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LAUNCH OF REGIONAL AQUATIC ANIMAL HEALTH LABORATORY NETWORK IN NIGERIA-AFRICA (RAAHLN-AF)

COUNTRY PRESENTATION – NIGERIA

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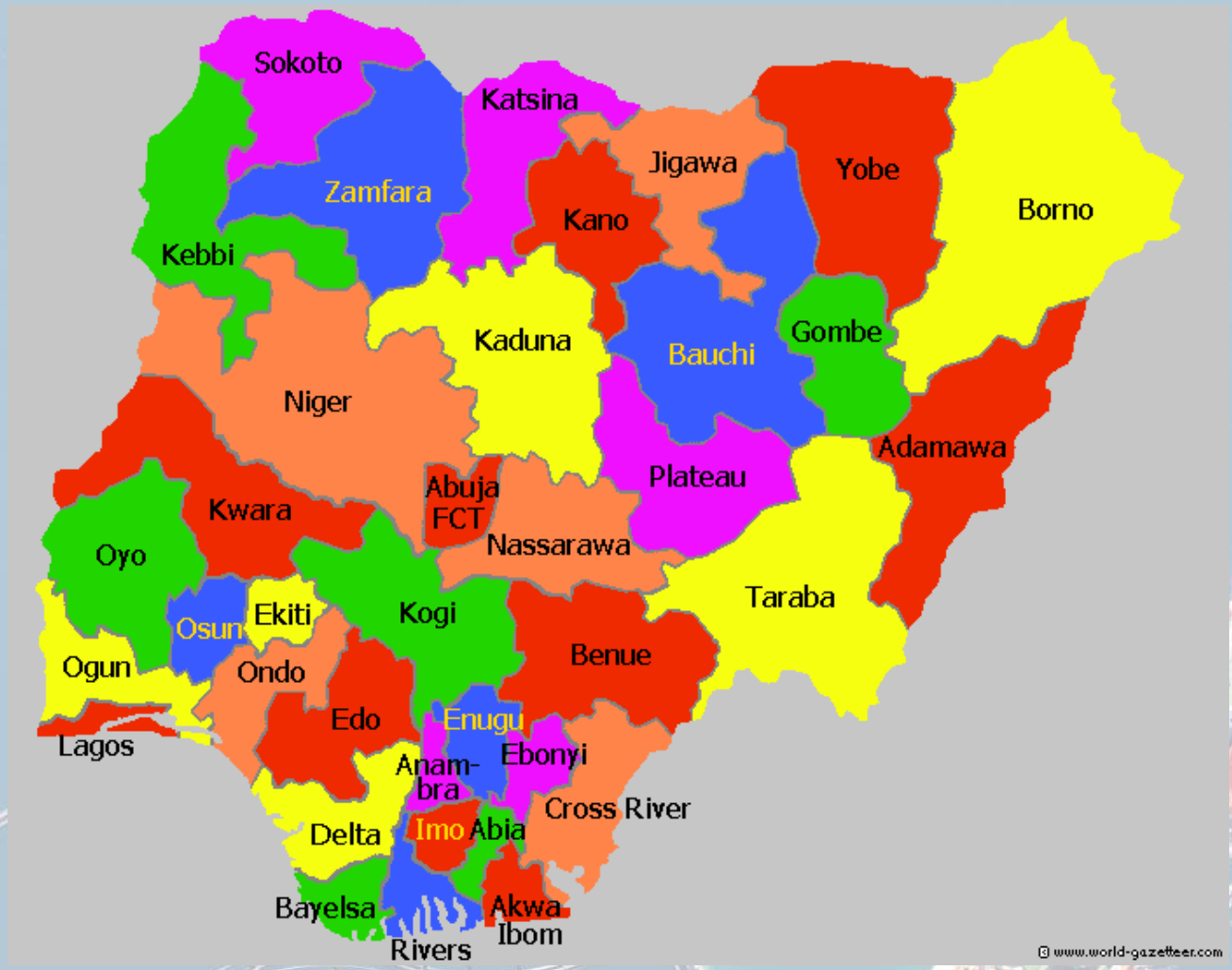
The Fleming Fund

