Project GloBAL

Global Bycatch Assessment of Long-Lived Species

Country Profile

Angola

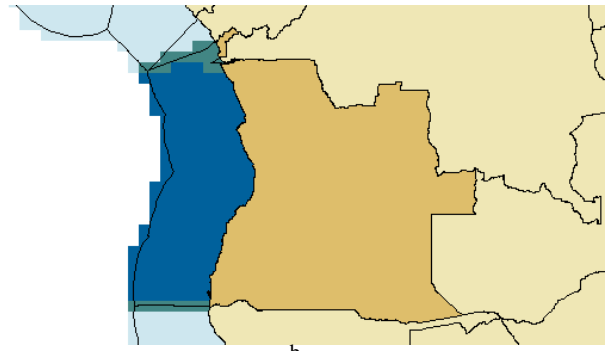
BLUE OCEAN INSTITUTE

Fresh Inspiration for Ocean Conservation

Angola

Map of Angola[a]


Flag of Angola[a]


Map of Angola's EEZ[b]

Geographic Coordinates[a]: 12 30 S, 18 30 E

Terrestrial extent (km^2)[a]: 1,246,700

Coastline (km)[a]: 1,600 km

Territorial Sea / EEZ (nm)[a]: 12/200

EEZ Extent (km^2)[b]: 518,433

EEZ Coordinates [b]:

Fisheries Landings (production in tons)[c]: 217,768

Other countries operating within this EEZ[c]: Russia, Poland, Japan, Spain (as of 2003)

Government agency for marine fisheries[b]: Ministry of Fisheries & Environment

Government agency for the protection of marine environment[b]: Ministry of Fisheries & Environment

Population[a]: 12,127,071

Languages[a]: Portuguese (official), Bantu and other African languages

[a] www.cia.gov/cia/publications/factbook/index.html
[b] www.seaaroundus.org [c] www.fao.org/fi/fcp/fcp.asp

The Fisheries of Angola

Overview

- Brief fisheries characterization

  The Angolan fishing industry is governed by the Ministry of Fisheries, which has jurisdiction over fishing closures, institution of enforcement measures, and setting TAC's. The Ministry appears to post a considerable amount of fisheries information on its website, but the site is nearly impossible to navigate due to technical difficulties. The fact that the nation has a website containing such information suggests it takes a vested interest in the sustainable use of marine resources. As a member of BENEFIT, the regional Benguela current resource management organization, Angola is likely to feel pressure about conserving resources, as well as receiving assistance in creating a use management plan. I believe detailed information about resource conservation measure or management strategies, if available, would be found here. Without access to this primary source information, this profile is composed primarily of secondary sources which suggest Angola fisheries management is lacking and bycatch of sea turtles, marine mammals and sea birds is an overlooked resource management problem. Furthermore, the subsistence mindset of the nation suggests Angola does not appear to have the political will needed to fully implement conservation measures. Angolan fisheries management is primarily based on use principles.

- Issues for fisheries management

  BENEFIT has identified two main problems with Angola's fisheries. First, too many vessels pursue too few fish each year, suggesting TAC's are poorly constructed. This also indicates a potential lack of research/fish census data or poor integration of scientific research into policy. Second, the nation does not appear to have any substantial enforcement program implemented. Again, the subsistence mindset of the nation might contribute to corrupt management or pirating of resources. In response to a precipitous decline of trawl catch, The Ministry of Fisheries is considering a temporary closure in all trawl fisheries in order to allow stocks to recover. Despite other overexploited stocks, this is the only management strategy mentioned in recent literature about Angolan fisheries. (BENEFIT 2004)

- Bycatch issues

  None of the literature reviewed during the creation of this country's fishing profile mentioned bycatch of sea turtles, marine mammals or sea birds. I believe that information about bycatch issues, if available, would be found on the Ministry of Fisheries website and perhaps this site should be referred back to see if improvements have been made that allow for access to such information.

- Trends in the fisheries (e.g. shift from artisanal to industrial):

  Artisanal fisheries have been promoted in recent years as a means for alleviating rural poverty and malnourishment. I perceive that these two issues, ubiquitous to the nation, could suggest that a majority of bycatch is utilized. It is worth noting, for instance, that Angola has not signed CITES.

