



World Organisation
for Animal Health



The
Fleming
Fund

Training of National Focal Points for Aquatic Animal Health (Cycle IV)

2 - 4 October 2023 Kigali, Rwanda



WOAH AQUATIC ANIMAL FOCAL POINT TRAINING RWANDA 2023

COUNTRY PRESENTATION – NIGERIA

Dr Modupe Ogunnoiki

**Federal Department of Veterinary and Pest Control Services,
Abuja, Nigeria**

1.3. Country General Information

Nigeria lies between Longitudes 2° 49'E and 14° 37'E and Latitudes 4° 16'N and 13° 52' North of the Equator.

Tropical Climate, characterized by high temperatures and humidity as well as marked wet and dry seasons

Variations between South and North

- Total rainfall decreases from the coast northwards.
- The South (below Latitude 8°N) has an annual rainfall ranging between 1,500 and 4,000 mm and the extreme North between 500 and 1000 mm.

The country is a multi-ethnic and culturally diverse federation (a colonial heritage) of 36 states and the Federal Capital Territory (Abuja), with 774 Local Government Areas and a population estimate of about 200 million people.

Structurally, there are three tiers of government, namely legislative, executive and judiciary. These work in tandem for the growth and development of the country through the principle of separation of powers and instrumentality of checks and balances.