Country General Information

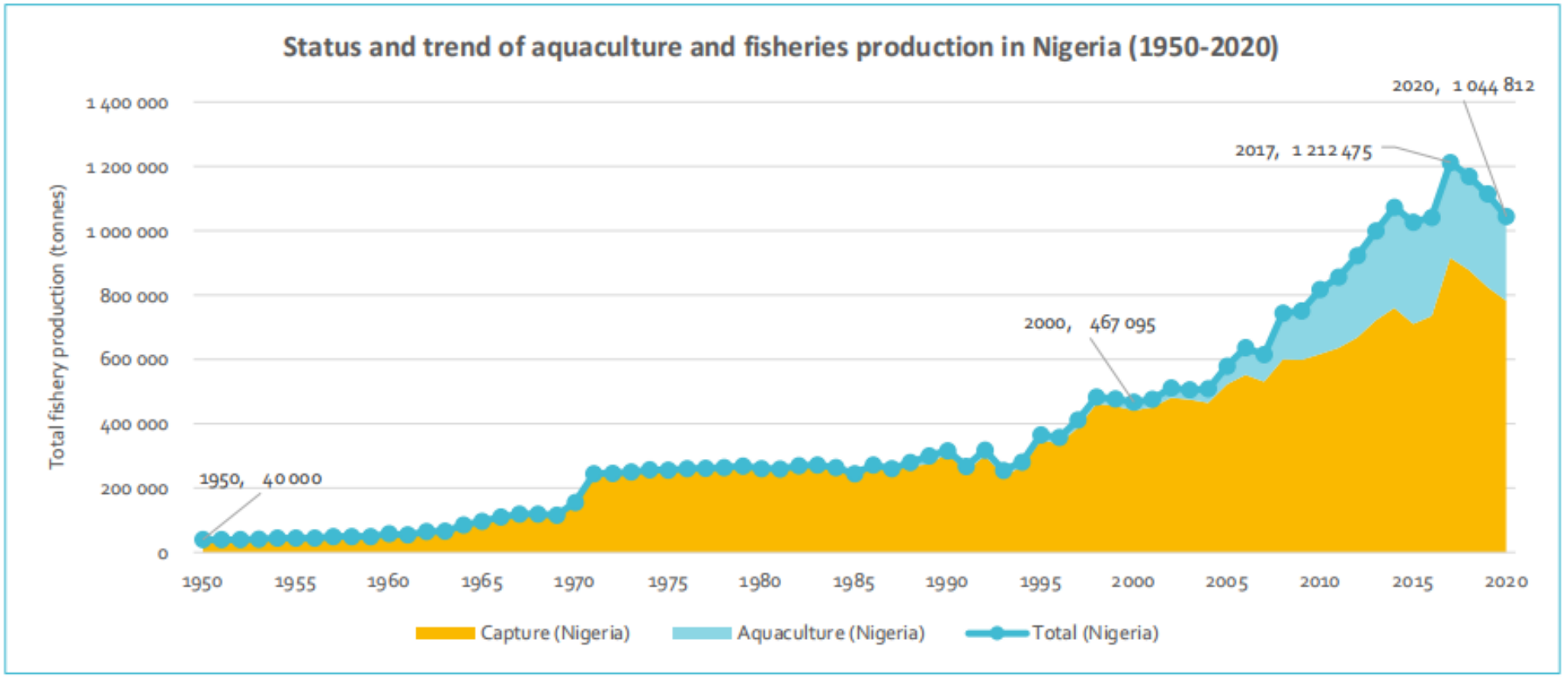
- Nigeria lies between Longitudes 2° 49'E and 14° 37'E and Latitudes 4° 16'N and 13° 52' North of the Equator.
- Tropical Climate, characterized by high temperatures and humidity as well as marked wet and dry seasons
- **Variations between South and North**
- Total rainfall decreases from the coast northwards.
- 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.



