

Vision

Namibia to be a leading fishing nation with a well-developed aquaculture

Mission

To responsibly manage living aquatic resources to continuously ensure a conducive environment for the fishing and Aquaculture sector to prosper

Strategic Objective

- Improve the image and reputation of MFMR
- Ensure optimal utilization and conservation of living aquatic resources
- Ensure compliance to regulatory framework
- Increase contribution of fishery sector to employment creation and improve the contribution of aquaculture to food security
- Improve value addition in fishery sector
- Ensure skilled and competent workforce
- Ensure motivated and satisfied workforce
- Ensure prudent management of re

Mandate

To sustainably managed the living aquatic resources and promote the aquaculture sector

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List of Abbreviations

ANN	Aquaculture in Northern Namibia
ASPM	Age Structure Production Model
BCC	Benguela Current Commission
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CP	Crude Protein
CPEF	Catch Per Unit Effort
CPP-NNE	Community Based Project-Namibia Nature Foundation
EEZ	Exclusive Economic Zone
EU	European Union
EUS	Epyzootic Ulcerative Syndrome
FIOC	Fisheries Inspector Observer Course
FOA	Fisheries Observer Agency
GDP	Gross Domestic Product
HAB	Harmful Algal Bloom
HIAC	Hardap Inland aquaculture Center
ICCAT	International Commission for the Conservation of Atlantic Tunas
IWP	Individual Wrapped Portion
KIFI	Kamutjonga Inland Fisheries Institute
Km	Kilometre
MANCOSA	Management College of Southern Africa
MCS	Monitoring, Control and Surveillance
MFMR	Ministry of Fisheries and Marine Resources
MSYL	Maximum Sustainable Yield Level
N\$	Namibian dollar
n. mile	Nautical mile
NAMFI	Namibian Maritime and Fisheries Institute
NPC	National Planning Commission
OIA	Onavivi Inland Aquaculture
PQ	Prime Quality
PV	Patrol Vessel
RFMO	Regional Fishery Management Organization
RV	Research Vessel
SA	South Africa
SANUMCRC	Sam Nujoma Marine and Coastal Research Centre
SEAFO	South East Atlantic Fisheries Organisation
SG-ASAM	Subgroup Acoustic Survey and Analysis Methods
SSFF	Small Scale Fish Farm
TAC	Total Allowable Catch
UK	United Kingdom
UNAM	University of Namibia
UNDP	United Nation Development Programme
UNISA	University of South Africa
USA	United States of America



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Foreword



It gives me profound sense of joy to present 2010/11 Annual Report of the Ministry of Fisheries and Marine Resources.

The year 2010 was a highly dynamic and most rewarding year for the Ministry for various reasons. And, I believe this out-look reflects the collective synopsis of both the Ministry and all its stakeholders, especially those that are active participants in the fishing sector.

As usual the most defining development of the year was the generally positive out-look of the fish stocks and the overall environment within which the industry operated. This enabled the fishing industry to gain the necessary confidence and make commensurate level of contribution towards our national economy in terms of direct and indirect employment, as well as, stimulate measurable growth in capital expenditure (CAPEX) aimed at strengthening operational infrastructure. Therefore, I am pleased to note, that this resulted in overall buoyancy in the fishing sector with corresponding increase in value-addition during 2010/11.

I remain keenly aware that these positive developments depend on sound fisheries management supported by scientific surveys and stock assessments, landing of TACs, continues monitoring, control and surveillance, and prudent management of both the fishing and mari-culture sectors. This importantly also underpins the reason why the fisheries sector was spared unprecedented levels of uncertainty and corresponding challenges which the global economic turmoil presented, at the scale we have witnessed in other parts of the world, during 2010.

Another noticeable issue that kept us fully engaged at the Ministry was the fact that promotion of aquaculture development among the local communities, continued to be hampered by challenges such as natural floods, inadequate financial resources and low skill base. This dictated that professional training, skills transfer and widening of access to financial support through partner institutions remained a priority during 2010/11.

I am confident, that this Annual Report gives vital information to all our stakeholders, and, my final words are that while fisheries remain a dynamic sector, only our collective effort as stakeholders in the sector will guarantee continued success now and into the future. Therefore, my personal thanks to everybody who has made positive contribution towards our collective success, through team work, dedication, passion and commitment in 2010/11.

I look forward to work with you all to achieve even higher goals in 2011/12.

A stylized signature in black ink, consisting of a large 'B' and 'E' followed by a horizontal line.

Bernhard Esau, MP
Minister



1. THE MINISTRY OF FISHERIES AND MARINE RESOURCES

The Ministry of Fisheries and Marine Resources is responsible for the management and development of fisheries and aquaculture.

1.1 OBJECTIVES

The overall objectives of the Ministry are derived from the mission statement. Our objectives are to:

Promote and regulate the responsible and sustainable utilization of living marine and freshwater resources and aquaculture within the context of environmental sustainability.

Establish a conducive environment in which the fishing and fish processing industries can prosper and derive optimal income from marine resources.

Further Namibia's interests within the international fishing sector.

Provide professional, responsive and customer-focused services.

Deliver our services efficiently and effectively providing best value for money.

Continuously invest in human resource development so as to enhance Namibia's capacity to manage fisheries and marine resources, develop and participate in domestic fishing and fish processing, and play an effective role in regional and international fisheries affairs.

1.2 ORGANISATIONAL STRUCTURE

The Office of the Permanent Secretary provides executive management to four directorates, namely: the Directorate of Resource Management, responsible for scientific research and advice; the Directorate of Operations, responsible for monitoring, control and surveillance; the Directorate of Policy, Planning and Economics, responsible for MFMR planning activities, formulating fisheries policies and legislation as well as undertake research to advise on the socio-economics, Directorate of Aquaculture, responsible for the administration and development of aquaculture. A General Services Division provides support services.

1.2.1 GENERAL SERVICES



Main Responsibilities:

To render an efficient and effective Human Resources/Personnel administration function to the ministry.

To provide professional human resources management service in accordance with the Public Service Act, Public Service Staff Rules and Procedures, Labour Act and other relevant legislation.

To ensure that human resources are being used effectively, efficiently and in accordance with the laid down laws and policies of the Government.

1.2.2 DIRECTORATE OF OPERATIONS



Main Responsibilities:

Regulating fishing activities within the Namibian EEZ.

Monitoring, control and surveillance activities both at sea and onshore through the operation of fisheries patrol vessels, cars for coastal inspection and fisheries patrol aircraft by Fisheries Inspectors.

Fisheries legislation enforcement

1.2.3 DIRECTORATE OF RESOURCE MANAGEMENT



Main responsibilities:

Provides advice on the state of commercially important marine fish stocks and recommendations on their appropriate yields;

Appropriate management measures in relation to species and fish size limitations, closed seasons, closed areas, and limitations on the types and effectiveness of fishing gears.

1.2.4 DIRECTORATE OF POLICY, PLANNING AND ECONOMICS



Main responsibilities:

- Co-ordinates the formulation, implementation, as well as monitoring and evaluation of fisheries policies and legislation.
- Carries out continuous policy and economic research and analyses.
- Responsible for the management of information services of the Ministry
- Administration of fishing rights and quotas
- Collection of fees
- Analysis and publication of fisheries statistics.
- Co-ordinates overall planning of the Ministry.

1.2.5 DIRECTORATE OF AQUACULTURE



Main Responsibilities:

- Ensure the responsible and sustainable development of aquaculture to achieve socio-economic benefits and environmental sustainability.
- Facilitate an efficient, coordinated administrative and institutional framework for aquaculture.
- Ensure that the genetic diversity and integrity of the aquatic ecosystem is maintained.
- Promote responsible aquaculture production practices.



1.3 MINISTRY'S MANAGEMENT PLANS

For the Ministry to achieve the 2009-2014 Strategic Plan, its overall strategic priorities and activities are implemented through the operational management plans. The management plans are reviewed and re-aligned during 2010/11 financial year. Therefore, it very grateful to note that most targets set out in the management plans were achieved during reporting period.

1.4 FINANCE

The Ministry's total budget allocation for 2010/2011 financial year was N\$ 322,180,000.00. This is broken down into N\$ 169,110,000.00 for Operational expenditure and N\$ 153,070, 000 for development expenditure.

Table 1: MFMR budget allocation 2010/11 Financial Year (N\$000)

BUDGET	Allocation	Expenditure	%rate execution
Operational	169,110	160,188	94.72%
Development	153,070	107,882	70.48%
TOTAL	322,180	268,070	83.21%

Source: MFMR, 2010

The table below shows the type of projects or activities implemented during the reporting year. Eighteen projects varying from community's fish farms developments, ponds construction and infrastructure improvement in various regions of the country were planned for implementation during the reporting year.

Table 2: MFMR Projects Implemented, 2010/2011

	(N\$,000)
1. Kamutjonga Inland Fisheries Institute	14 000
2. Extension of Aquaculture Development at Olushandja/Onavivi	18 000
3. Aquaculture Development Project in Kavango	300
4. Aquaculture Development Project in Caprivi	300
5. Upgrading of Ongwediva Hatchery and the Construction of new offices	10 000
6. Upgrading of Hardap Facilities /Ponds	300
7. Leonardvile Fish Farming Project	4 000
8. Upgrading of Keetmanshoop Fonteintjie Fish Farm Community Project	*0
9. Construction of Fish and Vegetable Market Outlet	*0
10. Construction of Noordoewer Fish Farm	*0
11. Renovation of MFMR Head Office in Windhoek	7 000
12. Construction of New Research Vessel	50 000
13. Extension and Renovation of Swakopmund (NATMIRC)	20 000
14. Upgrading of the Offshore Island Infrastructure	5 970
15. Construction of MFMR Regional Office in Caprivi	16 000
16. Construction of MFMR Regional Office in Kavango	5 000
17. Traditional Fishing Development /Renovation and Extension Building	1 000
18. Extension/Construction of Offices of Fisheries Observer Agency in Walvis Bay	1 200
Total	153 070

Source: MFMR, 2010/11, * Project 8,9 and 10 were awaiting for the outcome of the feasibility study.



In addition to government budgetary provision, the Ministry also received technical and financial assistance from donors and development partner countries during the reporting period as indicated in Table 3 below.

Table 3: Donor Support, 2010/2011

Institution	Type of assistance
Norwegian Agency for Development Co-operation	Technical assistance
Government of Cuba	Technical assistance
Commonwealth	Technical assistance(Advisor to Aquaculture)
Vietnam	Technical assistance
Spain	Finance assistance

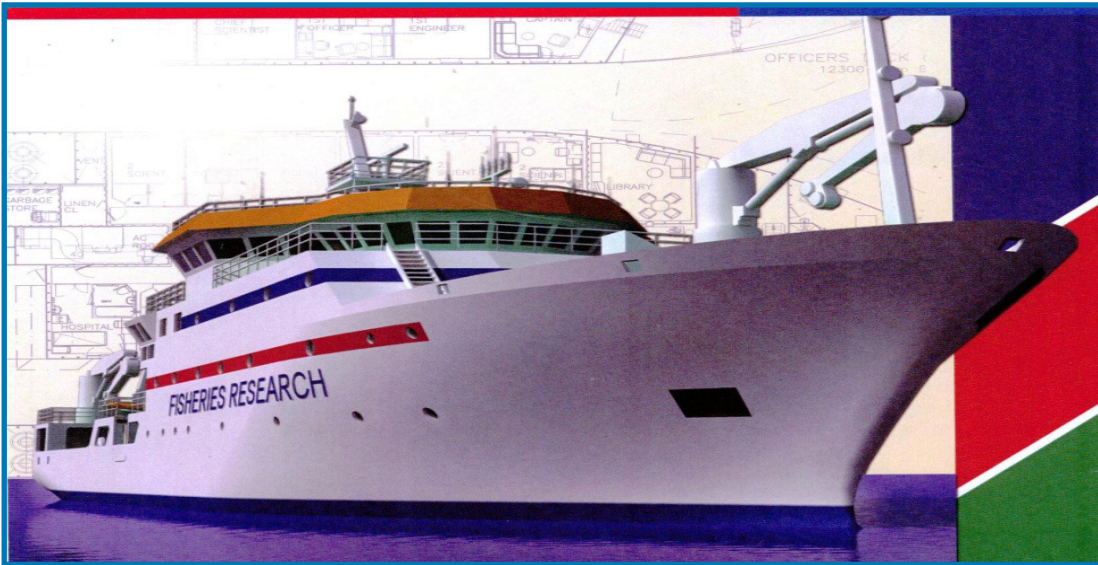
Source: MFMR, 2010



2. FISHERIES RESEARCH

2.1 STATE OF THE MARINE ENVIRONMENT

The Ministry of Fisheries and Marine Resources has conducted environmental-monitoring surveys in 2010/11 to gather information on important oceanographic parameters and processes such as sea temperature, salinity, dissolved oxygen, hydrogen sulphide, nutrients, chlorophyll-a, phyto- and zooplankton, upwelling and frontal movements. Environmental data was also collected during other resources surveys such as those for hake, pilchard and horse mackerel and monk biomass estimation. Remotely sensed data of wind speed and direction, air temperature, sea surface temperature and chlorophyll were obtained from various other sources and instruments such as satellites and weather stations.



Picture 1: MFMR Mirabilis Research Vessel, 2010/11

2.1.1 SEA SURFACE TEMPERATURE

Figure 1 represents the monthly sea surface temperature anomalies over the Namibian and southern Angolan shelf for March, June, September and December 2010. Sea surface temperatures during 2010 ranged from slight negative anomalies during the first quarter, mainly off southern Angola, to average and above average temperatures along much of the Namibian coastline for most of 2010. No significant anomalies, positive or negative, were detected.