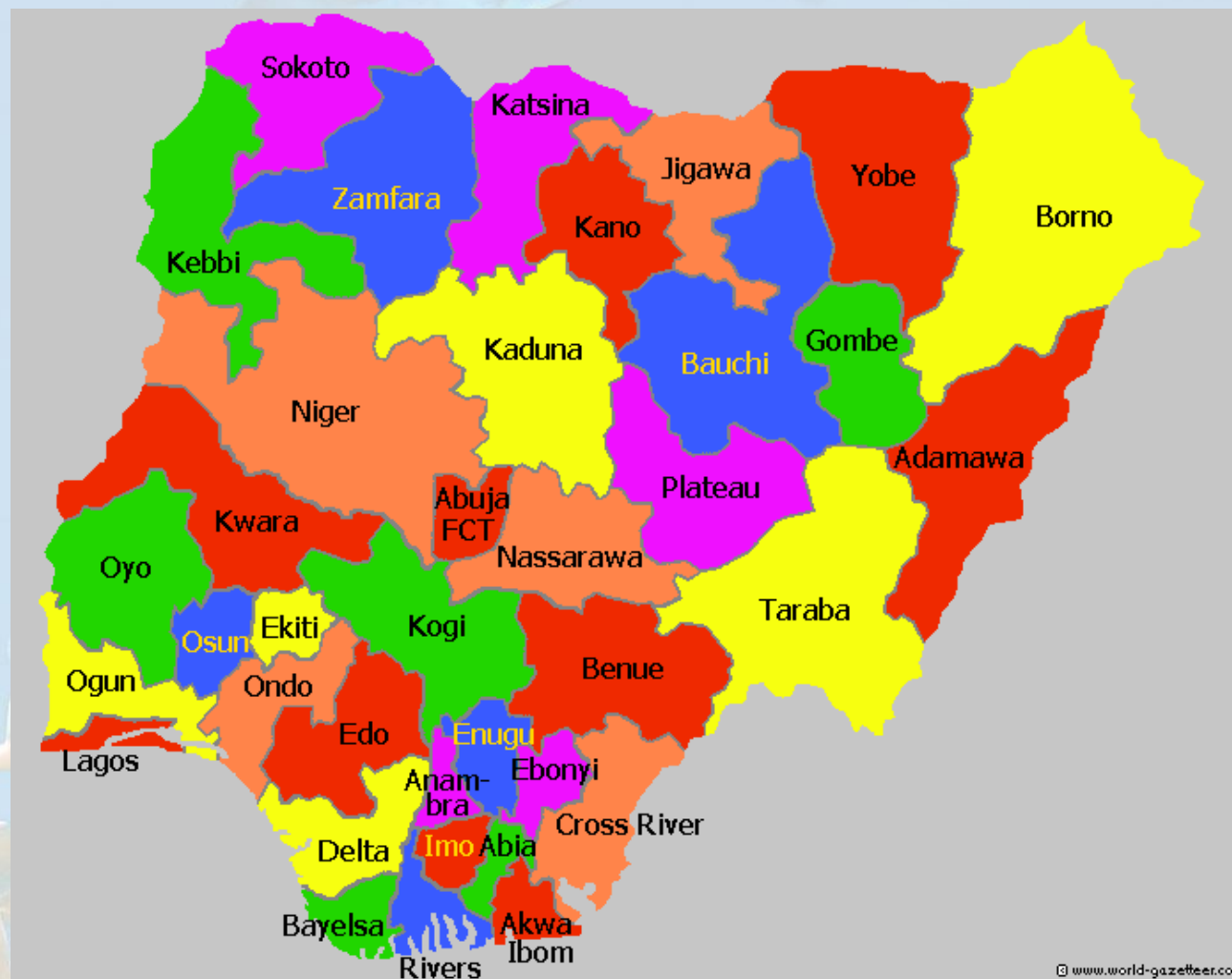
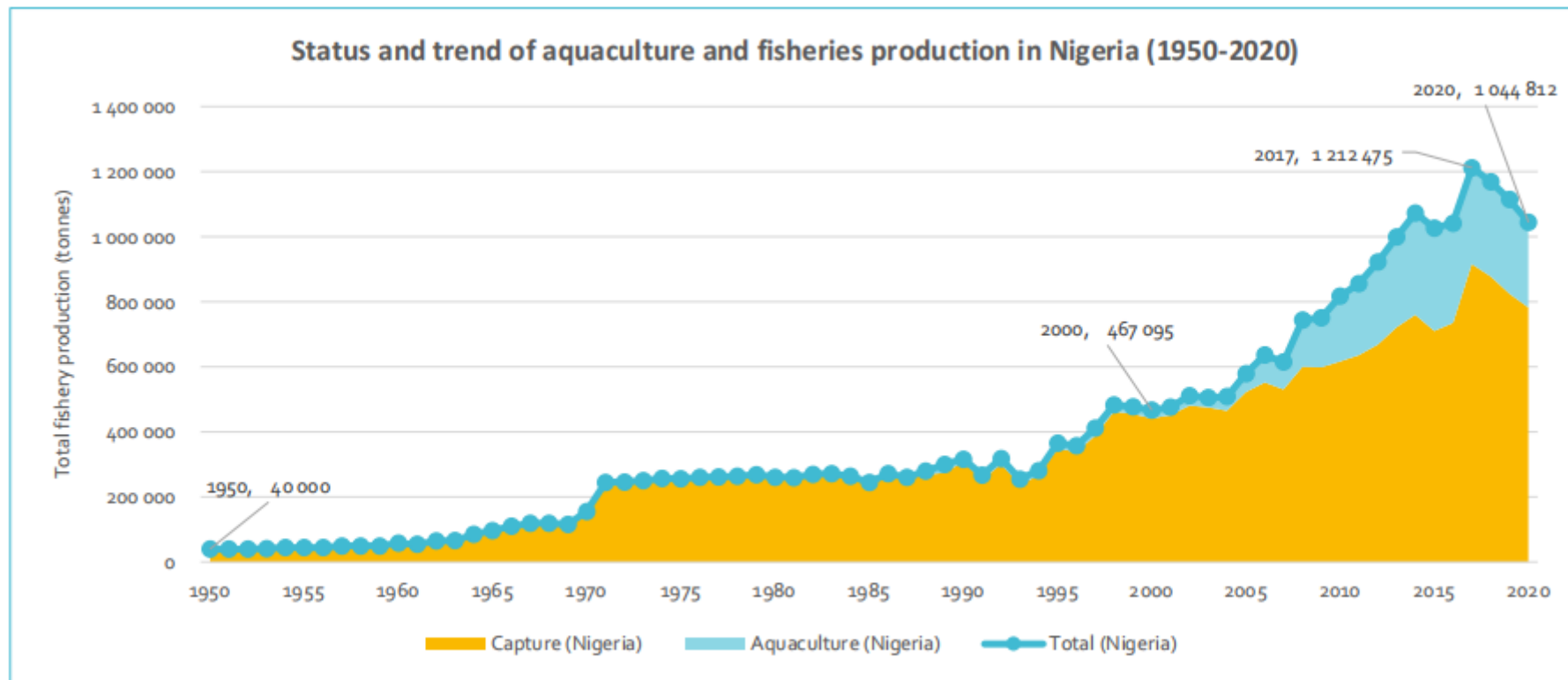


Fig. 1. Physical map of Nigeria

Status and trend of aquaculture and fisheries production in Nigeria (1950 - 2020)



Data source: FAO. 2022. Fishery and Aquaculture Statistics. Global production by production source 1950-2020 (FishStat); www.fao.org/fishery/statistics/software/FishStat/en.