Status and trend of aquaculture and



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

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).

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).

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.

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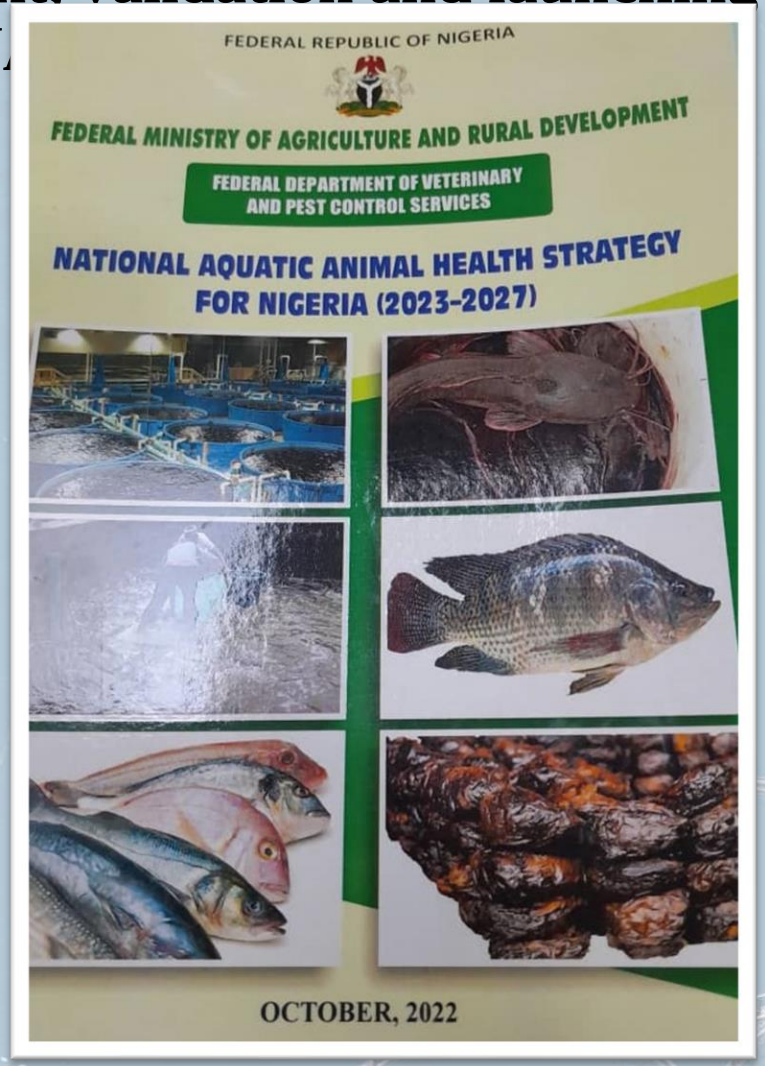
Field Visit – AMR Aquatic Surveillance

