

CÔTE D'IVOIRE

1. INTRODUCTION

This document is aimed at providing reference information on the present status (2007) of fishery information and data collection in Côte d'Ivoire for the discussion during the FAO FishCode-STF/CECAF/FCWC Subregional Workshop on the Improvement of Fishery Information and Data Collection Systems in the West Central Gulf of Guinea Region held in Accra, Ghana, in June 2007. The information contained in this document was provided by staff members of the Fisheries Department, from the FAO Côte d'Ivoire fisheries country profile and other documents from the FAO Corporate Document Repository.

2. GENERAL INFORMATION ON CÔTE D'IVOIRE RELATED TO FISHERIES

The fisheries sector in Côte d'Ivoire is, at the same time, an importer and exporter. The sector produces 30 percent of locally consumed fish (consumption is estimated at 275 000 tonnes is 16.2 kg/capita/year). The marine fishing sector lands annually about 63 000 tonnes, Lagoon and inland fisheries produces about 30 000 tonnes. The deficit of about 182 000 tonnes is imported. Import and exports of the fisheries sector becomes even more complicated as there are three processing plants which produce annually 121 000 of canned Tuna for export.

The fisheries sector contributes about 3.2 percent of the agricultural GDP, its contribution to the total GDP is to 0.8 percent and it generates annually 66 billion franc CFA.

Côte d'Ivoire has a coastline of 550 km, a continental shelf of 11 000 km², three lagoons (Ebrié, Aby and Tadjo) covering 1 500 km², of four large artificial lakes which (Ayamé, Kossou, Buyo and Taabo) and 1 700 km² of rivers and streams.



3. STRUCTURE OF THE FISHERIES SECTOR

The fishing fleet

The fishing fleet in Côte d'Ivoire encompass:

- Trawlers: in 1997 the Côte d'Ivoire counted 20 trawlers. This number is relatively stable (17 in 2001) and includes 6 foreign trawlers (35 percent).
- Sardine fishing vessels: 22 in 1997 which reduced to 13 in 2001.
- Shrimp vessels, from 4 in 1997 their number increased to 8 in 1999. However none were operational in 2001.
- Foreign owned Tuna vessels (24 purse seiners, 5 french, 19 spanish).

The artisanal fleet, primarily made up of dugouts canoes operating at the lakes, lagoons and at sea. The artisanal fleet operating at sea are motorized.

Artisanal fisheries

Marine artisanal fisheries

Marine artisanal fisheries is practiced by the fishermen with gillnets and hook and line from motorized dugout canoes, also the seines of beach are used. The peak fisheries seasons of is from December to February and July to September.

Artisanal lagoon fisheries

Lagoon fisheries in Côte d'Ivoire is regarded as a marine fisheries because it is covered by the service in support of artisanal marine and lagoon fisheries.

Inland artisanal fisheries

Côte d'Ivoire has four principal artificial lakes created for hydro-power generation which are the principal places of inland artisanal fisheries. They are the Lakes Kossou (800 km²), Buyo (600 km²), Ayamé (160 km²) and Taabo (70 km²). The major species caught by inland fisheries are: *Oreochromis niloticus*, *Chrysichthys* spp., *Heterotis niloticus*, *Heterobranchus* spp., *Labeo coubie*, *Alestes* spp. and *Hemichromis fasciatus*.

Industrial fisheries

Industrial marine fisheries is important for the local market. About 20 national trawlers exploit the fish resources on the continental shelf and land their catch in Abidjan. The foreign vessels do not land in Abidjan.

Tuna fisheries

The Oceanographic Research Center (CRO) deals with the research of high seas fish resources, especially Tuna and Swordfish. It should be noted that management decisions on these stocks are taken to the International Commission for the Conservation of Atlantic Tunas (ICCAT), but Côte d'Ivoire contributes to the management of these resources through the transmission the results of the Tuna observatory in the fishing port in Abidjan. The Tuna Observatory collects statistics on the quantities of tunas, by species, landed for the processing plants.

Tuna fishing is also practised by artisanal fishermen who land the catches of their gillnets. Tunas which are refused by the processing plants arrive at the local markets and are not monitored. A programme of collection of the statistics for this group "Faux poissons" started in 2006 for better knowing the order magnitude of this category of fish.

Marine resources***Pelagic resources***

The majority of the artisanal fishermen target the small pelagic, i.e. the sardinelles, pikes (barracudas), carangues (*Caranx* spp.), *Brachydeuterus auritus*. Other pelagics targeted are marlins, sailfish and Spanish mackerels.

It should be noted that the continental shelf of the Côte d'Ivoire is relatively narrow, explaining the relatively low fisheries potential of Côte d'Ivoire which hardly exceed 10 000 tonnes of biomass. The sardine fisheries is based in Abidjan, their catches are composed of the small pelagics (sardinella, mackerels, bigeye grunt, anchovies), which are resources shared with Ghana and to a lesser extent with Togo and Benin. The round sardinella (*Sardinella aurita*) which knew a collapse in 1974, became again, since 1984, the dominant species in the catches.

