

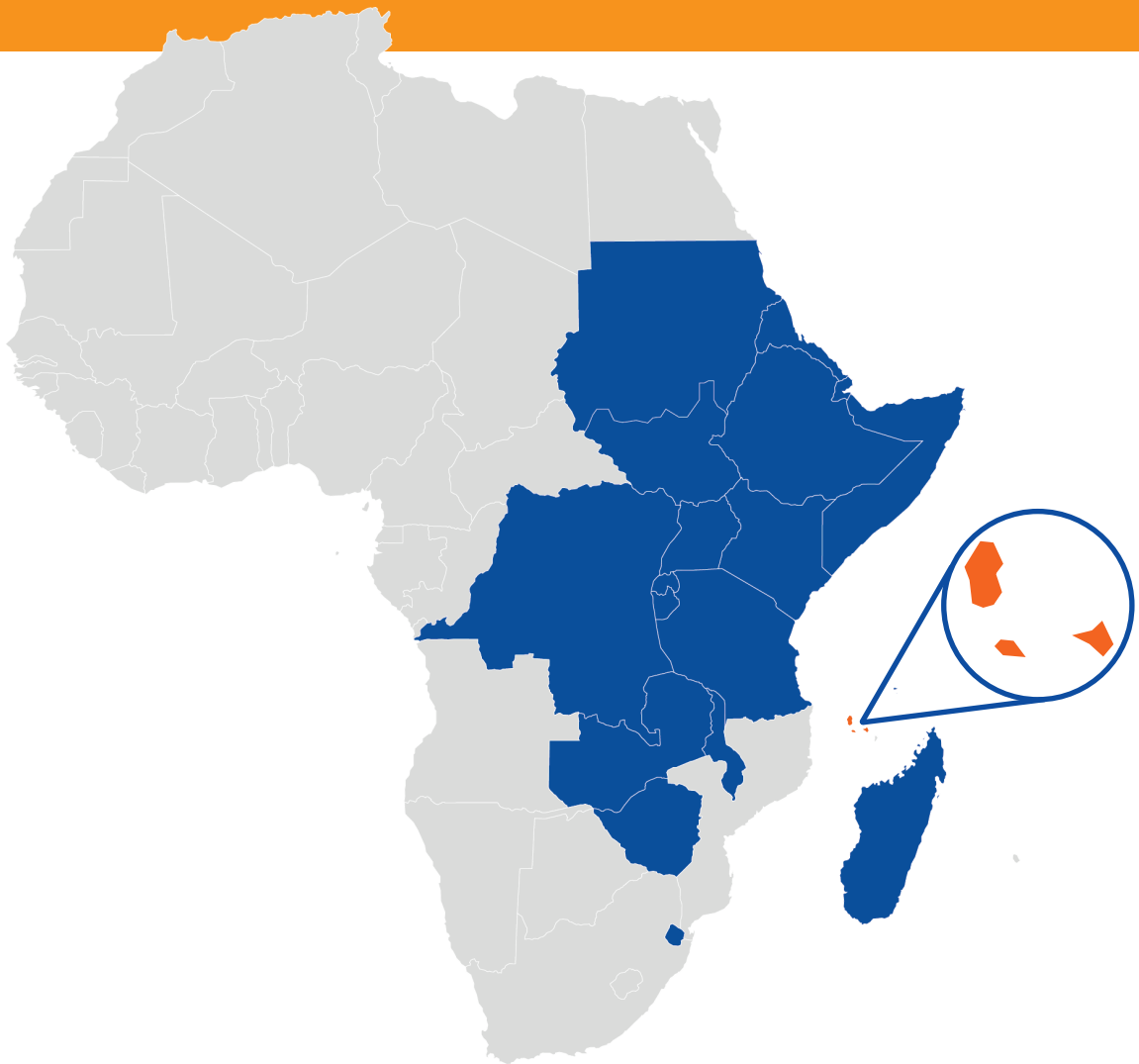


Fisheries in the ESA-IO Region: Profile and Trends

COUNTRY REVIEW

2014

COMOROS



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This document was prepared as part of the activities of the Indian Ocean Commission (IOC) SmartFish Programme, under the FAO Fisheries management component, in the monitoring and analysis of major issues with implications for fisheries and aquaculture in the twenty countries from the Eastern Southern Africa-IOC region participating in the Programme. This has resulted in the preparation of twenty country baselines whose purpose is to serve as easy-to-read and informative references for policy decision-makers, fishery managers, development partners and stakeholders. The baselines inventory and describe for each country the trends in status of fisheries, major social and economic dynamics of relevance to the fishery sector, policy, legal and administrative frameworks, and management regimes. The present document relates to the baseline for Comoros.

The preparation mainly involved Mr Christophe Breuil and Mr Damien Grima, FAO consultants, who made essential contribution in drafting the text and developing infographic for publication on the basis of the analysis of official and grey literature and vast field experience in the region. Much gratitude is due to all SmartFish experts who act as reviser. In particular, Ms Clotilde Bodiguel Chief Technical Adviser of IOC SmartFish activities implemented by FAO, who provided the initiative, was instrumental in the editing and Mrs Florence Wallemacq, Outreach Consultant, assisted in the formatting for publication. Lastly, the editor would like to thank National and Regional Focal Points of the IOC SmartFish Programme for providing complementary data and information.



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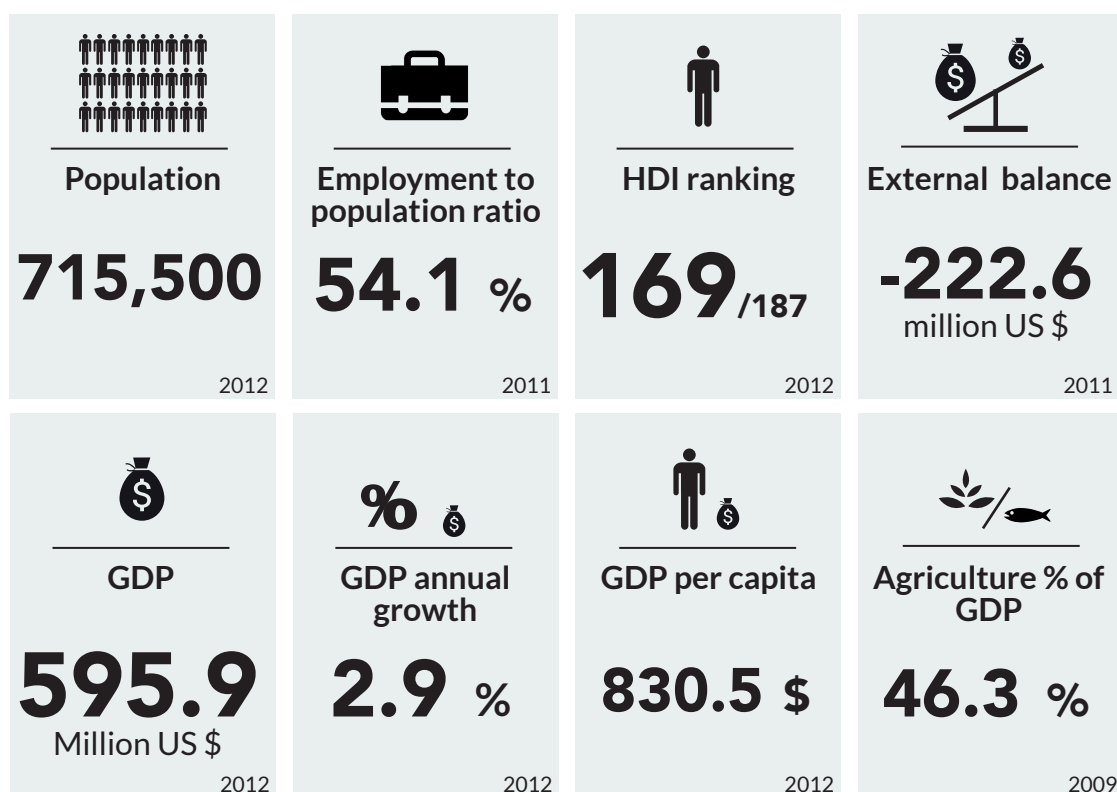


BACKGROUND INFORMATION

1 Brief on the National Economy

Key figures on Macro economic data

2014- Source World data Bank - Latest reported data



The Comoros archipelago is located in the Indian Ocean, north of the Mozambique Channel, 350 km northwest of Madagascar and 250 km from the coast of Mozambique. It comprises four main volcanic islands, three of which form the Union of the Comoros (hereafter referred to as the Comoros): Grande Comore (Ngazidja), Anjouan (Nzwani) and Moheli (Mwali). The fourth island, Mayotte, is under French administration.

