



上海海洋大學
SHANGHAI OCEAN UNIVERSITY

International Seminary

“International Seminar on Sustainable Seafood Value Chain: Traceability”

In Shanghai

from November 27th to 30th 2018

Bassirou DIARRA / Senegal

OUTLINE

- **I. PRESENTATION OF SENEGAL**
- **II. IMPORTANCE OF FISHING SECTOR**
- **III. MAIN STOCKS SUSTAINABILITY SITUATION**
- **IV. TRACABILITY 'S TOOLS**
- **V. SEAFOOD TRACABILITY: CACTH CERTIFICATE PROCESS**
- **VI. SEAFOOD'S TRACEABILITY : CONTRAINTS**

PRESENTATION OF SENEGAL

Population (Projections 2018)	Total female	Total men	Superficie (km2)	Density (No. of inhabitants / km2) in 2018	EEZ (km2)	Coast length (km)	Capitale
15 726 037	7 896 040	7 829 997	196 712	80	198 000	718	Dakar



II IMPORTANCE OF FISHING SECTOR



www.alamy.com - BM1AW8

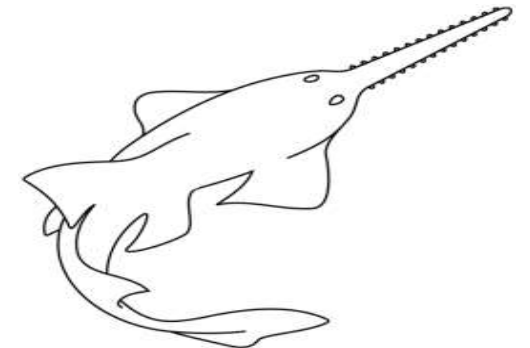
Industrial vessels Trawls, pole and line, purse seiner	Licenses 2017 130 vessels
Small pélagics	07
Tuna	10
Céphalopodes	54
Shellfish (shrimp and crabs)	42
Demersal fish	48
Average Capacity (gross tonnage) and 30 years old	200

Artisanal fisheries

- 22 000 pirogues
- Traditional practices
- Very dynamic
- 80% of landing caught per year
- Wood made
- Targets fishes:
 - Small pelagics
 - Demarsal fishes
 - Cephalopods (Octopus and sepia)