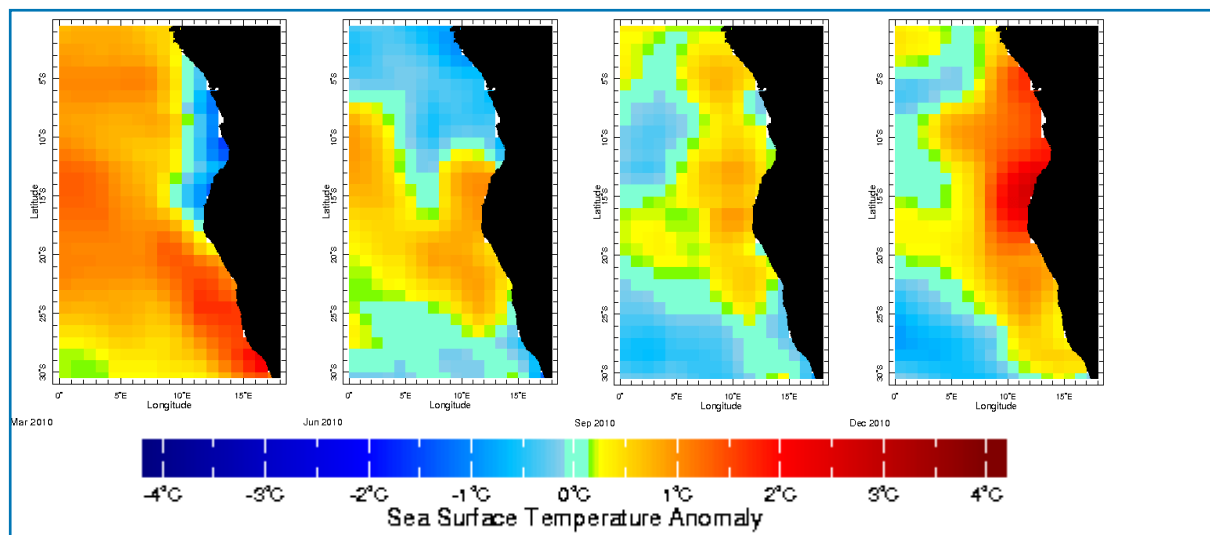


Figure 1: Monthly SST anomalies off southern Angola and Namibia for March, June, September and December 2010.

Figure 2 represents SST anomalies along the Angolan and Namibian coastline since January 2000. Namibia has not experienced any major warming events during the past few years, although temperatures were consistently above the long-term average (0.2 to 1.5°C). Several less significant warm events did occur over the Angolan shelf and the last significant cool anomaly that affected both Angola and Namibia occurred in 2004 and a less intense one occurred mainly off the Angolan coast during the first quarter of 2010.

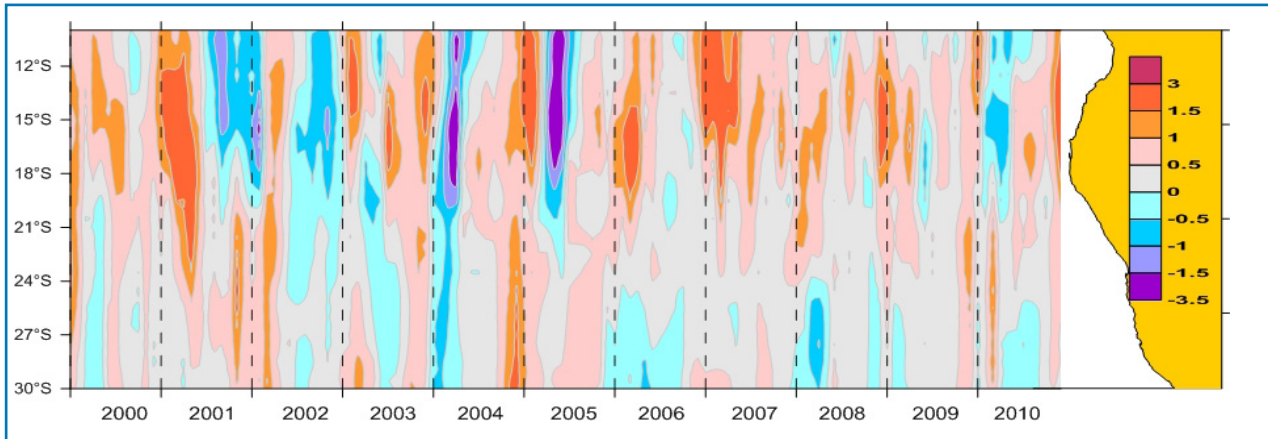


Figure 2: Monthly SST anomalies along the southern Angolan and Namibian coastline since January 2000

2.1.2 THE SOUTHERN OSCILLATION INDEX (SOI)

SOI is widely used as an indicator of El-Nino/La-Nina conditions in the Pacific Ocean and is constructed from various measurements such as sea level pressure, temperature etc. (Figure 3). The red bars, below the zero-line, represent periods with El-Nino conditions, associated with very warm ocean conditions in the eastern Pacific – coast of Peru/Chile) and the blue bars represent La-Nina type conditions, which are the opposite. The Pacific Ocean has experienced La-Nina conditions since April 2010 resulting in average to above average rainfall over large areas of Namibia and adjacent regions.

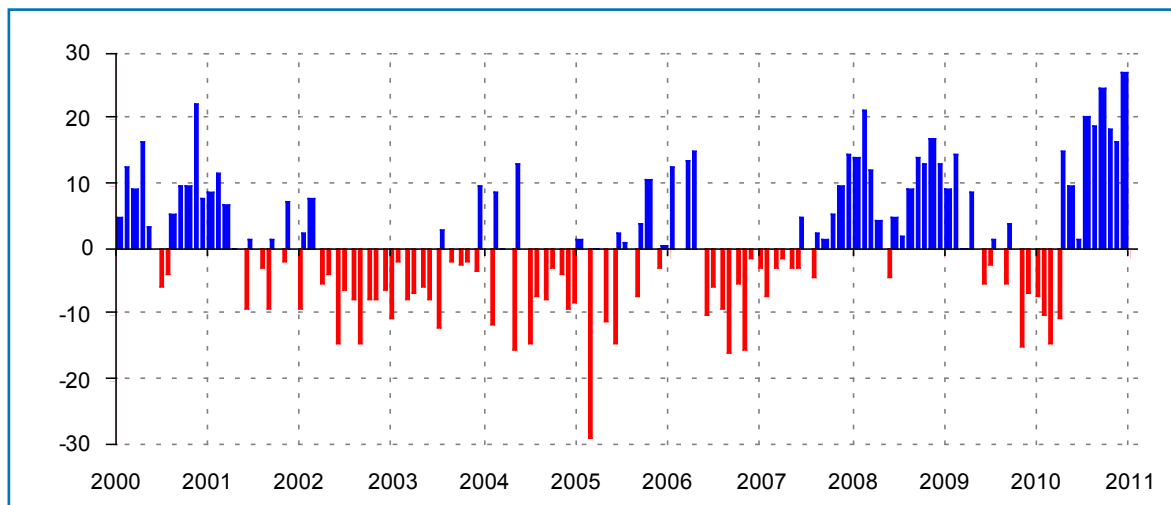


Figure 3: A time series of monthly Southern Oscillation Index values, which is used as an indicator for El-Nino and La-Nina conditions in the Pacific ocean. The blue bars represent periods with La-Nina conditions and the red bars indicate periods where El-Nino conditions were present.



2.1.3 WIND

Wind induced coastal upwelling is the most important oceanographic process along the Namibian coast as it stimulates primary production in the sunlit zones through the enrichment of the surface water with nutrients. The Diaz Point (Lüderitz) time series of wind speed and direction is used to create a coastal upwelling index for the southern Namibian coast. Figure 4 illustrates the monthly wind-stress anomaly at Lüderitz, which is the main upwelling centre in the Benguela system. It is clear from the graph that upwelling has been below average since the 1999/2000 seasons and that this downward trend fits well with the temperature trend of the region, which was above average for the corresponding period.

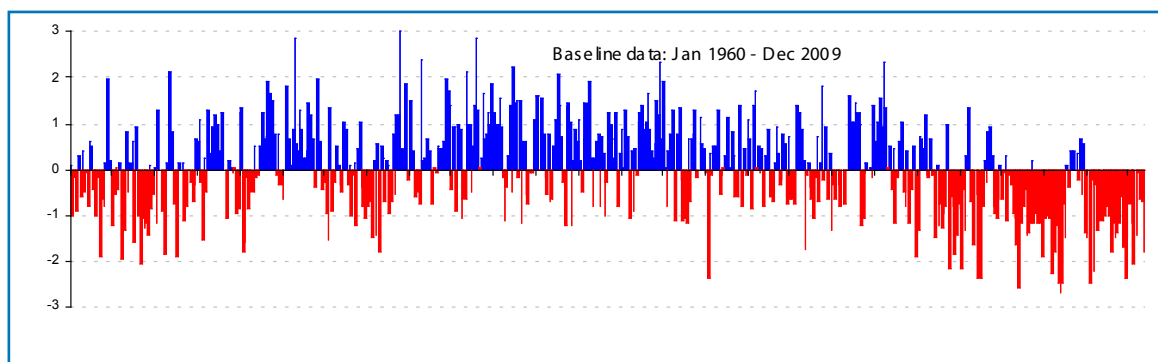


Figure 4: Monthly alongshore wind anomalies recorded at Diaz Point, Lüderitz – blue indicates stronger than average southerly winds and red indicates below average winds. These southerly winds are directly responsible for upwelling along this part of the coast.

2.1.4 OXYGEN

Dissolved oxygen is one of the key environmental variables influencing the habitat suitability in biologically productive systems such as the northern Benguela. The low oxygen index in Figure 5 illustrates both seasonal and inter-annual variability. Larger volumes of oxygen poor water usually appear during summer/autumn due to local oxygen consumption. In winter/spring the bottom oxygen conditions improve as a result of upwelling that transports oxygen richer water onto the shelf area. Oxygen conditions over the Namibian shelf have been favourable between 2006 and 2009, the only period where levels dropped significantly below the long-term average (blue dashed line) was in autumn 2007 & 2009.

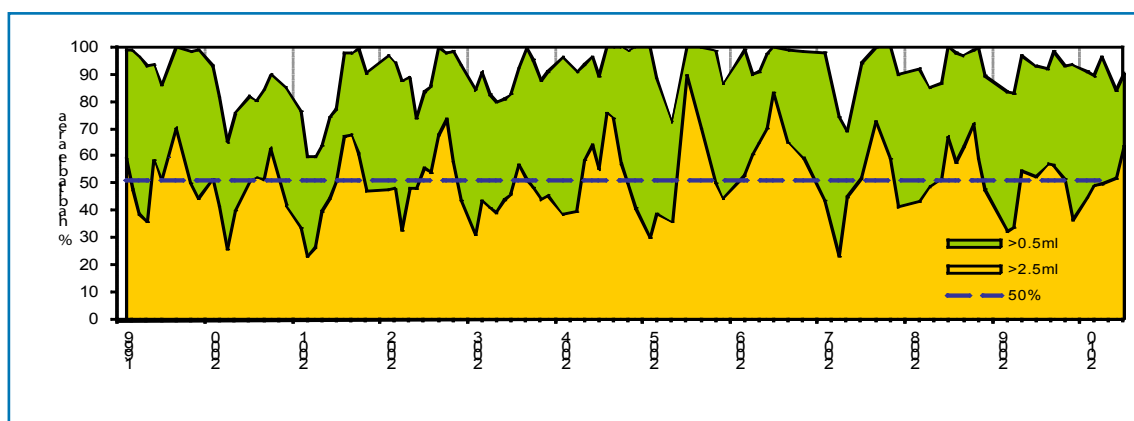


Figure 5: Percentage habitable area of water with dissolved oxygen content $\geq 2.5\text{ml/l}$ (yellow) and $\geq 0.5\text{ml/l}$ (green) on the central Namibian shelf (up to 50nm). The value $\geq 2.5\text{ml/l}$ is the lowest threshold for successful survival of pilchard eggs and larvae. The dashed line indicates the level of the historical mean for the 2.5ml/l oxygen level.

Oxygen conditions over the Namibian shelf have been favourable since 2006, the only period where levels dropped significantly below the long-term average (blue dashed line) was in autumn 2007 & 2009. During the December 2010 MOM survey the average habitable area for pelagic fish and larvae (Dissolved oxygen levels above 2.5ml/l/l) was still above 50% over the central Namibian shelf.

A satellite derived chlorophyll-a index covering the southern Angolan and Namibian coasts is shown in Figure 6. The highest chlorophyll-a concentrations are usually found off central Namibia (green area on figure), which is located downstream of the Lüderitz upwelling area. The upwelling centre off Lüderitz have low chlorophyll-a concentrations due to the intense turbulence in the water column during active upwelling and most production takes place downstream of it.

