



Second Regional Conference

“Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea”

FAO/ GFCM/ Algerian Government

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* A valuing approach of the sea
life and its governing: a
demanding and difficult
trajectory

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Very beautiful aesthetic representation of a young fisher carrying dolphin fishes. Thera, 18th B.C.



A rhyton representing a marine scape (marine style) with star fish, nautilus, triton shells and sea weeds. 17th century B.C., Palace of Palaikastro in East Crete.



Geometric vase (7th B.C.) coming from Pithekussai (Ischia) representing the consequences of a wrecking: The fishes eat the men. This topic of **death at sea** has been developed in our conference in February 1992 at *Maison des Sciences de l'Homme* (“Les Poissons ont mangé les hommes”) in the framework of a study of representation of the sea in Homers poetry.

*Topics

- * 1. Elsa Pêche survey: The valuations of the Mediterranean Fishermen
- * 2. Ecost Research Programme - What are values: a social scanning
- * 3. Institutions and communities values - facing the tragedy of fishing commons in Senegal/ Yoff, Zanzibar/Mesali Island and Egypt/Alexandria
- * 4. What kind of pathway to build a sustainable for the inshore coastal fishers?

Presentation ELSA PECHE PROJECT

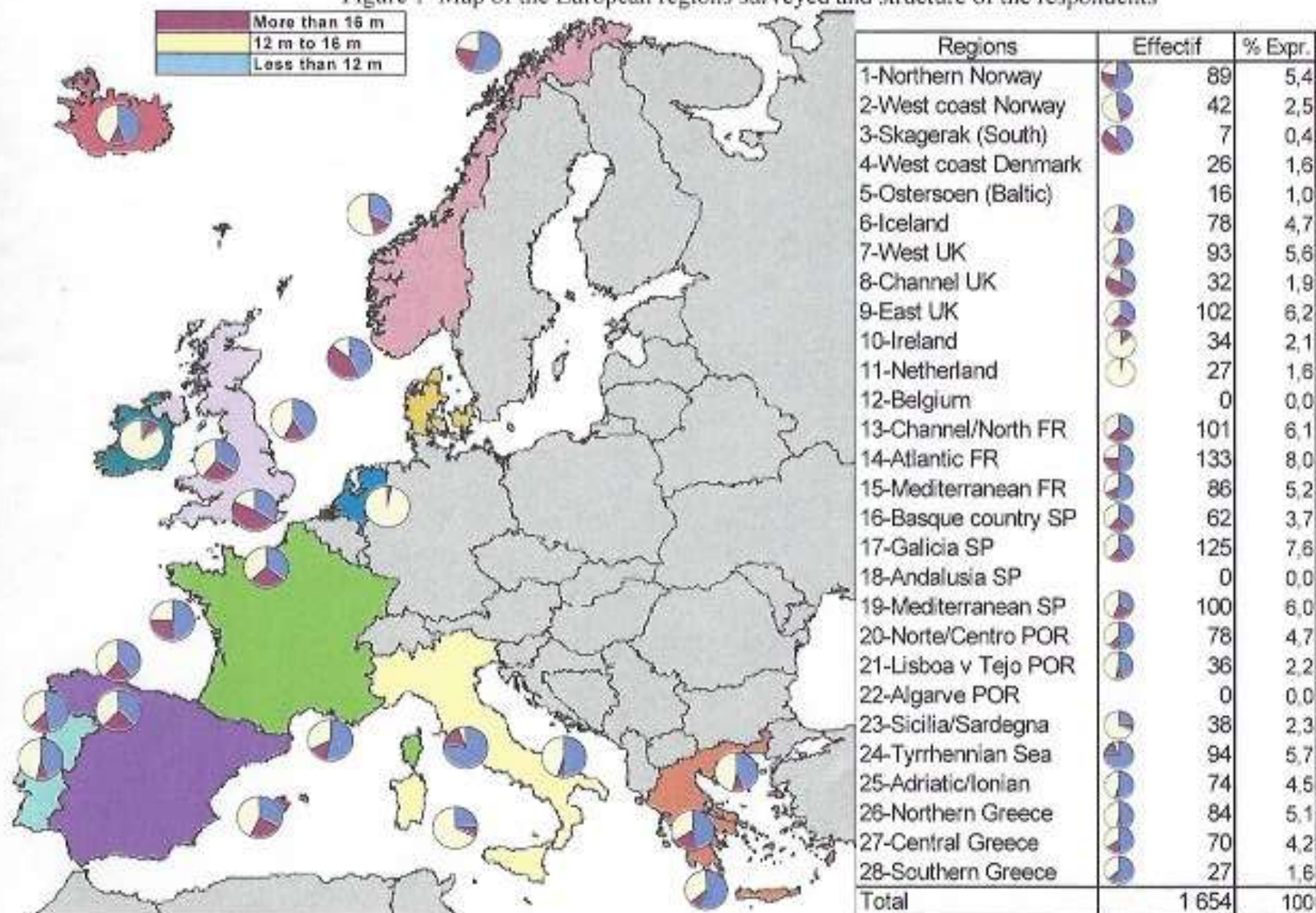
E.P. is a multidisciplinary research project carried out in the context of the PCP revision led by E. Bonino (1999).

It aims to analyze the fishermen's perceptions - valuations of fisheries management measures.

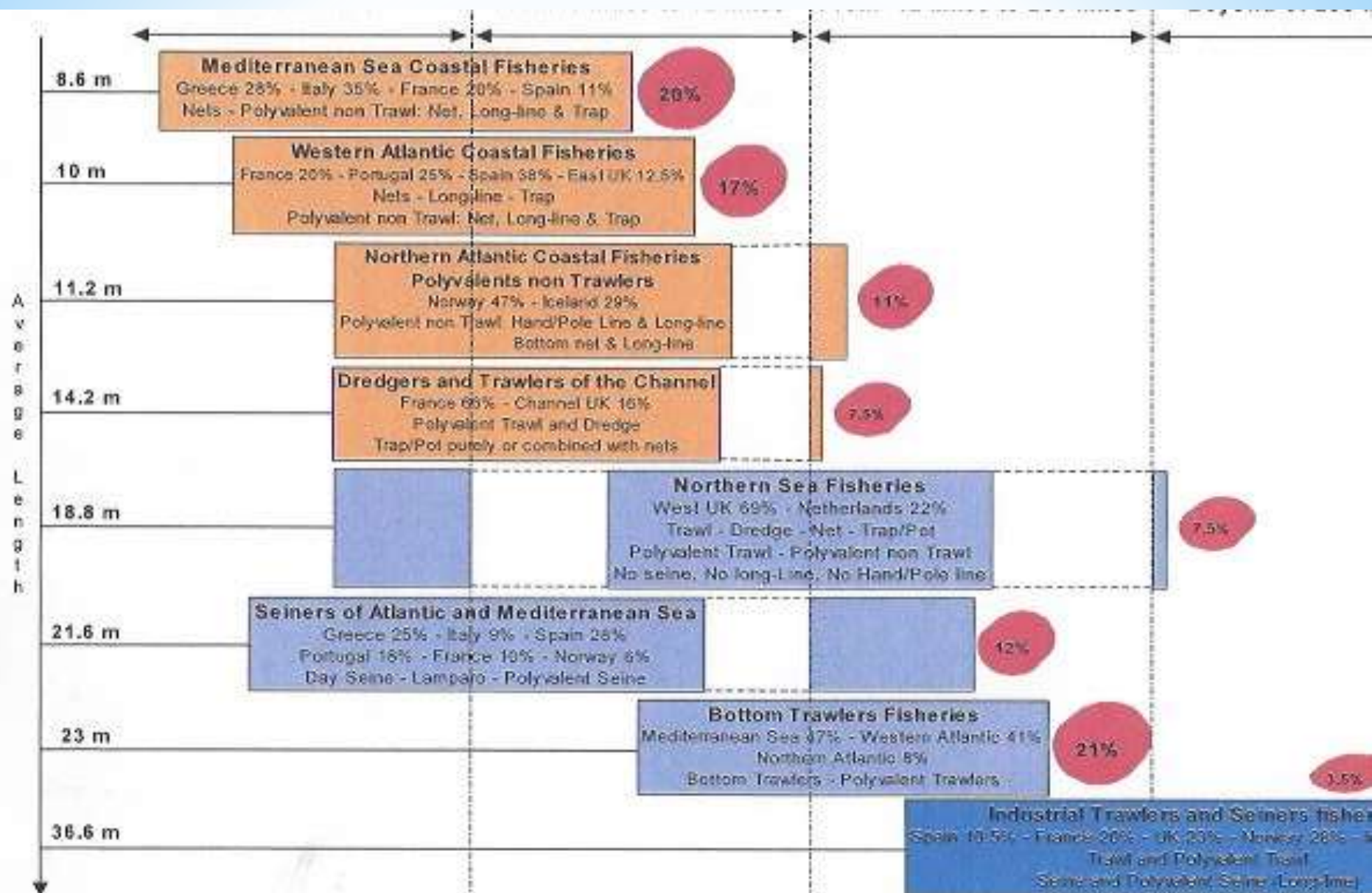
E.P. research group has endorsed and emphasized the ethics completely under looked.

