure in Ras R'Mal has increased significantly in recent years.
4	Fish catches are declining compared to the past.
11	Lost fishing gear represents a serious threat to marine life.
16	Tourist excursions bring economic benefits to the local community.
21	Fishermen should be involved in decisions about the management of the protected area.
26	Cooperation between fishermen and scientists can improve resource management.

Idealized Q-sort of Factor 2
Highlighted are the distinguishing statements for Factor 2



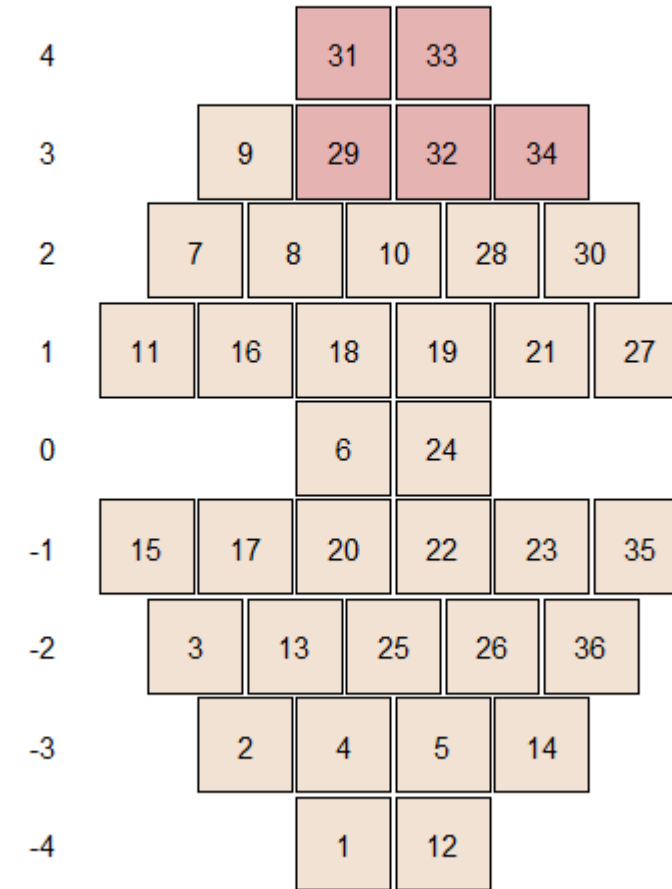
FISHERMEN'S DISCOURSES IN LA GALITE

Factor 1: Sustainability and Future-Oriented Vision

Statement ID	Label
33	Without stronger protection, marine resources will continue to decline.
31	Ras R'Mal should become a model for sustainable coastal management.
29	New fishing practices should be encouraged to protect marine ecosystems.
32	Economic development and environmental protection can coexist.
34	Young people are losing interest in fishing as a profession.
33	Without stronger protection, marine resources will continue to decline.

