



REPUBLIC OF ANGOLA
Ministry Fisheries and the Sea
National Directorate of Aquaculture



ANGOLAN AQUACULTURE

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INTRODUCTION

- The development of aquaculture in Angola accompanies the socio-economic and political evolution of the country and is therefore subdivided into three major stages
1. BEFORE INDEPENDENCE (until 1975)
 - **Rustically practiced** at the initiative of the private sector
 2. AFTER INDEPENDENCE (1975-2002)
 - **Period of stagnation** due to the politico-military situation that the Country crossed. Initiatives were paralyzed, abandoned, and degraded by the war.
 3. CURRENTLY (Since 2002...)
 - The **definitive Peace** had a positive influence on Aquaculture, which led to a growing **interest from both the Government and the private sector** to invest in the activity

- 2002 - Restarting private investment in the sector
- 2003 - Evaluation of the potential and identification of species by the mixed commission formed by Angolan, Israeli, Serb and Montenegrin and Vietnamese technicians. In these trips the Provinces of Luanda, Bengo, Benguela and Cuanza Sul were visited.
- 2004 - Approval of the Law of Aquatic Biological Resources.
- 2005 - Approval of the Aquaculture Regulation by the Council of Ministers.
- 2012 - Institutionalization of the National Directorate of Aquaculture (DNA)
- 2013 - Approval of the PND (National Plan for Development) 2013-2017
- 2015 - * Inauguration of the 1st Angolan Tilapia Larviculture Center (Centro de Larvicultura de Tilapia do Massangano);- * Approval of PADAA 2014-2017 (Plan of Action for the Development of Aquaculture in Angola).
- 2018 – Approved the PDN 2018-2022 and the **Angola's Fisheries, Aquaculture and Salicatural Development Plan (POPAS - 2018/2022)**.

TILAPIA ESPECIES

In Angola both Farmed or Wild Tilapia are called
CACUSSO

- 1. Farmed Tilapia

Among the hundreds of species of tilapia farmed in the world, in Angola, the farmed species of is
Oreochromis niloticus





○ 2. Wild Tilapia

Parallel to the Nile tilapia, Angolan rivers and lagoons are filled with many species of tilapias that need to be identified. Among them, the following species can be recognized:

- ❖ **Tilapia zillii**
- ❖ **Tilapia rendalli**
- ❖ **Oreochromis macrochir**
- ❖ **Oreochromis andersonii**





Tilapia zilli (Tilapia, Tilapia)



Tilapia zilli (Tilapia, Tilapia)



Clarias fuscus (Clarias, Clarias)
(Kamutoko, Mankoko, Duguloko, Dugul)



Tilapia zilli (Tilapia, Tilapia)



Tilapia zilli (Tilapia, Tilapia)



Clarias fuscus (Clarias, Clarias)



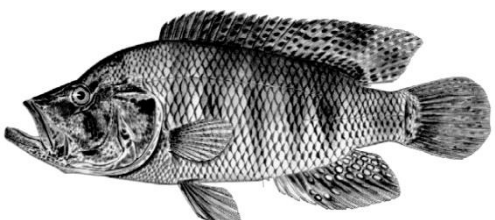
Tilapia zilli (Tilapia, Tilapia)



Tilapia zilli (Tilapia, Tilapia)



Tilapia zilli (Tilapia, Tilapia)



Tilapia zilli (Tilapia, Tilapia)



Clarias fuscus (Clarias, Clarias)



Tilapia zilli (Tilapia, Tilapia)

Other species wild fish

3. Potencialidade e Potencial da Pesca Artesanal em Angola

A Pesca artesanal depende os ecossistemas aquáticos como o Rio Kwanza que é o principal recurso hídrico utilizado para gerar energia elétrica para o país. As represas contruídas já alteram a vazão natural do rio em sua gestão do volume represado. Assim, o volume de água disponível no rio é artificialmente variável, afetando inclusive o regime de alimentação das lagoas vicinais como a N'golome por exemplo. Este resultado afeta negativamente a migração e disponibilidade de alimentos e locais de refúgio e reprodução dos peixes. Atualmente, As barragens de Capanda, Cambambe e Laúca já afetam o regime do rio Kwanza, significativamente alterando a disponibilidade de água à jusante, especialmente para as lagoas do Dondo e Massangano cujos canais de ligação com o rio encontram-se assoreados.