1. ***What fisheries exist in this territory and what are the target species? Are they fished by artisanal or industrial fishers? Are industrial fishers national or foreign?***

"Artisanal fishers catch demersal species and lower-value species like groupers, snappers, seabreams, croakers and spiny lobster, whereas semi-industrial and industrial fishers mainly target pelagic species (horse mackerel, sardinella, tuna), shrimp and deep sea red crab." (FAO 2007)

Mid-water trawls (29.6%), Boat seines (21.7%), Bottom trawls (2.5%), Purse seines (6.2%), Hooks or gorges (10.7%), Gillnets (0.7%), Handlines (1.9%), Genuine seine net (0.1%), Trammel nets (0.2%), Traps (2.1%), "other" gear types (2.3%)

Gear or target stock	National Fleet			Foreign Fleet	Total	Capture average (kg/day)	Fishing days	Capture (t)	
	Semi-industrial	Industrial	Total	Industrial				Per vessel	Year
Shrimp	17	4	21	22	43	650	300	195	8 385
Demersal	16		16	33	49	5	300	1 500	73 500
Pelagic	6		6	11	17	20	300	6 000	102 000
Gillnet	7		7		7	3	240	720	5 040
Long line	18		18	3	21	3	240	720	15 120
Cerco	18	78	96	8	104	15	240	2 880	299 520
Longline tuna	1		1	33	34	3	150	450	15 300
Trap	1		1		1	1.800	300	540	540
Transport	3		3	6	9				
Total	87	82	169	116	285			12 950	519 405

"Artisanal fishing activities are scattered along the coast, with around 102 regular landing sites identified. Benguela and Luanda provinces have the greatest concentration of artisanal fishing areas. There is a real potential for increased artisanal fisheries and Institute for the Development of Artisanal Fisheries (IPA) has put great effort into developing the sector, particularly in terms of improving quality and tonnage of landings, as well assisting to improve the standard of living of the artisanal communities. According to IPA survey data, total artisanal catches in 2002 exceeded 100,000 t, almost double the reported catch of 2001."(FAO 2007)

Source: (FAO 2007)

2. ***What are the specific vessel and gear types used in each fishery? <u>For each vessel type</u>:***

   a. ***Vessel length (m)?***
   N/A

b. Number of vessels

Numbers of fishing vessels

Gear or target stock	National Fleet			Foreign Fleet	Total
	Semi-industrial	Industrial	Total	Industrial	
Shrimp	17	4	21	22	43
Demersal	16		16	33	49
Pelagic	6		6	11	17
Gillnet	7		7		7
Long line	18		18	3	21
Cerco	18	78	96	8	104
Longline tuna	1		1	33	34
Trap	1		1		1
Transport	3		3	6	9
Total	87	82	169	116	285

Source: (FAO 2007)

c. Engine type (if any)? No Information Available

d. Avg horsepower of engines? No Information Available

e. Gear employed (e.g., net materials, line and hook types, pole types, whether gear is hand- or machine-operated, etc.)

The table above summarizes what little information was available about gear employed by the nation's fishing fleets.

Source: UN Food & Agriculture Organization, http://www.fao.org/fi/fcp/en/AGO/body.htm

3. Where and when are the specific gear types deployed for <u>each</u> of these fisheries (seasonality, trip duration, etc)?

a. In which months does fishing occur?

It does not appear that The Ministry of Fisheries determines specific seasons during which a certain fish may or may not be caught. Rather, the Minister will close a fishery when the Marine Research Institute determines (through regular surveys) that the fishery can no longer sustain fishing pressure. Some of the most recent closures are as follows –

Closed areas

Small pelagic fisheries

"All pelagic trawl fishing in all areas has been prohibited for 2004. This measure affects 19 pelagic trawlers licensed in 2003, and implies a substantial reduction in fishing effort. Licensed purse seine remains at 112, and they continue to be permitted to fish sardines

and other pelagic species. Maximum cooperation has been promoted with the Navy and Air Force for reinforcement of fisheries monitoring, control and surveillance patrols in the fishing areas, including the border areas to the north and south.

Demersal fisheries
"2003 saw a decrease in the fishing effort in this fishery, with the departure 10 bottom trawl vessels, with 46 remaining in operation. In spite of this reduction, and the measures adopted in 2003 to extend the fishing limits, catches from this fishery continued to decrease, especially in industrial sector, so there was the possibility of further reduction in fishing effort in 2004, inter alia through:

- establishing a bottom trawl close season of three months in 2004 from August;
- banning use of demersal bottom trawl for vessels longer than 40 m in the area between 13º and 17ºS;

Deepwater shrimp fisheries
"No recovery was seen in this fishery in 2003, confirming the decreasing trend of captures in spite decreased effort. It has therefore been recommended that:

- fishing effort in this fishery be reduced, starting from August of 2004, with a maximum of 35 industrial units;
- the close period be maintained for February and March; and
- the minimum mesh size be increased from 45 mm to 55 mm.