How far ethics will order and command institutional choices, process of change and fisheries governing? This question has been a main issue structuring the guide of deep interviews (200).

Figure 1 Map of the European regions surveyed and structure of the respondents



Typology of the fleets related to fishing extension areas



The majority of fishermen - 48% - use only one gear; 0,7% seven or six gears are found in the Mediterranean.

Table 4 and Figure 8 Fishermen distribution according the number and combination of gear applied

Number of gears used	Number of different gears combinations applied	Number of fishermen
1	11	712
2	39	496
3	58	269
4	44	95
5	22	26
6	8	9
7	1	1
Total	183	1608

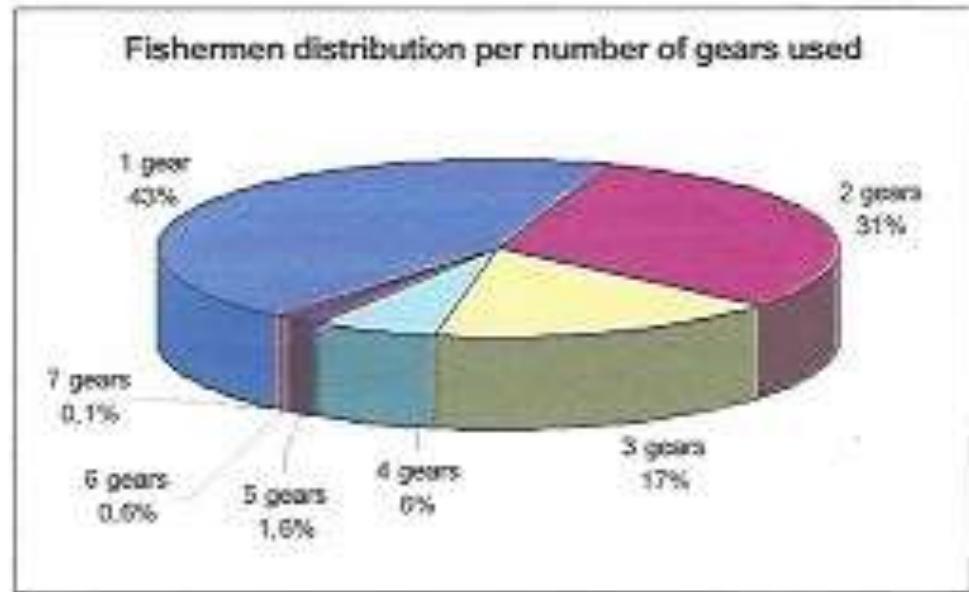
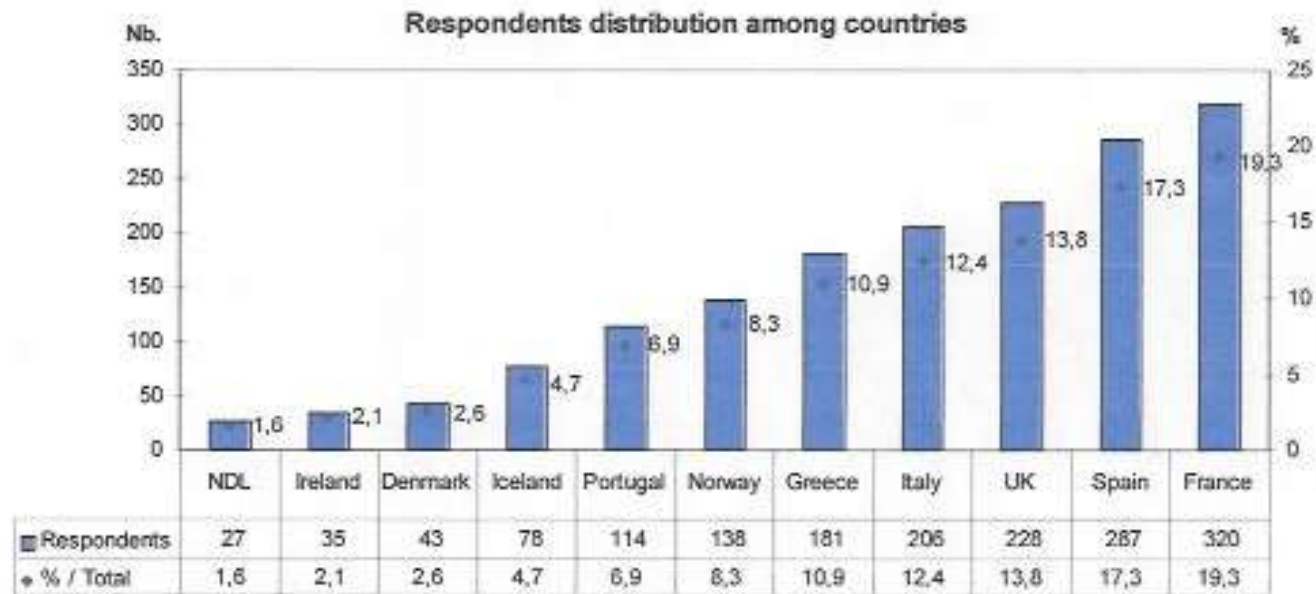


Figure 2 Number and % of respondents per country surveyed



The average respondent rate excluding direct interview led in Portugal and Greece is 17,6% and much higher by those directly contacted: 28%.

The global statement (1657) respondents shows that fishing industry experiences serious problems due to overexploited fish resources.

Figure 10 Fishing industry statement

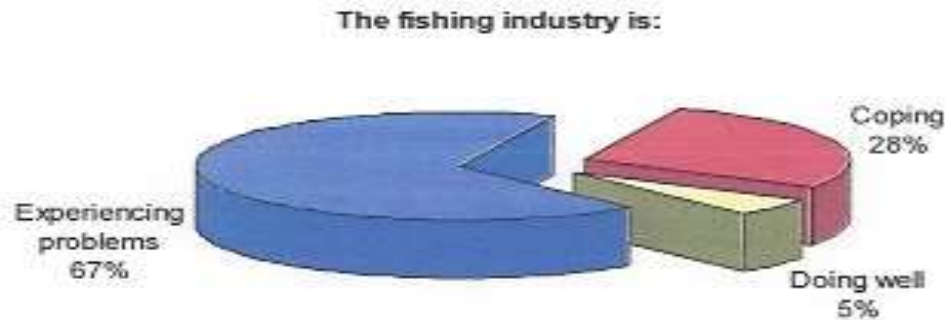
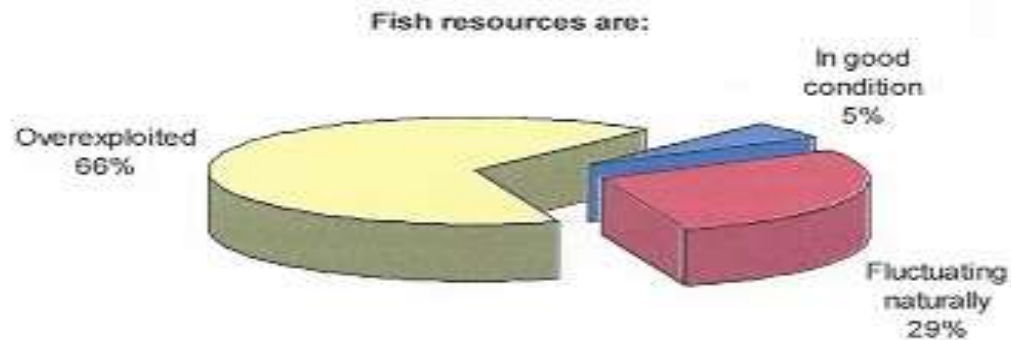


Figure 11 Resources statement



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- ⁷ - A global statement of fisheries and marine ecosystems
- The problems in fisheries and their causes
 - Governance of human to nature relation in fisheries
 - Governance of human to human relation in fisheries