Although the Comoros is a small country with a surface area of approximately 1,660 km² and a coastline of 427 km, natural resources and biodiversity constitute a major potential for the national economy. Agriculture, livestock and fisheries are the main contributors to the economy of the Comoros. The country is one of the world's leading producers of several cash crops including ylang-ylang, bourbon vanilla and cloves. Its fishery potential, which is mainly composed of tuna and tuna-like species, is an estimated 33,000 MT per year.

There has been no significant structural change to the economy since the Comoros gained independence in 1975. Agriculture (including fisheries) and the service industry still make up the bulk of economic activities, contributing almost 40 percent and 28 percent respectively to GDP. On the other hand, industrial activities are still at a bare minimum, contributing less than 10 percent to GDP, and almost all items for domestic consumption are imported (OECD, 2013).

The economic growth rate of the Comoros ranges from 2 to 3 percent per year. Economic growth is driven by continued domestic demand supported by financial transfers from the Comorian diaspora (about 20 percent to GDP) and public investment on roads financed by income from the Economic Citizenship Act of 2008 (the aim of this Act is to boost investment by granting Comorian nationality and a Comorian passport to all immigrants of Arab origin wishing to invest in the Comoros). The Comoros' medium term growth prospects are expected to be above 3 percent, thanks notably to the recovery of public investment in economic and social infrastructure after the country completed the Heavily Indebted Poor Countries (HIPC) Initiative at the end of 2012. Moreover, projects supported by Gulf States as part of the commitments made by the Doha Conference in March 2010 are expected to be implemented in the near future; projects are in relation to agribusiness, fisheries, transport, financial sector and tourism.

In 2012, the total GDP in the Comoros was an estimated US \$0.6 billion (World Bank). The GDP per capita was estimated at US \$830 in 2012, showing a slight decrease of 4.5 percent compared to 2011. The population was estimated at 0.7 million inhabitants in 2012, with an annual growth rate of 2.4 percent.

Despite a national development strategy that recognizes the private sector as an engine for growth, the private sector is stagnating. The business environment has been faced with a lack of strategic dialogue between the Government and private stakeholders, a lack of infrastructure, especially transport and energy, limited access to financial services and non-financial services (management consultancies, accounting, etc.) and an unskilled workforce (OECD, 2013). According to the World Bank's 'Doing Business 2013' report, the Comoros ranked 158 out of 185 economies in its ease of doing business in 2012.

Inflation in the Comoros has been stable over the last decade, with temporary deviations reflecting movements in world food prices (especially rice) and oil products. Inflation is well below 10 percent.

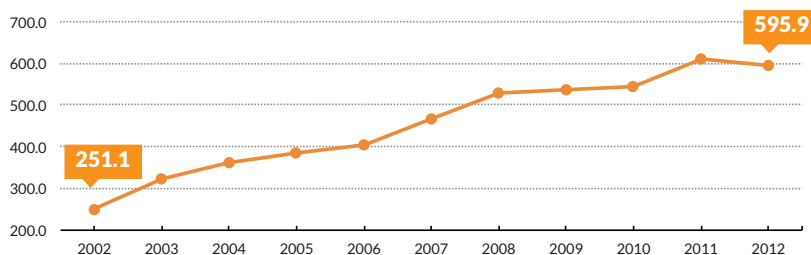
The trade balance of the Comoros showed a deficit of US \$222.6 million in 2011, indicating a steady decline over the last decade. The country's main export goods are made up of agricultural products, in particular vanilla, cloves and ylang-ylang. Imports consist mainly of food products (sugar, meat, fish, flour, and dairy products), petroleum products and pharmaceuticals.

The Comoros has been a member of the Common Market for Eastern and Southern Africa (COMESA) since 2006. Progress made by the Comoros towards further regional integration has however remained slow and trade with other countries in the region is still limited. Most exports

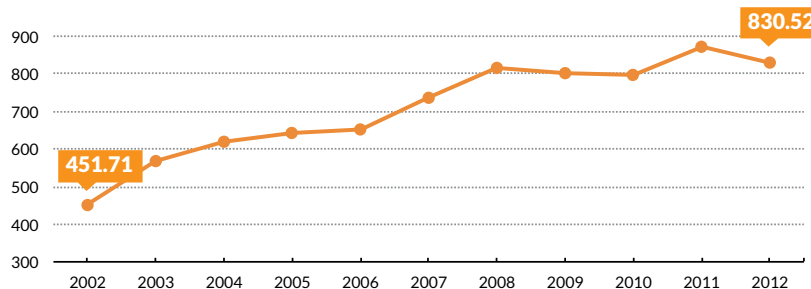
Trends

2014 - Figure 1-5 - Source World Data Bank - Last ten years

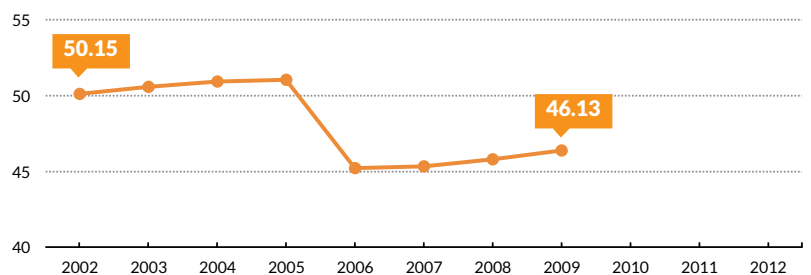
GDP (current million US \$)



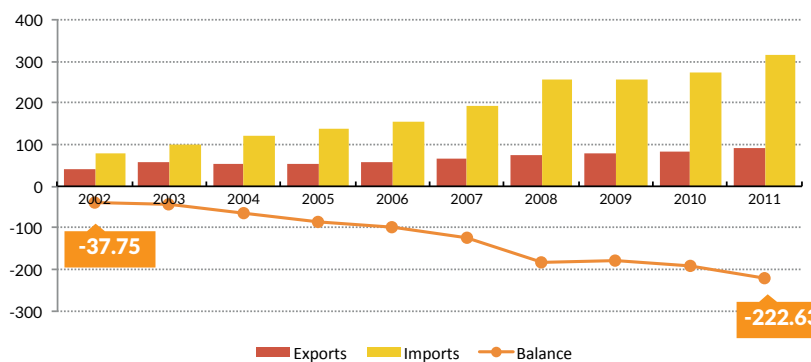
GDP per capita (current US \$)



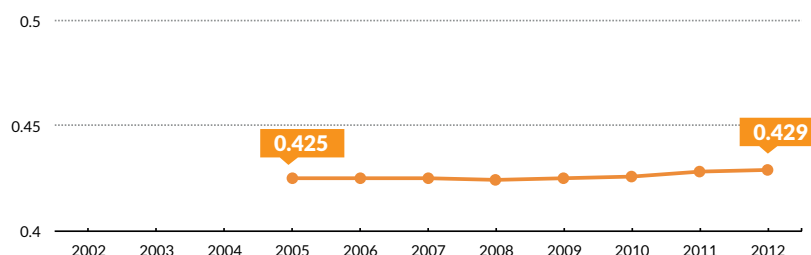
Agriculture % of GDP



Trade balance (current million US \$)



Human Development Index



are currently to the EU (above 50 percent) whilst most imports, especially oil, come from the Gulf States.