Crab fishery
"The closed period in February and March has been continued, and the areas and depths of fishing are as adopted in 2003.

Lobster fishery
"The minimum size length for capture in this fishery is 25 cm, and no berried females may be taken." (FAO 2007)

b. how long do the vessels operate each day, and what times do they operate
No Information Available

c. Where are they deployed (inshore/offshore, pelagic/demersal, east/west coasts, etc)

Main resources

Group	Main species	Fishing gear	Distribution area
Pelagic	Horse mackerel	Trawl, seine	whole coast, but mostly in south
	Sardinellas	Purse seine	whole coast, but mostly centre and north

	Tuna	Longline	whole coast
Demersal	Sea breams	Trawl, gillnet	whole coast
Crustaceans	Shrimp	Trawl	centre and north
	Crab	Trap	centre and south

Source: (FAO 2007)

d. At what depths? No Information Available

e. Latitude and longitude information for where fishing occurs?

The area from Lobito to the mouth of the Cunene River is by far the most productive of Angola's fishing zones, with an abundance of horse mackerel, sardines, tunas and a range of demersal species. Angola's northern fishing zone extends from Luanda to the mouth of the Congo River, and the central fishing zone stretches from Luanda to Benguela. (See map of Port Cities below)

Source: (FAO 2007)

Province	Ports for the semi-industrial and industrial fleets	Region	Number of beaches for the artisanal boats
Cabinda	Cabinda	northernmost	18
Zaire	Soyo		11
	Nzeto		9
Bengo	Ambriz	northern	12
Luanda	Boavista		3
	Samba		6
	Carvão		1
	Cefopesca		5
K. Sul	Porto Amboim		9
Benguela	Benguela	central	10
	Lobito		3
	Baía Farta		3
Namibe	Namibe	southernmost	8
	Tombwa		4

Source: Google Earth

Main landing places (beaches) for the artisanal sector

Province	Landing beaches
Cabinda	18
Zaire	20
Bengo	12
Luanda	15
Kwanza Sul	9
Benguela	16
Namibe	12
Total	102

Source: (FAO 2007)

f. amount of gear (including fishing vessels) in the fishery:
No Information Available

Sources: UN Food & Agriculture Organization, http://www.fao.org/fi/fcp/en/AGO/profile.htm & Google Earth Maps

4. What species of marine mammals, sea turtles and seabirds occur and are caught as bycatch or may be at risk for capture or interaction with fisheries? Please describe the extent of these interactions, and whether they are considered to be conservation concerns.

- Species that occur in the territorial waters/ EEZ
Balaenoptera acutorostrata "Minke whale"
Balaenoptera borealis "sei whale"
Balaenoptera physalus "fin whale"
Hyperoodon ampullatus "north Atlantic bottle-nosed whale"
Mesoplodon bidens "north Atlantic beaked whale"
Physeter catodon "sperm whale"
Physeter macrocephalus a whale,
Phocoena phocoena "harbor porpoise" a porpoise
Delphinus delphis "long-beaked saddle-backed dolphin"
Globicephala melas "long-finned pilot whale" a dolphin/small toothed whale,
Globicephala ventricosa a dolphin/small toothed whale,
Grampus griseus "Risso's dolphin" a dolphin/small toothed whale,
Grampus orca a dolphin/small toothed whale,
Lagenorhynchus acutus "Atlantic white-sided dolphin"
Lagenorhynchus albirostris "white-beaked dolphin"
Tursiops truncatus "bottle-nosed dolphin"
Globicephala melas (as Globicephala melaena) "long-finned pilot whale"
Halichoerus grypus "gray seal"
Phoca hispida "ringed seal"
Phoca vitulina "harbor seal"
Alca torda "razorbill"

Fratercula arctica "atlantic puffin"
Fulmarus glacialis a bird
Heterocercus flexuosus a bird
Heterocercus maritimus a bird
Heterocercus obsoletus a bird
Hydrobates pelagicus a bird
Larus argentatus "herring gull"
Larus canus "mew gull"
Larus fuscus "lesser black-backed gull"
Larus marinus "great black-backed gull"
Larus melanocephalus
Larus ridibundus "common black-headed gull"
Morus bassanus a bird
Phalacrocorax aristotelis a bird
Phalacrocorax carbo "great cormorant"
Rissa tridactyla a bird
Sterna albifrons "little tern"
Sterna dougallii "roseate tern"
Sterna hirundo "common tern"
Sterna paradisaea "arctic tern"
Sterna sandvicensis "sandwich tern"
Uria aalge "common murre"
Dermochelys coriacea "leatherback"