Demersal resources

They are the shellfish, fish resources and cephalopod. The first group is most important; the representatives of the second are also exploited but mainly exported. The cephalopods can be considered by catch as they are not really targeted.

Fish

The fish are subdivided in species which are found on the trawling fishing grounds (flat fish *Pseudotolithus* spp., Galeoides) and those which live on the rocky bottoms (*Lutjanus*, *Sparus*, mérours, etc.).

Shrimps

In river mouth areas shrimp are found, which are especially targeted by foreign vessels. To avoid confusion it should be noted that the name "langoustine" is used for the commercial category of shrimps of the *Penaeus* species.

Cephalopods

Octopuses are rarely captured, other species are not targeted. When they happen to be landed, cephalopods are considered to be bycatches.

4. FISHERY POLICY AND MANAGEMENT OBJECTIVES

Artisanal fishing (maritime, lagoon and inland) represent a potential and it is believed that the production could be increased within clear policy framework and a strategy of rational exploitation of the aquatic resources.

Fisheries legislation

No progress has been made since the relation in 1996 in spite of the implementation of the FAO project TCP/IVC/4553.

Sources of information

Data on fisheries for Côte d'Ivoire are available at various institutes:

- Direction des productions halieutiques (DPH, part of the Ministry of Livestock and Aquatic Resources);
- Oceanographic Research Center (CRO) ;
- Inspection Services and Animal Sanitary Border control (SICOSAVF, part of the Ministry of Livestock and the Aquatic Resources);
- the newly created fishing port authority (NCCP).

5. STATUS OF CAPTURE FISHERIES REPORTING

Fisheries statistics reported to FAO

The national statistics on fisheries as reported by DHP to FAO are presented in Figure 1. It should be observed that since 2004 there were no more figures on the aquaculture production in Côte d'Ivoire.

National reporting

The last statistical directory of fisheries was published in 2003.

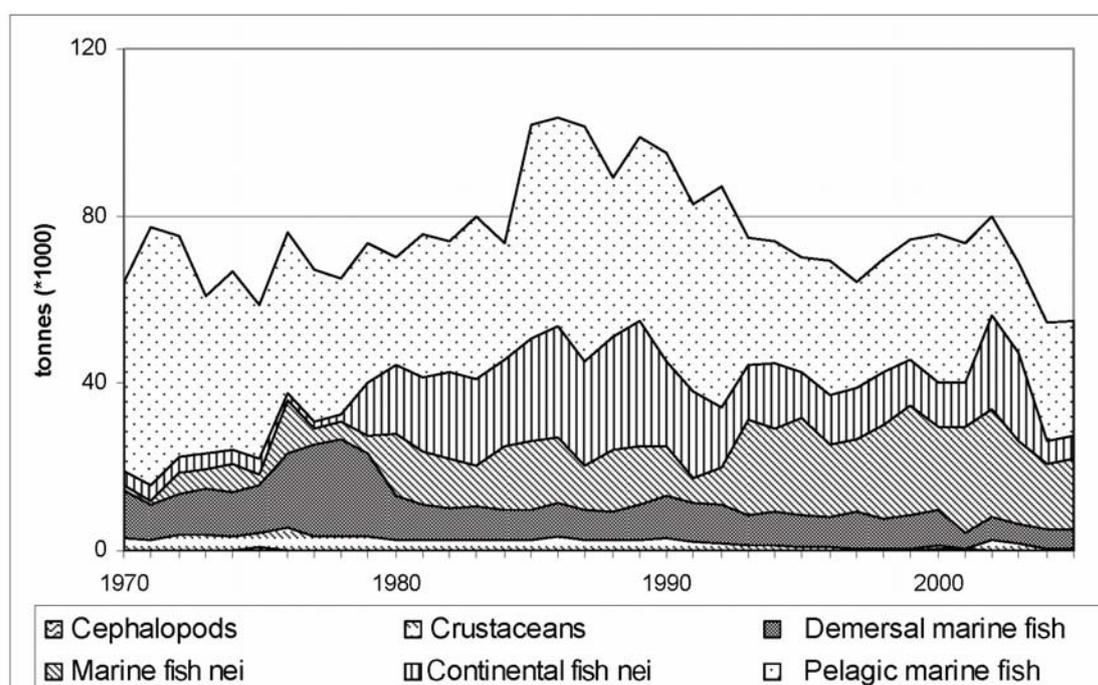


Figure 1: Fisheries statistics as reported by Côte d'Ivoire to FAO

6. DESCRIPTION OF FISHERY INFORMATION AND DATA COLLECTION SYSTEM

Objectives of fishery data collection

The main objective of the data collection for fisheries in Côte d'Ivoire fishing is to know the quantities of fish captured in the waters of Côte d'Ivoire. The system is not effective to provide advice needed by the DHP. The system aims at obtaining information on landings; however neither fish size frequencies nor fishing gear mesh sizes are determined. The information acquired by the statistics program is to determine the quantities of fish to be imported to satisfy the demand for fish at the national level.