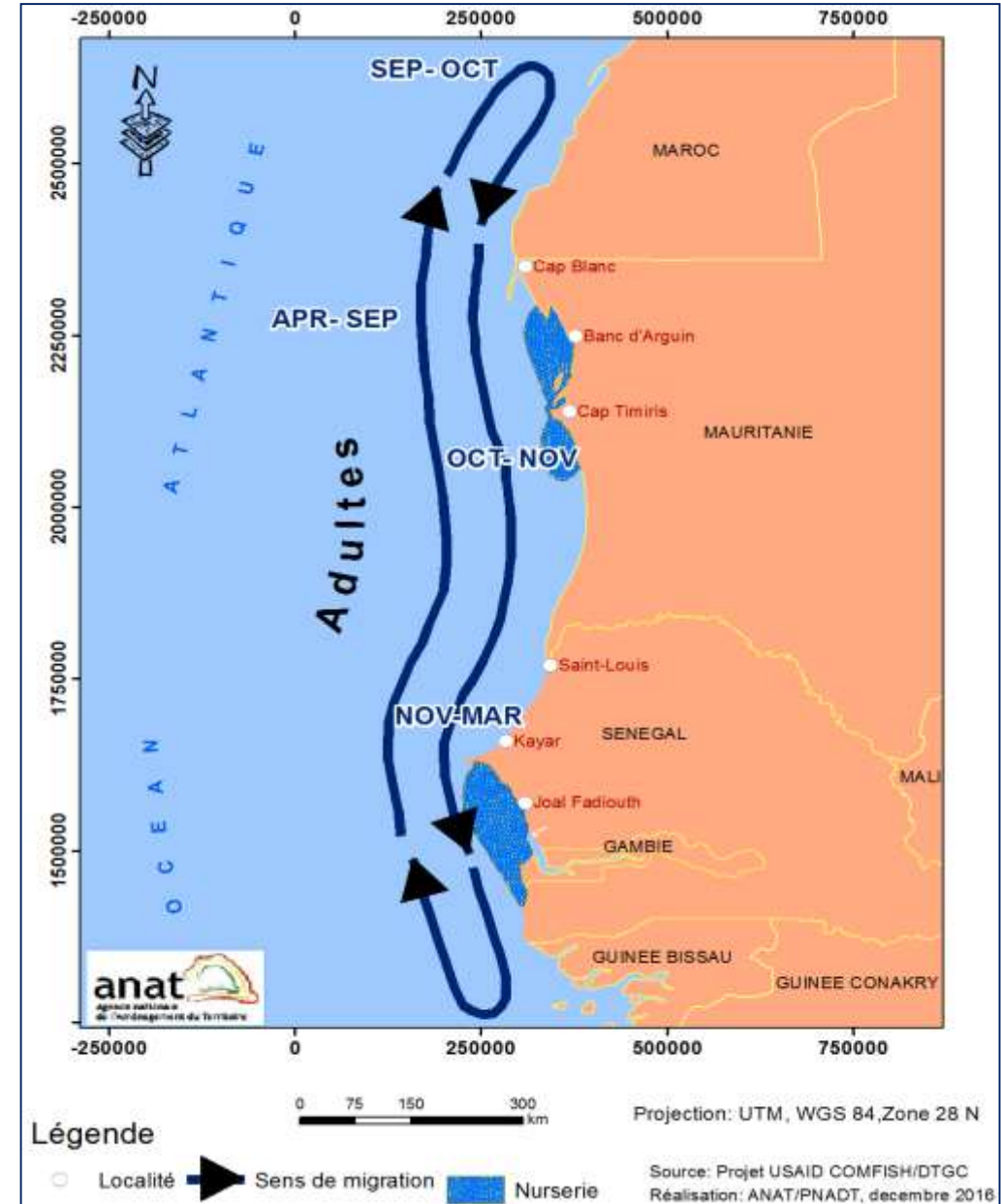
II IMPORTANCE OF FISHING SECTOR

- **EEZ** : upwelling zone +++
- **high biodiversity** : fishes, shellfishes, cephalopods, gastropods ...
- **Landings** : ± 450 000 t/year average (~ 1000 t en 2017/aquaculture)
- **Food Safety** : 75 % animal protein, 20-26 kg of fish/ inhabitant
- **Income** : 600 000 jobs, 3.2 % of GDP, ± 244 billion FCFA of export (2017)
- **Culture** : main communities (lébous, niominka, guet-ndariens), since century 16th
- **Turtles & seabirds** (and their eggs), **aquatic mammals &** and sawfish : **prohibited!**



III MAIN STOCKS SUSTENAIBILITY SITUATION : Coastal Pelagic Resources

- Ex : Round and flat sardinella, yellow and black horse mackerel, mackerel, etc.
customary name: small coastal pelagics
- Seasonal migration between Morocco (North) and Bissagos Islands (South)
- Landings; 350 000 tons/year



III MAIN STOCKS SUSTAINABILITY SITUATION : Coastal Pelagic Resources

Coastal small pelagics	Operating condition, diagnosis
Round & flat sardinella <i>Sardinella sp</i>	Overexploited. Biomass (B) \approx 373 000 t (dont 131 000 t en Gambie) en 2016 \rightarrow dropping \approx 42 % compared to 2015 (B = 577 300 t)
Black makerel <i>Trachurus trecae</i>	Overexploited. B = 138 000 t vs 454 000 t for Carangidae and other associated species
Bonga <i>Ethmalosa fimbriata</i>	Overexploited
Anchovy <i>Engraulis encrasicolus</i> Mackerel <i>Scomber japonicus</i> et Black horse mackerel <i>Trachurus trachurus</i>	Fully exploited
Sardine <i>Sardina pilchardus</i>	Not fully exploited

III MAIN STOCKS SUSTAINABILITY SITUATION :