Source: (OBIS 2007)

- Species that are caught/ at risk as bycatch
  No Information Available
- Bycatch location or species distribution within the country
  Industrialized fishing occurs along the entire coast.
- Fishery and gear type responsible for bycatch or risk of bycatch
  Industrialized longline, gillnet and trawling occurs along the entire coast.
- Data source: stranding, observer program, fishery-dependent (anecdotal or observed)
  No Information Available
- Are there potential fisheries-related threats for these taxa, even if species distributions are not known? (i.e. is there an extensive longline fishery, and large seabird population – maybe no bycatch data, but can make predictions)

5. ***What collection methods (observer programs, etc.) exist for gathering fishing effort and bycatch data for each fishery?***
   Little information is available about enforcement. BENEFIT has suggested Angola's enforcement is lacking and overexploitation of fisheries occurs without sufficient enforcement. (BENEFIT 2004)
- Observer programs – Very Little Information Available
- Fisheries Division data collection – Collected by the Ministry (see note above about Ministry website)

- Research programs – The majority of scientific publications about Angolan fisheries has been published through BENEFIT, suggesting BENEFIT is the primarily organization conducting any type of research on Angolan marine resources. (BENEFIT 2004)

6. ***Are there databases or datasets (including geospatial databases) on fisheries, fishing effort or bycatch of mammals, birds, or turtles? Please describe.***
   Any data available would be found within the Ministerio das Pescas (see note above about Ministry website)

7. ***What bycatch studies or bycatch mitigation projects exist for sea turtles, sea birds and marine mammals?***
   No Information Available

8. ***Are there bycatch research and mitigation projects for other taxa, such as non-target fish or shark species?***
   No Information Available – bycatch within the shrimp trawling industry is a recognized problem by BENEFIT, but mitigation plans do not appear to be in order.

9. ***What policy/regulatory framework exists to guide fisheries or bycatch management?***
   Also include list of regional agreements/acronyms to use as appendix for regional compilations of reports

- Maritime boundaries/EEZ delimitation agreements
  No foreign fishing within 12 miles of shore

- Regional agreements
  Angola is a represented member of BENEFIT (Benguela Current regional management organization)

- Multi-lateral treaties/agreements of relevance
  - World Heritage Convention: Convention concerning the Protection of the World Cultural and Natural Heritage
  - CBD: Convention on Biological Diversity
  - Dakar Convention: Convention on Fisheries Cooperation among African States bordering the Atlantic Ocean
  - IMO Convention: Convention on the International Maritime Organization
  - Lome IV: Fourth ACP - EEC Convention
  - ICCAT: International Commission for the Conservation of Atlantic Tunas
  - ICSEAF: International Commission for the Southeast Atlantic Fisheries
  - SADC: Southern African Development Community
  - UNCLOS: United Nations Convention on the Law of the Sea

Source: (SeaAroundUs 2007)

10. Have research and management needs priorities or constraints been identified or recommended? (include gear/ technological developments or prohibitions that might impact)

It does not appear as if the nation is looking at specific ways of safe-guarding or conserving any species of marine mammal, sea turtle or sea bird. In all likelihood these are recognized as consumable items.

11. Please complete Table 2A & 2B, to provide a detailed summary of fishing effort in your country.

12. Fishing Effort Contacts: If there are other individuals in relevant government agencies or non-governmental organizations that may be able to assist us with information on fisheries, please provide their names and contact details below:

Republica de Angola
Ministério das Pescas
Edificio Atlântico, Av. 4 de Fevereiro nº30, Caixa Postal 83
Telefones: +224 2 311420/311140
Fax: +244 2 310199
geral@angola-minpescas.com

For other contacts within the Ministério das Pescas:
http://www.angola-minpescas.com/home.aspx?tab=0&tab2=4

13. Bycatch Contacts: If there are other individuals in relevant government agencies or non-governmental organizations that may be able to assist us with information on bycatch of sea turtles, sea birds and marine mammals, please provide their names and contact details below:

This information is perhaps posted on the website (see note above about Ministry website).

14. Documents: What documents (journal articles, grey literature, agency reports) describe fisheries and bycatch in this area?

Literature cited

BENEFIT. (2004). "Benguela Environment Fisheries Interaction & Training." Retrieved December 1, 2006, from http://www.benefit.org.na/.

FAO. (2007). "Angola: Country Profile." Country Profiles Retrieved 18 April 2007, 2007, from http://www.fao.org/fi/website/SwapLang.do?language=en&page=%2FFIRetrieveAction.do%3Fdom%3Dcountrysector%26xml%3DFI-CP_AO.xml%26lang%3Den.

