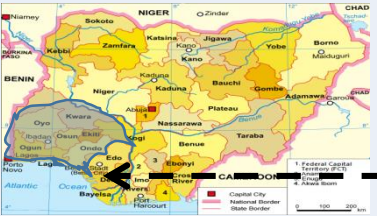


**NATIONAL ACTION PLAN (NAP)
FOR IMPLEMENTATION OF FAO/ASTF PROJECT:
TITLED GCP/RAF/510/MUL: ENHANCING
CAPACITY/RISK REDUCTION OF EMERGING
TILAPIA LAKE VIRUS (TILV) TO AFRICAN TILAPIA
AQUACULTURE IN NIGERIA**

Checklist #	Requirements/Considerations	Considerations
1. Aims/Purpose of surveillance program	Status of TiLV in the country Scenario 1 No report, no surveillance in place, no information on mass tilapia mortality but the country is at risk considering the scientific information available about TiLV in other African Countries. The Country want to investigate and know the status of TiLV.	Scenario 1: Nigeria
2. Definition of population: pond, farm, location, region	1. Description of tilapia sector: <ul style="list-style-type: none"> • The farms are spread all over the six geo-political zones of the country but mainly concentrated on the south West zone of the Country. • The culture period is throughout the year (from Jan-December). • The system include extensive, semi-intensive and intensive system using concrete tanks, cages, earthen ponds. • The management technique ranges from re-circulatory for the hatchery operators- flow through system of management for the grow-out cages and ponds. • The scale of operation ranges from small scale(indigenous producers for consumption, medium scale,(indigenous producer), large scale (commercial producers). • Cultured fish species include: Tilapia mainly <i>Oreochromis niloticus</i> with other fish species example Catfish, Heterotis. • Enrolment/Registration of farms is required to enhance the TiLV surveillance process 	To be used in finalising the sampling frame (checklist no. 5) and to be used during field visits (Field survey nos. 1 and 2)
3. Clustering of disease	time (e.g. season, temperature), or animal subgroups (e.g. age, physiological condition)	All year round culture period is practiced with average temperature ranging b/w 20°-30°C

Checklist #	Requirements	Considerations	
4. Case definition	No Suspicion: A tilapia farming system in which the farmer has not observed during the previous and ongoing production cycle - sudden mortalities and /or clinical signs such as skin redness/erosions or eyes protrusion/ruptured/cloudiness or abdomen swollen or scale protrusion/loss (e.g. farmer answer “No” to the question whether TiLV occurred.	Present Status Determination: Upon the collection of 30 moribund or sick fish samples, TiLV is not confirmed by a negative test result using PCR and the histopathological signs of TiLV	
5. Sampling	<p>Sampling frame: Samples will be collected from five Geo-political zones as follows:- South West zone – 26 farms South South zone – 6 farms South East zone – 2 farms North West zone – 2 farms North Central zone – 4 farms</p> <p>Diagnostic team Composition: 2 Country delegates, 1 lab. Technician and 1 statistician(4persons) Surveillance team Composition: 2 Country delegates, 1 Vet officer and 1 Quarantine officer(4persons) Requirement checklists (field and laboratory) Cost estimates</p>	<p>Field survey materials 6 sections in one field questionnaire form (hatchery, grow-out ponds, cages):</p> <ol style="list-style-type: none"> 1. Farm profile 2. Farm technical details 3. Clinical history (TiLV related questions and other environmental data) 4. Field sample collection form: fish samples and water samples 5. Socio-economic survey 6. Other biosecurity-related questions  <p>The map shows the geographical distribution of Tilapia farms across Nigeria, with a concentration in the northern and central regions. States highlighted include Sokoto, Zamfara, Kaduna, Niger, and others. A legend indicates symbols for Capital City, National Border, and State Border. A scale bar shows 0, 100, and 200 km.</p>	<p>Laboratory requirements</p> <ol style="list-style-type: none"> 1. For Level II (histopathology) National Veterinary Research Institute (VOM) Lab has been selected for diagnosis analysis 1. Fish and water samples (see no. 4 Field materials) 2. Procedure for sending samples to laboratory <ul style="list-style-type: none"> • (1) fixation of samples collected in test tubes and use of zip lock bags for histopathology and PCR test 3. Laboratory form for each laboratory test: Level II and Level III <p style="text-align: right;">Areas of Tilapia farm concentration</p>
<p>Considerations in implementation: National sensitization about the project; training of diagnostic and surveillance teams, enrolment of farmers, pilot testing, conduct of field interviews (structured or participatory, etc.)</p>			

Checklist #s 6-7

Checklist #	Requirements	Considerations	
6. Diagnostic testing	SoPs for Level I SoPs for Level II SoPs for Level III Diagnostic team Diagnostic laboratory Materials	Days 1-3 Training course Days 1-3 Training course Days 1-3 Training course	Cross reference to Checklist No. 5
7. Methodology	<p>Invitation letter to participate and enroll farms</p> <ul style="list-style-type: none"> • Epidemiological unit: A tilapia farm • Unit of sampling: A mix of 30 moribund or sick tilapia from ponds at the farm. • Total number of enrolled and participant farms: 40 tilapia farms; which should be visited twice (total field visits = 80 per country - at least 1+ve farm, at 2% Prev). • 1st and 2nd semesters, 2019 (pre/post hot season?) <p>Estimated goal for monthly field visits: approx. 2 farms/week ie 8 farms/month</p> <ul style="list-style-type: none"> • Timeframe of sampling: 8 months, starting in March 2019. • Sampling proportional for the structure of the industry; only aquaculture settings. Predominant species(Oreochromis niloticus) • e.g., 20 grow-out ponds, 10 hatcheries and 10 cages 		

Checklist # 8-9

Checklist #	Requirements	
8. Data management	Database development (Excel) Data management: <ul style="list-style-type: none"> • Storage • Retrieval • Analysis • Interpretation • Risk communication 	Template to be provided for all forms (Checklist no. 5) Classical epidemiological approach: quantify risk factors: other components contributing to the disease development (refer to Snieszko circle) Fill up 2 by 2 table: Contingency table Computation of risk factors (exposed vs non-exposed) Compute: incidence (exposed); Incidence (unexposed) and relative risk
9. Validation	Done by statistical estimation of the level of confidence (not for this project) – Se of surveillance program Done by pilot trial (yes) Done by expert/external evaluation (peer review): Yes	95% confidence is for international sensitivity of the system

Checklist # 10-12

Checklist #	Requirements	
10. Quality assurance	To be discussed	
11: Human and financial requirement	To be discussed	
12. Surveillance in the big picture	To be discussed	

Checklist # 11 Human and Financial Requirement

Checklist # 11	Requirements	Cost estimate (in USD)
Field survey materials	<ul style="list-style-type: none"> 1st Awareness meeting with 40 farmers 2nd meeting with other relevant stakeholders(40 Participants) <p>Fish samples Composition 4 persons/each farm visit to collect 30 moribund fish/farm Field questionnaire form(hatchery, grow-out ponds, cages)</p>	<p>5775 PER TRIP x 2 = \$11,550</p> <p>\$9317per trip x 2 = \$18,634</p>
Laboratory test materials	Histopathology lab test 10 % formalin,70% ethanol, test tubes, 80 slides, dissecting kit, etc.	Test analysis per slide \$100 x 80 = \$8,000
Small equipment	Water quality kit GPS Pocket PCR	\$3,000
Diagnostic & Surveillance Team	Training of 20 persons(diagnostic & surveillance team) for 2 days	\$7,166
Other miscellaneous expenses(stationeries etc.)		\$4,835
Total Cost		\$53,185