Figure 12 Marine ecosystems statement

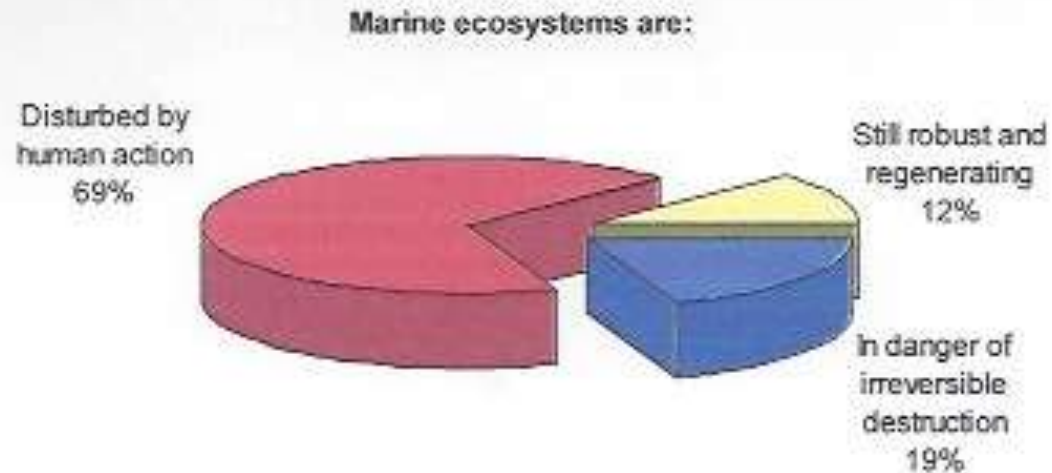
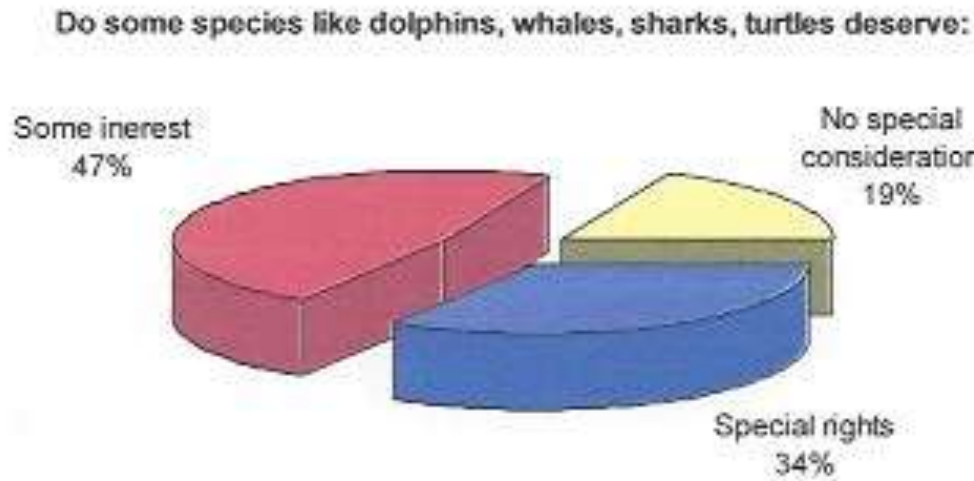


Figure 13 Consideration for some species



If the main representation is that marine eco systems are disturbed by human activity, it is worth to state that they are in danger of irreversible destruction, too. These respondents are those who give rights to species at risk.

It is worth to state here that if the dominating representation of the sea as a place to work and making a living from extracting fish resources, 7% classify the sea as a place of freedom and more a place of dreams.

Figure 14 Fishermen's representation of the sea

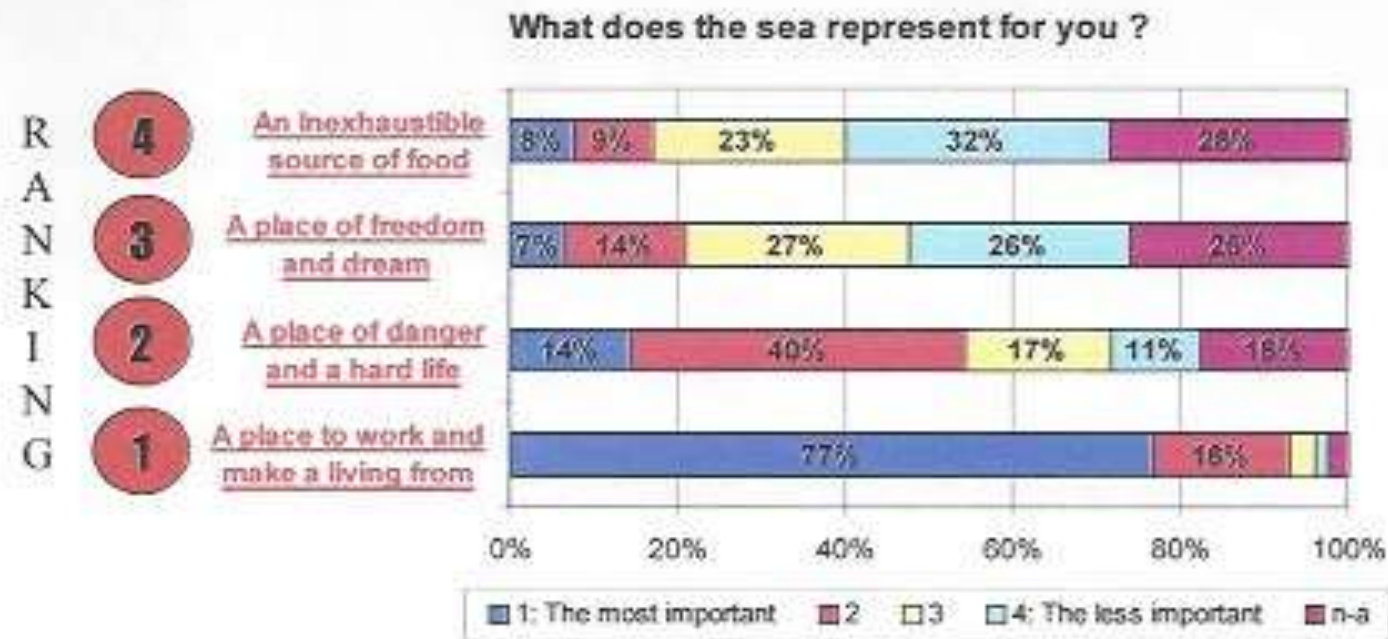


Figure 16 Fishermen's Sea representation and their global statement on fisheries and marine ecosystems

Sea representation		GLOBAL STATEMENT ON FISHERIES AND MARINE ECOSYSTEMS				Optimist ↑
		Fishing industry	Fish resources	Marine ecosystems	Dolphins, whales, sharks, turtles	
+ Work	Deep-sea and coastal fisheries of Northern Atlantic (Iceland & Norway)					↓ Pessimist
- n-a	Trawl, net, longline, seine	+	= +	+	= -	
- Freedom	(It is to note some Mediterranean vessels)					
+ Work	Coastal fisheries of Eastern Mediterranean (Greece) and Iberian peninsula (Central Portugal)					
- Danger	Polyvalent non Trawl, Net, Longline, Trawl	-	-	=	= +	
- Food						
- Freedom						
+ Work	Bay of Biscay/Irish Sea and Channel Fisheries (France & UK)					
- Danger	Polyvalent non Trawl, Polyvalent trawl / mainly coastal	-	-	=	=	
- Food	It is to note vessels from Western Mediterranean Sea					
+ Work	Coastal fisheries of Western Mediterranean and Adriatic, Fisheries of Northern Sea (Spain, Italy, France & UK)					
- Freedom	Net, Long-line, Bottom trawl	-	-	=	=	
- Food						
- Danger						
+ Work	Coastal fisheries of Mediterranean Sea (Greece & Italy) & Fisheries of Iberian Peninsula (Northern Portugal)					
- Danger	Net, Trawl, Seine, Trap, Polyvalent non Trawl	-	-	=	=	
- Food						
- Freedom						
+ Freedom	Coastal fisheries of Tyrrhennian Sea and Northern Portugal					
- Food	Net or Polyvalent based on net	- -	-	= -	+	
- Danger						
- Work						
+ Work	N-A FISHERMEN					
- Danger/n-a	Fisheries from Atlantic to Northern Sea	- -	- -	= -	= +	
- n-a	Spain, France, UK, Norway (additional Iceland and Italy)					
- n-a	Diversity of gears					
+ Work						
- Danger						
- Freedom						
- Food						
+ Work	SAMPLE'S POPULATION					
- Danger		-	-	=	=	
- Freedom						
- Food						

This table allows to consider the issues, which strongly opposes (in the global sample) fishers groups and two types of sea representations.

Figure 17 discriminating factors between the two most opposite groups in terms of global statement and sea representation