Offshore pelagic resources

- **Major Atlantic tropical tunas** : *High migratory species* : **yellowfin** (*Thunnus albacares*), **bigeye** (*Thunnus obesus*) et **Skipjack** (*Katsuwonus pelamis*) :
- Management of International Commission for the Conservation of Atlantic tuna (**ICCAT**)
- Senegal is member & General Secretary

Thon albacore



Yellowfin Tuna
Thunnus albacares

Listao *Katsuwonus pelamis*



Thon obèse *Thunnus obesus*



Différencier Marlin, Voilier et Espadon



VOILIER : *Istiophorus albicans*
Voilier de l'Atlantique, Sailfish



VOILIER : *Istiophorus platypterus*
Voilier cosmopolite



MARLIN BLEU : *Makaira nigricans*
Makaire

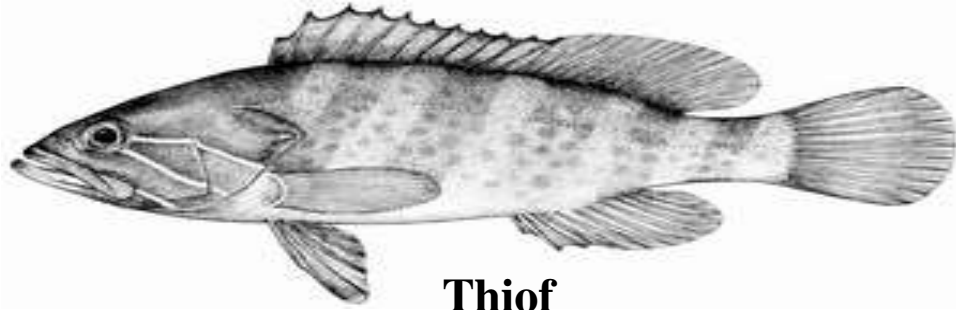


ESPADON : *Xiphias gladius*
Poisson épée

Exemples of offshores pélagics

III MAIN STOCKS SUSTENAIBILITY SITUATION

Coastal demersal resources



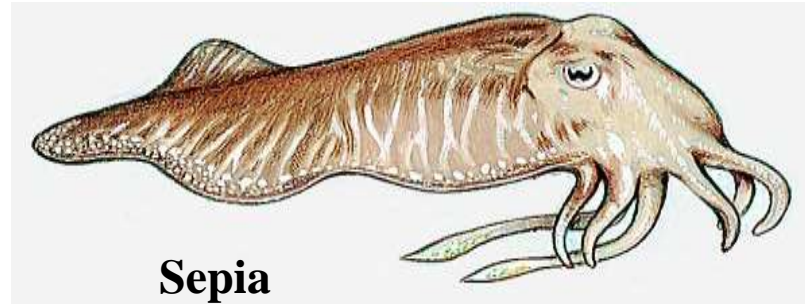
Thiof



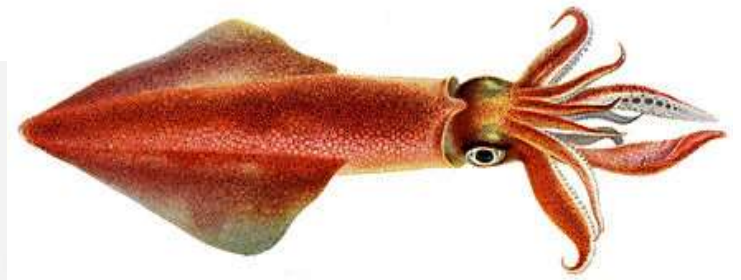
Rouget



octopus



Sepia



Calmar



Pagre



Coastal shrimp

III MAIN STOCKS SUSTAINABILITY SITUATION :

Coastal demersal resources

Poulpe <i>Octopus vulgaris</i>	slightly overexploited - MSY : 9 449 t (Me) - 10 180 t (M)
Pagre à points bleus <i>Pagrus caeruleostictus</i>	Pleine exploitation - MSY : 3 348 (Me) à 3 331 t (M)
Pageot <i>Pagellus bellottii</i>	Slightly overexploited - MSY : 7 375 (Me) à 7 582 t (M)
Rouget <i>Pseudupeneus prayensis</i>	Under exploited - MSY : 1 729 (Me) à 1 627 t (M)
Thiékem <i>Galeoides decadactylus</i>	Under exploited - - MSY : 4 335 (Me) à 3 755 t (M)
Thiof <i>Epinephelus aeneus</i>	Severely overexploited - MSY : 1 074 (Me) à 2 028 t (M)