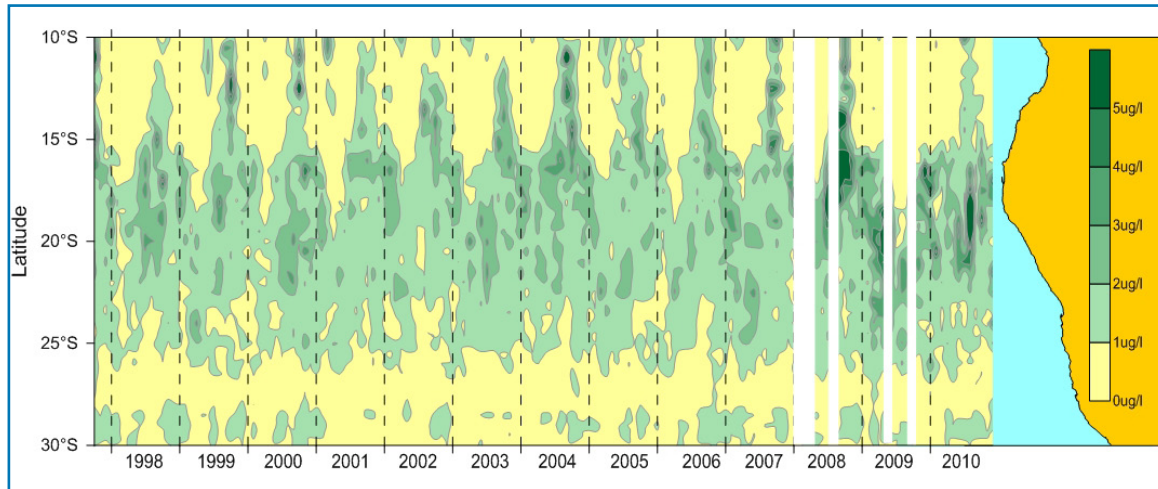


Figure 6: Chlorophyll-a measurements from satellite along the southern Angolan and Namibian coastlines from September 1997 to December 2010.

2.1.5 SECONDARY PRODUCTION

Copepod (zooplankton) numbers off central Namibia are much lower since early 2005 (Figure 7). Preliminary analysis of historical data sets indicated that these abundances are still above the long-term average. The high concentration of copepods during the 2002 to 2004 period was mainly due to an increase in *Oithona* spp. Copepod abundances along the 20°S transect are generally lower than those of the 23°S transect.

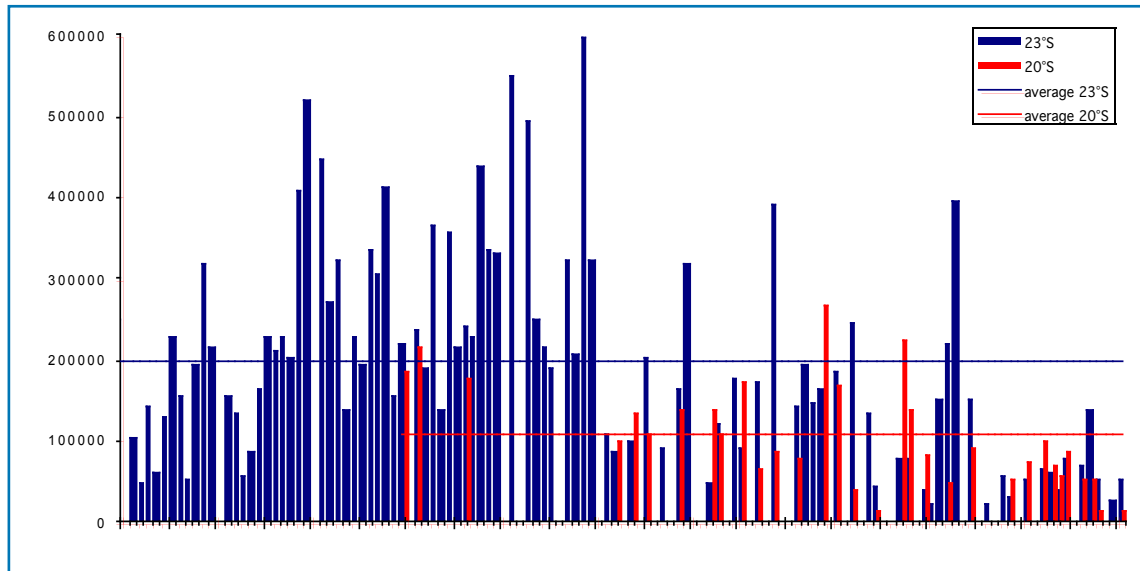
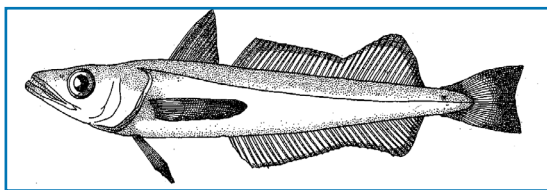


Figure 7: Copepod abundance (number per m2 surface water) along line 23°S (blue bars) and 20°S (red bars) averaged for the 10 nm to 70 nm stations. The horizontal lines show the average abundance (2 nm to 70 nm) for the two transects since the beginning of the time series.



2.2 STATE OF MARINE RESOURCES

2.2.1 Hake (Merluccius capensis and M. paradoxus)

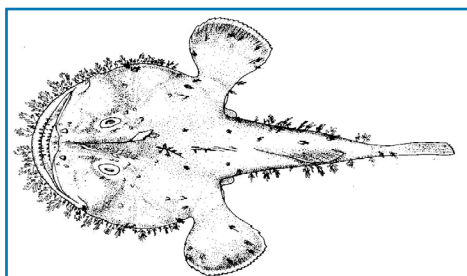


The January/February 2010 swept-area biomass survey showed the total relative abundance estimates to be around 1 million tonnes, 29% lower from the previous year of 1.4 million tonnes. This decrease in abundance was a result of a 43% decrease in the non-fishable part of the stock (hake size <36 cm), otherwise the fishable part (hake size >35 cm) increased by 12%. The 2010 survey estimates of the

recruitment potential (2008 cohort) was just above the long-term average, at about 4 billion small fish, and almost similar to the estimates from the seal scats samples, at about 5 billion small fish. Barring some severe environmental conditions, the cohort detected during the 2009 survey (2007 cohort) is expected to recruit to the fishable stock by the year 2011 and replenish it remarkably.

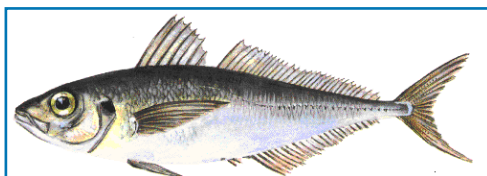
The long-time series catch rates (CPUE, which is used as an index of stock abundance) has continued to show recovery and has shown a very remarkable increase for 2010. By considering all the available data from 1964 to 2009/10, the age structured production model (ASPM) estimated the status of the Namibian hake stock to be below the state of the stock in 1990, while the overall stock indicator is way below the maximum sustainable yield level (MSYL). Although some improvement is noticeable (total biomass, fishable biomass, CPUE, sizes), the hake stock is still in an undesirable state and needs to be rebuilt to sustainable levels. Noteworthy, conservation measures introduced at the beginning of the 2006/2007 season (closed area, closed season and reduced TAC) are proving to be effective and need to be kept in place in order for the stock to improve.

2.2.2 Monkfish



November 2010 biomass survey estimates show that the monkfish stock has declined by 11% (45 000 to 40 000 tonnes) since the last survey in November 2009. As length at 50% maturity is estimated to be around 30 cm, about 40% of the estimated biomass in 2010 was immature fish an indication of good recruitment. Despite the slight decreased in biomass estimates in 2010, the CPUE has increased while the catch at length data indicates a healthy stock.

2.2.3 Horse Mackerel



The 2010 acoustic survey biomass was estimated at 1,207,000 tonnes. The annual average midwater catch-per-unit effort (CPUE) has increased drastically from 18.8 tonnes/hour on average, recorded in 2009 to 30.1 tonnes/hour on average recorded in 2010.

2.2.4 Pilchard



The biological indicators such as length at maturity show that the northern Benguela sardine stock is still in a stressed, low biomass condition. One positive sign was that of relatively good recruitment (high numbers of the 2009/10 cohort) encountered during the state-of-the-art sardine survey in October 2010, but about half of the sardine recruits were found in Angola. The rela-

tive biomass estimates from the acoustic surveys decreased by almost 40% from around 357 000 (2009) to around 134 000 tonnes (2010). At such low biomasses the estimates show increased variability due

to high mortality, fish avoidance or availability and so forth, or a combination of these factors. Since the surveys determined two successive years of above average recruitment the stock assessment model estimated the current biomass to be higher than the survey did ($SSB = 280\,000$ tonnes). Nonetheless, the spawning stock biomass is still below the Limit Reference Point that needs to be reached and exceeded to ensure sustainable harvesting and better socio-economic returns of the sardine resource.

The general low biomass of forage species in the northern Benguela gives rise to concern regarding the productivity of the ecosystem and thus the possible fish yields obtainable.

2.2.5 Deep Sea Red-Crab (*Chaceon maritae*)



The 2009 crab fishing season progressed well. Although monthly catches were variable throughout the season, the relatively high monthly CPUEs ensured a good catch rate. Samples taken directly from the commercial catch showed slight changes in population attributes, the most significant of these being the decreases in numbers (sample sizes) and average size of both male and female crabs from the 2008 season to the 2009 season. These two trends were generally supported by the fisheries independent data collected via the annual biomass surveys. Unfortunately very limited recruitment (crabs <60 mm CW) data were recorded during the 2008 and 2009

biomass surveys, the majority of this being male crabs. Opposing trends were obtained from the two biomass determining models applied to the 2009 data. The fisheries independent (trawl) data indicated a minor decrease in the overall fishable biomass whereas the commercial data predicted a moderate increase in the overall fishable biomass from the 2008 to 2009. This increase continues on the trend of the preceding five seasons where the upward trend indicates signs of a recovering stock.

2.2.6 Rock Lobster (*Jasus lalandii*)



Biological indicators revealed normal lobster distributions of samples taken on the fishing grounds. There was a marked decline in catches (from that of the previous season) on the northern & central fishing grounds, but this is believed to be an effect of environmental variables influencing the feeding behaviour of lobsters and not necessarily a density factor. Pueruli settlement was very low during the 2009-10 period, while the commercial data predicted increases in both the new and full recruits during the 2009-10 season as well as

noticeable a increase in the overall fishable biomass of the resource.

2.2.7 Large Pelagic



Atlantic Big eye Tuna. The biomass at the beginning of 2010 was estimated to be at between 0.72 and 1.34 (80% confidence limits) of the biomass at MSY, with a median value of 1.01 and the 2009 fishing mortality rate was estimated to be between 0.65-1.55 (80% confidence limits) with a median of 0.95. South Atlantic Albacore - Based on the 2007 assessment the view of the resource status is that the spawning stock has declined to about 25% of its unfished level in 2005. MSY was estimated

to be around 33,300t, whereas the replacement yield averaged over the last 10 years, is approximately 29,000t. The assessment also showed that the stock was overfished and model projections indicated that catches, at about the 2006 level (24,452t), will recover the stock. A recommendation adopting a catch limit of 29,900t (the lowest estimate of MSY) until 2011 was made. Recent catches were below the

TAC level while the current management regulations are considered to be sufficient for the recovery of the stock. The assessment is set to be updated in 2011. South Atlantic Swordfish - Because of the high level of uncertainty associated with the south Atlantic production models results, the SCRS (Scientific Committee on Research and Statistics within ICCAT) conducted catch-only modeling analysis, including two explorations using different assumptions concerning the intrinsic rate of population increase. The distribution for MSY was skewed for both runs. The median of MSY estimated for RUN 1 was 18,130 t and for RUN 2 was 17,934 t. Until sufficient research has been conducted to reduce the high uncertainty in stock status evaluations for this stock, the Committee emphasizes that annual catch should not exceed the provisionally estimated MSY (15,000). Considering the unquantified uncertainties and the conflicting indications for the stock, the Committee recommends a more precautionary Fishery Management approach, to limit catches to the recent average level (~15,000 t), which are expected to maintain the catch rates at about their current level.

2.2.8 Snoek



As snoek is a highly migratory, seasonal species, it is not managed by an annual TAC allocated to the lineboats fleet that target this species; they harvest what they need annually. Freezer lineboats produce high-value fresh/frozen snoek as well as low-value vlekke & salted snoek. Snoek

is caught relatively close to Walvis Bay.

For 2010 a total of 1518.8 tons of snoek were caught by the industry, almost double the tonnage 827 tons in 2009 (Landing data provided by the companies).

2.2.9 Silver Kob



Historically, silver kob was the most important component of the linefish fishery off Namibia and was caught by recreational shore anglers and skiboats, and commercially by lineboats and some skiboats. However, for the last 6 years the lineboat industry could not find large concentrations of kob and therefore this

industry targeted snoek. For instance only 8 tons of kob was caught in 2007 and 24 tons up to April 2008 and these were by larger skiboats. At this time the Ministry decided to limit the lineboat industry in that they may only target snoek to give the kob stock a change to recover. In 2009 a total of 27.1 tons of kob were caught by the larger skiboats (chuckies). Total recreational anglers catches of kob estimated from anglers beach surveys for 2008 was approximately 54437 individual fish (average 2.5kg) which shows a 2.6% decrease from the numbers of kob caught in 2008. The reason for this decline in catches over the last 3 years is unknown.