2.2.1 Aquaculture Production in Nigeria

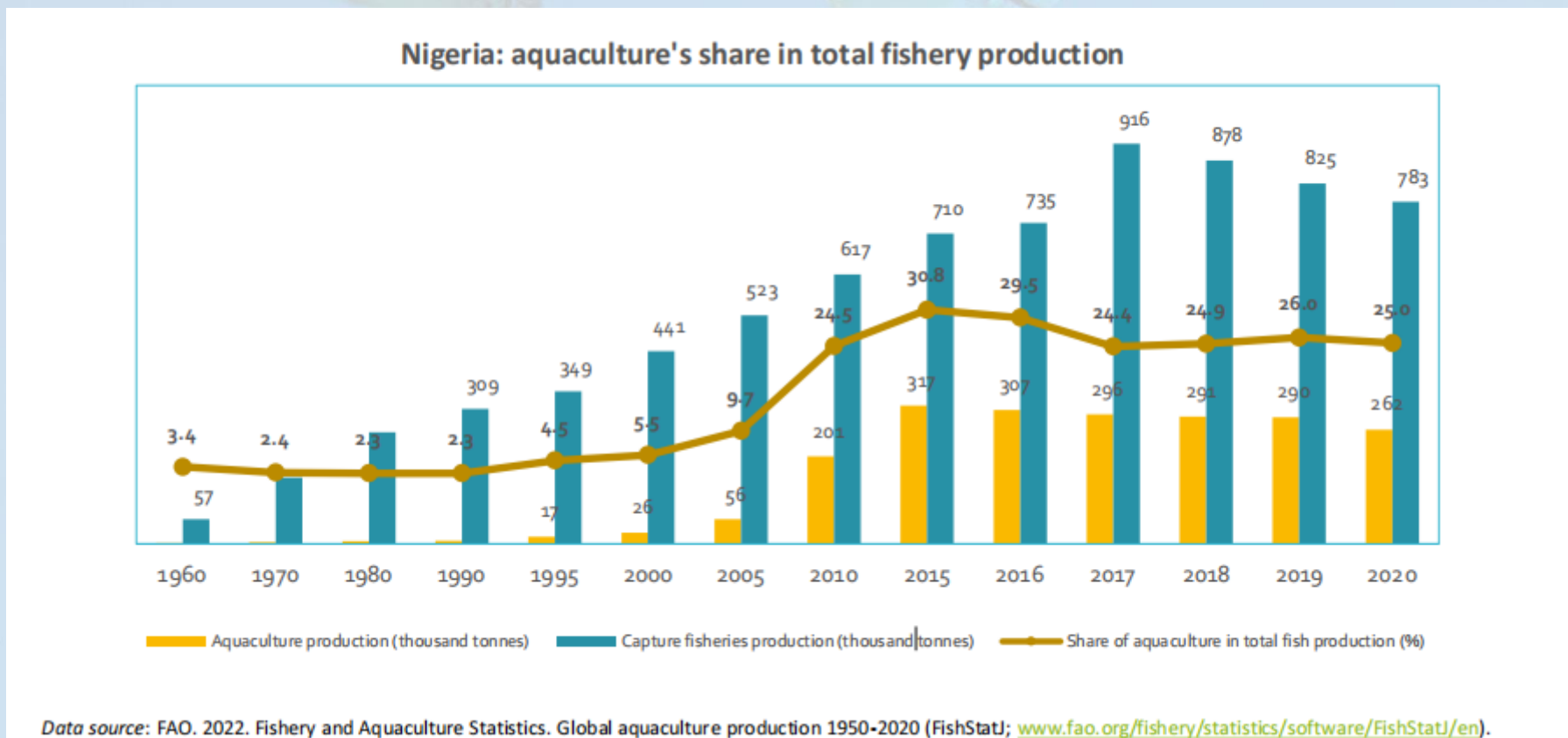
Aquaculture plays an important role in the development of many national economies and a key role in the socio-economic resilience of rural areas, potentially offering valuable and skill-based employment opportunities, and in some cases stabilizing the economic base of otherwise fragile communities (Edwards, 1999; Haylor and Bland, 2001; Muir, 1999). It provides livelihood options in rural areas of the developing world including Nigeria, as well as income and employment in both remote regional and more developed economies.