III MAIN STOCKS SUSTAINABILITY SITUATION :

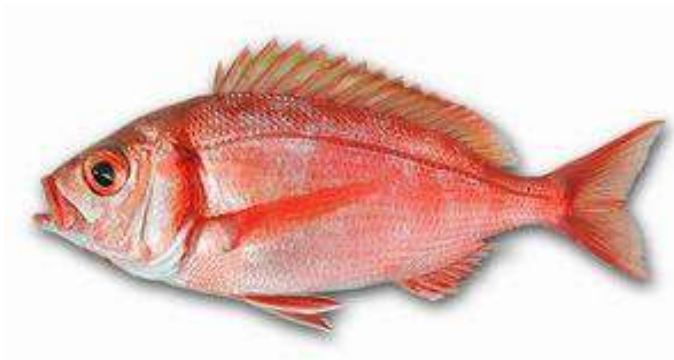
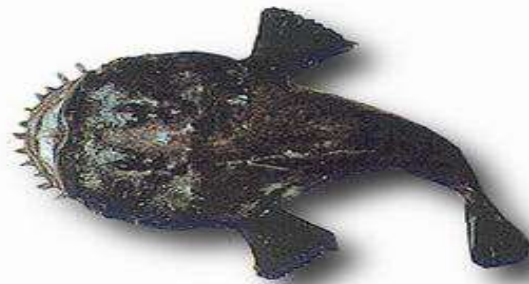
Demersal deep resources

Various crustaceans (gamba and alistado shrimps, Géryon red crab, pink lobster, etc.) and fish (deep toothed fish, black hake, scorpion fish, anglerfish / monkfish ...)

- Much more targeted by Spanish trawlers until 2006, Senegalese (Spanish, timidly) more and more since 2013
- Gamba fishery → concession entrusted to the Senegalese Cooperative Deep Shrimp Exploitation / COSECPRO, 6 armaments, 16 boats

Gamba *Parapenaeus longirostris*

Full exploited . MSY : **2 415 t (Me)** à **2 457 t (M)**



**Exemple of deep sea
démersal fishes**



IV TRACABILITY 'S TOOLS :

- **1 . Legal: international & national**
- **United Nations Convention on the Law of the Sea (UNCLOS):**
 - Sovereign rights and conservation obligations related to the fisheries resources
- **FAO , Code of conduct for responsible fisheries**
 - ecosystem approach
 - precautionary approach
- **Highly migratory species agreement**
- **Flag state agreement**
- **Port state control Agreement Measures (PSAM)**
- **law 2015-18 of July 13 related to fishing maritime act**
- **Application orders and local management**

IV TRACABILITY 'S TOOLS : Legal and institutional framework

- **2. Institutionnel : Ministry of fisheries and maritime affairs**
 - **Maritime Fisheries Directorate** : National fishing policy: Regulations, Licenses and artisanal fisheries registration
 - **Industrial processing Directorate**: Sanitary quality control of seafood products
 - **National Agency for Maritime Affairs**: Management of maritime affairs related to security and safety and management of man power on board
 - **Protection Monitoring and surveillance Directorate**: Monitoring control and surveillance of fisheries; Competent Authority for Coordination to fight against Illegal fishing Activities: **Caught certificate**
 - **Navy and others defense and security forces**: patrollers and security and strategic maritime intelligence

IV TRACABILITY 'S TOOLS

- **3 Flag State Control**

- **Register of Authorized Vessels and pirogues**
- **VMS and AIS**
- **Fishery observers on board**
 - 20 observers on boards for 60 days
 - Collecting data fisheries and implementing fishing regulation
- **Airplanes patrols**
 - One air plane 15 hours / week depend on vulnerabilities of the moment
- **Maritime Patrols:**
 - 02 patrol boats 33 m ,
 - 02 of 20 m
 - and 04 of 12 m

- **4. Port State Control**

- Inspection and control at the port
- Request to fight against IUU cooperation

V SEAFOOD TRACABILITY: CATCH CERTIFICATE PROCESS

- **Industrial vessel**
- **1 - Administrative control of the vessel**
 - A check is made on the name of the vessel, flag, registration, call sign, Lloyd's OMI number, license number and validity, inmarsat number, fax, e-mail address.
- **2 - Administrative control of the crew and operations related to fishing**
 - A check on transshipment operations shall include the transshipment authorization, the receiving vessel's specifications, the authorization authority's specifications and the exporter's specifications.