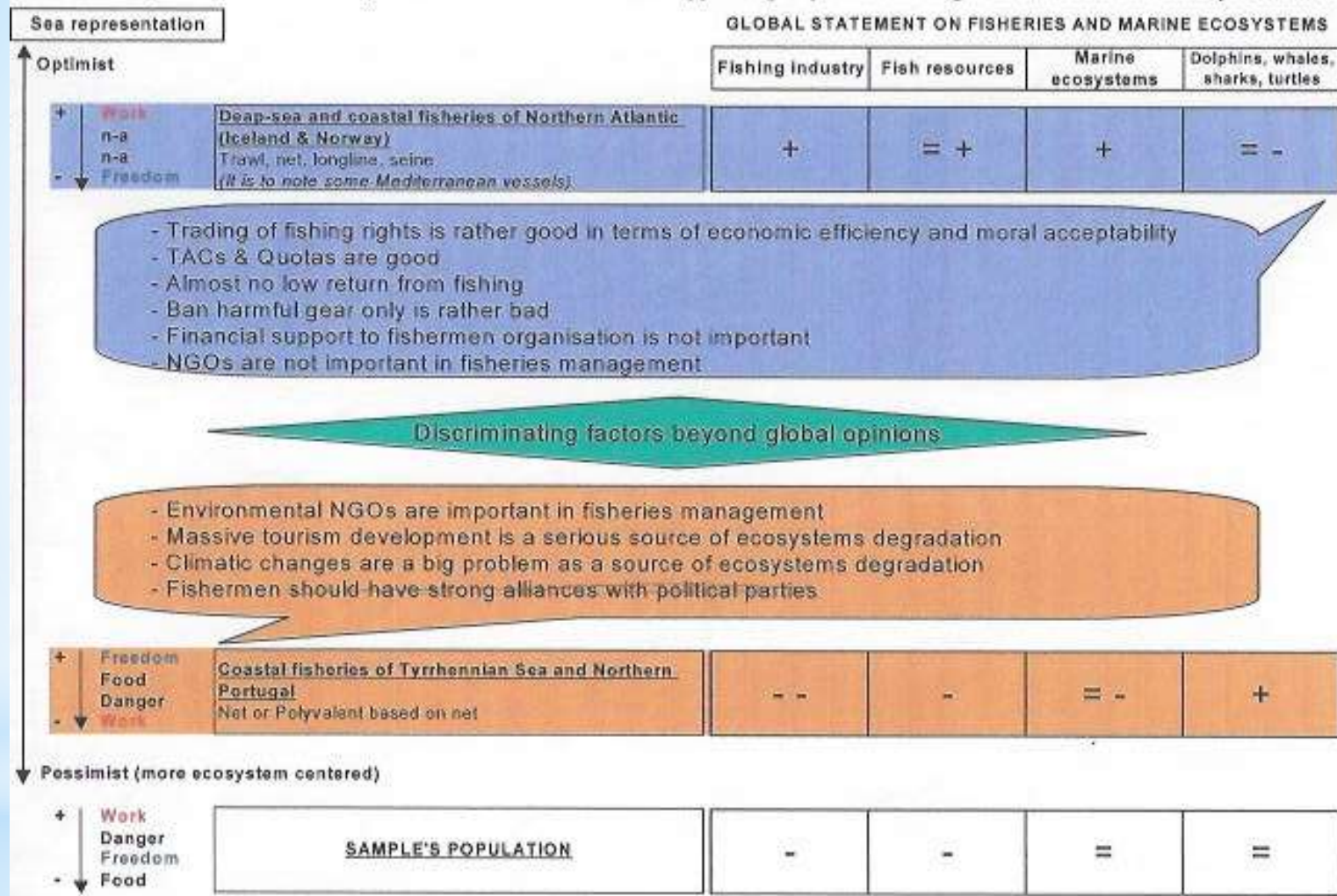
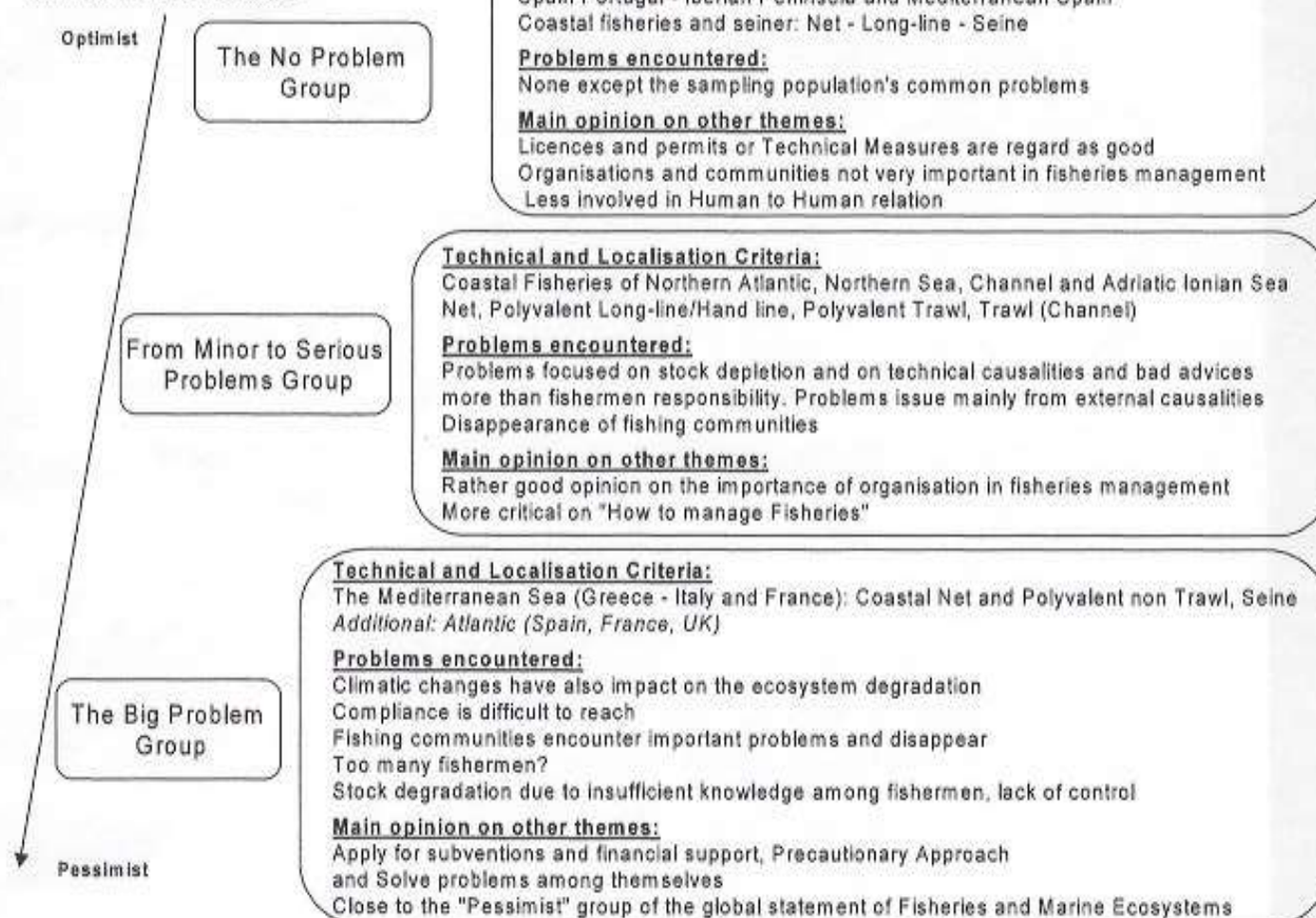
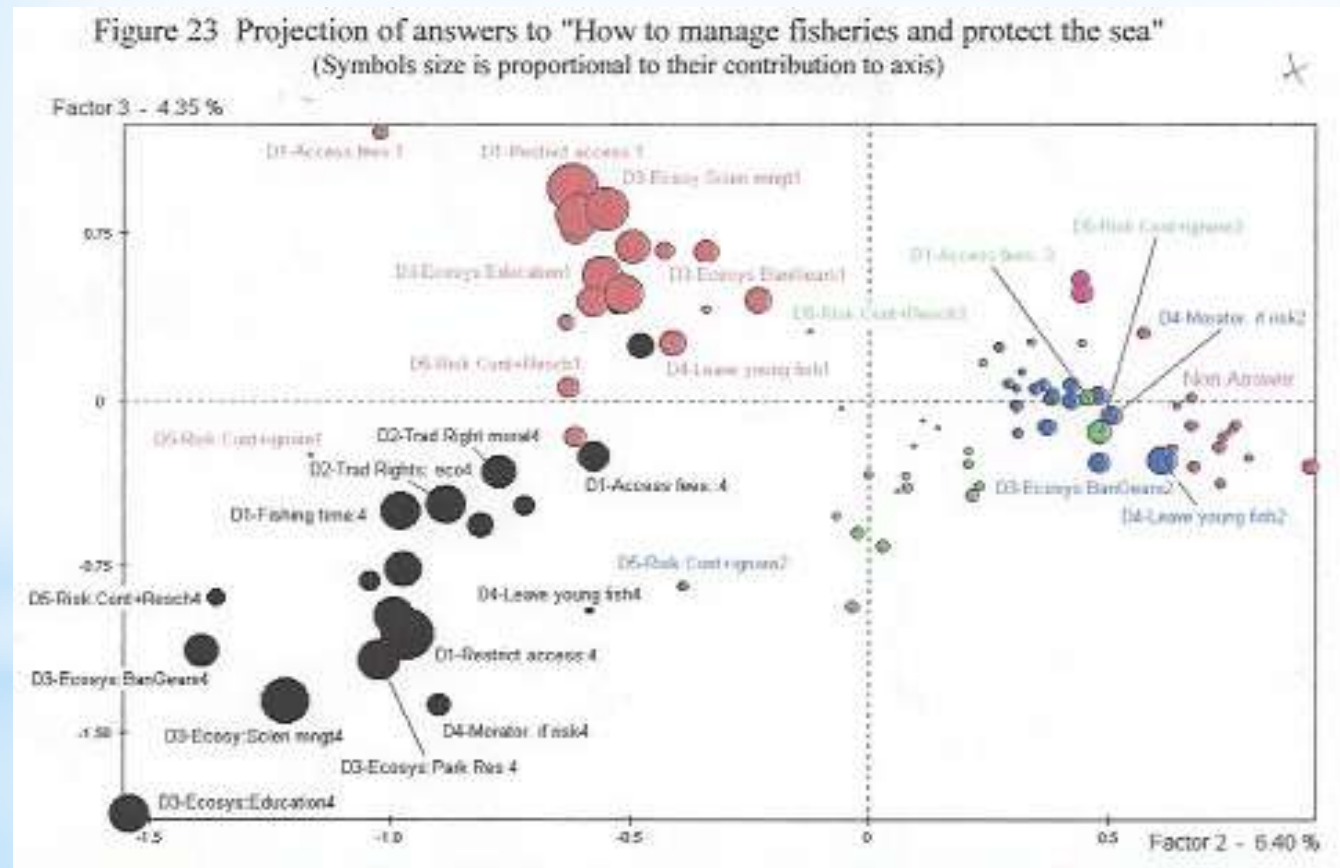


Figure 20 Typology of fishermen according their opinion about problems in fisheries and their causes

Perception of the problems in fisheries and their causes



One of the main outcomes of the multivariate analysis allowing to state the relationships between individuals and variables. First axis represents non answers. Horizontal axis factor 2 opposes individuals giving mitigated answers to those with clear cut answers: very good or very bad. Vertical axis factor 3 represents the approbation of the items (how to manage fisheries and protecting marine protecting eco systems).