2.2.10 West Coast Steenbras

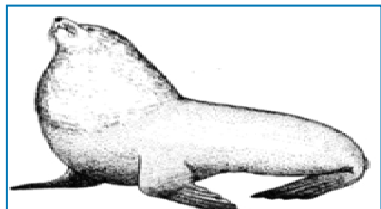


Two genetically distinct West Coast steenbras populations occur in Namibian waters namely a closed population at Meob Bay situated in a closed area in the south and is therefore unavailable to recreational anglers. Recreational anglers exploit only the northern population, occurring in the open angling area. These two populations differ genetically in growth rates and age at maturity.

Anglers beach surveys are carried out throughout the year to estimate the annual catches of the anglers. In 2009 recreational anglers caught an estimated 9867 West Coast steenbras which relates to a 30% in-

crease of the numbers (7009) caught in 2008. This increase seems large but this season's catch is still less than half of what was caught only 3 years ago namely 22128 individuals.

2.2.11 Cape Fur Seals



Pup growth and birth weight are both used as indicators for food availability to the females during lactation and pregnancy. The average birth weight for the 2009/10 cohort (based on the 2008/9 aerial survey) was 5.8 kg and 5.9 kg for Wolf/Atlas Bay and Cape Cross, respectively. Above average birth weights were prevalent at Wolf/Atlas Bay and Cape Cross for the 2009/10 cohort.

Pup growth monitoring studies during 2010 indicated an average winter pup growth of 13.5 g-day at Wolf/Atlas Bay and 15.6 g-day at Cape Cross, which is 2.1 g-day higher than that of Wolf/Atlas bay. Pup growth variability between and within years, at Wolf/Atlas Bay and Cape Cross, are attributed to spatial and temporal variability in prey availability. The average weaning weight was 12.59 kg and 12.6 kg during 2010 at Wolf/Atlas Bay and Cape Cross, respectively, thus above the critical average weaning weight of 10.89. The post-weaning survival index gives an indication of the percentage of pups weighed at weaning that are above the critical average weaning weight. This index for 2010 was 64% for Wolf/Atlas Bay and 86% for Cape Cross, respectively. A fairly good probability of pup survival after weaning is thus expected at Wolf/Atlas Bay and a high probability of survival at Cape Cross.



3. MONITORING, CONTROL AND SURVEILLANCE

3.1 MONITORING, CONTROL AND SURVEILLANCE ACTIVITIES

The Namibian fisheries operation is based on the deployment of fisheries patrol vessels, patrol aircrafts, harbour and plants inspections and coastal patrols. The figure below depicts the country's fisheries operations:

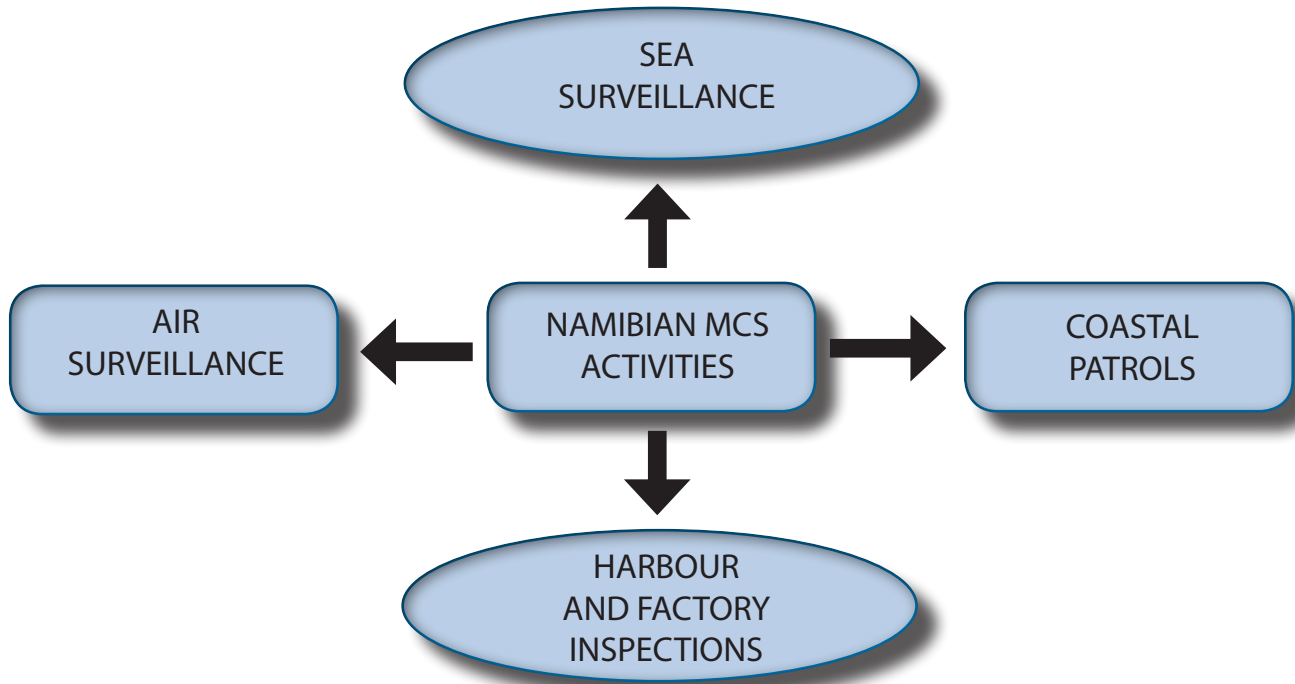


Figure 8: Namibia's Fisheries Operations

3.1.1 Fisheries Sea Surveillance Activities

Two patrol vessels namely "Nathaniel Maxuilili" and "Anna Kakurukaz Mungunda" are deployed at sea to strengthen fisheries control function through regular monitoring, control and surveillance. They undertook 27 sea patrol missions and sailed for 321 days (P/V "Nathaniel Maxuilili" 111 days, P/V "Anna Kakurukaze Mungunda" 120 days). The inspectors onboard the patrol vessels inspected 109 Namibian fishing vessels and observed the movement and activities by 221 other fishing vessels, tankers and cargo vessels. Inspectors recorded 19 violations ranging from irregular round-straps, outdated vessel hold drawings, displaying of unclear vessel names on the vessel side and incomplete daily log books. They issued N\$6 300.00 fines for this non-compliance.

The Pie Chart below illustrates sea patrol days by the Namibia fisheries patrol vessels:

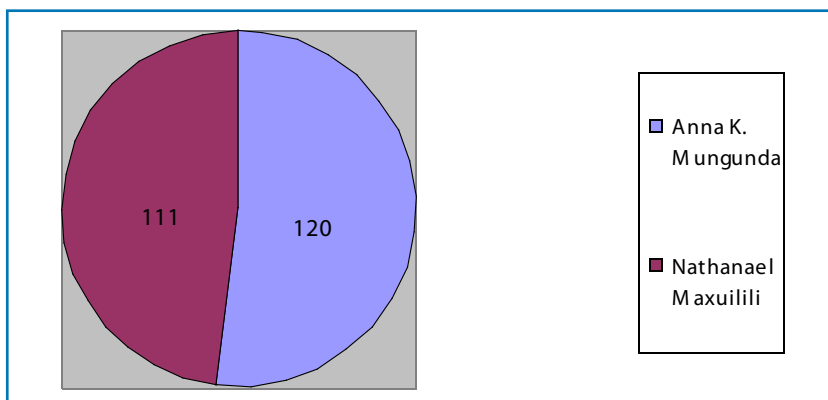


Figure 9: Patrol days per annum, 2010/11

3.2 AIR SURVEILLANCE

The two fisheries patrol aircrafts "Sea Eagle I" and "Sea Eagle II" undertook 82 air patrols missions in 187.8hours. The inspectors onboard the patrol aircrafts observed 548 fishing vessels and 133 cargo/tanker vessels. They also undertook 29 technical flights for 53hours, 10 VIP flights for 3.9hours and 5 training flights in 3.2hours.

The sea Eagle 1 resumed air surveillance in June 2010 after it was ferried back from France where it underwent major maintenance and repairs due to corrosion on the wings and default on the radar system. The Ministry assigned its own pilots and aircraft technicians to fly the aircraft over Africa and the Mediterranean sea for such an exercise. This exercise has once again demonstrated the Ministry's capability and human resources self-reliance.



Picture 2: Pilots: Michael Mushimba, Zacekey Kangotui, Lukas Shikufinde, Engineer: Risto Kapenda flanked by the Director of Operations Peter Amutenya few minutes before the crew successfully ferried the "Sea Eagle I" from France to Namibia.

3.3 COASTAL SURVEILLANCE

The Ministry deployed fisheries inspectors from Walvis Bay and Luderitz Inspectorate Offices to enforce fisheries legislation along the country's coastline. Inspectors undertook 2 154 coastal patrols (1 617 from Walvis Bay, 537 from Luderitz). The Ministry recorded 1 213 illegal fishing activities during these operations (1078 from Walvis Bay, 135 from Luderitz). Normally, the offences that are normally reported during coastal patrol are related to fishing without permits, harvesting and retention of juvenile fish, exceeding the daily bag limit, possession of prohibited baits, and retention of lobsters in berries, written warnings for fishing too close to culverts. The inspectors' further measured 41 gillnets for registration at Regional Councils. They also erected 12 closed fishing signs in the Oshakati East Constituency. They further acquired 144 signs clamps for closing fishing signs.





Picture 3: The Deputy Director of MCS-Mr. Bonny Amutse, the Deputy Director of Technical Services-Mr. Steven Ambabi, the Director of Policy Planning and Economics-Ms. Anna Erastus exchanging views on the management plans regarding amendment of the Namibian Marine Resources Act and Regulations.

Walvis Bay inspectors issued fines amounting to N\$304 510.00 while Luderitz inspectors issued fines amounting to N\$30 650.00. Walvis Bay inspectors further undertook 70 overnight patrols, manned 52 roadblocks jointly with Nampol and executed 56 warrants of arrest. Luderitz inspectors also manned one roadblock at Keetmanshoop.

3.4 ONSHORE MONITORING AND CONTROL

Namibia deployed fisheries inspectors from Walvis Bay and Luderitz Inspectorate Offices to monitor and inspect fishing activities in harbours, onshore processing plants and at midwater. Both offices inspected and monitored fish landings by 3 216 Namibian fishing vessels (2 457 from Walvis Bay, 759 from Luderitz). Walvis Bay inspectors also monitored the landings by 69 foreign vessels. Both offices cleared 207 Namibian fishing vessels.

Walvis Bay inspectors issued 19 fines amounting to N\$20 900.00 for failure to give 48hrs notice, offloading without the presence of inspectors and illegal removal of fish from vessels. Luderitz inspectors issued 34 fines amounting to N\$48 700.00 for the retention of lobster in berry and offloading without the presence of inspectors.

Walvis Bay inspectors further inspected and monitored the seal harvesting of 19 705 pups, 30 bulls and 4 cows while Luderitz inspectors inspected and monitored the seal harvesting of 20 753 pups, 682 bulls and 30 cows.

Luderitz inspectors further recorded the collection of 7 631 bags of guano weighting, 175 686.73mt.

3.5 INLAND FISHERIES ACTIVITIES

The Ministry is also responsible for enforcing freshwater legislation along the rivers and inland water bodies. These activities are coordinated from Caprivi, Karas, and Kavango and Oshana regional offices.



Katima Mulilo Office conducted 309 land patrols and 71 river patrols. The inspectors issued 61 fines amounting to N\$15 700.00. They further confiscated 66 gill nets, 165 mosquito nets, 1 shade net, 4 drag nets, 2 canoes, 4 puddles, 6 spears and 1 unlicensed fishing rod. They also issued 17 verbal warnings and 3 written warnings for non-compliance with inland fisheries legislation. They held 16 awareness and educational campaigns at Muyako and Ikaba and Kwando Conservancy.

Ongwediva Office conducted 99 land patrols. The inspectors issued 7 fines amounting to N\$2 100.00. They further confiscated 8 gill nets, 70 mosquito nets, 33 shade nets and 24 anchovy nets. They also issued 4 verbal warnings.

Rundu Office conducted 228 land patrols and 31 river patrols. The inspectors issued 27 fines amounting to N\$7800.00. They further confiscated 52 gill nets, 219 mosquito nets and 44 shade nets. They further issued 264 verbal warnings for minor irregularities and 4 written warnings for using illegal gears and failure to register nets. They conducted 3 awareness and educational campaigns on freshwater fisheries in NBC– Rukwangali Service, as well as 3 awareness and educational campaigns in Kavango Region (1 at Kavango Regional Council attended by 86 people, 1 at Sauyemwa Informal Settlement attended by 146 people and 1 at Rundu Rural Constituency attended by 200 people).

Luderitz Office conducted 39 land patrols along the Orange River, Oranjemund and Hottentots Bay. The inspectors issued 16 fines amounting to N\$4300.00 for fishing without permits. They further remove 6 illegal nets from the Orange River.