Heterobranchus longifilis - (Bagre)



Ciprinídeo a identificar d'qwango ?



Labeo cylindrical, *Labeo annectens* - (Jinginjji)



Hepsetus odoe (Peixe-cão)

GEOGRAPHICAL DISTRIBUTION OF TILAPIA

Angola has excellent environmental conditions for aquaculture since the environments are diverse and in large numbers and the levels of pollution low



@ghisperina

Climate - tropical, humid

-**Temperature** - temperatures above 24° / year

-**Rainfall** - well distributed rainfall - short dry period

-**Evaporation** - at most, compensating for the rain of the month

-**Water sources** - close, perennial, abundant and clean

-**Rivers** - perennials, water without turbidity

-**Lakes** - depths > 5m

-**Soils** -> 20% clay, fertile

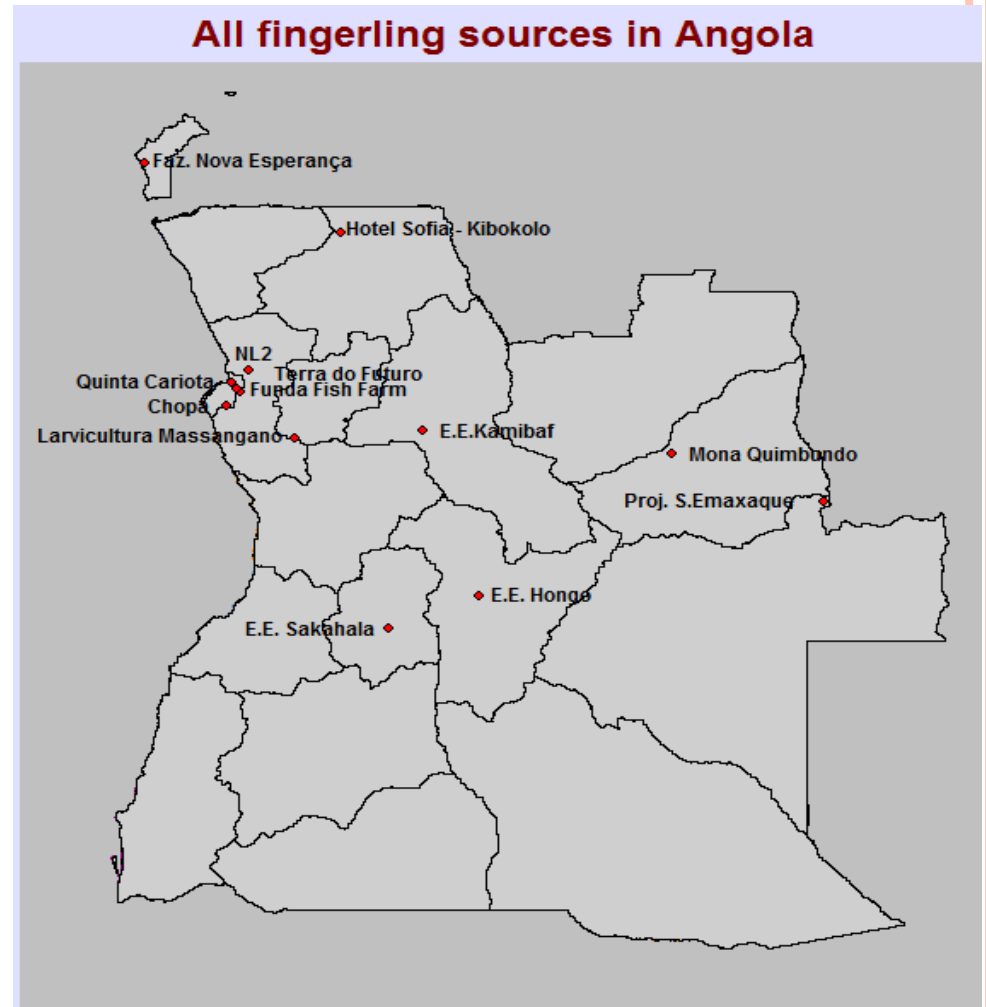
-**Gradient** <5%

-**Altitude** <400m



AQUACULTURE PRODUCTION 2013-2017

Years	Productions /Ton.
2013	47
2014	305
2015	872
2016	655
2017	1339



- In 2017, The DNA controlled 135 aquaculture projects, of these 64 provided monthly production data as per table below