Agriculture (including fisheries) remains the largest provider of employment in the Comoros.

According to official estimates, about 37 percent of households and 45 percent of people live below the poverty line. These figures however vary from one island to another and poverty is generally higher in rural areas. Efforts to reduce poverty are hindered by a high birth rate, which affects the allocation of household income, whilst remittances from diaspora are an important social buffer particularly in rural areas (OECD. 2013).

The Comoros' Human Development Index (HDI) puts the country in the 'low human development' category. With an HDI score of 0.429, the Comoros ranked 169th out of 187 countries in 2012.

2. Policy and Planning Framework

2.1. General Framework

The Union of the Comoros consists of three islands: Grande Comore, Anjouan and Moheli and they have a large amount of autonomy within the Union. Anjouan has economic and legislative independence and is a self-governing island within the new Union of the Comoros (Snijman Phil. 2011).

At the Union level, the main policy document is the Poverty Reduction and Growth Strategy (SCRP). The SCR 2009-2014 is built on the following six strategic pillars: 1) Stabilize the economy and lay the ground-work for strong equitable growth; 2) Strengthen key sectors by focusing on institution-building and ensuring a broader role for the private sector; 3) Strengthen governance and social cohesion; 4) Improve the health status of the population; 5) Promote education and vocational training with the aim of developing human capital; and 6) Promote environmental sustainability and civilian security.

An action programme, composed of priority programmes prepared by key stakeholders from the three islands, complements the SCR.

2.2. Food Security Strategy

IOC-SmartFish (Kurien John and Lopez Rios Javier. 2013) recently reviewed the Comprehensive Food Security and Vulnerability Analysis (2006). It should be noted that fishing is one of the four main activities in which households participate to fulfill their needs and is also one of the livelihoods most vulnerable to transitory food insecurity, given the seasonality of catches. Food security is assessed in the country as an issue of access to food. Fishing is a relevant activity across all the islands of the country, and whilst some households rely on fisheries as their only means of subsistence, more often than not it is carried out in conjunction with agricultural activities.

In addition to the national policy document, the Indian Ocean Commission developed a Regional Food Security Strategy in 2012 covering its five member states: Comoros, Madagascar, Mauritius, Reunion (France) and Seychelles.

2.3. Fisheries in Public Policies

Fisheries and tourism are considered in many planning documents (including UNDAF 2008-2012) as the two key sectors to promote economic growth in the Comoros. The Doha Conference in March 2010 confirmed that fisheries is one of the priority sectors to attract foreign investments. Related

key challenges include the development of various infrastructures and the sustainability of natural resources and the coastal environment.

Given the limited amount of agricultural land, fisheries have an important role to play in the Comoros with regards to food security issues.

Furthermore, several axes of the National Environment Policy (NEP), and the Environmental Action Plan have a bearing on fisheries. These include the sustainable use of natural resources and the development of alternatives, the conservation of biodiversity and zones of high ecological and cultural interest, the building of environmental awareness and effective spatial management of the marine and coastal environment.

3. Fishery Resources

The Comoros EEZ is an estimated 160,000 km² covering 427 km of coastline. It should be highlighted that the Comoros EEZ is surrounded by several other EEZs including France, Madagascar, Mozambique, Seychelles and Tanzania, and there is no maritime boundary with the high seas.

The marine and coastal environment shows an appreciated morphological diversity composed of sand beaches, mangroves, sea-grass and coral reefs, and associated high level of biodiversity. Due to the volcanic origin of the islands, the 'continental' shelves are rather limited with a total surface of 900 km². The continental shelves around the islands vary, but are generally small (<2nm) with a narrow fringing reef, after which the depth increases rapidly (Fennessy et al, SWIOFP, 2009). However, Moheli, which is the smaller island, is endowed with a significant coral reef platform that forms the limit of the unique marine protected area in Comoros, Moheli Marine Park.

Due to the narrowness of the continental shelf, most of the fisheries (traditional, artisanal or industrial) work in the oceanic surface waters and target pelagic resources, in particular tuna and tuna-like species that seasonally migrate in Comorian waters. The Comoros EEZ straddles the important tuna fishing grounds at the mouth of the Mozambique Channel. Pelagic fishing involves both domestic artisanal and foreign industrial (Distant Water Fishing Nation - DWFN) fleets.

The main tuna and tuna-like species occurring in the Comorian waters are *Thunnus albacares*, *Katsuwonus pelamis*, *Thunnus alalunga*, *Thunnus obesus*, *Istiophorus platypterus* and *Euthynnus affinis*. Large pelagic sharks, in significant quantity, are also found in the Comorian EEZ. The main species targeted by domestic artisanal fisheries are pelagic fish (*Scombridae*). On Grande Comore, sharks are largely caught as bycatch, whilst on Anjouan, sharks are, more often than not, intentionally targeted (Maoulida Kamal. 2009).

Demersal fishing is mainly carried out by traditional (non-motorized, outrigger dugout canoes) and artisanal (planked or fiber-glass boats, sometimes motorized) fleets, using a variety of gear including traps, nets and hand lines, and a wide variety of reef species are caught. The main species targeted by traditional fisheries are *Serranidae*, *Lutjanidae*, *Lethrinidae*.

The potential sustainable production of Comorian marine resources was previously estimated to be around 33,000 MT per year (M.Naji. A.M. Youssouf, 2007). Current production ranges between 20,000 and 25,000 MT per year, which shows some room for further fisheries development, particularly for tuna and tuna-like species.

According to WIOFISH classification, which is based on the type of gear used, there were 22 marine fisheries in Comoros in 2012, of which 17 'artisanal', 16 'small-scale commercial', 17 'subsistence', 2 'industrial', 2 'foreign fleet' and 1 'other'. Fisheries are multispecies with catch composition data including 97 different catch items. Most fisheries operate on the general inshore area, coral reef

platforms and the oceanic surface.

Furthermore, it should be noted that aquaculture in Comoros is not significant.



KEY INFORMATION AND FIGURES ON THE FISHERY SECTOR

4. Fishery Sector

4.1. Status of Resources

Research systems are particularly weak in the Comoros. As underlined in many studies, the lack of data in Comoros does not enable satisfactory assessment of the status of marine stocks, with the notable exception of the more important large pelagic species that fall under the mandate of the Indian Ocean Tuna Commission (IOTC). For pelagic fishes, the best estimate of stock status, apart from IOTC assessments, are contained in the national reports of the SWIO countries presented to the SWIOFC Scientific Committee compiled using methods based on observations and expert judgment (K.L. Cochrane. D.W. Japp. 2012).

In 2010, a delegation from the Comoros reported to the 4th Session of the SWIOFC Scientific Committee held in Mahe, Seychelles, that the country has very limited data and that the information it presented was largely from 1994. At the 5th Scientific Committee in Cape Town, South Africa in March 2012, a presentation on the status of fishery resources in Comoros reported that the potential sustainable production of pelagic resources in Comoros waters was an estimated 33,000 MT (M. Naji. A.M. Youssouf. 2007) and that only 64 percent of that potential production was being taken at that time. The populations of coastal tunas and related species in Comoros are therefore being moderately exploited.

Concerning demersal resources in shallow waters, it is considered that most stocks are fully- or over-exploited. According to fishers, overall production in reef areas has remained stable over the last two decades, although individual catch rates have steadily declined as a result of the increase in the number of fishers; they also highlighted that environmental conditions in reef areas have been degraded due to the use of damaging techniques such as dynamite fishing and coastal pollution (Ranaivoson Eulalie. Ranaivoarison Andoniaina. 2013).