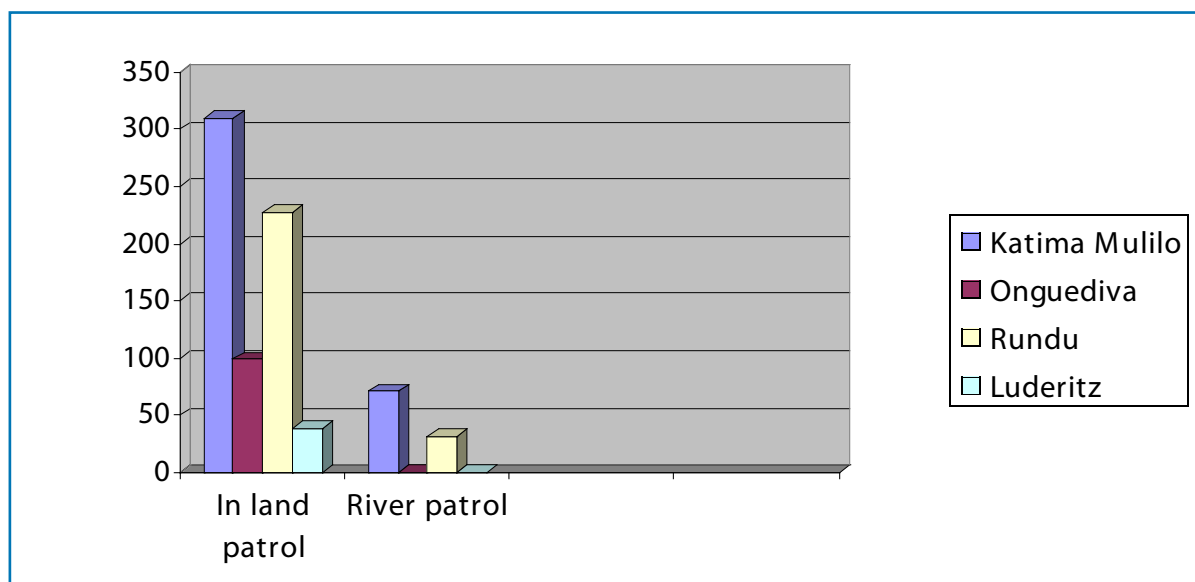


Figure 10: Inland and river patrol

4. THE ECONOMICS PERFORMANCE OF THE FISHING SECTOR

The sector plays a significant role in terms of production, employment, foreign exchange earnings and government revenue as elaborated under this chapter. The Ministry reviewed and evaluated some of the fishing rights that were expecting and called for the public to apply for new fishing rights.

4.1 NUMBER OF FISHING RIGHTS IN OPERATION

The total number of harvesting rights during 2010/11 are shown in table below.

Table 4: Number and duration of existing harvesting rights 2010/11

Fishery	Duration of Rights				Total
	Seven-year	Ten-year	Fifteen-year	Twenty-year	
Hake	0	4	34	0	38
Monk	0	2	7	0	9
Horse Mackerel	0	7	5	0	12
Large Pelagic	0	3	16	0	19
Red Crab	0	1	2	0	3
Rock Lobster	0	1	20	0	21
Line Fish	1	1	9	0	11
Orange Roughy	0	3	0	0	3
Pilchard	0	3	19	0	22
Mulletts	0	0	13	0	13
Seals	0	1	2	0	3
Guano	0	0	1	0	1
Total	1	26	128	0	155

Source: MFMR, 2010

Note: Currently no company qualified for twenty years term fisheries rights.

During 2010 the Ministry embarked on a process to review all the rights of exploitation that were due to expire 31st December 2010. Twenty fishing rights were reviewed during this exercise of which 10 were hake right holders, 7 pilchard right holders, 2 monk right holders and 1 crab right holder. As a result of this review process the following extensions were granted and resulted in a change in the above table when compared to the information in the 2009 report.

One hake right with a seven-year term was extended to a fifteen-year term of right. Nine hake right holders with each having a 10-year term of fishing right were extended to a fifteen-year term of right. The overall terms for right of exploitation in the hake fishery stand as follows, zero 7-year term of right, 4 ten-year term of right and 34 fifteen-year term of right.

In the pilchard fishery, 2 seven-year term right holders were extended to a fifteen-year term of right respectively. While 5 ten-year term right holders were extended to a fifteen-year term of right respectively. The overall terms of right of exploitation in the pilchard fishery is therefore zero seven-year term of right, 3 ten-year term of right and 19 fifteen-year term of right.

In the monk fishery 2 ten-year term right holders were extended to a fifteen-year term of right respectively. Therefore the overall term of right of exploitation in the monk fishery is 2 ten-year term of right and 7 fifteen-year term of right.

In the red crab fishery, one ten-year term right holder was extended to a fifteen-year term of right. This resulted in the red crab fishery reflecting the following one ten-year term of right and 2 fifteen-year term of right.

Also important to note that the Minister called for the public to apply for fishing rights as per Government Gazette advertise during 2010.



4.2 UTILISATION OF VESSEL LICENCESED

During 2010/11 a total number of 199 vessels were licensed to operate in the Namibian Exclusive Economic Zone (EEZ). It is observed that there is a slight decrease in the total vessels licensed when compared to what was submitted during 2009. The decrease is mainly noted in the demersal trawlers, long liners and large pelagic fishery. The decrease could be attributed to a reduction in the Hake TAC which resulted in lower hake quota allocations for the individual right holders and in return right holders adjusting their catching capacity accordingly. As for the large pelagic fishery the declined can be attributed to management measures that were introduced in this sector towards the end of 2008 and were still maintained during 2010/11 fishing season.

Table 5: Number of licensed vessels by fishery, 2006 – 2010

Fishery	2006	2007	2008	2009	2010
Small pelagic	16	9	11	10	8
Demersal Trawlers	78	87	91	71	63
Longliners	39	30	18	18	13
Midwater	10	13	10	9	9
Deepwater	4	2	0	0	0
Large pelagic	65	67	88	48	40
Linefish	15	15	15	15	14
Crab	2	2	3	3	3
Rock lobster	18	32	31	29	33
Monk	22	20	25	16	16
Total	269	277	292	219	199

SOURCE: MFMR, 2010/11

4.3 TOTAL ALLOWABLE CATCHES

In accordance with Namibia's Marine Resource Policy towards Responsible Development and Management of the Marine Resources Sector, the Ministry annually set a Total Allowable Catch (TAC) for all major commercial fisheries. The objective is to manage the resources sustainably and to prevent overexploitation of Namibian fish stocks. Table 6 shows the TACs trend since 2006 - 2010.

Table 6: Total Allowable Catches, 2006-2010 in tonnes

Year	Pilchard	Hake	Horse Mackerel	Red Crab	Rock Lobster	Orange Roughy	Monk	
2006	25 000	130 000	360 000	2 400		420	1 100	9 500
2007	15 000	130 000	360 000	2 500		350	900	9 500
2008	15 000	130 000	230 000	2 500		350	900	9 500
2009	17 000	149 000	230 000	2 700		350	N/A	8 500
2010/11	25 000	140 000	247 000	2 700		275	N/A	9 000

Source: MFMR, 2010/11 N/A =Not Applicable

From the above it can be observed that during the 2010 period, an increase in the TAC occurred in the pilchard, horse mackerel and monk fisheries in comparison to the 2009 information. As for hake and rock lobster a decrease in the TAC was observed during 2010/1. Furthermore, for the red crab fishery the TAC was maintained at the same level during this reporting period. The Orange Roughy fishery is still in moratorium.



4.4 LANDINGS

The 2010/11 total catches for the quota species amounted to 343,874 metric tons indicating a decrease of about 11% when compared to the total catches of 2009, where 385,282.00 metric tons were landed. The decrease is evident in the most fisheries such as Hake, Horse Mackerel, Crab and Tuna. The decrease in some fisheries such as Hake could be attributed to adult fish migrating to closed areas while in Horse Mackerel, it could be attributed to fisher's compliance with conservation and management measures.

Table 7: Landings of Quota Species: 2006-2010

Species	2006	2007	2008	2009	2010
Pilchards	2,314	23,522	18,755	20,137	20,229
Hake	137,771	125,534	117,286	137,312	127,196
Horse Mackerel	309,980	201,660	186,996	215,996	185,673
Monk	9,816	8,932	7,270	6,922	7,904
Crab	2,228	3,245	2,100	1,577	766
Rock Lobster	285	1,153	195	43	82
Orange Roughy	545	255	0	0	0
Tuna	2,903	4,596	3,281	4,241	2,024
Total (MT)	463,842	367,897	335,883	385,283	343,874
Seals(Number)	83,045	34,728	47,603	41,145	47,821

Table 8: Landings of By-catches and non-quota species 2006-2010

Species	2006	2007	2008	2009	2010
Kingklip	4,493	4,366	3,424	4,380	4,810
Others	39,891	40,408	12,973	15,791	12,917
Total (MT)	44,384	44,774	16,397	20,172	17,727

The total landings have decreased by 12% in 2010. This indicates that there were few by-catches caught in the attempt of catching the targeted species were calculated within the specific target species. That's why the reduction is very high.

4.5 CATCH VALUE

The three value indicators for fish and fish products are illustrated in table 9 below they are;

4.5.1 Landed Value

This is the value of the fish in the form it is landed (i.e.) at ex vessel prices. Landed value reduced by 26% between the years 2009 and 2010 from N\$5,087.4 million to N\$3,749.4 million respectively. The reduction in the landed and export values can be attributed to the negative effect of the economic crisis in the major markets that led to reduced prices of some fish and fish products. Low landings by about 10% could also be the reason for the significant reduction.

4.5.2 Final Value

This is the value of fishery products in their final form at export (ex factory) prices. As it is shown in table 9 below, final value is higher than landed value. The difference is accredited to value addition by onshore fish processing. During 2009, final value was N\$4,789.3 million which, reduced by 15% to N\$4,059.8 million in 2010 because of reduced prices of most products and landings accordingly.

4.5.3 Export Value

This indicator gives the Namibian dollar parity of foreign currency earnings brought into Namibia due



to the sale of fish and fishery products. Namibia's fishing industry remains the country's second biggest export earner of foreign currency after mining. Export value reduced by 15% between 2009 and 2010/11 from N\$4,637.3 million to N\$3,926.8million respectively. During 2010, the landed, final and export value of fish and its respective products decreased by N\$1,338, N\$729.50 and N\$N\$710.50 respectively, translating into 13% of the total export of goods as compared to 2009 when it was 15%. This decrease was attributed to fluctuations in fuel, product prices as well as exchange rates.

Table 9: Value of Fish and Fish products - 2006-2010/11 (N\$ billions)

Value	2006	2007	2008	2009	2010		
Landed Value	3,146	3,772	4,290.4		5,087.4	3,749.4	
Final Value	3,985	4,843			5,084.1	4,789.3	4,059.8
Export Value	3,883	4,711			4,934.5	4,637.3	3,926.8
% of total export of goods	18,9%	17%	14%		15%	13%	

Source: MFMR & NPC, 2011

4.5.4 Contribution to Gross Domestic Product

The level of output in the fishing sector can be assessed by looking at its contribution to Gross Domestic Product (GDP). Over the past several years, the fishery sector has positioned itself as one of major contributors to GDP. The sector's contribution to GDP is essentially the gross income earned, wages and salaries, gross profits and indirect revenues from fish production. It does not, include the value of intermediary inputs and it is therefore much less than the value of production.

Table 10 below shows estimates of the contribution of the fishing sector to GDP at current prices, from processing on shore and fishing and fish processing onboard. The revised figures were estimated using rebased prices of 2004 from the previously used base year of 1995. The fishery contributed 5.2% in 2007, compared to 4.6% contributed in 2008, representing a 0.6% decrease. During 2009 the Ministry contributed 5% to GDP.

Table 10: Fisheries contribution to GDP, 2006-2010, at current prices (N\$ billions)

GDP Contribution	2006	2007	2008	2009	2010	
Fishing and fish processing on board	1,948	2,330	2,411	2,523	2,177	
Processing on shore	657	903	993	950	785	
Total	2,605	3,232	3,404	3,473	2,962	
% of GDP	4.8	5.3	4.7	4.6	3.7	

Source: NPC: 2011

4.6 EXPORT MARKETS

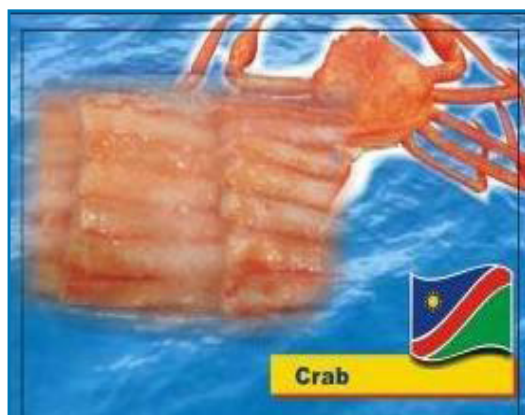
4.6.1 Rock Lobster



All Namibian Rock Lobster is marketed internationally by Namibian Rock Lobster Packers (Pty) Ltd (NAMROCK), which is the marketing organization that sells Namibian Rock Lobster worldwide.

The two main forms in which the rock lobster is exported are either as whole cooked frozen or as frozen tails. The majority of the tails are exported raw, mainly to Japan, USA and Spain. Around 95% of Namibian rock lobster is exported to Japan. Over the years NAMROCK has been able to establish itself in the Japanese market and the NAMROCK brand is highly valued in that country.

4.6.2 Crab



Crab is being exported in form of claws, flakes, legs and sections to Asian markets with Japan being the main importer of Namibian crab. Few crabs are sold locally. Another export destination for Namibia crab is Spain and China. The Japanese buyers prefer frozen portions, frozen mince/flake while the Chinese only prefer frozen portions. The companies have also shown the desire to export to Europe but indicated that prices are not as good as in the other export markets.

The demand for Namibian crab is high in the Japanese market though at times Namibian exporters face competition from countries such as Brazil, Argentina, Russia and Uruguay. For the past 5 years crab cost N\$33.42/kg on average with the

best prices recorded in 2010 at N\$40.00/kg. Local prices for crab are lower compared to international prices. In 2009, the average price locally, was N\$10/kg. This is attributed to and determined by the ordinary principle of demand and supply to the crab commodity, locally.