V SEAFOOD TRACABILITY: CATCH CERTIFICATE PROCESS

- **A. Industrial vessel**
- **3 - Technical control**
 - **a - Areas and dates of catch.**
 - Vessels must fish in areas open to fishing and comply with the regulations in force.
 - Monitoring from : VMS, inspectors, reports of observers on board, inspection team 's of logbooks.
 - **b - Fishing gear.**
 - Methodology, the inspection of fishing gear at sea and on the port side .
 - **c - The size of the targeted and caught species (minimum market size).**
 - Methodology; check at sea and wharf inspection, patrol boats inspection at sea
 - **d - The lawful origin of the declared products (Foreign fishing vessels)**
 - Application for authorization to enter the port.
 - Application for landing authorization.
 - Catch check sheet.
 - Application for a transshipment authorization

V SEAFOOD TRACABILITY: CATCH CERTIFICATE PROCESS

- **B-Artisanal pirogue**
 - It concerns catches from small-scale fishing and fishmongers from EU-approved fishing docks
- **1 - Administrative control of the boats**
 - An audit is carried out concerning the registration of the boat and the fishing license.
- **2 - Administrative control of the crew and operations related to fishing**
 - A check on the fisherman's card is done.
- **3 - Technical control**
 - a - Areas and dates of catch.
 - b - The size of the mesh of the catch gear.
 - c - The size of the targeted and caught species (minimum market size).
 - d - The lawful origin of declared products