4.2. Major Fishery Dynamics in Artisanal Sub-Sector

The artisanal sub-sector can be divided into three main categories based on type of fishing craft and gears used: traditional, artisanal and semi-industrial (under development). Foot-fishing activities also take place in the intertidal zone, mostly targeting octopus.

Traditional fishing involves outrigger dugout canoes, locally known as 'Ngalawas'. Canoes are 3 to 4 m in length and are propelled by paddles and long poles. Fishing activities are confined to inshore waters (max. 3.0 nautical miles) within the reef ecosystem due to technological limitations. Traditional fishing also takes place around coastal fish aggregating devices (FADs) set in shallow areas (30-50 m), locally called 'Champas', which mostly attract juvenile pelagics. According to the last frame survey, about 3,660 Ngalawas were operating in 2011. The main fishing gears used include hand lines, surface nets (for small pelagics) and gillnets.

Artisanal fishing involves motorized 6-7 m fishing crafts, including planked ('Fedawas') and fiberglass boats, with fishing areas extending up to 50 nm. Artisanal fishing mostly targets medium and large pelagics using hand and trolling lines. Most fishing units can access deep-water FADs. Most artisanal fishing is undertaken on a daily basis whilst the duration of fishing trips for some fiberglass units targeting demersal resources on offshore banks is reported to be 4-6 days. In 2011, there were about 1,670 artisanal fishing craft, of which 300 were Fedawas, equipped with 15-25 HP engines. A few of these vessels use ice or refrigerators. Weather conditions can restrict fishing operations except during November -March when large pelagics concentrate in coastal waters.



The overall traditional and artisanal fishing capacity has significantly increased over the last two decades. From 1994 to 2011, the total number of fishing craft increased by 35 percent, i.e. from 3,950 to 5,330. In the same period, the number of artisanal motorized craft tripled, increasing from 543 to 1,670.

Semi-industrial fishing refers to the introduction of about 1,000 more modern and longer (7-9 m) fiberglass boats as part of the activities of an integrated fisheries development project promoted by the recently established National Fishing Company. The project is supported by Qatari investors and involves Sri Lankan technical expertise. Besides the construction of modern artisanal crafts, foreseen activities include the introduction of industrial longliners in the national fleet and the development of onshore infrastructures, facilities and equipment for fish processing and storing. Business plans include the export of high-valued pelagics.

The deployment of FADs in the Comoros in the early 1980s clearly shows that whilst small-scale fishing catches have subsequently increased (i.e. from 8,000 to 14,000 MT), this was largely dependent on the level of technological development and on the absorption capacity of the pelagic fish markets (Failler Pierre. 2011).

Fishermen are organized in national and island fishing syndicates, fishermen's cooperatives (Grande Comore and Anjouan) and fishing village associations (Moheli). The improvement of safety at sea is one of the major issues highlighted by artisanal fishers. At most fish landing sites, older fishermen play a leading role in the traditional organization of community activities including fishing activities (Ranaivoson Eulalie. Ranaivoarison Andoniaina. 2013).

A recent socio-economic study on FAD fisheries in the SWIO (Failler Pierre. 2011) observed that in the Comoros, skippers are, on average, relatively old (around 50 years) compared to other countries in the region. Despite a lack of alternative employment (no tourism industry or other sectors employing a high percentage of local manpower), meagre fishery improvement prospects may have acted as a barrier to new entrants in the fishery sector for the last decade, this could explain the skippers' relatively advanced age.

To contribute to the diversification of income-generating activities within fishing communities, the IOC-SmartFish programme provided support for a national workshop on ecotourism in the Moheli Marine Park and conservation areas throughout the archipelago in 2013. Findings were presented to Comorian tourism stakeholders, including technical and financial partners.

In addition to the workshop, a familiarization trip was organized for 8 international tour operators and journalists to investigate the Comoros as a potential tourist destination. An IOC-SmartFish consultant (AIDE team) also helped develop various communication tools to be used for to promote the Comoros as a destination in the 2013/14 season.

Following an evaluation of ten ecotourism products, the IOC-SmartFish consultant identified six fishing communities to be integrated in the tourism value chain: support activities which will focus on training for fishermen so that they can offer better quality services and access intermediaries such as hotels or inbound agencies. These fishermen were to be recognized as tourism services providers and promoted as such in professional directories and brochures.

4.3. Major Fishery Dynamics in the Industrial Sub-Sector

Industrial fishing in the Comorian EEZ is almost entirely conducted by foreign tuna fleets, in particular European vessels, operating under two types of fishing agreements. The management of industrial fisheries is based on the delivery of annual licences with several conditions attached to licensing, including: payment of fees, VMS, declarations for entry/exit of fishing zones, and data reporting using fishing logbooks. Moreover, industrial fishing is not permitted less than 10 nm from the coastline and less than 3 nm from deep-sea FADs that have been installed by the Comorian

authorities. The entire fish production from DWFN fleets is exported to the fishing countries without being landed or transshipped in Comorian waters.

The current Fishing Partnership Agreement (FPA) between the Comoros and the EU initially covered the period 2005-2011. Following a tacit extension of its duration for 7 years in December 2011, the FPA is valid until December 2018. Under the current FPA, 45 purse seiners and 25 long liners are authorized to fish, for a total reference catch of 4,850 MT per year. Financial compensation is €625,000 per year, of which €300,000 per year is to support the national fisheries policy. In 2011, the number of licences delivered to European vessels was as follows: 22 purse seiners (half the potential number) and 0 long liners (due to piracy, European long liners in the SWIO area operate further South and East out of the Comorian EEZ). In the same year, the total catch declared was 3,600 MT (approximately 74 percent of the approved catch).

It should be noted that almost 80 percent of the catch of European vessels operating in the Comorian EEZ (approximately 3,100 MT) is processed in one of the following SWIO countries: Mauritius, Seychelles, Madagascar or Kenya (COFREPECHE. 2013).

Non-EU foreign tuna fleets operate under private access agreements between the Comoros and foreign private companies. In 2011, 13 licences for purse seiners flying the Seychelles flag were issued. The annual licence fee is US \$15,000 per vessel.

The recent introduction of a brand new 19 m long liner in the national fleet should also be noted. This vessel has been issued a licence for demersal fishing in the Mozambique EEZ (Ranaivoson Eulalie. Ranaivoarison Andoniaina. 2013).

Furthermore, as mentioned above, the recent National Fishing Company plans to introduce industrial long liners in the national fleet. In particular, 10 long liners of 20 m are expected to fly the Comorian flag.