4.6.3 Seals



Since the total banning of seal products into the European markets in 2008, it has not been easy to promote and diversify to other markets. The complete ban meant a loss of a trade block consisting of six member countries (Belgium, Denmark, France, Spain, The UK and Germany) for Namibia. However, concessionaires are positive and act with optimism to penetrate new markets. The diversification of markets for the respective products is currently top priority. So far, the Chinese market has shown an interest to purchase the carcass for consumption.

There are currently two markets to which the Namibian seal products are exported, namely Turkey and China. During 2010, the number of skins (both pups and bulls) exported

totaled 40,904 an increase of 27% since the previous season. The increase was exclusively due to the demand by the buyer. Seal organs exported in 2010, decreased by 32% to 145kg.

4.6.4 Monk



Concessionaires in this sector are having operational links and joint ventures with European retailers and marketing companies respectively. They have established international marketing channels, which stretch as far as the Far East (Singapore and Korea), Australia and America.

Initially Monk production was mere skin-on Monk tails. However, at present, production is skinless and skin on Monk tails, Monk heads as well as whole round Monk.

Spain and Italy remain the two leading European markets in terms of volume exports. For the past five years (2005-2010), on average, Italy has imported 70% of Namibia's

monkfish during this period while Spain has imported 24%. Other notable importers of Namibian monkfish are Netherlands and South Korea, each having imported 2% each. The remaining 2% of Namibian monkfish exports have gone to countries such as South Africa, France, and other Caribbean countries.

During 2010 the price obtained for Monk decreased by 23%, from N\$70.85/kg in 2009, to N\$53.97/kg in 2010. This is mainly due to the strengthening of the Namibian Dollar against the Euro. Also, the repercussions felt in Spain caused by the global economic crisis, led to a drop in prices paid for Monkfish.

4.6.5 Pilchard Export Products



The major export destination for Namibian pilchard is South Africa to which 80-85% of canned pilchard is sent annually. Namibian pilchard is also exported to Thailand in the form of frozen cutlets. There is a market for Namibian pilchard in the UK but this particular market has not been serviced for the past few years due to a shortage in pilchard volumes.

The products exported are mainly canned pilchard in tomato and chilli sauce; fishmeal; fish oil and cutlets. The prices differ from market to market due to differing economic costs incurred when supplying to those markets. These costs include transportation and packaging.

4.6.6 Large Pelagic



Tunas, its associated species Swordfish and Sharks are exported to the United States, Japan and Spain. The products reaching Japan are auctioned at the Tsukiji Market, which is the biggest wholesale fish and seafood market in the world and also one of the largest wholesale food markets of any kind.

In terms of diversification, during 2010 the Australian market has been explored and the activity is still continuing. Concessionaires are at all times looking into introducing new products in existing and emerging markets; France, USA and UK are possible markets been exploited with steaks.

Prices for the large pelagic species are quite volatile; for the 2009/10 fishing season the price for whole round tuna was 18/kg. Fresh tuna caught by polling recorded good prices for 2010/2011 fishing season at N\$38.31/kg.

4.6.7 Hake

Most of the Namibian hake and hake-products are exported mainly to the European markets. The Spanish market is and remains to be the biggest importer of the Namibian hake and its products. The global economic crisis and its effect on Spain, led to a decrease in export percentages of hake to this market in 2010. Only 61% was exported to Spain compared to the exports of 71% during 2008 and 49% in 2009.



Efforts to diversify markets in order to reduce the high dependency on the Spanish market might also have led to the reduced exports. South Africa, to where 16% of good are exported, is the second highest country to which Namibian hake and hake products are sold.

4.7. REVENUES GENERATED

Despite the increase of quota fees and fund levy as shown in table 10 below the sector recorded an overall increase by 15.60 % from N\$96,029 in 2009 to N\$113, 782 in 2010. The increase in quota fees is attributed to the collection of outstanding quota fees mainly in the hake fisheries. However, stern measures were put in place to collect and settle all outstanding fees owed by the fishing industry.

Table 11: Revenue Generated, 2006-2010/11 (N\$ millions)

Fees	2006	2007	2008	2009	2010/11
Quota fees	68,299	107,218	59,255		68,800
Marine Resources Fund levy	12,446	12,561	12,075		18,733
By-catch fees	11,199	9,639	10,837		8,410
License fees (000)	93	91	85	86	82
Total revenue	92,037	129,509	82,253	96,029	113, 785

Source: MFMR ,2010 *Note: Figures for 2010 are provisional.

The table below shows recreational permits and revenue collected during 2010/11 fishing season. About 12 863 permits were issued on a monthly basis whilst 1831 were issues on a yearly basis. It is important to note that there is a high interest generated in the recreational activities in terms of fishing.

Table 12: Recreational Permits Issued and Revenue Generated, 2010/11

Month	Monthly permits issues	Revenue collected (N\$)	Yearly permits issued	Revenue collected (N\$)
January	1123	15 722,00	1207	29 834,00
February	660	9 240,00	35	5 880,00
March	1060	14 840,00	49	8 232,00
April	732	10 248,00	20	3 360,00
May	706	9 884,00	27	4 536,00
June	679	9 506,00	21	3 528,00
July	481	6 734,00	10	1 680,00
August	477	6 678,00	14	2 352,00
September	484	6 776,00	19	3 192,00
October	445	6 230,00	16	2 688,00
November	1042	14 588,00	81	13 608,00
December	2242	31 388,00	154	25 872,00
January	1 106	15 484,00	86	14 448,00
February	990	13 860,00	62	10 416,00
March	636	8 904,00	30	5 040,00
Grand Total	12 863	180 082,00	1831	118 944,00

Source: MFMR, 2010/2011



Table 13: Types of permit issued in 2010/2011

Period	Total number of Permits	Amount Received (N\$)
Monthly permits issued	12 863	180 082,00
Yearly permits issued	1831	118 944,00
Total	14694	299 026,00

Source: MFMR, 2010/2011

4.8 ECONOMICS OF THE INLAND FISHERIES SECTOR

4.8.1 Performance and Utilization

The production of fish from inland fisheries sector in Namibia is estimated to be 2,000 tonnes per annum for the Caprivi Region, 800-1,000 tonnes for the Okavango Region, 250 tonnes for the Cuvelai system and minimal amounts for the Orange and Kunene Rivers. The types of fish species harvested in the inland waters are tiger fish, bream and catfish. A marked preference for fresh fish followed by dried fish is reported. Smoked fish is less popular while canned marine fish is consumed in small quantities.

Fish catches vary with different seasons while catch per unit effort may differ with constant level of effort depending on the time of year or season that affects fish availability. The most popular fishing methods used by inland fishermen include gill nets, spears and hook and line. Dragnets are also used, mainly during the low water periods when they are more effective.

About 60% of the households in the Kavango and Caprivan region depend primarily on the fishery for subsistence and income purposes. Earned income from the fishery meets basic expenses such as food and clothing.

With reference to the Caprivi region members of the community having access to lakes apply for licenses to fish in the lakes from the Ministry of Fisheries and Marine Resources. The licenses are issued for N\$50 per year. Fishermen in this regions fish throughout the year. The fish obtained from the respective lakes in the Caprivan Region are of good quality and is exported in bulk and smaller quantities. The fish is dried or kept fresh on ice and packaged in cooler boxes of 67kg, 34kg and 16kg respectively.



Fishermen & women after a harvesting trip Processing into dried product Packaging for export

The mayor consumers of the fish from the Caprivi Region are Zambians; they buy fish from Namibians and transport the fish to markets such as the Zambian, Tanzanian, Democratic Republic of Congo, Malawi and Botswana.

The table below shows volumes and value of fish from lakes in the Caprivi Region

Table 14: Volumes and Value of Fish from Lakes in Caprivi Region

	Volumes (t)	Value (N\$)
2010/11	247	1,746,250



5. AQUACULTURE SECTOR

5.1 INTEGRATED MANAGEMENT OF THE ZAMBEZI/CHOBE RIVER SYSTEM TRANS-BOUNDARY FISHERY RESOURCE

A project on the Zambezi/Chobe river system is in progress, with the output earmarked for 'a fully integrated management system for livelihood and sport fisheries that provides optimal benefits to all stakeholders reliant on this valuable resource'. The goal of the project is 'To sustainably manage the shared Zambezi/Chobe River fisheries resources by promoting trans-boundary coordination and collaboration on the introduction of fully integrated fishery management systems'. The output is expected to be achieved by the year 2012, under specific targeted pilot communities.

On 15th October 2010, the Ministry received a donation of research boat for freshwater research activities from prominent businessman, Mr. D. Brink of West coast Marine in collaboration with South African based company, T-Craft. The boat will be used for research purposes, water quality monitoring in lakes, river and water bodies, broodstock collection and other aquaculture related activities in the Kavango and Caprivi regions. The boat was officially received by the Honourable Minister, Bernhard Esau.



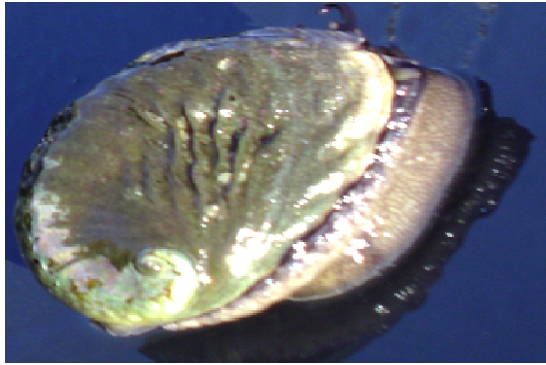
Picture 4: Mr. D. Brink of Westcoast Marine (left) co - sponsor of the research boat with Hon. Minister, followed by a test drive of the newly acquired boat, buckle up - safety first.

5.2 MARICULTURE

5.2.1 Regulation of the Shellfish Industry

The Export and Import regulations for aquatic organisms have been formulated and gazetted (gazette number 4453 of 09 April 2010) in terms of the Aquaculture Act (2002). These regulations apply to import, export and movements of aquatic animals, and to the control of disease. They complement the quality control measures for fish and aquaculture products, which is the responsibility of the Competent Authority, the Namibia Standard Institute.

The oyster sector maintained production despite a devastating hydrogen sulphide event which affected several Walvis Bay oyster farms in April 2010. Mariculture production remains dominated by molluscan shellfish, with promising abalone and mussel enterprises adding to oyster production. Mussel culture targets the black mussel *Mytilus galloprovincialis* although the indigenous species *Perna perna*, *Semimytilus alcosus* and *Choromytilus meridionalis* also show promise. The abalone species indigenous to the Benguela region, *Haliotis midae* is farmed in Lüderitz, where the development of a hatchery is promoting sound environmental and health practices for abalone production in Namibia.



Abalone *Haliotis midae*



The indigenous brown mussel *Perna perna*

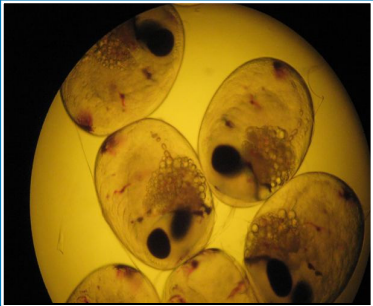


The Mediterranean mussel *Mytilus galloprovincialis*

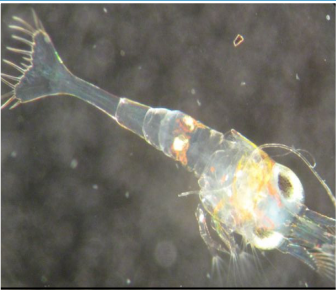


The small indigenous bisexual mussel *Semimytilus allosus*

Existing aquaculture potential is the ongoing research initiated in 2010, into the prawns found at the Kunene river mouth (*Macrobrachium* sp). These prawns are successfully breeding in tanks set up at NatMIRC and at SANUMARC where experiments into their salinity and temperature tolerances are being carried out. This research project is a successful collaboration between NatMIRC, SANUMARC and industry.



Eggs of Kunene prawns
Macrobrachium sp.



Day 1 larvae of Kunene prawns
Macrobrachium sp.



Kunene prawns
Macrobrachium sp.
Adults

Genetic investigations of indigenous species

Thorough baseline information of available species, genetic studies of indigenous species has been initiated by the Mariculture section. Indigenous species are preferable for aquaculture activities for several reasons, including maintenance of biodiversity and aquatic health.



Aquatic Animal Disease

Aquaculture activities require responsible development: with regard to aquatic disease surveillance. Namibia has prioritized national and international responsibility by:

- ensuring the abovementioned Import/Export regulations are in place,
- allocating capital budget to the building of aquatic animal disease laboratories in the NatMIRC extension, which is currently under construction,
- familiarization of the needs of aquatic health diagnostic laboratories through visits to the Norwegian Veterinary Institute laboratories,
- Successfully hosting the OIE African Regional Training seminar on aquatic animal diseases, in Swakopmund, 15-19 June 2010.

Research into Harmful Algal Blooms and hydrogen sulphide events

Ongoing research into Harmful Algal Blooms (HABS) and Hydrogen Sulphide (HS) events increases our knowledge of these naturally-occurring phenomena, which can cause severe damage to the Mariculture industry. Hand-in-hand co-operation of farmers with our scientific research activities has assisted the farmers to plan mitigating strategies to maintain production.

Mariculture production

There was growth in Mariculture production along the coast in Luderitz, Swakopmund and Walvis Bay in both volumes and value (Table 15).