Valuations of the State of Mediterranean fisheries, marine eco systems, tools and actors involved in their restoration (after Elsa Pêche, 2000)

- * B3: State of the fish resources
- * B4: In your opinion - marine eco systems are.....
- * B5: In your opinion do some species like dolphins, whales, sharks, turtles deserve rights?
- * C1: The cause of marine ecosystem degradation
- * C5: The cause of problems in fishing communities
- * D1: How do you regard the following instruments?

	B3	B4		C1		C5		D1	D1
Med. samples	fish resources Are overexploited	Irreversible destruction	special rights for some species	damaging fishing practices	urban industrial pollution	difficulty to recruit young people	disappearance of local fishing communities	technical measures as mesh size etc.	restricted access to fishing areas
postal Med. fishermen: 573; 37% of the respondents	68 %	15%	42%	76%	78%	83%	71%	66%	63%
Greek fishermen 181; 2,9%	93 %	10%	42%	85%	78%	81%	70%	71%	62%* *fishing time: seasons, days at sea 74%
Italian fishermen 206; 12,4%	57%	22%	40%	76%	69%* *climatic changes 71%	93%	84%	53%	55%
Italian coastal fishermen 116; 0,7%	55%	28%	49%	71%	68%* *climatic changes 90%	93%	82%	55%	60%

	D3			E3		E5				
Med. samples	increase ecological education and awareness	scientific management of eco system	set up marine park or reserves with restriction of fishing	solidarity with local community	solidarity with other fishermen	environmental NGOs	fishermen organisations	fishing communities	scientists	politicians
Med fishermen: 573; 36% of the respondents	90%	84%	76%	95%	83%	51%	96%	93%	85%	49%
Greek fishermen 181; 2,9%	93%	92%	82%	90% *solidarity with industry 98%	82%	76%	92%	98%	88%	56%
Italian fishermen 206; 12,4%	87%	78%	56%	78%	96%	36%	97%	93%	91%	42%
Italian coastal fishermen 116; 0,7%	91%	75%	62%	73%	97%	42%	99%	90%	68%	46%

D3: What are the best ways to protect marine eco systems?

E3: What kind of solidarity is important for fishermen?

E5: Which of the following groups is important in the management of fisheries?