4.4. Fishery Production

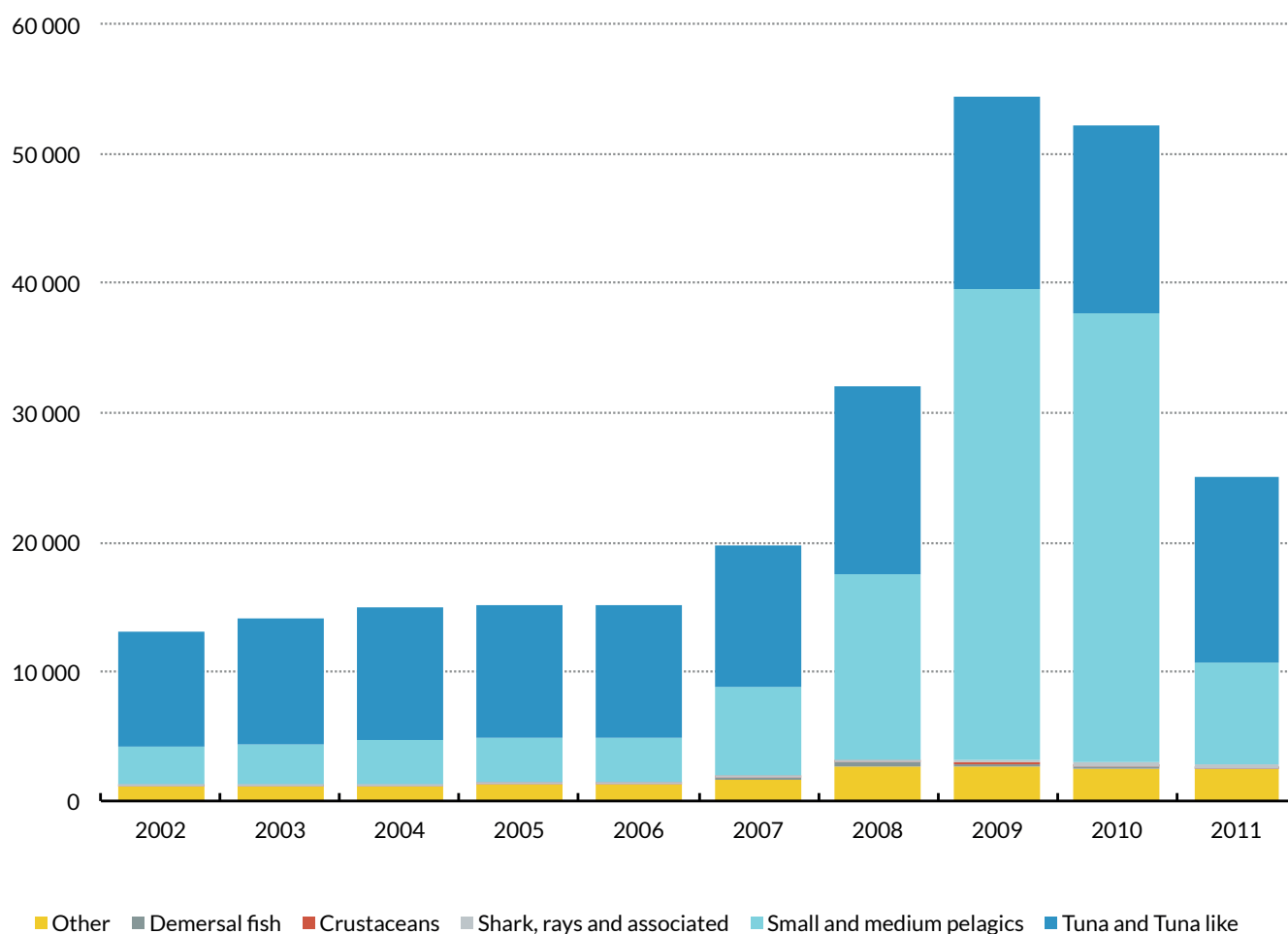
Domestic fishery production in Comoros has been reported as approximately 20,000 MT per year in several reports over the last decade. Surprisingly, official fish production was approximately 50,000 MT in 2009 and 2010 corresponding to a significant increase in catches of mackerel (see Figure 6 below based on FishStat data).

Catches of pelagic species by the domestic fleet are dominated by the larger pelagic species, in particular *Katsuwonus pelamis* and *Thunnus albacares*, whereas *Engraulidae* and *Sardinella spp.* are the most abundant species of small and medium pelagics with reported catches of approximately 1,000 MT in recent years, followed by *Scomberomorus spp.* which reached approximately 800 MT in 2010 (Cochrane K.L. Japp D.W. 2012). However, catch statistics of the small-scale domestic fleet are known to be of poor quality for the region including the Comoros. IOC-SmartFish has initiated support to improve the statistics of small-scale fleets in terms of their tuna catches.

Furthermore, it should be stressed that fishery production by DWFN tuna purse-seiners in the Comorian EEZ may be close to 5,000 MT per year.

Domestic inland fish production in Comoros (in tons)

2014 - Figure 6 - Source FAO FISHTAT J (2002-2011)



4.5. Fish Utilization

The entire domestic fish production is sold on the local market, mainly when fresh. Indeed, drying and salting fish is marginal. Fish marketing networks are relatively short and simple: fisher - fishmonger - consumer.

On Grande Comores, fish consumption is significant and can reach up to 50 percent of landings in some cases. A share of landings is also levied by fishermen's cooperatives (Ranaivoson Eulalie, Ranaivoarison Andoniaina, 2013).

Large pelagic fish account for approximately 75 percent of the country's fish consumption, and this rises to nearly 90 percent between December and June when sea conditions are favourable and fishers can operate outside the lagoons.

However, one of the main limitations to the development of fish consumption is the lack of cold storage facilities to process and store fresh fish, which implies that most of the production has to be sold rapidly while it is still fresh (Kurien John, Lopez Rios Javier. 2013.). The lack of storage and processing facilities indeed prevents greater catches per trip, as the market can be rapidly

saturated and prices are very sensitive to landing volumes.

5. Fish Import and Export

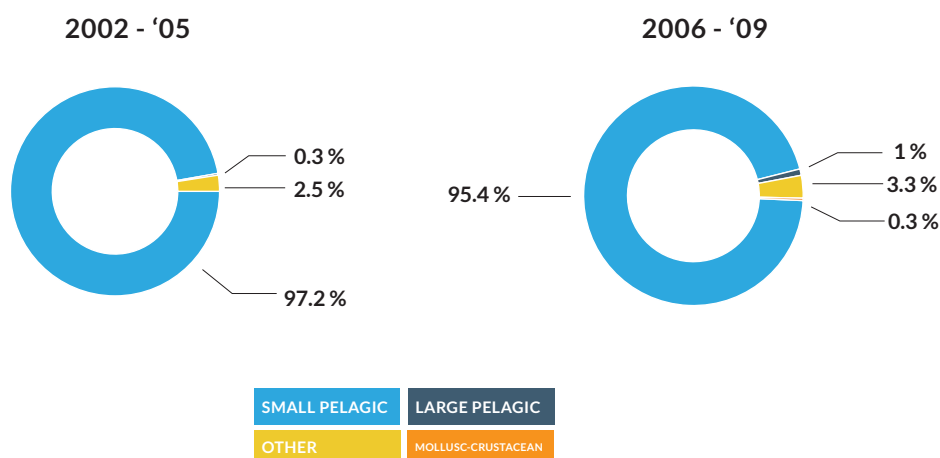
Import

Domestic fisheries production is supplemented by annual imports of several hundred MT of fish (about 1,000 MT in 2009 according to FAO FishStat data) mainly from Mayotte and Madagascar. For the most part, imports are composed of small pelagics and dried fish. These imports do not necessarily reflect the occasional deficit in terms of fish supply on the domestic market but is rather the result of traditional fish-eating habits. It should be noted however that the Comoros imported about 650 MT of sardines from the EU in 2009, valued at about US \$2 million.

Imports of fishery products account for only 3 percent of the total food product purchases from foreign countries.

Fish Imports by category in Comoros in value (% of \$)

2014 - Figure 7 - Source FAO FISHTAT J (2002-2009) - Average period



Export

Fish exports are still more or less non-existent today. Some shark meat may be dried and traded from Comoros to the African continent (Maoulida Kamal. 2009). According to COMSTAT, the Comoros exported a significant quantity of fish to Mauritius markets in 2012, valued at about US \$700,000.