Table 15: Growth in Mariculture along the coast in Luderitz, Swakopmund and Walvis Bay

5.3 INLAND AND MARICULTURE LICENSES

Table 16: Inland and Mariculture licences

Species	Number of Licenses issued
Abalone	3
Scallop	1
Pacific Oyster	1
Clam	1
Seaweed	1
Crocodiles	1
Tilapia	7
Catfish	1
Sea Lettuce	1
Silver Cob	1
Kelp	1
Yellow Tail	1
Oyster	1
Grand Total:	21



5.4 FINANCING FOR AQUACULTURE BUSINESSES

National support has seen Namibia's fledgling aquaculture industry expand exponentially over the past 5 years. The mariculture industry is predominantly private sector driven, and the freshwater aquaculture industry, has witnessed substantial investment by the Namibian Government, in the form of infrastructure development, the development of technology and aquaculture systems, research, training, seed provision and fish feed formulation and supply.

The aquaculture industry is capital intensive and financing is necessary to facilitate the growth of Namibian aquaculture entrepreneurs, to assist in infrastructure development as well as input purchases in order to establish successful aquaculture enterprises. Financing of marine and freshwater aquaculture businesses can be sourced from numerous sources – both in Namibia and abroad. Locally, institutional arrangements for disbursing aquaculture credit lies with two institutions namely, the Agribank and the Development Bank of Namibia.

Having realized the need to establish strong financial commitment as well and increased financial support towards aquaculture development in Namibia, the Agribank in consultation with the Ministry of Fisheries and Marine Resources, through a Technical Committee, developed these "Guidelines for Evaluating and Financing Aquaculture Businesses in Namibia".

5.5 MASTERPLAN FOR AQUACULTURE IN NAMIBIA

On the 7th of June 2010, an agreement was signed by the parties for a Grant from the Middle Income Country (MIC) Technical Assistance Fund. The ADB awarded a grant to the Republic of Namibia, through the Ministry of Fisheries (as the Executing Agency for the Project); for the purposes of (i) developing an Aquaculture master Plan for Namibia, and (ii) providing institutional support for the development of inland freshwater throughout the country.

In order to meet the objectives, the Project will consist of the following specific activities; to be achieved and be completed in the year 2011:

- Assess and advise on the potential and economic viability of mariculture in Namibia. Conduct a needs assessment with respect to hygienic standards of possible export markets like the European Union, including the needs for a laboratory, and assess demand for Namibian grown shellfish.
- Assess and advise on the potential of inland freshwater fish farming in 12 regions of Namibia and the strategic option.
- Build capacity by training Fisheries officers in the Ministry of Fisheries and Marine Resources through field activities,
- Build capacity for Extension staff in the Ministry of Fisheries & Marine Resources.

The expected output of this project, will mark as a milestone to investors in both the marine and inland aquaculture sector. The Master Plan will include information about the potential and economic viability of mariculture in Namibia including zones where sustainable and land based mariculture projects can be developed and indicating the market demand for Namibia grown shellfish and the potential of inland freshwater fish farming in Namibia.

5.6 IMPLEMENTATION OF THE NAMIBIA / VIETNAM SOUTH COOPERATION PROGRAMME FUNDED BY THE SPANISH GOVERNMENT

On the 15th of March 2010, the Ministry of Fisheries and Marine Resources, the Food and Agriculture Organisation (FAO) and the Government of the Kingdom of Spain, Government of the Socialist Republic of Vietnam, signed a Memorandum of Understanding (MOU), where the Government of Spain has agreed to provide FAO the resources necessary for the South-South Cooperation programme between Namibia and Vietnam through a project "Support to the SSC Technical Assistance Programme between Namibia and Vietnam". The programme is for cooperation in areas of inland aquaculture development within the context of the National Programme for Food Security (NPFS) and related areas.



The implementation of such a programme will draw, a total number of twelve (12) experts and technicians from Vietnam, for a period of five years. The expected output of this programme is to see the technicians having assisted the smallholder fish farmers/communities in rehabilitation and expansion of existing infrastructure and in the establishment of new, small-scale aquaculture operations.

5.7 ONAVIVI INLAND AQUACULTURE CENTER, OMUSATI REGION

Onavivi IAC currently focuses only on fingerlings production of both tilapia and catfish, and training; whereas fish production is only grown at the Epalela Fish Farm. During the year 2010, the seventh season was completed, with tilapia fingerlings production of 709 976, and 1.2mill of catfish fry production. Though fingerlings produced are high, the request from farmers remains at the minimal. This is due to reasons such as, lack of good farming ponds that can hold water for a longer period, to enable good stocking of fingerlings; availability of water and interest from the individuals.

5.8 ONAVIVI FISH FEED PLANT, OMUSATI REGION

The fish feed plant is operating under its second year only since the inception in March 2009.

Table 17: Quantity of fish feed produced in 2010.

DIET TYPE	QUANTITY PRODUCED (TONNES)
	January to November 2010
Pre starter (38% CP)	1
Breeders and fingerlings(30%CP)	15
Semi intensive II (25%CP)	60
Semi intensive I(15%CP)	48
Grand total production (T)	124

The main bulk of the feed produced distributed to the Government owned and cooperative fish farms, and approximately 20% of fish feed sold to private farmers. The estimated production for 2010 was set at 380 tonnes, hence low production is motivated by the request from farmers. In other words, if farmers are not requesting for a high number of fish feed, no production is done, as fish feed has expiry dates attached (six months).

Table 18: Quantity of fish feed distributed per region/farm: 2010.

DIET TYPE	FISH FEED BAGS PROVIDED TO REGIONS				BAGS OF FEED SOLD
	Katima, Kavango & Otjozondjupa,	Hardap	Epalela	Onavivi	Ongwediva
Pre starter (38%CP)	0.45	0.05	0.15	0.93	0.28
Breeders and fingerlings(30%CP)	0	1.25	2.1	4.9	0.5
Semi intensive II (25%CP)	3.3	6.33	12	11	1.4
Semi intensive I(15%CP)	37	2	0.05	0.45	5.28
GRAND TOTAL (T)	40.75	9.63	14.03	17.3	7.46



5.8.1 SOURCING OF RAW INGREDIENTS 2010

The total quantity of raw ingredients bought was approximately 164 tones, to the total value of N\$580,000. Sourcing of Mahangu has been easier during this reporting year 2010, as compared to the year 2009, where we had experienced difficulties in acquiring mahangu. Local people are now aware that mahangu is on the market to produce fish feed, thus local community individuals are motivated by the Ministry, they are offering their mahangu for sales to the factory. Some of the people are willing to expand their field for better yield from 2011; this is an indication that Mahangu may not be a worrying ingredient to obtain in the future.

There are other ingredients that are under experimental subject to be included in the diet, such as that of sorghum and beans. The Ministry is requesting the farmers to increase their sorghum & beans production, as it will be needed in the feed production in the near future. The cost of fishmeal remains high and this result in feed to be expensive. Wheat bran, one of the cheapest ingredients has been scarce to get since Etunda Irrigation Scheme, the only sole supply, does not produce it in large quantities.

5.9 CAPRIVI REGION

Extension services in the Caprivi region remains one of the co activities on a day to day operation of the region. Site Inspection, identification of potential water bodies, are the function of operation. During the year 2010,

- 80 water bodies were assessed,
- 45 water bodies were found suitable for fish farming,
- 28 sites/ water bodies were found to be moderate suitable due flooding or inaccessibility of water to the potential areas.

From the above water bodies assessed,

- o Twenty four (24) water bodies are stocked with fingerlings,
- o Nine (9) sites/ water bodies flooded
- o 15 sites harvested

5.10 DATA AVAILABILITY AND ON-GOING INLAND FISHERIES RESEARCH AND SURVEYS

- a. Fish Market Survey
- b. Lake Liambezi fisheries survey
- c. Zambezi River fisheries surveys

5.11 KAVANGO AND OTJOZONDJUPA REGIONS

The regions have a potential to contribute positively to aquaculture development with additional extension services and support.

A Government Cooperative farm in the Nkurenkure area, the Mpungu Fish Farm, have harvested twice during 2010, with a combined tonnage of about 4mt. the farms fish and vegetable production is promising for the years to come.



Picture 5: Extension staff hard at work in Otjozondjupa and Oshikoto regions monitoring fish growth and health, at Grootfontein Army Base (left) and Tsintsabis School Project (right).

5.12 HARDAP INLAND AQUACULTURE CENTER, HARDAP REGION

Annual Fish Biomass Survey

The annual Lower Orange River Fish Biomass Survey, for April 2010 was called off as river conditions could not permit fish sampling in the lower reaches following heavy showers and floods of the preceding rainy season.

Fish Harvesting

As part of an agreement between the MFMR and the Karas Urban Constituency Office, about 1.4 and 1 ton of fish were harvested from the Naute Dam in April/May and October 2010, respectively. The harvests were sold to local communities and proceeds from the harvests were used to augment payments of the two community members manning the Fonteintjie Fish Farm Project. This is in line with the objectives of the Directorate of Aquaculture to alleviate poverty and enhance food security in communities with limited alternative food resources. It was also a noble gesture to instructions by the former Minister of Fisheries and Marine Resources for state dams to be harvested annually for local communities to benefit from the untapped food- resource base.

5.13 FONTEINTJIE FISH FARMING PROJECT, KARAS REGION

The feasibility study for the expansion of the Fonteintjie Fish Farm Project at Keetmanshoop has been completed during the reporting year.

The study was to design an integrated and sustainable fish farming and crop production project for the benefit of the Karas Region community in general and the people of Keetmanshoop in particular. Currently, the project is made up of six circular grow-out ponds (9 m³ in size each) stocked with fingerlings of Mozambique tilapia and common carp sourced from the HIAC, with an on-site irrigation for selected crops.

With the opening of a fish shop in Keetmanshoop in 2009, by the Namibia Fish Consumption Promotion Trust, concerted efforts have been made by the Trust together with the MFMR and the Keetmanshoop Urban Constituency Office to coordinate activities and ensure that marine fish and freshwater aquaculture products are available in the region for local people. It is envisaged that production of this farm will increase once the 2nd phase of the project has been completed.



5.14 UIS FISH FARMING ECO TOURISM ENTERPRISE, ERONGO REGION

During a momentous occasion which was held on the 11th September 2010, the Ministry of Fisheries & Marine Resources of Namibia inaugurated the Uis Fish Farming Eco-Tourism Enterprise. The Enterprise involves farming fish in cages in a large burrow pit which has ample water supply and is located in Uis, a village situated very remotely in Namibia's Erongo Region.

The youth will farm tilapia in cages and with 12 cages, they are expected to harvest at least 1 ton of tilapia per cage per month once they reach a full production cycle.



Picture 6: The cages were placed in the water, thereafter the youth posed for a photo with the Deputy Minister (right).

During the same event, the Namibia Fish Consumption Promotion Trust, which was established in 2007 to promote the consumption of fish in the country also held a fish promotion campaign during the event of Uis Fish farming (picture below).



Picture 7: The National Course in Freshwater Aquaculture continues being a success every year. The Course is conducted for communities with cooperative efforts between the MFMR and INFOSA.



Picture 8: Fonteintjie fish farm (L) held a joint fish consumption promotion event with the Namibia Fish Consumption Promotion Trust (NFCP)

Table 19: Fish Production small scale fish farmers and community based farms throughout Namibia

REGION	NUMBER OF FISH FARMERS WHO RECEIVED FINGERLINGS			NUMBER OF FINGERLINGS DISTRIBUTED			NUMBER OF FISH FARMS HARVESTED			TOTAL NUMBER OF FISH HARVESTED			FISH HARVESTED (KG)			VALUE OF FISH HARVESTED (N\$)		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
YEAR																		
KUNENE	1	4	4	3300	11000	22432	0	0	3	0	0	1890	0	0	216,4	0	0	3246
OHANGWENA	19	15	6	25520	36450	15750	6	12	6	1540	6341	7825	117	687	1651,4	1 756	10 305	24771
OMUSATI	24	16	18	28358	33550	31080	10	11	10	9801	7803	4409	830	698	624,8	12 446	10 470	9372
OSHANA	7	5	3	6413	7700	3300	2	6	2	925	1892	5265	18	239	350,3	273	3 585	5254,5
OSHIKOTO	39	15	11	62131	23017	21528	14	9	7	3783	8185	5130	180	1410	576	2 703	24 150	8217
OTJONZONDJUPA	0	0	4	0	0	6500	0	0	6	0	0	4471	0	0	793	0	0	10718
KHOMAS	8	0	-	1680	0	-	1	0	-	500	0	-	110	0	-	1 650	0	-
OMAHEKE	14	8	6	1900	5762	4100	7	2	1	1500	NOT COUNTED	718	205	145	150	3 075	1 450	2982
HARDAP	11	8	11	2400	5020	14650	2	3	0	1760	NOT COUNTED	0	405	225	0	6 072	2 500	0
KARAS	5	2	2	3200	3262	5055	1	1	1	650	NOT COUNTED	1178	163	410	392	2 444	4 100	7840
ERONGO	0	0	-	0	0	-	0	0	1	0	0	2300	0	0	420	0	0	0
KAVANGO	0	0	7	0	0	5900	2	2	2	16500	13930	19000	5700	4477	4750	85 500	67 148	71250
CAPRIVI	12	0	2	24000	0	?	2	2	2	19500	0	3421	4380	3106	497,6	65 700	62 134	12564
TOTALS	140	73	74	158902	125761	130295	47	48	41	56459	38151	55607	12108	11397		181619	185842	



6. HUMAN RESOURCE DEVELOPMENT

The Ministry places much emphasis on the development of human resources. This is achieved through enrolling staff members on skills development or short and qualifying courses. During the period under review, various skills development courses were attended by 115 staff members. Furthermore, the Marine Resources Fund availed new eleven staff members. Whilst, three staff members received scholarships through private initiatives.