Aquaculture has been growing steadily in recent times in Nigeria, with the country ranking second only to Egypt, whose aquaculture products have Nigeria as its main African market destination. The most cultured fishes in Nigeria are catfish and tilapia, but the country has the environment to support the farming of other tropical species in fresh, brackish and marine water environments (FAO, 2019).

The aquaculture sub-sector is therefore considered a very viable alternative to meeting the nation's need for self-sufficiency in fish production. This is based on its high reliability in return on investment and low capital intensity relative to capture fisheries. (Jerimoth, Irabor, & Ebuka, 2017). Hence, the subsector has become increasingly economically and politically incentivized making Nigeria one of the top aquaculture producers in Africa and the leading producer in Sub-Saharan Africa (SSA) accounting for 52% of the total farmed fish production in the region.

According to FAO (2022), aquaculture production in Nigeria increased from 25 718 tonnes in 2000 to 261 711 tonnes in 2020. The 12.3 percent of annual growth was slightly lower than the sub-regional average yet higher than regional and world averages. In 2020, the country was the second largest aquaculture country in Africa.

Trend of aquaculture production (share in total fishery production)



Number of farms and species cultured

In 2004, fish farms inventoried were 2,658 with major concentration in the southern part of the country (AIFP Project, 2004), but by 2009,

Over 5000 farms (Miller & Atanda, 2011).

However, the 2011 National Fish Frame Survey Report, indicates that there were about 5,664 fish farms and 5,752 fish farms with hatcheries.

By estimation, using the annual growth rate that occurred between 2004-2009, the current number of farms may be above 20,000.

Aquaculture production in Nigeria has grown significantly over the past 35 years at an annual growth rate of 12% (compared to the world average of 8%), from about 6000 mt in 1980 to above 300,000 mt in 2016 (WorldFish, 2018).

Nigeria is the second largest aquaculture producer in Africa after Egypt and the largest producer of catfish in Africa and the world. (Dauda, Natrah, Karim, Kamarudin, & Bichi, 2018).

The main fish species cultured by Nigerian farmers include:

Catfish species (*Clarias gariepinus*, *Heterobranchus spp.*, Hybrids: *Heteroclarias...*),

Tilapia species (*Oreochromis niloticus*), and Carp (*Cyprinus carpio*)-Cyprinids.

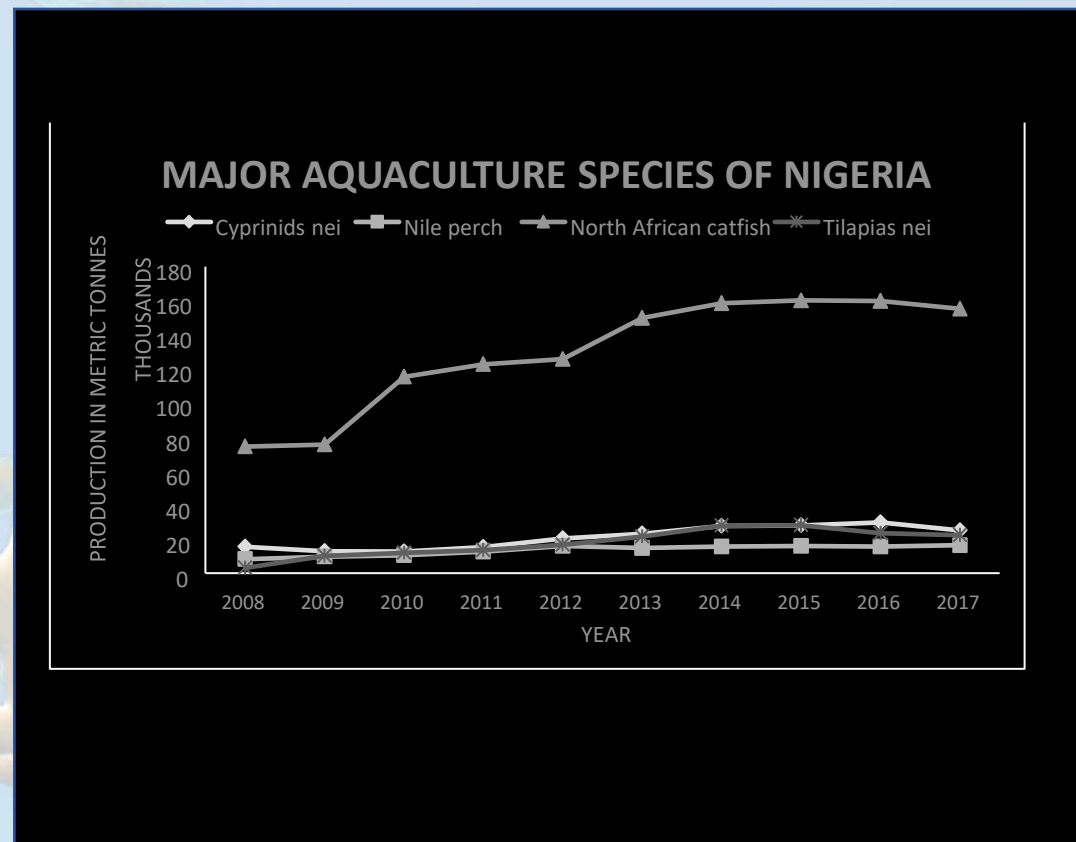
However, the Nile perch-*Lates niloticus*, *Parachanna obscura* are also reared but mostly on extensive farming systems. These include species like the African bony tongue; *Heterotis niloticus*, the Trunk fish; *Gymnarchus niloticus*, Silver catfish; *Chrysichthys nigrodigitatus* for food, and ornamental fish species such as gold fish, electric fish etc. Attempts are being made to culture Shell fish species like shrimp; *Macrobrachium macrobrachion* and Oysters.