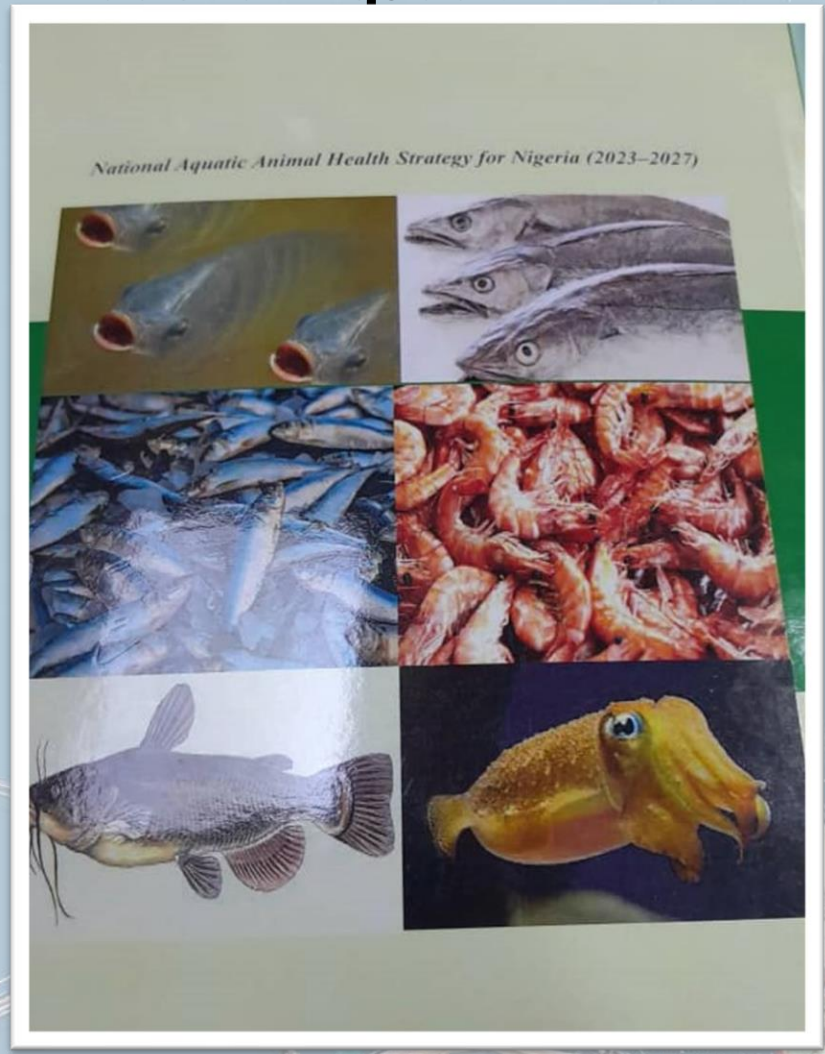
AMR: The routine farm visit Checklist was designed to reduce or totally eliminate Antimicrobial Resistance

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**

Development, validation and launching of National Aquatic Animal Health Strategy (NA





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

National Veterinary Research Institute (NVRI), Vom, Plateau State Nigeria

HISTORY: The NVRI was founded in 1924

CAPACITY

- The Institute is endowed with highly trained manpower with experienced research Scientist in varied fields of Veterinary Sciences and other fields of Applied Sciences
- and a number of Medical Laboratory and Animal Husbandry Scientists.
- Research for the development of new vaccines or other methods of disease control to combat emerging diseases of livestock and poultry and improving the vaccines in production is the Institute’s primary area of focus.
- With 23 outstations sprayed around the country

MANDATE

- To conduct Research into all aspects of animal diseases, their Treatment and Control.
- To Develop and Produce animal Vaccines, Sera and Biological to meet the National demand
- To provide Surveillance and Diagnosis of animal diseases
- To introduce Exotic Stock for improved egg, meat, fish and milk production
- To provide Extension Services to poultry, fish and livestock farmers
- To Train intermediate Manpower in Veterinary Laboratory Technology and Animal Health and Production Technology.

LABORATORIES: MOLECULAR/VIROLOGY LAB

TRAINING


NVRI is the backbone for animal disease
control programmes in Nigeria with the
responsibility for vaccine production, but
its capacity for production is insufficient
leading to the importation of
vaccines to the tune of 7 mill
annually

VACCINES/ BIOLOGICALS

CENTRAL DIAGONSTIC LAB

- This Division has the following sections:
- Necropsy,
- Epidemiology,
- Bacteriology,
- Histopathology
- Clinical Pathology.
- Others are Small Animal Section, Large Animal Experiment Station and Rabies diagnostic laboratory.
- CDL contributes significantly to the Institute's role as a national and regional laboratory for avian influenza and other trans-boundary animal diseases for West and Central Africa by conducting ambulatory services to farms, diagnosis of emerging and re-emerging diseases and surveillance activities.

BACTERIOLOGY LAB

BIOCHEMISTRY LAB

DRUG DEVELOPMENT LAB

PARASITOLOGY LAB

THANK
YOU
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