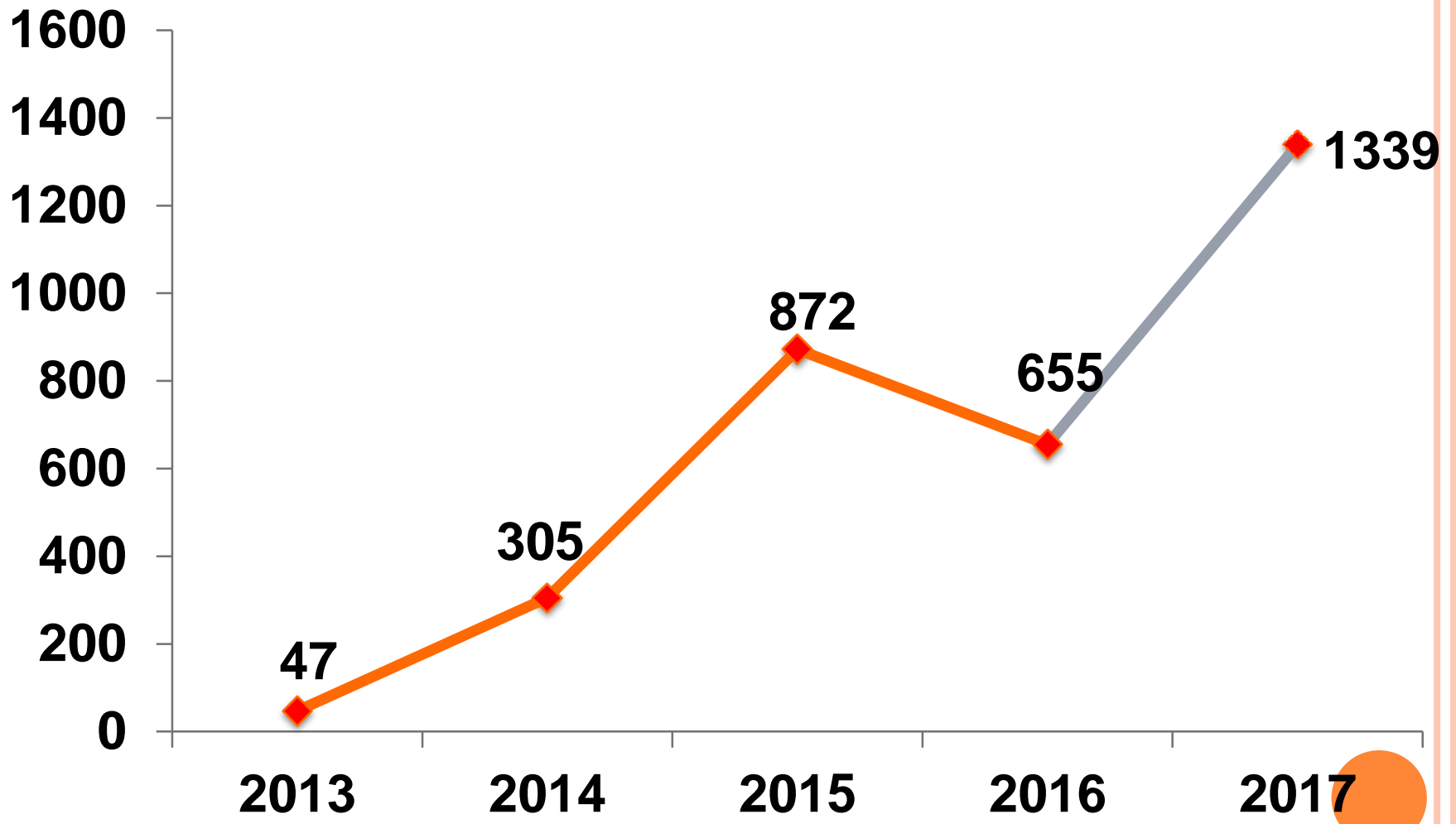
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0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
84	400	500	300	1200	2484
30	4230	0	3500	7730	12160
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
72	1170	0	0	1170	2442
44	0	670	600	1270	2714
32	3505	3000	2800	9305	17037
15	4600	3801	3500	11901	16916
698	13097	14100	14600	41797	68495
475	9300	9100	9000	27400	46875
40	595	600	600	1795	2535