The main fish species cultured by Nigerian farmers include:

Catfish species (*Clarias gariepinus*,
Heterobranchus spp., Hybrids: *Heteroclarias...*),

Tilapia species (*Oreochromis niloticus*), and
Carp (*Cyprinus carpio*)-Cyprinids.

However, the Nile perch-*Lates niloticus*,
Parachanna obscura are also reared but mostly
on extensive farming systems. These include
species like the African bony tongue; *Heterotis
niloticus*, the Trunk fish; *Gymnarchus niloticus*,
Silver catfish; *Chrysichthys nigrodigitatus* for
food, and ornamental fish species such as gold
fish, electric fish etc. Attempts are being made to
culture Shell fish species like shrimp;
Macrobrachium macrobrachion and Oysters.



History Of Aquatic Health Branch

Fish Disease Branch was created in 2009 at the Federal Department of Fisheries and Aquaculture in 2009.

Aquatic Health Division/ unit in 2020 after the visit of CEFAS, UK in the Federal Department of Veterinary and Pest Control Services

Operations: Both in the Federal Department of Fisheries and Aquaculture; and Federal Department of Veterinary and Pest Control Services.

Other collaborating Department and Agency:
NAQS (Nigerian Agricultural Quarantine Services)

Checklist for Routine Farm Visits



Checklist for Routine Farm Visits (cont'd)