Objective	Required indicators and variable
National importance fisheries sector	Total production, Value of catch
Estimation of needed imports to cover national needs for fisheries products	Total Catch, Imports and Exports

Main institutions involved in fishery data collection

Direction des productions halieutiques (DPH)

The DPH deals with the data collection of the artisanal fisheries through its Service d'appui à la pêche artisanale et lagunaire.

Oceanographic Research Center (CRO)

Fisheries data through its tuna Conservatory and its research programmes.

Inspection Services and Animal Sanitary Border control

The SICOSAVF inspects the industrial catches.

7. DATA COLLECTION SYSTEMS AND THEIR COMPONENTS

Monitoring of artisanal fisheries

Monitoring of artisanal fisheries is based on stratified sampling of the artisanal fleet (ARTFISH) and was introduced by FAO through a TCP project in 2000. Since its introduction, DHP could follow and sample artisanal fisheries at the Fishing port of Abidjan until the end of 2006. The DPH carried out this programme in close cooperation with the CRO.

Monitoring of industrial fisheries

The national industrial fishing vessels land their catch at the fishing port of Abidjan. The fish is auctioned in the port and all marketing is recorded and compiled by SICOSAVF. DPH carries out calculations and prepares the final figures for the directory of the national statistics and FAO.

Monitoring of tuna fisheries

The Tuna observatory of CRO in charge of the data collection of the tuna fisheries following ICCAT specifications. Data collection includes total catch, species composition and size structure of the catch.

Registers

All the dugouts canoes involved in marine fisheries are registered (Repertoire pirogues).

Licences

The national fleet which exploits water of the Côte d'Ivoire is authorized through a licence to fish in territorial waters, but beyond a certain depth not to violate artisanal fisheries.

Observer programmes

There are no observers on board foreign vessels (freeze-trawlers or tuna vessels). There is no control on mesh size utilization for codend or on fishing waters.

Monitoring, control and surveillance

The artisanal fishermen complain about the foreign fishing vessels which fish close to the coast and damage and destroy their gears. There are no means to intervene.

Market data

At the market/auction in the fishing port of Abidjan the data are collected for the small pelagics and démersals, data includes fish prices.

The auctioneers do not maintain statistics; in fact staff of SICOSAVF collect the data and send the aggregated data to DPH.

Frame surveys

The last frame survey took place into 2003/2004. That implies that these figures form the base of calculations of program ARTFISH. After this frame survey/census the CRO and the DPH collaborated until the end of 2006 on the collection of the statistics of fishings (i.e. catch and effort).

Socio-economic surveys

BAPs collect field information, however there is lack of harmonization of data collection methods.

Exploratory ad hoc resources surveys

Staff of DoF and CRO take part in the Nansen programme for the evaluation of the resources on the continental shelf beyond 30 m depth, by the trawling and hydroacoustic.

8. CONCLUSIONS

It is obvious that human and financial resources are not sufficient to maintain a sample-based monitoring programme for artisanal fisheries. Each year the information becomes less reliable. It is necessary that this monitoring system is re-evaluated. Also the sampling rate should be re-evaluated to decrease the requirements in resources. It should be noted that with a programme of sampling in time and space also reliable data can be obtained.

The deficiency in the systems of data collection, processing and analyses does not make it possible to use the information for management of the sector.

In the light of data collection it seems that there is a lack of coordination and a institutional problem.

The CRO collects data on “false tunas” and on landed Tuna by the artisanal fisheries. At the same time DPH collects data on non Tuna species at the same artisanal landing sites

The SICOSAVF data-gathering on the industrial fishing (which is entirely based on the data auction).

Then BAPs collect data in their own way.

It could be necessary that the DPH takes the initiative to coordinate the collection in a harmonized manner.

First of all the collection on the level them BAPs should be harmonized, so that the chiefs of BAPs work in the same way by using the same formats of reports/ratios.

Instead of waiting the compilation of the data from SICOSAFV, DPH could monitor industrial catches itself. This could improve knowledge on species composition, etc.

The DPH, in full collaboration with the CRO, could carry out these studies to put forward measures of management.

9. DOCUMENTATION

FAO. Web site Fishings. Fishery and Aquaculture Country Profile for Côte d'Ivoire.

NEPAD/FAO. 2005. Government of the Republic of Côte d'Ivoire. Support with the implementation of the NEPAD-PDDAA, TCP/IVC/2903 (I) (NEPAD ref. 05/25 F). Profile of negotiable project of investment.

CRO. 2007. Oceanographic Research Center, Management Report Scientists 2006.