SEAFOOD'S TRACEABILITY : CERTIFICATION DIAGRAM: INDUSTRIAL FISHERIES

RECEIPT OF THE FILE
APPLICATION FOR CERTIFICATION

DOCUMENTARY CONTROL
-Administrative of the ship

Decision

UNFAVORABLE OPINION

FAVORABLE OPINION

PROVISIONAL REJECTED
CERTIFICATION

TECHNICAL CONTROL
Fishing gear, Species

ADDITIONAL
VERIFICATIONS

RESULTS OF
RECHECKS

Decision

Decision

FAVORABLE
OPINION

UNFAVORABLE
OPINION

FAVORABLE
OPINION

UNFAVORABLE
OPINION

PROVISIONAL REJECTED
CERTIFICATION

RESULTS OF
RECHECKS

decision

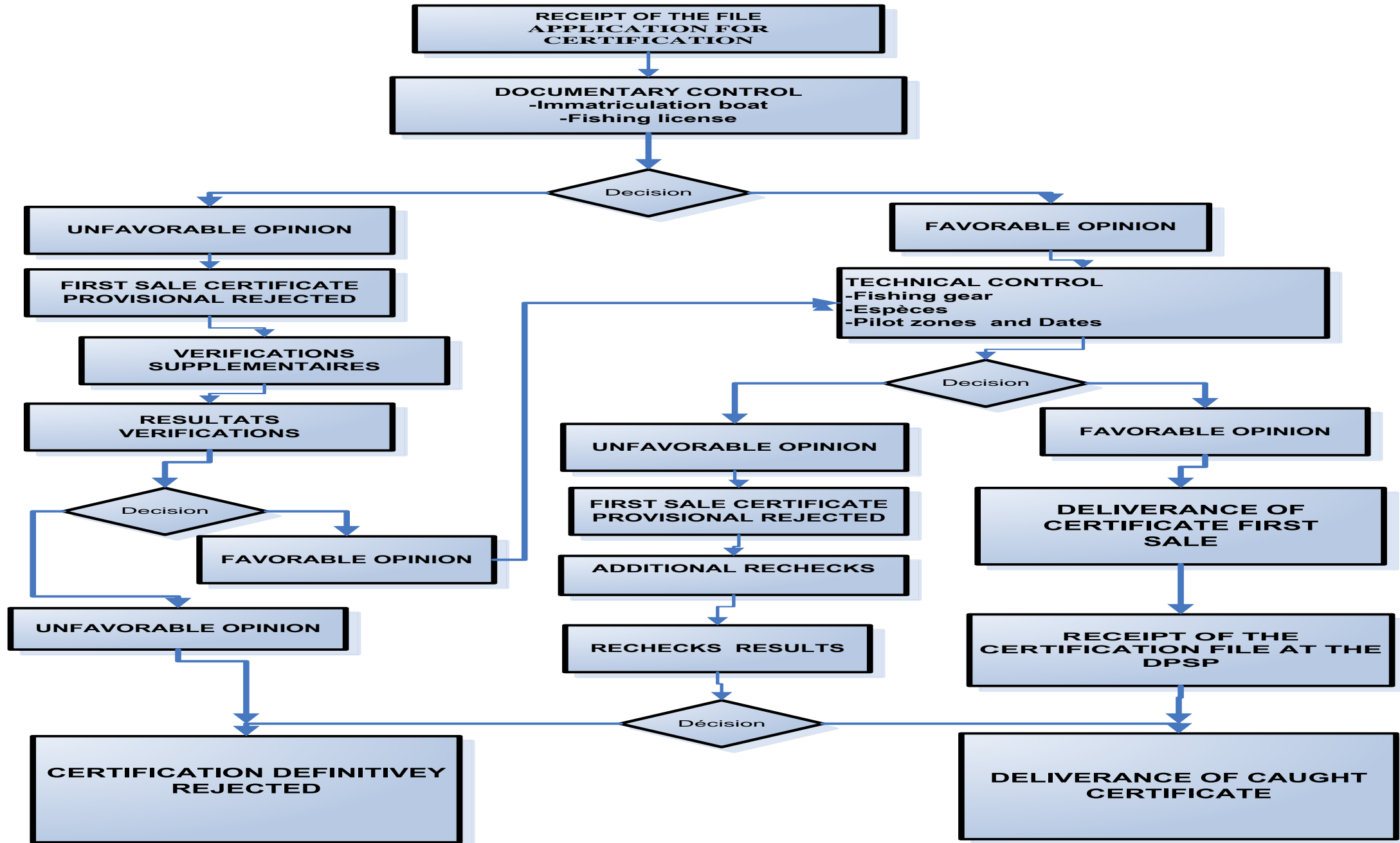
NO DELIVERANCE
CAUGHT CERTIFICATE

DELIVERANCE
CAUGHT CERTIFICATE

SEAFOOD'S TRACEABILITY :CERTIFICATION DIAGRAM; ARTISANAL FISHERIES

CONTROL POSTS AND DISTRICT SERVICES

DPSP



Results of the Seafood Certification Process

Année		2010	2011	2012	2013	2014	2015	2016	2017
Number of authorized vessels		118	98	101	98	103	127	139	141
Number of seafood catch certificates issued	Airport	7 325	7 861	7 805	7 754	7 680	7 783	8 239	7 560
	Office	2 105	2 480	2 460	2 405	2 401	2 467	2 504	4 111
	TOTAL	9 430	10 341	10 265	10 159	10 081	10 250	10 743	11 671
Quantity of exported seafood (tons)	Airport	4 231	4 987	4 950	2 238	3 087	4 142	5 894	5 431
	Office	14 723	15 808	15 703	14 586	22 114	28 365	59 402	90 770
	TOTAL	18 954	20 795	20 653	16 824	25 201	32 507	65 296	96 201

VI SEAFOOD'S TRACEABILITY : CONSTRAINTS

- Lack of technical staff
- Lack of training
- Documents are still paper and not electronic yet
- No sufficiency cooperation in monitoring control and surveillance actions at national and sub-regional level
- Difficulties of transparency into the resources exploitation procedures

**THANK YOU FOR YOUR
ATTENTION...**