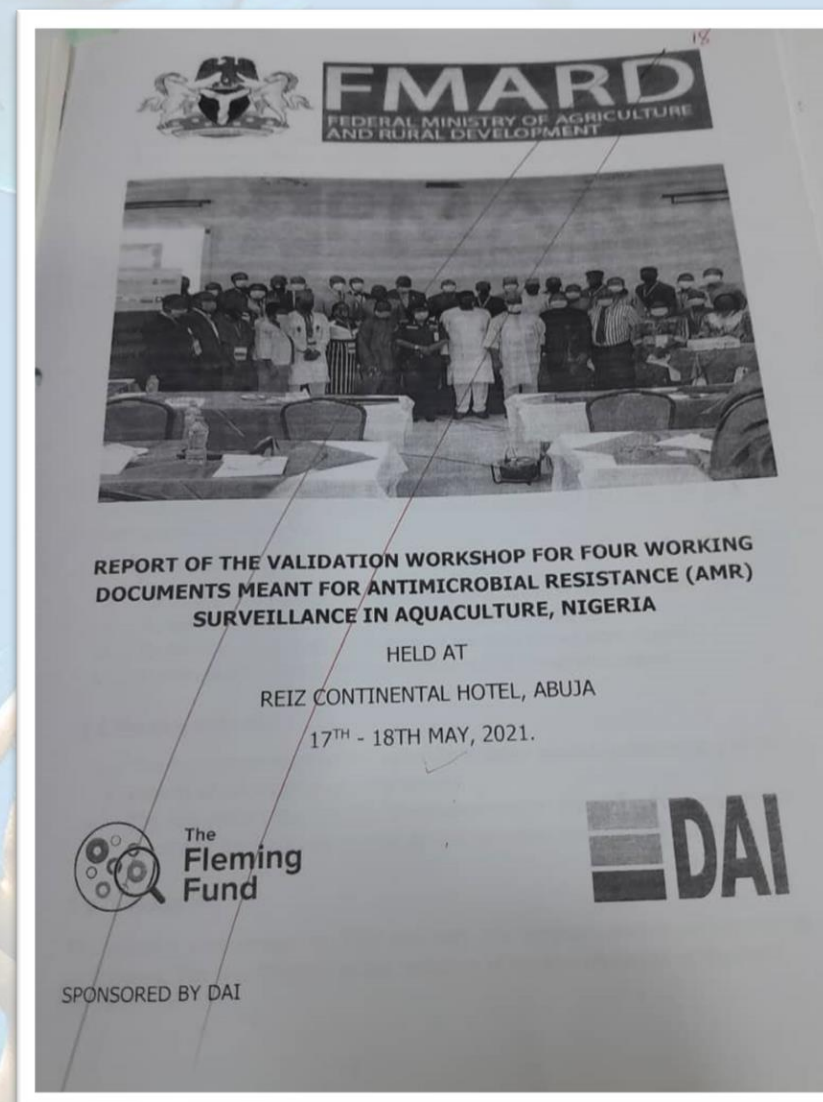
AMR: The routine farm visit Checklist was designed to reduce or totally eliminate Antimicrobial Resistance

Fleming Fund: The following Document were developed and validated under Fleming Fund Project (4 AMR Document):

- 1) A Situation Analysis of Nigeria Aquaculture Industry focusing on Antimicrobial Use and Resistance in Aquaculture Value Chain
- 2) AMR Surveillance in Aquatic Species; Surveillance Guidelines
- 3) Aquaculture Stakeholders and Antimicrobial Stewardship Network Report
- 4) Establishing Aquatic Species AMR Surveillance Recommendation Report

AMR Laboratory:

Nigeria
Fisheries
Laboratory
Animal Health
Antimicrobial
Resistance
Surveillance
Sentinel Site,
Lagos



Aquatic Disease Data:

Summary of fish pathogens observed between January and December 2020

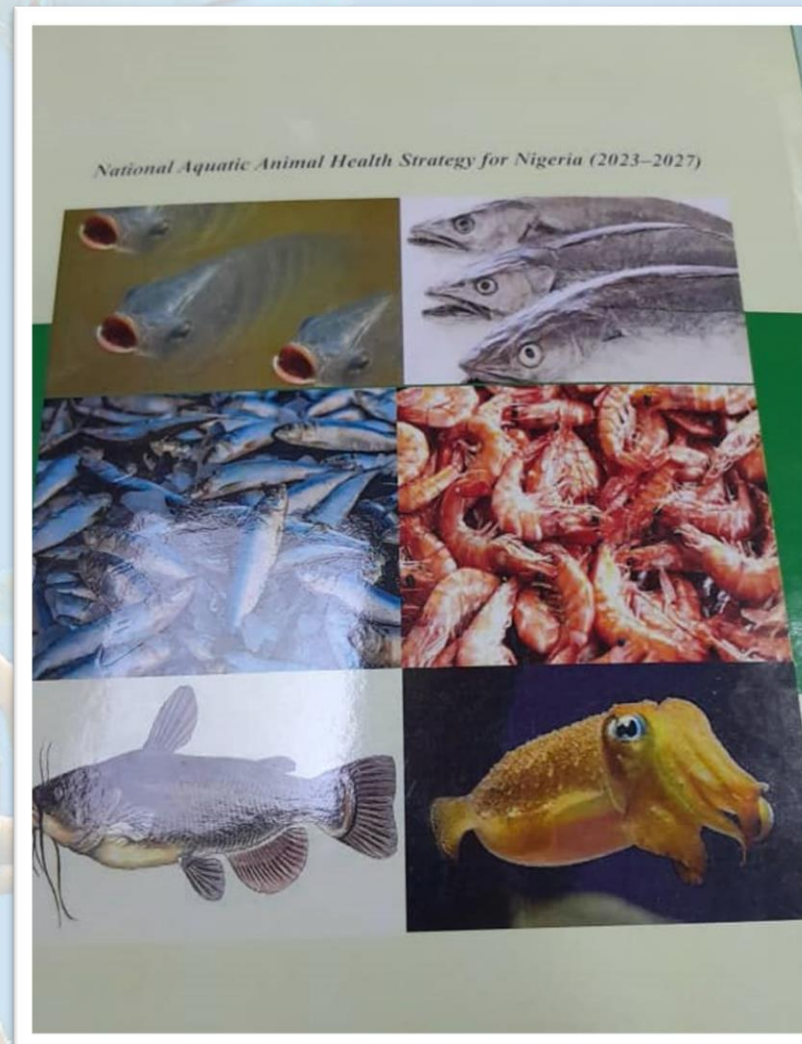
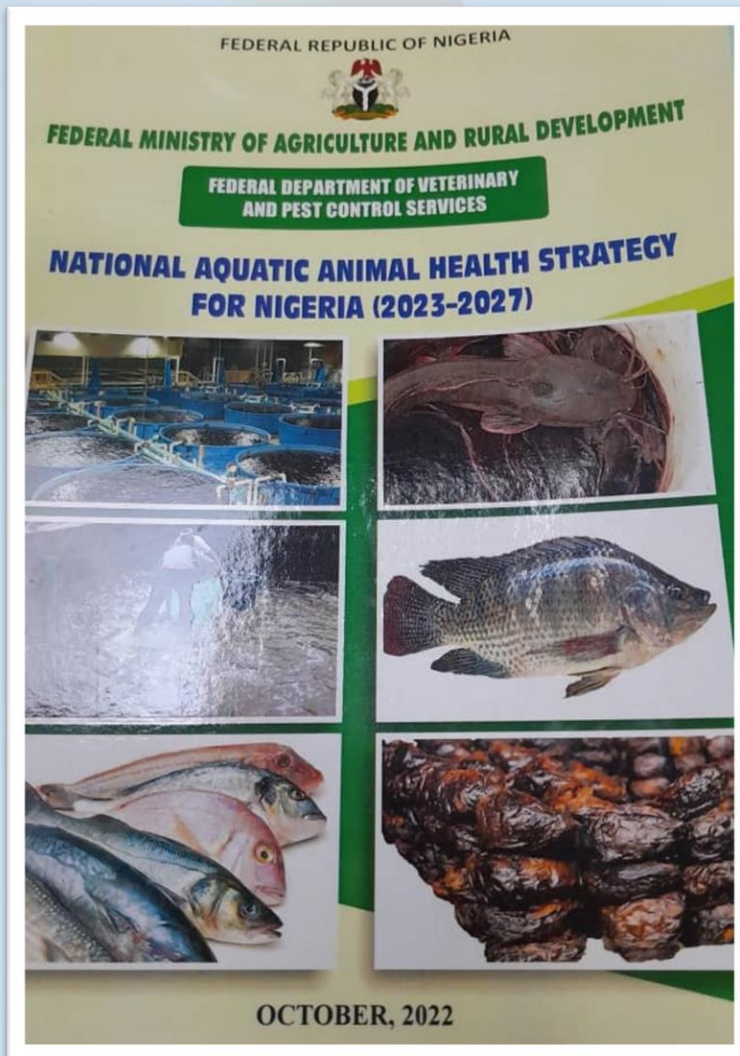
MONTH	TOTAL NO OF CASES	LABORATORIES (LOCATION)	BACTERIA AND FUNGI ISOLATED FROM SICK FISH
JANUARY	2	Ogere 1, Abuja 1	Vibrio spp (), Aeromonas spp (1), Escherichia coli () Citrobacter (1)
FEBRUARY	3	Lagos 2, Abuja 1	Vibrio spp (2), Aeromonas spp (), Candida spp (), Aspergillus spp(), Citrobacter (1)
MARCH	10	Ogere 3, Lagos 7,	Vibrio spp (4), Aeromonas spp (3), Aspergillus spp () Enterobacter spp (3), Serratiaspp ()
APRIL	2	Ogere 2,	Vibrio spp (4), Aeromonas spp (), Escherichia coli ()
MAY	6	Ogere 4, Lagos 1, Ibadan 1	Vibrio spp (2), Aeromonas spp (3), Staphylococcus spp () Escherichia coli (1)
JUNE	7	Ogere 1, Abuja 4, Lagos 2	Vibrio spp (2), Aeromonas spp (1), Aspergillus spp (), Salmonella spp(1), Candida (1). Citrobacter (3)
JULY	7	Ogere 2, Ibadan 2, Lagos 2, Abuja 1	Vibrio spp (3), Aeromonas spp (1), Aspergillus spp (), Salmonella spp (1), Candida () Escherichia coli (2)
AUGUST	16	Ogere 4, Lagos 6, Ibadan 4, Abuja 2	Vibrio spp (8), Aspergillus spp (1), Salmonella spp (2), Aeromonas spp (5) Escherichia coli ()
SEPTEMBER	7	Ogere 1, Lagos 3, Ibadan 2, Abuja 2	Vibrio spp (5), Aeromonas spp (1), Salmonella spp (2),
OCTOBER	8	Ibadan 2, Lagos 5, Abuja 1	Vibrio spp (4) Aeromonas spp (4)
NOVEMBER	8	Ogere 1, Lagos 5, Abuja 2	Vibrio spp (7), Aeromonas spp (1),
DECEMBER	4	Lagos 4	Vibrio spp (3), Aeromonas spp (), Edwardsiellatarda, Aspergillus spp (1), Escherichia coli ()
TOTAL	80		