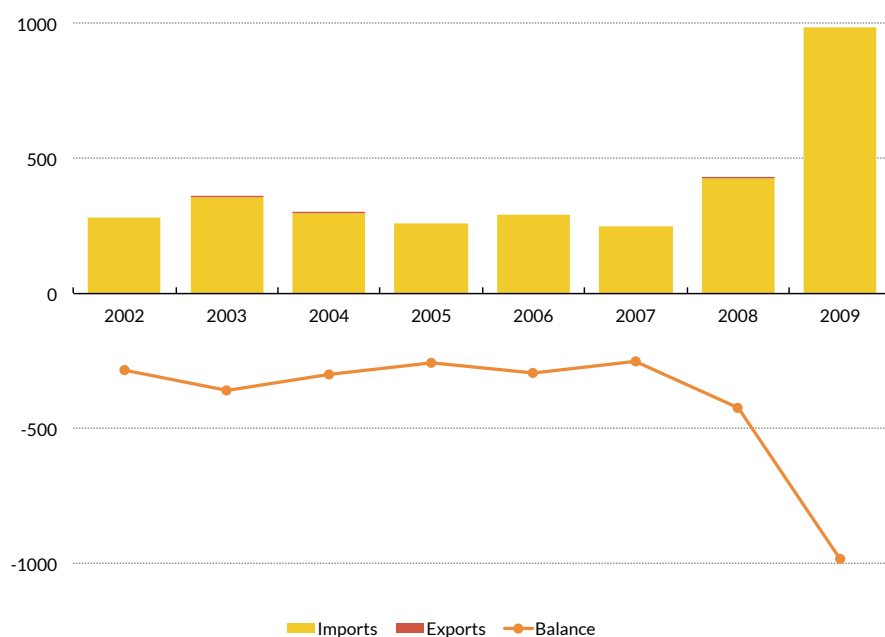
As mentioned above, a national company plans to develop an export-based tuna fishery. The strategy of this company will be to integrate the value chain from fishing to processing to trade.

However, the Comoros is working to support the export of fishery products, primarily with the EU market in mind. For this purpose, the Comoros Union National Quality Audit Office for Certification of Fisheries Products (ONCQCPH) was established by decree in July 2010 to strengthen national capacities for the sanitary control of fish products. The short-term objective was to make a competent authority operational to support the export of products from Comoros. IOC-SmartFish initiated the support process for the operationalization of a competent authority.

Fish trade balance in Comoros in volume (in tons)



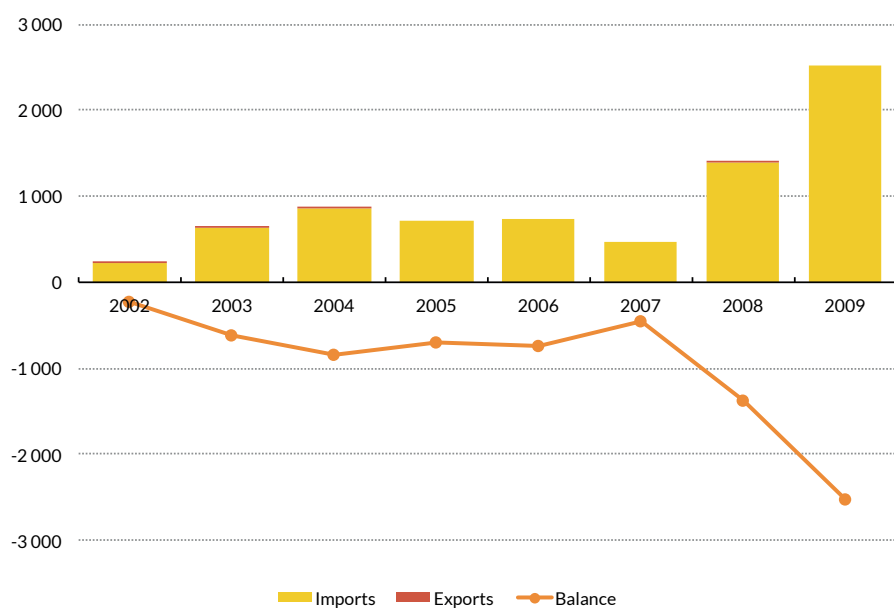
2014 - Figure 8 - Source FAO FISHTAT J (2002-2009)



Fishtrade balance in Comoros in value (in '000 US \$)



2014 - Figure 9 - Source FAO FISHTAT J (2002-2009)

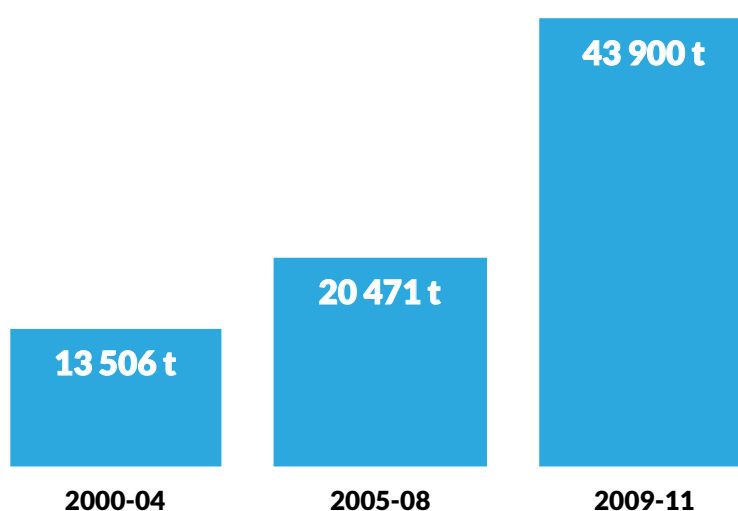


6. Contribution of the Fishery Sector to the Economy

With a domestic fish production averaging 20,000 MT per year, the fishery sector contributes about **8 percent to GDP** (or about 24 percent of the 'agriculture GDP').

Total Domestic Fish production in volume in Comoros (in tons)

2014 - Figure 10 - Source FAO Fishtat J (2000 -2011)



The fishery sector, through fisheries access agreements, is also a key component of the country's balance of payments and public revenues. Fees paid to the government for the access of foreign vessels to Comorian waters and their resources are approximately US \$1 million per year. These payments represent almost **1 percent of the Comoros public revenue**.




Traditional and artisanal fisheries employ about 8,500 people directly (about 6 percent of the country's population) and it is estimated that the fishery sector indirectly employs an additional 24,000 people, for the most part in local and traditional processing, distribution and marketing. Fishing activities take place across all the islands; for some households fishing is their only source of livelihood, but it is usually carried out as part-time activity together alongside agriculture. In total, **30 percent of Comorian people are dependent on the fishery sector**.

Of the IOC countries, **fisheries play the most significant role in food security** in the Comoros (Kurien John, Lopez Rios Javier. 2013). According to FAO, in 2009 fish accounted for 70.2 percent of total animal protein intake, the highest among the IOC countries, and the second highest in Africa. Protein intake from fish was estimated at around 9.8 grams per capita per day in 2009.

Fish consumption is also high with an annual per capita consumption of 29.5 kg, almost entirely supplied by domestic fisheries. This level of fish consumption is more than three times the African and IOC average. In years that resulted in a good domestic catch (according to FishStat data), the per capita consumption showed a significant increase.

Fish consumption in Comoros (in live weight)

2014 - Figure 11 - Source FAO Fish and fishery product, world apparent consumption FAO STAT (2000 - 2009)

	 Total fish supply quantity	 Fish supply per capita	 Fish protein per capita
2008 - 09	16,462 MT	23.3 kg/y	7.9 g/day
2004 - 07	15,798.25 MT	24.2 kg/y	8.2 g/day
2000 - 03	13,841.5 MT	23.65 kg/y	7.95 g/day



POLICY, INSTITUTIONAL AND LEGAL FRAMEWORK OF RELEVANCE FOR THE FISHERY SECTOR

7. Fishery Policy and Planning

The Comoros does not seem to have an updated fisheries policy and planning document. The most recent document was prepared in 2004 in the context of an FAO project whose main objective was to assist the government in formulating a Fisheries Act (the draft Bill that was prepared was adopted in 2007).