OBIS. (2007). "Ocean Biogeographic Information System." Retrieved 18 April 2007, 2007, from http://www.iobis.org/.

SeaAroundUs. (2007). "A global database on marine fisheries and ecosystems. ." Web Products: Country EEZ Retrieved Visited 18 Apr 2007, 2007, from World Wide Web site www.seaaroundus.org. .

Other relevant literature

Sardinha, M.L. *The Marine Environment in Angola: Threats and methods of management* BENEFIT publication, IIM, Angola.

Available on-line: http://www.benefit.org.na/publications/docs/vol2_1d.pdf

Da Franca, P. (1968). Breves comentários acerca da biogeografia marinha de Angola. *Notas do Centro de Biologia Aquática Tropical* (Lisboa) 12:1-22

Hampton, I., D. Boyer, A.J. Penny, A.F. Pereira, M.L. Sardinha. 1999. Integrated overview of fisheries of the Benguela Current region. *Synthesis and assessment of information on the Benguela Current Large Marine Ecosystem (BCLME*).

United Nation Development Programme (RAF/96/g43). Neto, V. 1997. Fisheries resources of Angola. *In Report on Symposium on Science in Africa.* American Association for the Advancement of Science Annual Meeting, 16 February, Seattle, USA: 63-67

Tapscott, C. (Draft). An overview of the socio-economics of some key marine industries in the Benguela current region. *A report prepared on the behalf of the Benguela Large Marine Ecosystem Project*. Windhoek

Websites

Ministério das Pescas**:** http://www.angola-minpescas.com/home.aspx

OBIS: http://www.iobis.org/

FAO Country Profile: http://www.fao.org/fi/fcp/en/ANG/body.htm

FAO Country Management Plan: http://www.fao.org/fi/fcp/en/ANG/profile.htm)

The Sea Around Us: http://www.seaaroundus.org/eez/summaryInfo.aspx?eez=024

Table 1A. "Decked vessel" and associated gear types. Decked vessels have a fixed structural deck covering the entire hull above the deepest operating waterline.

Fishery by Target **(& non-target interactions)**	**Surround Nets (Purse-seine, Ring nets)**	**Longlines (Pelagic)**	**Longlines (Demersal)**	**Gill- or Trammel Nets (Drift)**	**Gill- or Trammel Nets (Anchored; mid-water or bottom)**	**Trawls (Mid-water)**	**Trawls (Bottom)**	**Seines (Boat)**	**Lift nets**	**Troll lines**	**Boat dredge**	**Vertical lines**	**Traps[1]**
Ocean Pelagics													
Mid-water Pelagics													
Demersal shelf spp.													
Groundfish													
Shallow-shelf reef fish													
Coastal Sharks													
Crustacea (shrimp)													
Crustacea (lobster, crab)													
Cephalopods (squid)													
Sea Turtles													
Marine Mammals													
Sea Birds													
(Any)[2]	**X**			**X**	**X**	**X**	**X**	**X**					**X**

[1] Pots, stored on decked vessels
[2] Place an 'X' in this row for all vessel/gear types used in the fishery.

Table 1B. “Undecked vessels” and associated gear types. Examples: large canoes or outboard motor boats

Fishery by Target (& non-target interactions)	Longline	Gill/Trammel Nets (Drift)	Gill/Trammel Nets (Anchored)	Circle Gillnets	Trawls (Bottom)	Seines (Boat)	Seines (Beach)	Troll lines	Traps[1]	Hand/Pole lines[2]	Hand dredge	Hand harvest[3]
Ocean Pelagics												
Mid-water Pelagics												
Demersal shelf/slope spp.												
Groundfish												
Shallow-shelf reef fish												
Coastal Sharks												
Crustacea (shrimp)												
Crustacea (lobster, crab)												
Cephalopods (squid)												
Sea Turtles												
Marine Mammals												
Sea Birds												
(Any)[4]	X	X		X		X	X		X	X		X

[1] Fish traps include fkye nets (Chinese seines), pound nets, pots, stow nets, aerial traps, and various barriers/fences/corrals/weirs/etc.
[2] Hand/Pole line techniques include a-la-vie (single hook w/ live bait), switchering (single or multiple hooks deployed from stationary boat), banking (multiple hooks set on bottom)
[3] Hand harvest includes all shallow-water (standing or in small boats) hand-held pursuit techniques, including cast netting, cover pots, portable lift nets, harpoons and spears.
[4] Place an ‘X’ in this row for all vessel/gear types used in the fishery.