1900	970	900	810	2680	4580
910	700	590	720	2010	2920
718	0	3850	0	3850	4568
5295	12100	11900	11000	35000	60295
1145	777	720	630	2127	3272
10090	9930	10100	11400	31430	41520
0	0	0	0	0	0
0	0	0	0	0	0
25	0	0	0	0	25
0	0	0	0	0	0
1068	0	0	0	0	1068
0	375	0	0	375	375
0	0	0	0	0	0

24073
10
0
0
0
0
0
4044
13979
0
0
0
0
156
6642
4017
26160
21337
85830
54327
3479

7240
3697
6337
84087
8022
47670
800
30
50
30
1068
425
50

18	D2P	100
19	Manianga	15260
20	Mussangi	4934
21	Fecefel	230
22	Bruno Molusso	0
23	Eduardo Mavempesa	
24	Luntadila	241
25	Joaquim Barros	100
26	Lameira	0
27	Consórcio Luau	0
28	Catchanjo	0
29	Adjamp, Lda	0
30	Avô Kuzombala	15
31	Lutonadio e Filhos	18
32	Lourenço	0
33	Godamaf	0
34	Terra do Futuro	
35	Daniel Cawanda	1
36	Emirais	4
37	Nzenguele	1
38	Ana Paula	9
39	Ndombaxi	4
40	Ricas Bizness	1
41	Orjoluku	
42	Argoapcc	
43	Angopescas	
44	Sikama	
45	Languido e Filhos	
46	NIMIF	
47	Mantatu	
48	TEKANZU	
49	Velho Diogo	



FINGERLINGS AND FISH FEED

ENTERPRISES	FINGERLINGS	PRODUCTION ESTIMATE/YEAR	FISH FEED
Larval Tilapia Center MASSANGANO	Yes	2.000.000	No
Marine Larval Center RAMIROS	Fish	200.000	No
	Molluscs	1.000.000	
	Crustaceans	10.000.000	
MISSOMBO future Larval Tilapia Center	Yes	3.000.000	No
Experimental Station KAMIBAFU	Yes	-	No
SUPERMARCAS	No	2400 ton	Yes
Chopa corporation	Yes	6.000.000	Yes
Jovibar	No	-	Yes
Osmats II	Yes	-	No
FMACO	No	-	Yes
TEKANZU	Yes	-	No
Terra do Futuro	Yes	5.000.000	paralyzed

PRODUCTION SEASON

Collection of aquaculture production data – Monthly data collection

DNA



DP



AQ

ECA/R

DNA – National Directorate of Aquaculture

DP – Provincial Directions

AQ – Farmers

ECA/R- Companies that sell fingerlings and fish feed



AVERAGE YEARLY CATCHES OF WILD TILAPIA

The IPA in announcing the catch data presents them as a whole (inland fisheries and marine fisheries together) so that it is not separated by species caught. But it was made an exercise for the year **2015** gave us that Tilapia was **12.776 tons**. and the same exercise will be done for the other years.

www.fao.org/fishery/facp/AGO/en.countrysector-overview

2006	2007	2008	2009	2010	2011
225741	306436	305860	268447	263000	262500



AVAILABLE LABORATORY FACILITIES

- The laboratory of the National Fisheries and Marine Research Institute of the Ministry of Fisheries and Sea has a laboratory where several analyzes are carried out. unfortunately, this lab is not equipped with the PCR device. the only laboratory where we can find this device is in the Laboratory of the Huambo Veterinary Faculty.