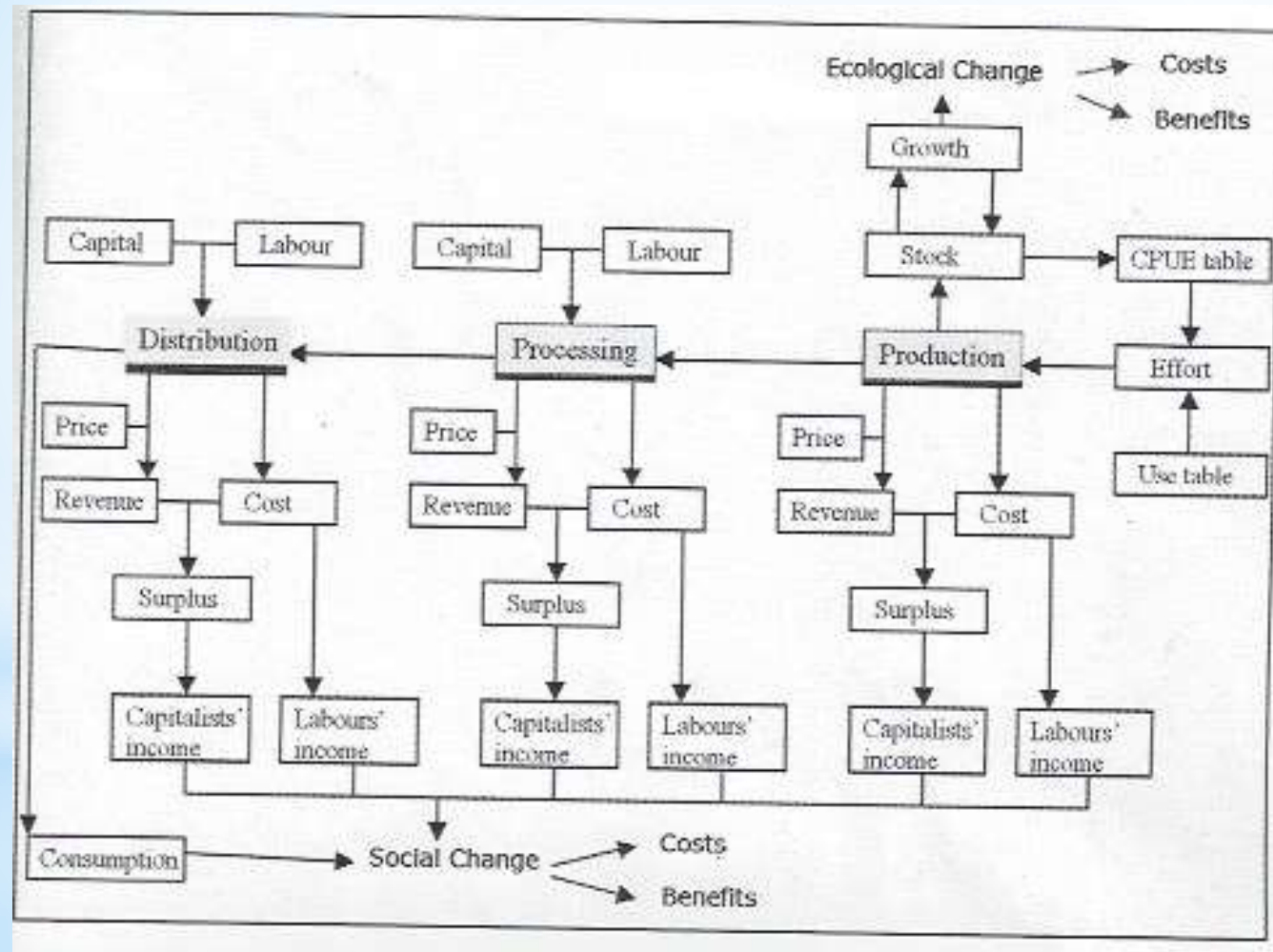
ECOST PROJECT

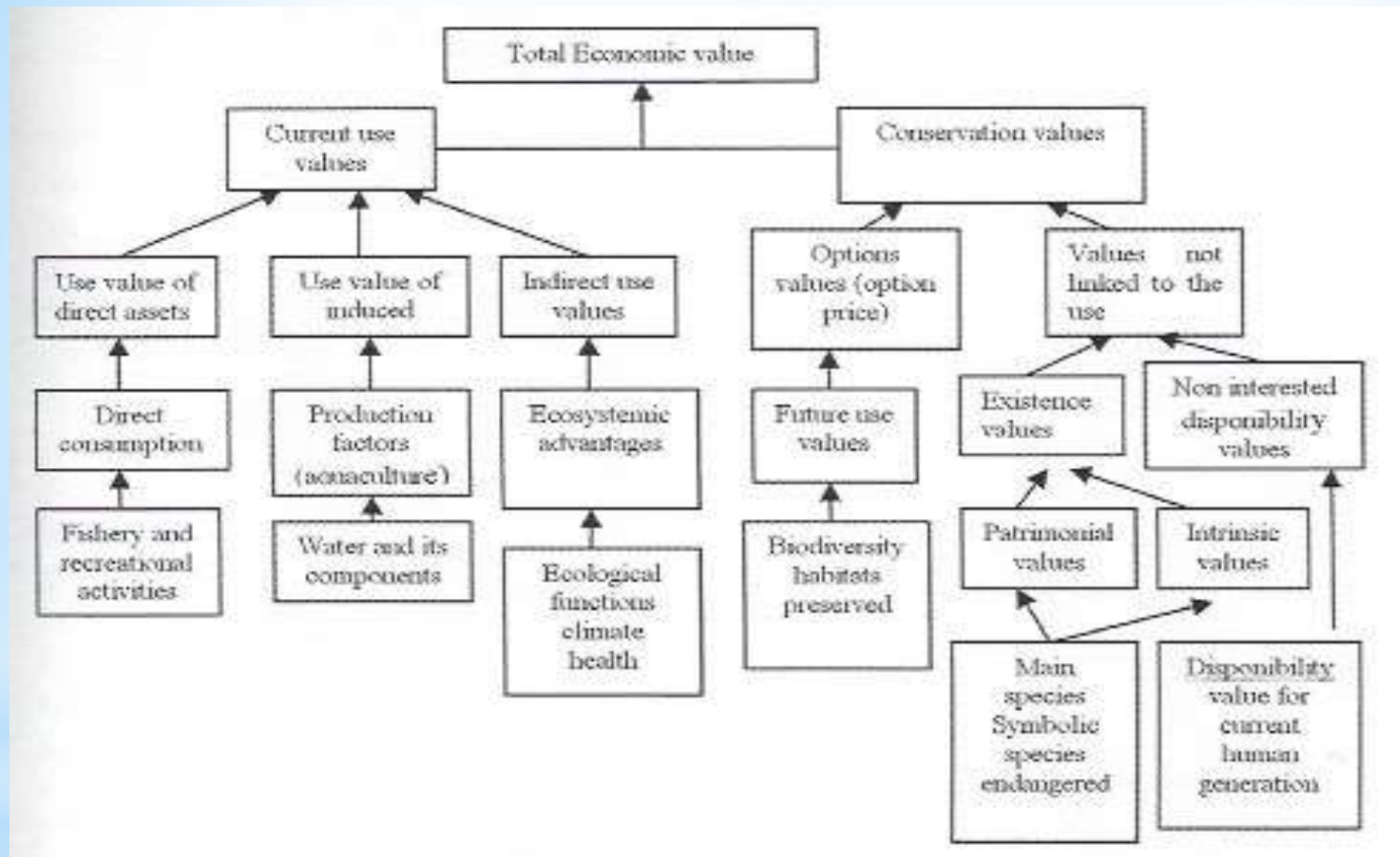
(Ecosystem, societies, consilience and the precautionary principle. Development of an assessment method to establish the societal cost of the best fishing practices and efficient policies)

is an interdisciplinary project aiming to the elaboration of a model capturing the full cost of damaging fisheries and eco systems (Failler and Pan, SSI, 46,1, 2007).

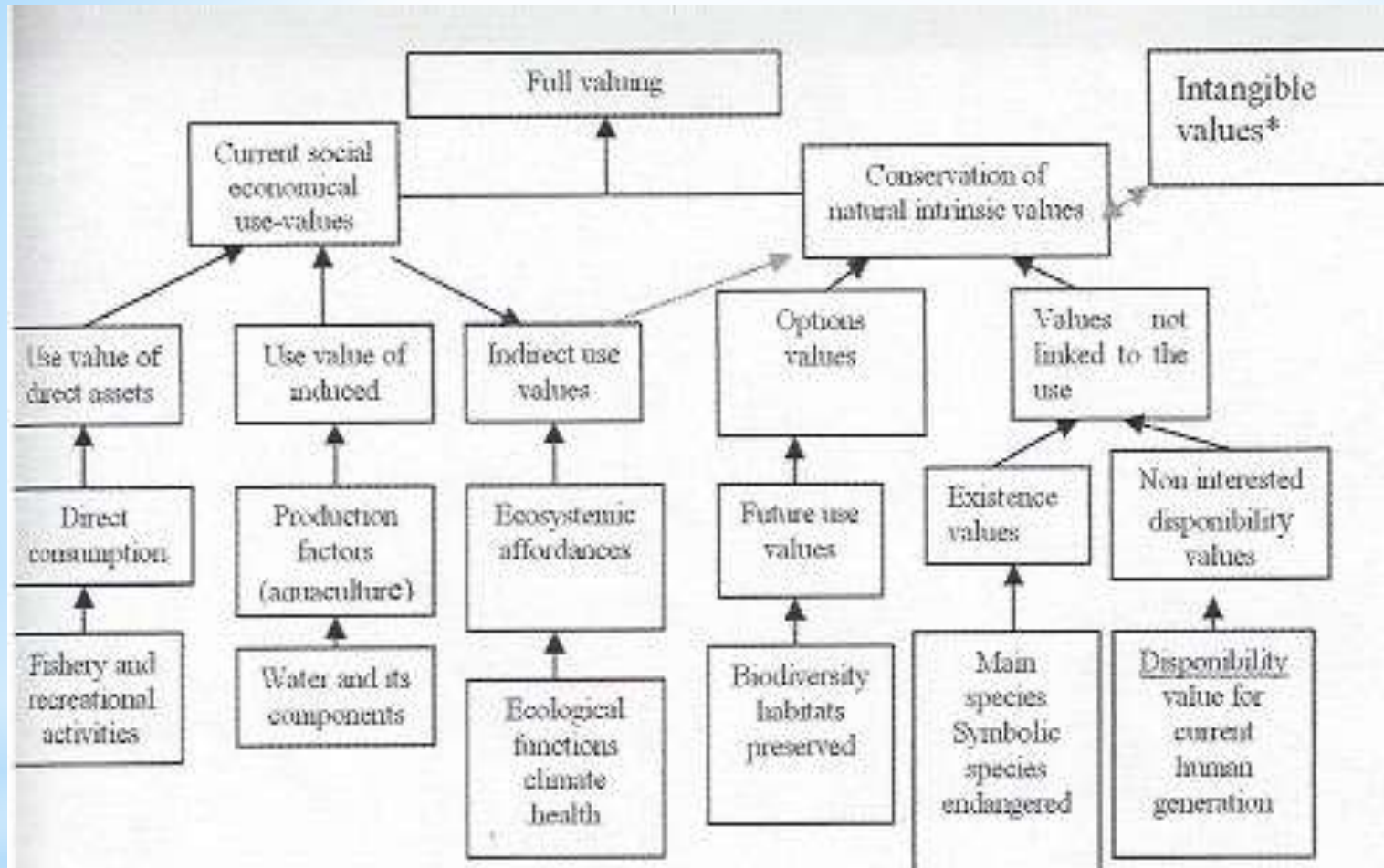
In this accounting of costs and benefits the full valuing takes in consideration conservation's values, not linked to the material use such as intrinsic values and intangible ones such as the sense of place or therapeutic role of sea scape. The field of these values is a complex one and requires a differentiated analysis of what they are (Collet, SSI, 46,1, pp.35-66). This anthropological analysis has been confronted with D. Pauly critics in regards to such a trend and the "inconsistent role of anthropologists in fisheries management" (MAST, 2006, v. 4, n 2, pp. 7-22).

This table presents the economical trajectory pursued in the Ecost project





The second table shows how quantitative economic valuing looks for to integrate qualitative conservation values, especially intrinsic ones. Such a way placing price tags on the marine and aquatic species and ecosystems has made humans the most cunning and innovative prey hunters.