In the context of the recent preparation of a regional World Bank programme involving the Comoros (SWIOFish), it was reported that a range of country policy statements and reports indicate that the following are among the priority initiatives to be considered:

- Training and human capacity building at all levels, including managers, fishers and women;
- Institutional development including modernization of laws, decentralization and co-management, fisheries statistics and information systems, and resource evaluations;
- Establishment of sustainable sector financing and development plans and fisheries management plans;
- Infrastructure for small scale fishers;
- Integrated small-scale fisheries development combining sustainable resource management with business opportunities and social development under a co-management framework;
- Improvement of the investment climate and promotion of foreign direct investment;
- Development of export markets including the sanitary certification of products and training of fishers in various aspects of fishing and the handling of products;

Maritime security including MCS of foreign and domestic fleets and search and rescue capability and safety at sea for fishers; and

Developing bilateral agreements with neighbouring countries and improving collaboration with regional organizations.

Furthermore, the current Fisheries Partnership Agreement between the EU and the Comoros makes reference to a fishery sector programme whose priority interventions refer to the following: fisheries governance and capacity building; fish storage; fish processing and trade; monitoring, control and surveillance; fish quality; and safety at sea (COFREPECHE. 2013).

Comoros is also a member state of the Indian Ocean Commission which has developed a regional fishery strategy and is engaged in updating a regional strategic framework that defines short and mid-term working paths for fisheries management with support from IOC-SmartFish.

8. Institutional Framework

8.1. Fisheries Administration

The fisheries administration is under the supervision of the Vice-President in charge of Production, Environment, Energy and Handicrafts. A specific delegated ministry is dedicated to agriculture and fisheries and a Permanent Secretary is responsible for all related structures. The specific delegated ministry is comprised of the General Directorate of Fishery Resources (DGRH – *Direction Générale des Ressources Halieutiques*). The DGRH is headed by a General Director and is split into two departments; the Department of Planning which deals with planning, regulations, fishing agreements and monitoring; and the Department for Fisheries Promotion which deals with licensing, statistics, value addition and professional organizations.

It is frequently reported that the DGRH is faced with weak human capacities as well as a lack of financial and logistical means (Ranaivoson Eulalie, Ranaivoarison Andoniaina. 2013).

The structure in charge of MCS, namely the National Centre for Fisheries Control and Surveillance (CNCSP – *Centre National de Contrôle et de Surveillance des Pêches*), reports to the Permanent Secretary of the specific delegated ministry. The CNCSP was created in 2007 and is responsible for the operationalization of all MCS related activities including in particular VMS. The CNCSP is based in Moroni and there are no island stations.

It should be noted that a specific institution in charge of fish quality was recently created, the '*Office de la Qualité des Produits Halieutiques*'.

As mentioned above, the fisheries fall under the competence of the Union ministry in charge of agriculture and fisheries. At the same time, there is a regional directorate in charge of fisheries on each of the three islands, the Director of which is nominated by the Governor of the island. The three regional directorates however struggle to fulfill their local mandates due to serious human and financial limitations. Also, the roles of the central and island authorities may be subject to interpretation with respect to some fisheries issues.

8.2. Fisheries Research and Training

The main fisheries research institute in the Comoros is the National Institute for Agriculture, Fisheries and Environment (NIAFE). The NIAFE is supposedly supported in its research activities by various universities and by the National Centre for Documentation and Scientific Research.

However, developments so far in fisheries research by the NIAFE have remained particularly weak due to a lack of human and financial resources specifically dedicated to fisheries research as well as the absence of a fisheries research plan. Some research activities have been conducted in the recent past on fish processing (salting and drying). However, the NIAFE has never conducted any serious scientific work on fisheries' biological and/or socio-economic dynamics. The current activities of the NIAFE mostly involve agricultural research (COFREPECHE. 2013).

The WIOFISH report, 2012, states that 91 percent of fisheries have had no research conducted on them in the last five years and the remaining 9 percent have been subjected to relatively low levels of investigation. It also states that no stock assessments have been carried out for any of the target species in the fisheries and that no recent research results have been published.

The DGRH is frequently involved in research work conducted by regional projects such as the former South West Indian Ocean Fisheries Project (SWIOFP). However, the role of the DGRH in this context mostly consists of contributing to the collection of data, which are then processed in other participating countries. There is no sustainability of such collaboration when the project is terminated and the impact on decision-making has remained questionable. It should also be noted that no collaborative linkages with the NIAFE have been developed within the context of these projects.

With regards to training, there is a national fisheries school based in Anjouan. Significant training activities were undertaken in the fields of fishing and mechanics in the '80's and '90's with the

support of several development projects.

8.3. Other Public Institutions concerned by Fisheries

The Directorate of Marine Affairs of the Ministry of Transport is responsible for the registration of all vessels flying the Comorian flag. Since 2007, the registration of vessels has been managed by a private company based in the United Arab Emirates (UAE).

Fisheries' MCS is the responsibility of the Ministry in charge of fisheries as mentioned above. Other administrations are however involved in MCS. These include the Coast Guard for at-sea operations and the National Gendarmerie for on-shore operations. The Coast Guard was created in 2010 by a Presidential Decree primarily to address the piracy problem but is also involved on a case-by-case basis for public missions relating to safety at sea and fisheries' surveillance.

The Directorate General of the Environment also plays a role in fisheries management.

8.4. Private and Community-Based Institutions

For the last two decades, the fisheries administration has put particular emphasis on the promotion of fishers' cooperatives on the three islands with a view to facilitating the implementation of fisheries development initiatives relating to FAD development, the provision of subsidized engines, the provision of cold storage facilities, the establishment of credit facilities, etc. There are about 28 cooperatives in Grande Comores (bringing together about 2,300 fishers), 25 cooperatives in Anjouan (approximately 1,200 fishers) and 19 cooperatives in Moheli (approximately 500 fishers).

At the island level, cooperatives are grouped into regional syndicates. At the national level, all the cooperatives, as well as the three regional syndicates, have been grouped under a National Syndicate for Fisheries Development in the Comoros (SNDPC – Syndicat National pour le Développement des Pêches aux Comores) since 2009. The SNDPC is currently the principal interlocutor between fishing communities and the fisheries administration and has an important role in promoting collaborative mechanisms with regards to compliance, safety at sea, registration of fishers and project implementation.

There is still a need however for the capacity building of syndicates and improved information exchange and cohesion amongst fishers and professional organizations (Ranaivoson Eulalie, Ranaivoarison Andoniaina, 2013).

8.5. Budget and Funding Mechanisms in support of Development and Management

Part of the financing of some the fisheries management services is supported through the sectoral programme of the FPA between the Comoros and the EU (€300,000 per year).

The fisheries administration is currently managing a Fisheries Development Fund (FODEP - *Fonds de Développement des Pêches*). The FODEP is fed by a share of the licence fees delivered to DWFN tuna fleets. The aim of the FODEP is to support the development of artisanal fisheries by facilitating the provision of cold storage facilities for fish processing and storage for fishers' cooperatives and regional syndicates.

9. Legal Framework

9.1. Fisheries Legislation

The principle fisheries legislation in the Comoros is the Fisheries and Aquaculture Act (*Loi n° 07-*

011/AU portant Code des pêches et de l'aquaculture), enacted in 2007 by Decree n° 07-159/PR. The draft Bill was prepared in 2004 with support from the FAO through its technical cooperation programme (TCP/COI/2902 project).

Since the Fisheries Act is relatively recent, it includes many provisions for the improved development and management of fisheries, in accordance with international and legal instruments. In particular, the Fisheries Act introduces the principle of fishing licences for the artisanal sub-sector. It also makes provision for the fisheries administration for the establishment and updating of a registry for fishing vessels and artisanal craft, the marking of all vessels and artisanal craft and regular frame surveys and socio-economic assessments of the artisanal fisheries.

Many recent provisions however are not being implemented due to delays in institutional reforms and a lack of enabling texts. In particular, the establishment of a licensing system in the artisanal sub-sector will first require the registration of the artisanal craft, and this system has yet to be finalized.