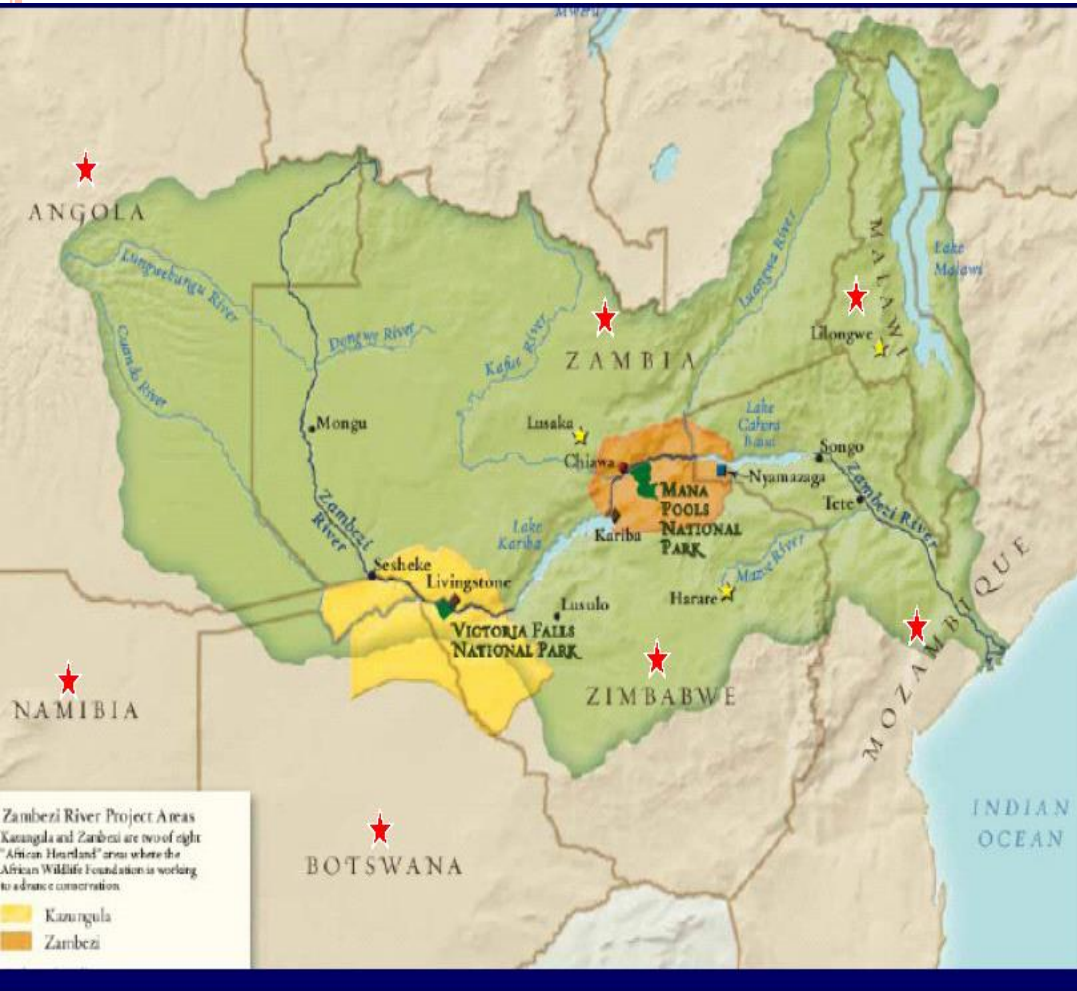




Larval Center Massangano

DISEASE OCCURENCES IN TILAPIA

- Although we do not have confirmed data, but, being in an endemic region, it is suspected that the disease that infected the tilapias in 2008 in Angola was an **Epizootic Ulcerative Syndrome (EUS)**



FEBRUARY 2011 EPIZOOTIC ULCERATIVE SYNDROME (EUS) IS SPREADING IN AFRICA

Cover (c) FAO (FI) 2009.

- The Republic of South Africa is the 4th African country to report the epizootic ulcerative syndrome (EUS) on its territory, following earlier notifications by **Botswana**, **Namibia** and **Zambia**. This disease of fresh-water (fin)fish affects a large number of species and is caused by a fungus (oomycete) *Aphanomyces invadans*. While the three previous discoveries all occurred in the Chobe-Zambezi river basin, this new discovery was made in the far south of South Africa, in a dam on the Palmiet river, close to Grabouw in the Western Cape province. Lesions were discovered in wild finfish that have been living in the dam for a long time, while recently introduced rainbow trout for a fish farming operation, remained unaffected. EUS is an OIE-listed disease. The [OIE Reference Laboratory for this disease is based in Thailand \(AAHRI, Bangkok\)](#), but a laboratory twinning programme is underway with the University of Zambia (UNZA). The FAO has produced an information leaflet regarding this disease, which is now also available in French, thanks to the financial support of the OIE Sub-regional Representation for Southern Africa, based in Botswana, one of the affected countries.





SECTORAL STAKEHOLDERS

- Currently, are registered in the data sheet of the National Directorate of Aquaculture 2018, 49 farms.
- ANAQUI – The National Association of Aquaculture
- Fisheries and Marine Sciences Academy
- José Eduardo dos Santos University (Faculty of Veterinary Medicine)



Thank you very
much