Creation of Aquatic Veterinarian Platform and Registration with CAC:

Regular Professional Technical sessions physically and virtually (by zoom, Telegram, Whatsaap)

Aquatic Health Workshop: Training of Stakeholders (Fish Farmers, Animal Health Service Providers and Private Veterinarians) on Aquatic Health Emergencies

Development, validation and launching of National Aquatic Animal Health Strategy (NAAHS) in Nigeria:



Statement of Purpose

The overarching objective of the National Aquatic Animal Health Strategy is to provide comprehensive strategy that will build and enhance capacity for the management of aquatic animal health and aquaculture biosecurity in Nigeria.

The purpose of the Strategy is to minimize the risk of aquatic animal diseases impacting on the sustainable exploitation of the aquatic resources, development of aquaculture and trade in fish and fisheries products, with consideration for aquatic biodiversity, food security, food safety and long-term economy benefits.

Specific Objectives

- i. Provide a national guideline for the safe and productive management of national aquatic resources
- ii. Strengthen national capacity for managing aquatic animal health
- iii. Maintain the traditional and cultural uses of aquatic resources in Nigeria
- iv. Improve the sustainability and the productivity of the aquaculture sector in Nigeria
- v. Facilitate the development of new aquaculture production systems
- vi. Maintain and strengthen the capacity of aquaculture sector to engage in safe trade
- vii. Protect the health and biodiversity of aquatic organisms and aquatic ecosystems
- viii. Improve knowledge on current aquatic species health status

Programmes and Projects/ Activities (NAAHS): 15 Programmes and 29 Projects/
Activities

National Aquatic Animal Nealth Strategy for Nigeria (2023 – 2027). Federal Ministry
of Agriculture and Rural Development. Federal Department of Veterinary and Pest
Control Services, Abuja, Nigeria, 54 pages

References

EDUN, O.M. (2007). Infectious dropsy of hybrid catfish fingerlings from Nigeria. *Journal of Animal and Veterinary Advances* 6(4): 528-529

Edun, M. O. (2017) Isolation and identification of *Streptococcus* in tilapia. Proceedings of the 32nd annual conference of the Fisheries Society of Nigeria (FISON), held at Nnamdi Azikiwe University, Awka, Anambra State, 23rd-28th October, 2017.

FAO (2022). *The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation*. Rome, FAO.
<https://doi.org/10.4060/cc0461en>

FAO (2022). *Aquaculture growth potential in Nigeria; WAPI factsheet to facilitate evidence-based policy-making and sector management in aquaculture*.

National Aquatic Animal Nealth Strategy for Nigeria (2023 – 2027). Federal Ministry of Agriculture and Rural Development. Federal Department of Veterinary and Pest Control Services, Abuja, Nigeria, 54 pages

THANK YOU