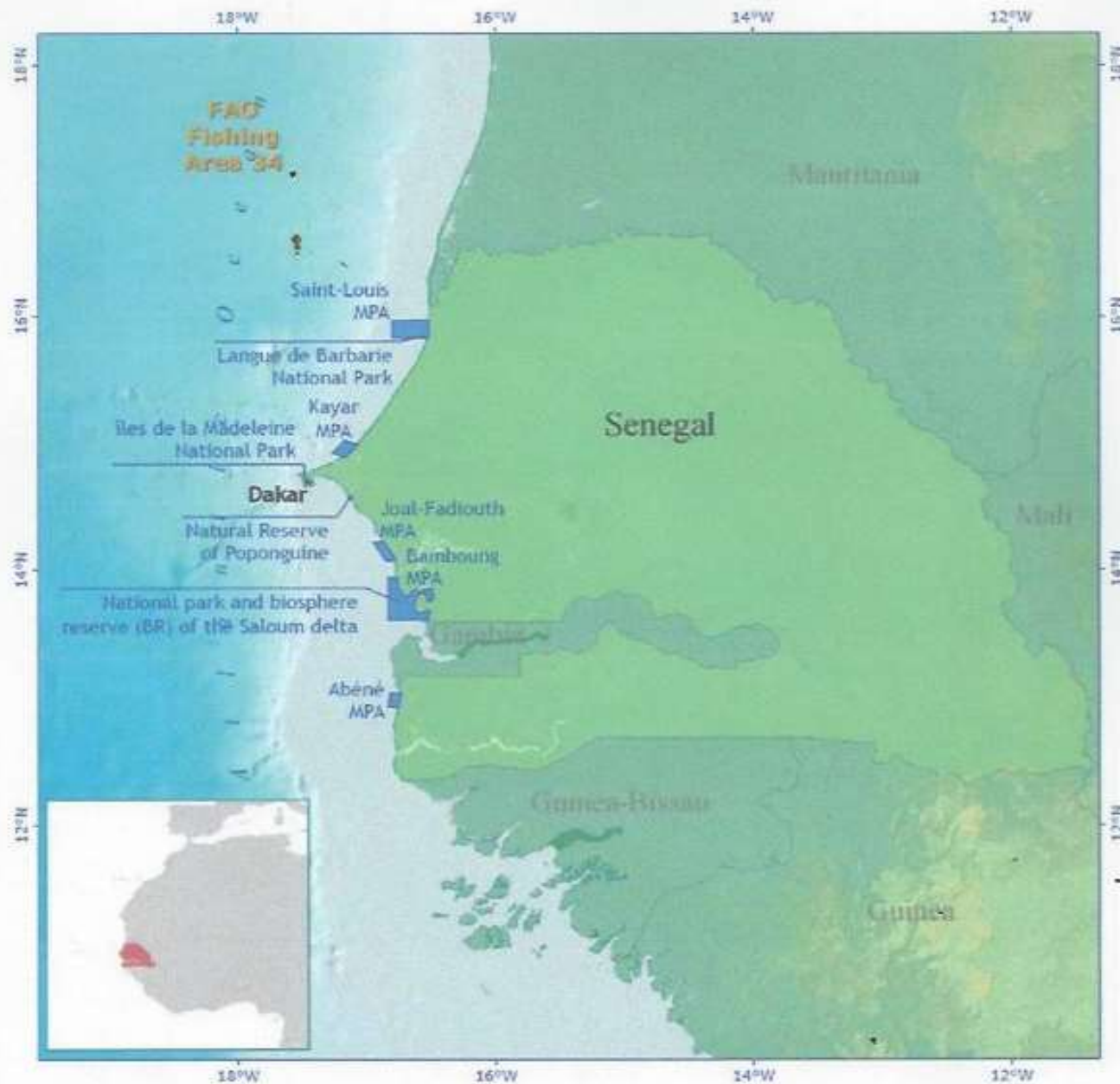


The third table puts in light the importance of the field of conversation values, including the intangible ones: recreative values, spiritual ones, which inspire people to connect to the sea places, aesthetic artistic educational or therapeutic ones.

Senegal Yoff

- * Senegal is a secular country with a population over 13,5 millions and considered as a Moslem country.
- * Its artisanal fishing economy is composed of 12.000 canoes between 9 and 10 meters and 14 to 19 meters for the purseiners.
- * Since 2004 fishing management institutions are struggling to set a new access regime based on licenses.
- * The structuring reform includes *fishing* MPAs as a tool of management, which clashes with that one of the Ministry of Environment to protect sensitive environment.
- * The shifting of top down course has been pushed forward by the new Local Fishery Council.
- * Where at risk fishing resources and eco system has been perceived fishers have promoted monitoring brigades supplying the six official guard coasts and claimed for three new MPAs adding to the five ones, already set up.

Map of Senegal and FAO Fishing Areas



0 50 100 150 200
Nautical Miles

Map Projection: Equal area
FAO, 2011



The numerous canoes of Yoff



One of the streets of the fisher's village of Ngor where we inhabited. With this photo we introduced the works and days of Senegalese fishing community at Yoff and St. Louis Senegal.



A young woman with a rich hair dressing is preparing the high valued Tiéboud Gène (couscous prepared with the head of the blue fish, more important than it's flesh).



Repartition of the fish by a woman (bonito species). This captures are destined for other women groups who are well supplied by this canoe.



Women
scaling
sea
breams
on the
beach of
Yoff



Tools of work of fish sale woman on the work table Dagugoukaye (second left to right):
Boka (a long knife),
Wassoukaye (a grater), Diaassi (machete),
Portou or Bak (a little mass) and a small besom to clean the table of the scales.



Small coastal workshop of drying and salting the fish on one beach of Guet Ndar. The fish dried can be brazed, too (Ketiak).



Large
workshop of
drying and
salting the
fish: Sali



A sale fish woman of the market of Soumbédioune (fish village between Ngor and Dakar) is using the little mass or portou to strike the Diaasi (machete) in order to slice the already prepared Small Captain.



Women are not only playing a central role in the fish processing, but are central persons in organizing yearly rituals *Tuuru*. This priestess wears a Boubou Faata, Serrou, Dialawali, emblematic of one of the two matrilineal descent lines. The priestess wears the “sacred” necklace of precious stones, *peme*, representing the spirits of the ancestors and a cross belt, which symbolizes a very high function and powers. She leads the *Tuuru* ritual.



Third moment of *the Tuuru*. The site is constituted of a well situated in a large hole, edged with big stones and sheltered by a Baobab. Assistants of the priestess will turn around seven times around the well and offer milk on the stones.



Very near of
the sea the
groups of
sacred
women are
offering the
nack
skimmed
milk at the
place where
the beefs
were offered
to the *djinni*
mame
ndiarré diop
coming up
from the sea.



Island of *Teugene* and the sea are the house of the *djinni Mum Woré* Moll. Priestesses leading the procession throw in the waves offerings which are brought to the *djinni* by the sea. The sea as such is especially valued in the dominant animist vision. Abundance of fishes and fishermen security depend on the will of the the sea goddess. The holiness

attributed to the sea can be appreciated to the fact that frequent baths at the occasion of release from prison whatever will be the social status and in case of therapy pursued in the mental disease, considered as breaking an alliance between a man and its spirit. Launching a canoe or restoring health demand immolations.



Holy site
on the
beach of
Yoff
devoted
to the
djinni
Mame
Woré
Moll of
the small
island
Teugene.
It is a
individual
altar.



A long the
beach facing
the holy sea
and
important
marine
sanctuary



It houses a large kind of basin with three stones, which symbolize the arm chair where the first protector of Yoff the djinni Mame Ndiaré can observe and monitor the sea and the village. These three stones represent the three small islands of the Peninsula of Cape

Verde (Madeleine, that one of Ngor and Teugene of Yoff). Offerings are made to the three stones during the procession of Tuuru by the priestesses who again turn seven times around.



The gesture
of a Guet -
Ndarian
fisherman
throwing it's
encircling
net in the
Senegal.



A beautiful canoe
prow, true
expression of a
sea art is
provided at it's
extremity of an
ornament on
which is written a
Surâh of Qur'an
on the eternal
face. The form of
this prow belongs
to the boat
building in the
18th century
where the canoe
was called *Gaal*,
surprisingly *Gwl*
in semitic and
Gaulos in ancient
Greek.



The female household washing is the occasion of collective and joyful social exchanges. It is the way to care for the children, too.



This last slide regarding the livelihood of Senegalese fishing communities shows how women play a customary role in the buying fish on the beach of Yoff.

Perceptions of the sea in Islamic countries

- * Senegal officially considered as an Islamic country the animist sea representation plays an important role. The sea is “sacred “.
- * Realistic consideration of it's alarming state is perceived as “a normal trials and tribulations” against which fishers have no power leading so a fatalist attitudes or eco fatalism.
- * What is the situation in other Islamic countries? The case of Misali Island in Zanzibar where “an Islamic ethical approach has been carried out by the CARE NGO to save the rich biodiversity of the rich coral reef (250 fish species, 40 types of coral) constitutes an interesting issue.
- * In the Qur'an the sea and the fish according to the Islamic expert Hartmut Botzin (“Der Koran”, 2013) are a very marginal issue (1 hits for the sea, 5 for the fish) compared to the conspicuous sure of the fear of Allah.

- * In the revised edition of “Environment protection in Islam” (IUNC, Bagader 1994) marine nature is not all considered as the air, the land, water, plants and animals.
- * Thus, CARE has been constrained to renew the framework of the Qur'an in order to introduce the sea protection and restoration of its bounty.
- * The implementation course is based on Madrassa, Mufti office to convey a new vision of Misali as Hima or no take zone.
- * The story of this Islamic project does not tell if the protection of coral reef has been effective or not. This project remains top down living to think if such direct pathway from religious core values to the operational and effective measures fits with the much more socially and economically advanced Moslem country where the secularity can be embedded in the constitution. In the case of Egypt it would be pertinent to conduct such analysis.



In Alexandria March 2012, we led a very first ethnographic survey. This group of fishers are on the beach of the Mosque.



Small crafts with horned prow, which records those of the Homeric period in Ancient Greece.



Restoring a little fisher boat.



The carpenter is using a short wooden hammer and a special iron chisel to caulk.



Net and very traditional tools, used in all the Mediterranean, on the deck of the small boat



A small craft decorated with Ka'ba representation.



Prow of a little boat decorated with two jumping dolphins.



Prow of a little boat decorated with a high symbolic representation: the harpooning of the devil eye.



The cemetery of little boats near the Mosque.



An old man binding the rope to a wooden bollard to fix the awning protecting the little wooden boat from the sun. Worthy to note the face to face between small crafts and the industrial boat.



Have a look to the way of doing the work.