Snijman Phil states that while it is clear that the 2007 Act provides a strong framework for effective MCS, the lack of enabling texts is a huge concern in the Comoros. With regards to legal challenges and barriers to regional cooperation, he states however that there is a need to consolidate relevant provisions in the 2007 Act to allow the establishment of compatible data collection or reporting systems and the sharing of data and information regionally. This could be done either through the drafting of enabling texts or an amendment of the 2007 Act.

The 2007 Fisheries Act provides for the adoption of regulations. In 2014, 42 measures were identified that needed to be regulated. Out of the 42, 21 were prioritized. Amongst those prioritized, 18 have been developed and are awaiting cabinet approval.

9.2. Other Elements in relation to Legal Aspects

The Comoros is a member of the Indian Ocean Commission, (IOC), the Indian Ocean Tuna Commission (IOTC), the Southwest Indian Ocean Fisheries Commission (SWIOFC), and it has also signed the South Indian Ocean Fishing Agreement (SIOFA).

As mentioned above, there is a Fisheries Partnership Agreement between the EU and the Comoros, valid until 2018. This agreement is part of the tuna network fisheries agreement for the Indian Ocean and allows EU vessels, mainly from Spain, Portugal and France, to fish in Comorian waters.

Customary law still plays a huge role in the traditional and artisanal fishing sector, but these rules vary between islands or villages. It is reported that customary rules are respected above any written rules in the Comoros and that the fishermen themselves are responsible for enforcing these rules by preventing and punishing transgressors (Snijman Phil. 2011).



FOCUS ON FISHERIES MANAGEMENT AND RELATED ISSUES

10. Administrative Functions

Fleet registration and management

The Directorate for Marine Affairs is responsible for the registration of domestic industrial vessels and artisanal craft. As mentioned above, this administrative function has been exerted by a private company based in the UAE since 2007. The procedures for registration do not however include any formal collaborative mechanisms between this private company and the Comoros administration, and means that the Comoros, as a 'flying state', does not have to fully comply with international obligations relating to IUU fishing.

With regards specifically to the artisanal fleet, the Ministry of Transport and the Ministry in charge of fisheries entered into an agreement whereby the CNCSP has been responsible for the registration of artisanal craft since 2009.

Information regarding the registry of domestic industrial vessels is not readily available. Registration of artisanal crafts is still on going with support from the regional IOC-EU PRSP project and it is estimated that about 20 percent of the artisanal fleet is currently registered.

Authorization to fish

The issuance of fishing licences for industrial vessels operating in the Comorian EEZ is the responsibility of the DGRH. Industrial vessels flying the Comoros flag, operating outside the Comorian EEZ, do not require a specific fishing licence or an authorization to fish from the Comorian fisheries administration. The registry of fishing licences for vessels operating in the Comorian EEZ is currently managed by the GDRH. However, the Comoros DGRH and the Ministry of Maritime Transport and Port Authority are in the process of establishing procedures to ensure that 'authorization to fish' outside the Comoros EEZ is implemented. The procedures include a compliance inspection prior to authorization.

According to the Fisheries Act of 2007, access to fishery resources for the artisanal sub-sector requires a fishing licence. Such provision however is not enforced due to the lack of enabling texts and delays in the registration of artisanal craft.

11. Fisheries Monitoring

The fisheries monitoring system for industrial fisheries operating in the Comoros EEZ is mostly based on catch declaration. Fishing logbooks from EU vessels are transmitted annually to the fisheries administration, before the renewal of licences. Data from the logbooks however is not processed and a computerized statistical system for the industrial fisheries has yet to be developed by the fisheries administration.

In the artisanal sub-sector, a fisheries monitoring system was developed with the technical and financial assistance of the IOTC and OFCF (Japanese cooperation) and has been in place since 2011. Data processing through Access is being finalized at the IOTC level (*Rapport statistique des Comores à la CTOI, 2012*). This system relies frame surveys (the most recent survey was conducted in 2011) and on the routine collection of data on fisheries through sample surveys, to generate the overall production and effort figures. The system involves 11 beach recorders that are located on



the three islands. The system is relevant and in line with international standards, although slight improvements are necessary.

The overall fisheries monitoring system in the Comoros has significantly improved in recent years. Some improvements however are still needed in order to adequately support stock assessments and decision-making in fisheries planning and management. There is also a need to develop a more comprehensive fisheries information system that would allow the compilation and processing of different kinds of data on fisheries from different sources (e.g. catch data from the DGRH, fleet activity from the CNCSP, etc.). Key challenges in this regard include capacity building and improved collaborative mechanism between fishery institutions.

12. Fisheries Management Systems

The industrial fisheries are managed through the issuance of licences and attached fishing conditions. The monitoring of the offshore tuna fisheries has however been deficient due to weaknesses in legal and institutional frameworks and human capacity.

The traditional and artisanal fisheries operate under an open access regime. Increased fishing activity has caused growing pressure on coral reef resources, leading to declining catches and increased environmental degradation. According to the current regulatory framework, some fishing techniques and methods are prohibited. These include the use of dynamite, poison, beach seine nets, small mesh-size for gillnets and mosquito nets. However, there is very little enforcement and these fishing practices are still taking place (SWIOFISH. 2012). Some villages have also banned the use of fishing nets, traps, and underwater spear guns, but these methods are also still being used (Breuil Christophe, Per Erik Bergh, Snijman Phil. 2011).

The fisheries policy encourages the participation of island authorities and fishing communities in fisheries' management. Local institutions however are faced with serious shortages of human and financial resources to actively engage in the participatory management of the fisheries.

It should also be noted that the Comoros recently prepared a draft fisheries management plan for demersal fisheries, with the support of the SWIOFP and EAF Nansen projects. One of the key challenges associated with the finalization of this plan is the lack of information and scientific data on the bio-ecological and socio-economic dynamics of the demersal fisheries.

13. Fisheries Monitoring, Control and Surveillance

The CNCSP has benefitted from the assistance of the IOC-EU PRSP project in many aspects, including logistical, financial and training. This has led to a significant enhancement of MCS capacity in the Comoros. In particular, a VMS system was installed in 2007 to monitor the activities of the licensed tuna fleet operating in Comorian waters. Due to severe technical difficulties, a new system, developed by CLS, was installed in 2010. The VMS system is now fully operational, although some equipment is still needed at the MCS centre. The PRSP project also supported training activities for inspectors and scientific observers and contributed to the payment of salaries for CNCSP personnel. The SWIOFP project also supported training activities for scientific observers.

The MCS system however lacks transportation. The CNCSP does not have any patrol vessel and most of the nautical resources that are managed by the Coast Guard are not adapted to conduct offshore surveillance activities. Generally speaking, this lack of logistical means results in the weak MCS of both industrial and artisanal fisheries.

No 'observers on-board programme' is being implemented (Breuil Christophe, Per Erik Bergh,

Snijman Phil. 2011), although some inspectors from the CNCSP participate from time to time in observation activities at sea.

14. Major Issues relating to IUU Fishing

As mentioned above, the level of compliance of traditional and artisanal fisheries with existing regulations in the inshore zone in general is weak, particularly with regards to the use of destructive fishing methods (i.e. dynamite and poisons).

Industrial fisheries are not inspected due to limited MCS resources and capacity, and poaching as well as breach of the artisanal zone is reported by fishers and coastal communities (Breuil Christophe, Per Erik Bergh, Snijman Phil. 2011).

Furthermore, there are currently no fishing agreements between the Comoros and the Asiatic tuna fleet, which is composed of long liners. Various Asiatic vessels flying Japanese, Korean and Taiwanese flags operate in Mozambique, Madagascar and the Seychelles waters and therefore it can be assumed that the risk of illegal fishing in the Comoros EEZ is high.

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FISHERIES IN THE ESA-IO REGION: PROFILE AND TRENDS

COUNTRY REVIEW - 2014

COMOROS



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