6.1 SKILLS DEVELOPMENT TRAINING

During 2010/11, various short courses were undertaken and offered in Namibia and within the SADC region. The courses are reflected in table below.

Table 20: Short Courses Undertaken, 2010/11

Short Courses	Beneficiaries		
	Male	Female	Total
Skippers course (under 25 tonnage)	30	1	31
Transport induction course	6	4	10
Professional secretaries and office management (administration)	-	3	3
Shell Fish Sanitation management	4	1	5
Information and Record management	-	2	2
Basic maintenance course (plumbing and pipe fitting)	1	-	1
Revenue Collection	-	7	7
Strengthening statistical capacity & Applied Statistics	2	15	17
Skills Development Facilitators Strategic course	-	1	1
Combating and prevention Sea piracy *	2	1	3
Public Sector Accounting	2	1	3
Driver Improvement course	2	-	2
Initiating and chairing disciplinary enquiries	1	-	1
Fast tract to power builder I & II *	3	-	3
Public relation practice *	1	-	1
Policy Development , implementation and monitoring *	1		1
Power for positive attitude and motivation for cleaners and messengers	5	13	18
Budgets and Budget control	3	-	3
Procurement of goods and services, tender procedures and store management	-	3	3
Aquaculture System Management program*	8	2	10
Subtotal: short course	71	54	125

Source: MFMR, 2010/11



6.2 BURSARIES AND SCHOLARSHIPS

About 40% of the qualifying training attended was through SADC and International Universities. These included degrees in the fields of aquaculture, business administration, Environmental management, fisheries administration and water resources

Table 21: Qualifying Courses

	Male	Female	Total
Qualifying studies: diploma and degrees	16	9	25
Total of qualifying courses	16	9	25

Source, MFMR, 2010/11

6.3 TRAINING STATISTICS

A total number of 150 staff members have been given an opportunity for short courses and qualifying courses, with a 58% attended by male colleagues. The months of January and September reflects a portion of Qualifying Training, which is representing 16% of the total training funded through MFMR.

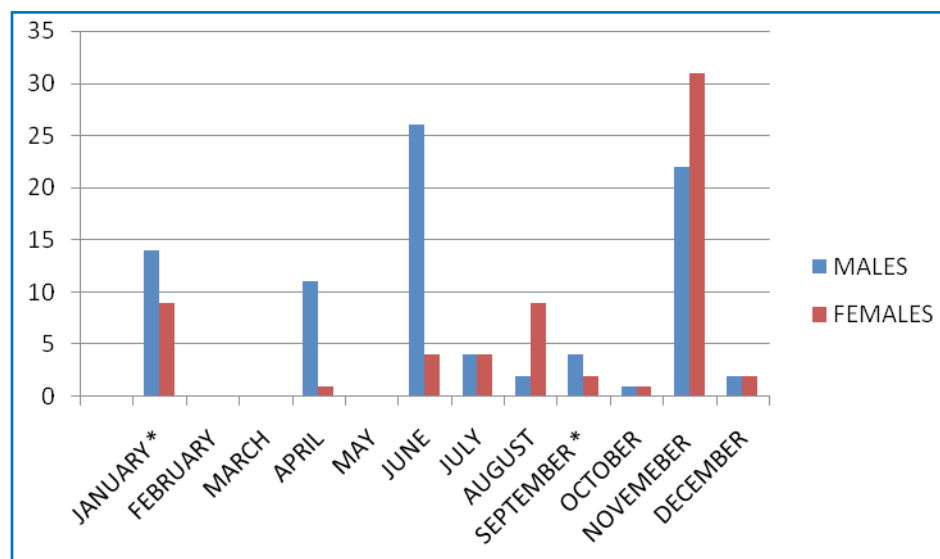


Figure 11: Monthly training statistics

6.4 TRAINING NEEDS/TRAINING PLANS

During the reporting period the Ministry develop a training needs matrix that identified various needs through the Ministry. The training needs plans assisted the MFMR to assist in the gaps identified by various staff members and also to make sure that relevant staff members attend training relevant to their work, either as short course or at qualified level. This included the budgeting skills for managers, skippers' course and basic safety training as mandatory courses. Due to budgetary constraints, not all needs were satisfied, however plans are in place to fulfil most of these needs in 2011/12.



7. REGIONAL FISHERIES RELATIONS

7.1 IMPLEMENTATION OF EC REGULATION ON IUU FISHING

The Ministry convened consultative meetings with inspectors and the fishing industry representatives to assess the implementation of the EC Regulation on IUU fishing since its introduction 1 January 2010. The participants exchanged the opinions and experience on the challenges and constraints experienced during the implementation process. These were compiled on one report and submitted to the EC in Brussels on 11 August 2010.

Mr. Carlos Palin visited Namibia from the 6–18 March 2011, to assess the implementation of the EC Regulation on IUU Fishing. The team held discussions with a number of Namibian stakeholders; these include MFMR, Ministry of Works and Transport, Ministry of Finance, Fisheries Observer Agency, Namibia Standard Institute and Namport. The EC team submitted the implementation report to MFMR containing their findings and recommendations.

7.2 BENGUELA CURRENT COMMISSION (BCC)

Benguela Current Commission BCC is a multi-sect oral initiative by Angola, Namibia and South Africa to promote inter-grated management, sustainable development and protection of the environment within the Benguela Current Large Marine Ecosystem (BCLME) region. The organisation is focusing, inter-alia, on the management of shared fish stocks, environmental monitoring and early warning of extreme oceanographic events, biodiversity and ecosystem health, pollution, mitigation of the impacts of Marine diamond mining and oil and gas production socio-economic and governance and is striving to keep training and capacity building at the fore front of its agenda.

Namibia attended the BCC annual symposium that was held in October 2010 at Swakopmund, Namibia. During the symposium, presentations were made on progress on the ongoing BCC projects and some new projects proposed for implementation. Among the new projects proposed was the joined stock assessment for trans-boundary stocks in the BCC region. Namibia is keen to participate in this new project, especially when it comes to capacity building. The year 2010, saw the finalisation of the BCC Convention, making the organisation a legal entity on its own. The post of the Ecosystem Co-ordinator was also filled during this period and this would definitely make the work of organisation more effective.

8. INTERNATIONAL FISHERIES RELATIONS

8.1 SOUTH EAST ATLANTIC FISHERIES ORGANISATION (SEAFO)

SEAFO is an International Organization responsible for the conservation and management of fisheries resources in the high seas of the south east of the Atlantic Ocean. During 2010, Japan officially became a member of SEAFO Convention. This is in addition to Angola, European Union, Namibia, Norway and South Africa who were already members of SEAFO during 2009.

Namibia attended the SEAFO annual Commission meeting held d in October 2010, in Windhoek, Namibia. During this meeting, the Commission adopted several conservation and management measures in the SEAFO Convection area. These include the suspension of fishing activities in areas where evidence of venerable Marine Ecosystems (VMEs) are encountered and for such areas to be considered for opening to fishing only after the necessary scientific research is carried out. The Commission also set the 2011 TACs for the major SEAFO species, such as Patagonian tooth fish, Deep-sea Crab, Orange Rough and Alfonsino, The meeting further directs SEAFO to implement the concept of precautionary approach due to limited availability of scientific data and to draw examples from other RFMOs in formulating Conservation Measures for SEAFO.



8.2 INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS (ICCAT)

The organisation is mandated with the conservation and management of tuna and tuna like species in the Atlantic Ocean and adjacent seas. In November 2010, Namibia attended the annual ICCAT meeting held in Paris, France. At that meeting, ICAAT adopted several recommendations aimed at improving and strengthening the conservation and management of tunas and tuna like species.

Namibia, as a member of ICCAT, strives to fully implement all ICCAT Conservation measures in force. Foreign fishing vessels which entered Namibian ports during 2010 were thoroughly inspected to ensure that they have not contravened national laws and regulations of Namibia or other states, as well as conservation and management measures were in place during 2010 to ensure that all products coming from licence tuna fishing vessels, when entering or leaving the country, are accompanied by a dully completed and validated statistical document.

Namibia collects statistical data from its tuna fishing fleet, through information gathered from the log sheets applied to fishing vessels, as well as from that are filled in Fisheries Observers. Since 2009 the numbers of chartered Bait Boats in Namibia have declined from 25 to 21 in 2010, whereas that of logline boats has slightly increased from 11 to 12 during the same period. A decrease in the amount of Albacore tuna (ALB) and Big-eye tuna (BET) landed by chartered Bait Boats was observed in 2010, when compared to 2009, whereas significant increases were observed in the catches of the main logline fisheries, mainly Swordfish (SWO), Blue shark (BSH) and SMA, for the same period.

8.3 COMMISSION FOR THE CONSERVATION OF ANTARCTIC MARINE LIVING RESOURCES (CCAMLR)

The organisation is mandated with the conservation and management of marine living resources in the Antarctic Ocean. In October/November 2010, the country contribute to the formulation and adoption of many recommendations made at annual meeting, some of which could have far reaching consequences for Namibia and the rest of developing world.

The meeting discussed, at length, the EU proposals on trade sanctions and no consensus could be reached to adopt this proposal. This proposal advocates that trade sanctions should be implemented to member states and third parties whose vessels were found to be involved in IUU fishing. Namibia, together with other member states, notably Argentina and South Africa, objected to the adoption of this proposal. The meeting also expressed concern about the low participation in the deliberations of the Scientific Committee by these member states. The meeting therefore recommended that member states should motivate for their scientific and other experts to attend CCAMLR Working Groups` meetings that normally take place during the intercessional period for exposure and knowledge imparting. Last, but not last, the meeting also decide to establish a scholarship scheme that could assist to build capacity amongst CCAMLR member states, especially those from the development world.

8.4 ECONOMIC PATNERSHIP AGREEMENT (EPA)

The Ministry of Fisheries and Marine Resources has been part of the Economic Partnership Agreement (EPA). The negotiations are still ongoing. The issues surrounding fish and fishery products in the context of EPA such as rules of origin, is still under discussion.



Annex 1: Useful contacts

Institution and contact details	Mandate
Ministry of Fisheries and Marine Resources (MFMR)	
Head Office, Private Bag 13355, Brendan Simbwaye Square, Block C, Corner of Uhland & Goethe Streets, Windhoek, Namibia. Tel: +264 61 2059 (switch) Fax: +264 61 233 286 www.mfmr.gov.na	Office of the Minister, sectoral policy, planning and economics, fisheries administration, legislative controls, data collection and analysis.
National Marine Information and Research Centre, (NatMIRC), Strand Street, Box 912, Swakopmund. Tel: +264 64 410 1000 (switch) Fax: +264 64 404 385	Applied fisheries and environmental research, physical, biological and chemical oceanography, stock surveys and stock assessment, advice to MFMR on TACs for commercial stocks and other management measures, regional programmes and research collaboration, aquaculture and inland fisheries research and development.
NatMIRC Research Centre, Luderitz. Tel: +264 63 202 415 Fax: +264 63 202 495	Branch of the Swakopmund head office. Main research activities include seals, seaweed, rock lobster as well as regular commercial fish stock surveys and assessment work.
Hardap Freshwater Research Institute, Private Bag 2116, Mariental. Tel: +264 63 240 361 Fax: +264 63 242 643 Inland Fisheries - Rundu Office Private Bag 2084, Rundu. Tel: +264 66 256 853. Fax: +264 256 867 Inland Fisheries – Katima Mulilo Office Private Bag 1004, Ngweze. Tel: +264 66 253 224. Fax: +264 66 253 226	Freshwater fish and invertebrate research, migrations of freshwater fishes using radio tagging, development of freshwater aquaculture techniques and assessment of candidate species.
Fisheries Inspectorate Office, Box 394, Luderitz. Tel: +264 63 202 905 Fax: +264 63 203 337	Monitoring, control and surveillance of marine commercial and recreational fisheries.



Fisheries Inspectorate Office, PO Box 1594, Walvis Bay. Tel: +264 64 201 6111 Fax: +264 64 201 6228	Monitoring, control and surveillance of marine commercial and recreational fisheries.
Namibian Maritime and Fisheries Institute (NAMFI), PO Box 3228, Walvis Bay. Tel: +264 64 203 114 Fax: +264 64 203 112 Poly Andima 081 129 1983	Main institute providing education and training for MFMR staff, including Fisheries Inspectors, Fisheries Observers, patrol boat personnel and fisheries scientists.
Fisheries Observer Agency, PO Box 2903, Walvis Bay. Tel +264 64 219 500 Fax: +264 64 219 547/8	Management and administration of the MFMR Fisheries Observer Programme.
Fishing industry associations: Pelagic Fishing Association Hake Association Midwater Trawling Association Monk and Sole Association Tuna and Hake Longlining Association Deepwater Fishing Sector	All have a common secretary. Write to: PO Box 2513, Walvis Bay, Namibia. Phone: +264 (0)64 20 9083. Fax: +264 (0)64 20 6158. E-mail: hardrud@iafrica.com.na



Annex 2: Ministry of Fisheries and Marine Resources Structural organogram.