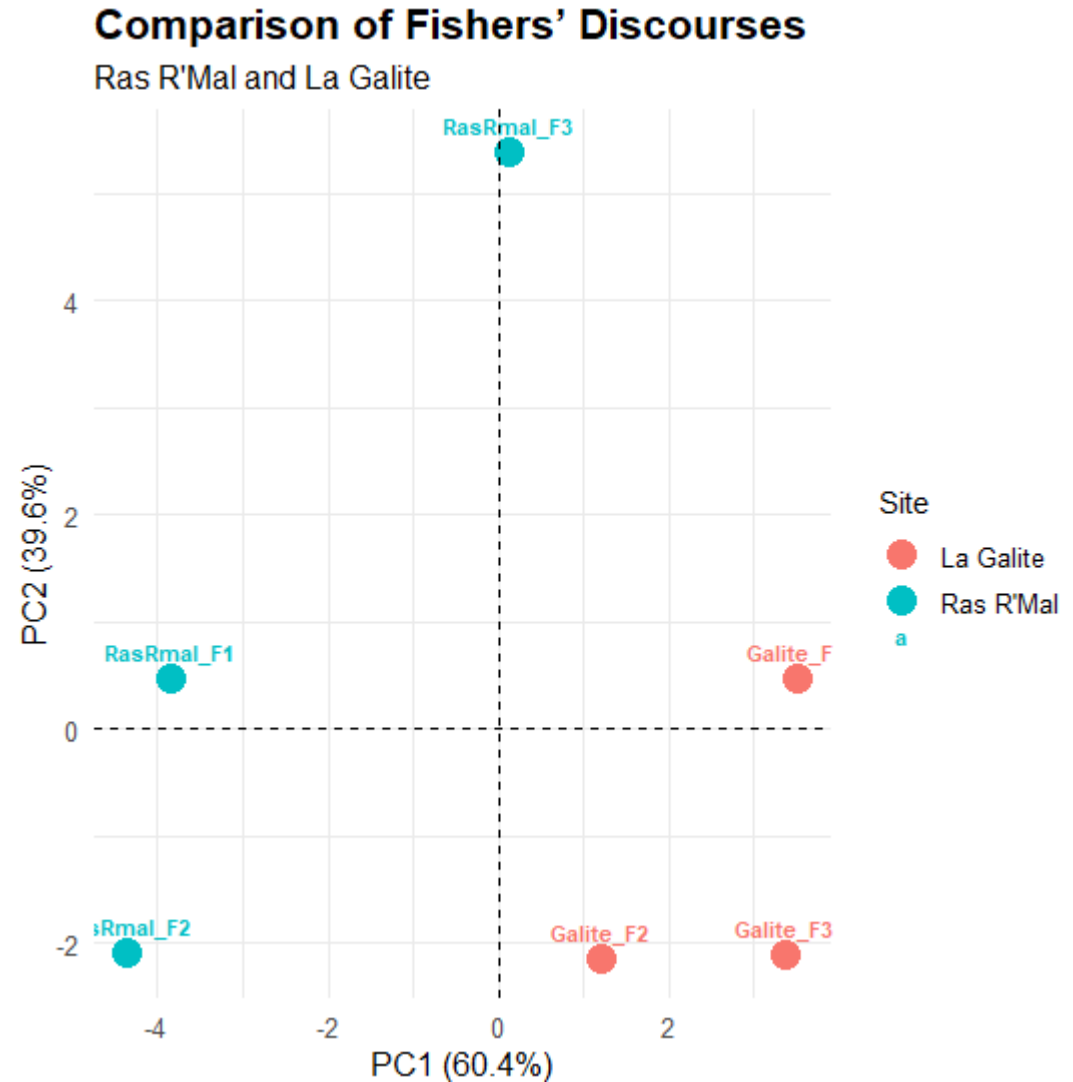
Idealized Q-sort of Factor 3

Highlighted are the distinguishing statements for Factor 3



COMPARISON FISHER'S DISCOURSES

- Three discourses were identified in each site
- Discourses from Ras R'Mal and La Galite occupy different positions in the perceptual space
- This suggests different perceptions of marine protection between the two sites



Key conclusions



Importance of Small-Scale Fisheries

Small-scale fisheries are central to coastal livelihoods in Tunisia, and fishermen have strong cultural and economic ties to marine ecosystems



Diverse Fishermen's Perspectives

Three distinct discourses emerged among fishermen, showing that perceptions of marine protection are diverse and sometimes contrasting



Role of Local Context

Local ecological and socio-economic contexts strongly influence these perceptions, as illustrated by the differences between Ras R'Mal and La Galite



Governance Challenges

The absence of fully implemented legal frameworks and clear governance mechanisms can limit fishermen's trust and acceptance.



Need for Participation

Understanding fishermen's perceptions and involving them in decision-making is essential for designing effective and socially accepted marine conservation policies.



THANK YOU !