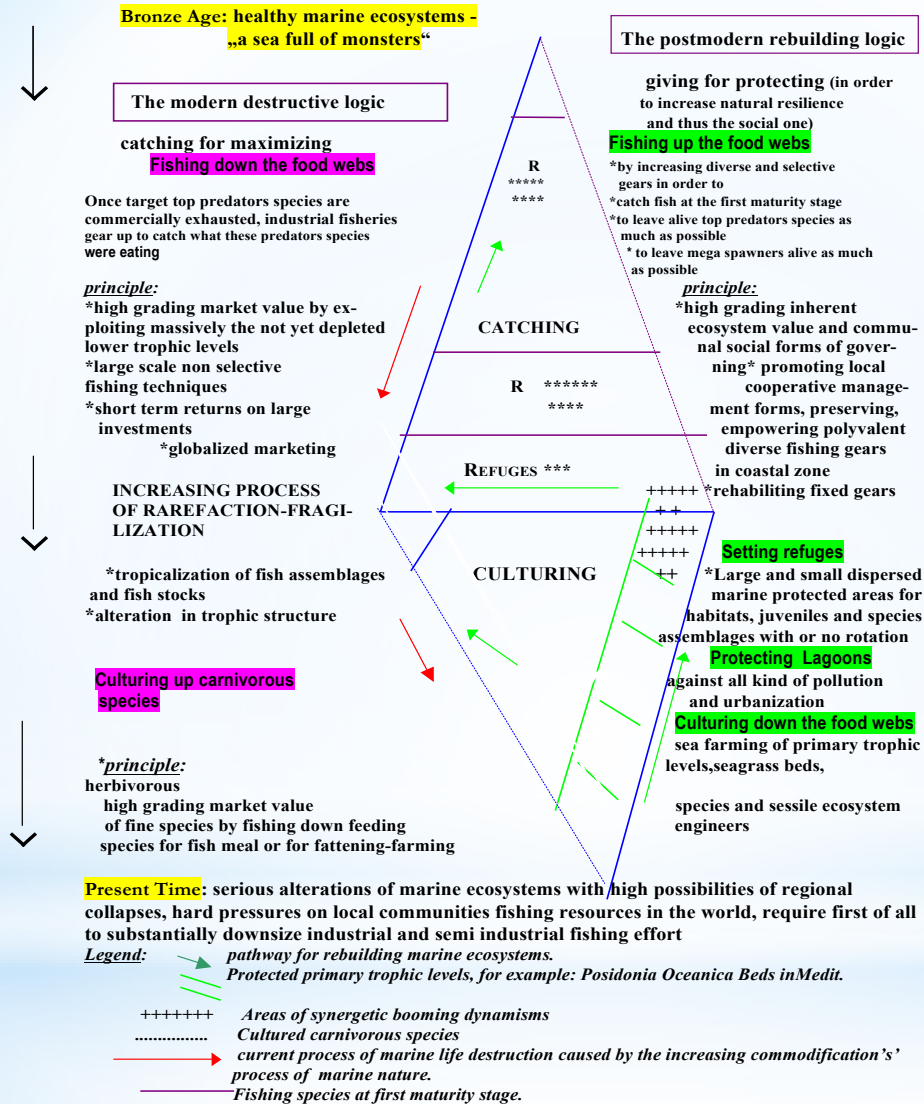
The old fisherman at rest observing the ethnographer. Surely he would have been a precious collaborator in a survey, which had to be interrupted.

- * The brief review of the Islam social context in which the implementation of MPAs is at stake has revealed the existence of two logics where the value given to the sea and the restoring of deeply altered marine eco systems are very different, if not opposite.
- * The animist valuing of the sea in Senegalese communities, the important role that women play in the processing and selling the fish products are in strong contrast with the Misali fisher's representations where no value is given to the fragile providing sea. An innovative operation referring to the Qur'an prescriptions has been introduced in order to save the coral reef putting the ignored sea life at the center, with the proposal of a no take zone implementation.
- * The only players at stake are visible men and important authority like the Mufti.
- * These contrasted cases show the complexity of the necessary practices aiming to restore marine eco systems.

Future designing

The brief review of Islamic social context in which the implementation of MPAs is at stake as revealed the existence of two logics where the value given to the sea and the restoring of deeply altered marine ecosystem are very different, if not opposite. The animist valuing of the sea in Senegalese community, the important role of women in the processing and selling fish product are in strong contrast with the Miscalì fisher's representations where no value is given to the fragile providing sea. An innovative operation reframing in part the Qur'an prescription has been introduced in order to save the coral reef putting the ignored sea life at the center with a no take zone implementation. The only players at stake are visible men and important religious authorities. These contrasted cases show the complexity of the urgent restoring marine ecosystems practices.

THE NOUN LOGIC : AN ECOSOCIAL CENTRED PATHWAY FOR HEALTHY FISHERIES IN THE MEDITERRANEAN



S. Collet, Social Science Information, SAGE Publications 41 (4), p.548. Abstracted in CSA database, Aug. 2003; revised by the author December 2003. Presented in Rio, 4-7 October 2007, session "Searching the real values of the sea: the ECOST perspective".

- * **Noun** is first based on concepts developed by D. Pauly such as fishing down the food web.
- * Necessity of deep survey in the fishing communities of the southern shores, including the values approach.
- * The implementation of such a pathway cannot be top down.
- * Core values have to be taken into account in order to avoid the ineffectiveness of the measures and a possible clash between scientists and fishermen.
- * The scientific work of bringing awareness on the state of marine ecosystems is a powerful mean to induce action.
- * How inshore fishers confronted with the eventuality of their disappearance could stay inactive?
- * A top down dynamic like in Misali based on subjection to religious prescriptions is not appropriated. Subjection is objectively the main hindering in the building of a future and the free ability to act cooperatively.
- * The free ability to act cooperatively is a key issue, which contravenes to the Qur'an vision of a man who is the executor of God's injunctions and commands, but with not one of a man who is the steward of God's creation.

What are values?

"A value is a conception, explicit or implicit distinctive of an individual or characteristic of a group (if not a society) of the desirable which influences the selection from available modes, means and ends". (C. Kluckhohn, 1951, 395) Central to human life a value reveals the "principle of upgrading" (L. Dumont, 1977, 1983) which actualises it in a configuration or a system of values and disvalues. Thus, we shall speak of values at sea shaping the social cultural perspective of marine nature.



Voices of the sea: artistic creation on values after Max Ernst

Intrinsic marine values

The intrinsic marine value of marine nature or marine nature (if not a society) of the desirable which influences the selection from available modes, means and ends". (C. Kluckhohn, 1951, 395) Central to human life a value reveals the "principle of upgrading" (L. Dumont, 1977, 1983) which actualises it in a configuration or a system of values and disvalues. Thus, we shall speak of values at sea shaping the social cultural perspective of marine nature.

The double screw of ecological and social reproduction is upgraded. Halielutal livelihoods depend necessarily on marine functions on their bounty. As such intrinsic value of marine nature is irrespective of any form of utility and quantification.

The main operational logic or metric for assessing intrinsic value is the severity of social and legal consequences for violating laws rooted in ethical, political frameworks. These one include today a strong precautionary principle, the shift of the burden of proof on those intending to make a profitable commercial use, the slow growing enlargement of democratic procedures to define and to preserve the field of the marine nature valuable and the setting of protected zones and sanctuaries. In a context of serious erosion of marine system's productivity and functions the world's first maritime nations (as France for example) could put one third of their marine territory in reserve in 2015 showing thus a virtuous example.



Leviathan
oeconomous
devouring marine
intrinsic and
intangible values

Utilitarian marine values

The utilitarian anthropocentric paradigm of marine values has no notion of intrinsic value and asserts, that based on the principle of human preference satisfaction, marine entities, systemic relationships and their functions have a value to human societies because they either directly or indirectly use them currently or in the future. The quantification through direct method (CBA) or indirect (WTP), (WTA) constitute the bulk of the exercise which looks for to set monetized prices on people and marine assets. The logic or the metric is that one of the enforcing and expanding market mechanisms and economic epistemologies (private property rights and pricing of the marine entities and marine functions). Values are reduced to substitutable preferences expressed in the common metric of money. We shall call this currently hegemonic paradigm the new monetism of the market fostering an idolatrous fetishism.

Intangible marine values: the non utilitarian marine values

Intangible values refer to that, which enriches the mind emotionally, psychologically, intellectually, spiritually, re-creatively. They are attributes of an ontological process of self realization inherently opened to the other. (Spinoza, Naess) of the flourishing of the human being and are strongly linked to the marine intrinsic value. They frame what we call a halielutal.

- I. **recreative values** are intrinsic qualities of sea – coastal and deepness scapes that interact with humans to restore or create anew through stimulations of the mind, body and soul.
- II. **spiritual values**: those qualities of the sea places that inspire people to relate with reverence to the "wholeness - holiness" (R. Rappaport, 1999) of marine nature. They correspond to an intimate reconnection with sea places.
- III. **identities values**: the sense of marine place, of belonging, which is fostered through experiential situations. Marine sites, especially favorite sea places link people to these places through experiential settings, myths, legends or histories.
- IV. **aesthetic value**: appreciation of the beauty, harmony, strength and ascribing deep meanings to the prismatic faces of the marine nature.
- V. **artistic value**: all the qualities of marine scapes which arise feelings, inspire imagination in creative expressions.
- VI. **educational value**: the qualities of marine nature which foster expanding enlightenment, understanding and respect between humans, and between humans and sea entities.
- VII. **therapeutic and appeasement value**: the complex relationships between marine places and people which enhance or restore physical and psychological well being.



Flask with marine style: the new
Palaeo Period in East Crete