

Impacts of COVID-19 on aquaculture with a special emphasis in Africa

Dr. Abdel Rahman El Gamal



EICA

Workshop

Impacts of COVID-19 outbreak on Fisheries Sector
in African Countries

27 July 2020

Egypt



JICA



COVID-19

A Global Glance

Introduction

- The outbreak of COVID-19 was first identified in the city of Wuhan, the capital of Hubei Province, China in December 2019
- From there, the virus spread within a short period of time to most countries in the world causing serious health and economic problems
- No country seemed far from the outbreak

Nature of the COVID-19 outbreak

- As the Corona virus (COVID-19) spreads rapidly across the world, countries developed plans and prepare for containment, active surveillance, early detection, isolation and case management
- Countries have also taken strict emergency measures to curb the crisis and cushion its impacts socially and economically
- Immediate shortage in specific hospital facilities were detected (e.g. intensive care equipment)
- Also, the shortage in basic supplies were detected in many countries (e.g. masks – alcohol)

Nature of the COVID-19 outbreak

- COVID-19 Plans identified the country capacity to control, and means to address the gaps
- Special emphasis were placed on hospitals, ventilator and critical care facility
- Healthcare professionals have been prepared
- The protective clothes needed for the frontline health care workers received highest priority
- Basic protective clothes and supplies for the public was found insufficient in the beginning in many countries before it became available (face masks, gloves, alcohol)
- Necessary regulations have been applied depending on the current and potential risk of the viral attack. Some of these regulations were of general nature while others were country specific

Protecting the frontline health workers



They received full support and recognition from the people all-over the world

Credit: WHO/Africa

COVID-19 outbreak -related actions

International: Boarder closures

Country level:

Lockdowns and curfew

Quarantine procedures

Social distancing: Encouraged - Examples:

Family-related: visits

Typical ceremonies: (wedding, funerals)

Citizens: asked not to leave home for non-essential purposes

Work: working from home – online meetings

Schools: Suspended – e-learning replaced classic education

Sporting events: Suspended

COVID-19 outbreak -related actions (Cont.)

Restaurants: closed and cling to delivery

Coffee shops: closed

Beaches: closed

Small markets: not allowed

Above actions have been strictly adopted in some places while less strict in others (country – rural versus urban)

Such actions have been relaxed –to a limit in case of:

- Measurable enhancement in the control plan of Corona

- Necessity to protect economic stability

- Saving the informal economy

- Adopting necessary protective measures

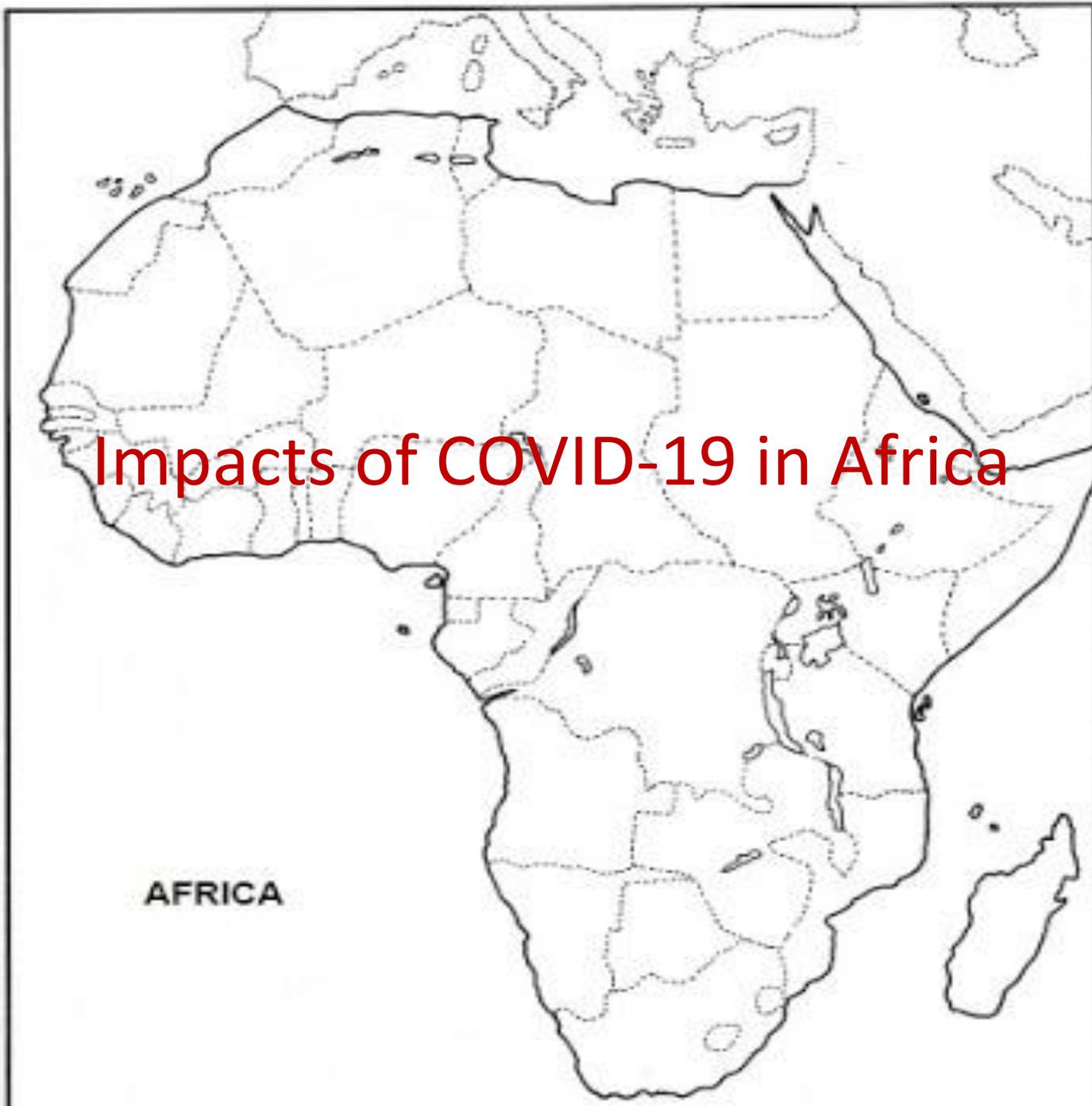
COVID-19 and media

It is understood that the public health agencies are the reliable source of information related to COVID-19

However, the media has in many instances caused enough confusion among the public through: Examples

- Status and progress on vaccine production along with expected timings
- Conflicting opinions between WHO and officials in some countries regarding the effective medicines
- End of the outbreak and the possibility of a second wave
- Means of the virus transmission (e.g. air – food)

The daily updating on the epidemiological situation by the health agencies eliminated most of the confusion and nervousness among the public



Impacts of COVID-19 in Africa

AFRICA

Impact of COVID-19 on aquaculture in Africa

The previous part addresses briefly the issue on global level where most or some of it would apply to any country in the world

The coming part is limited to the impacts of COVID-19 on aquaculture in Africa based on two subparts:

First: an online survey carried out by the author with four aquaculture experts specialized in various fields of aquaculture in Egypt. They are acknowledged for their contribution: Sherif Sadek – Ismael Radwan – Ahmed Sharaky, and Hussein Mansour

Second: a survey carried out by six aquaculture experts* on the impacts of COVID-19 on aquaculture in:

Cote d'Ivoire

Ghana

Madagascar

Malawi

Nigeria

Tanzania

*Names will follow

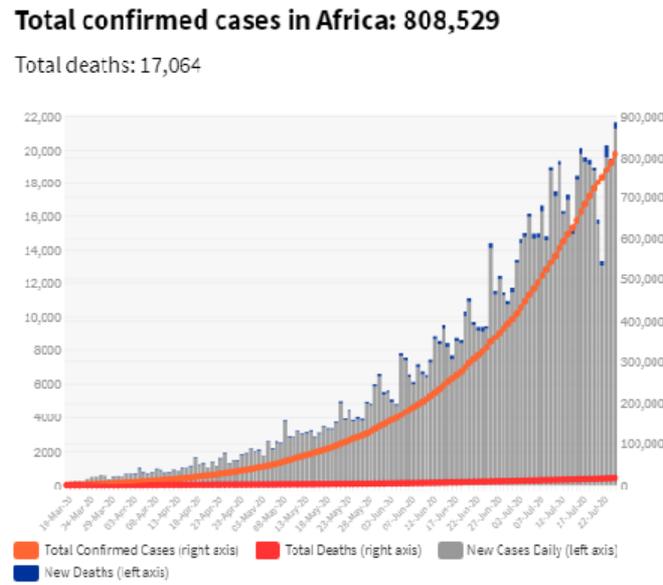
Impact of COVID-19 on aquaculture in Africa

Introduction:

The coronavirus disease 2019 (COVID-19) outbreak was first detected in Egypt on 14 February, Algeria on 25 February, and on 27 February, 2000 in Nigeria

Status till 25 July

Source: COVID 19 africawatch.org



Overall consequences of COVID-19 outbreak

- Slow-down of most economic activities (production – trade – etc.)
- Emerging practices and items that showed-up for the protection against the outbreak (on country level and household expenditures (face mask, sterilizers, etc.)
- Some activities suffered more because of the outbreak (e.g. tourism, aviation industry, restaurants, casual labor, etc.)
- Aquaculture is no different

Impact of COVID-19 on Egyptian aquaculture

Egyptian aquaculture has witnessed any/or all of the followings:

- Large number of fish ponds are still occupied with the last season fish
- Delay in fish stocking for the new season is highly expected
- Hatcheries have tilapia fingerlings as normal, while the demand is far below normal
- Hatcheries are offering their produced seeds either below cost and/or on credit

Impacts on Egyptian aquaculture – Fish production

- Because of the limited demand, harvested tilapia is much larger than normal (>500g)
- The farm gate price for such premium size tilapia was much lower than the production cost (~-15%); **the bigger the harvest, the larger the loss**
- Fish remain in the ponds are fed to maintain its physical condition and avoid weight loss
- Lower revenue and additional cost (feed) resulted in cash flow difficulty

Impacts of COVID-19 on Egyptian aquaculture

Feed production and trade

- The production capacity of feed mills has not been affected by the COVID-19 outbreak
- Most of feed ingredients are imported and the importation took place before Corona became an issue
- The concern as developed by large feed mills is related to the trade rather than the production
- Because farmers are selling their harvest at much reduced price, they have difficulty to pay the cost of feed to either traders or to the feed mills directly
- Feed mills in the light of the overall uncertainty about the short-term outlook, are not encouraged to sell their feed on credit as usual
- Smaller feed mills have their own ways to secure their money

Impacts of COVID-19 on education system in Egypt

- Regular education in schools and universities was suspended for two weeks effective March 15
- The suspension continued till the end of the school year
- Classic systems of education were substituted by other methods relying on e-learning technology
- Only students in high schools and universities attended their final exams under strict safety measures
- Egyptians scholars are back home especially from China

Physical distancing and use of face masks

In actual meeting events – physical distancing is enforced

Online meetings are encouraged

Physical distancing is enforced in large stores

Compulsory face mask has been enforced in most visited places such as:

- Governmental offices
- Banks and post offices
- Supermarkets
- Public transportation

More issues are covered upon addressing the analysis of questionnaire

Credit: Ministry of Social Solidarity



Credit: Youm7 newspaper

Analysis of circulated questionnaire

Nine participants in this workshop, from six countries responded and filled the questionnaire and provided their comments. **Thanks to you all**

Where several levels of impacts occur, a point system has been developed by the author

Country	Name	Country	Name
Cote d'Ivoire	N'Guessan Yao Joachim	Malawi	Benson Lusangasi
Ghana	Alhassan Arafat Salifu	Nigeria	Nancy Egwame
Madagascar	Jean Marcel Adavelo	Nigeria	Daniel Oluwaseun Osiyoye
Malawi	Symon Kamowwa Ngwira	Tanzania	Mussa George mndeme
Malawi	Madalitso Magombo Chatsika		

COVID-19 Preventative measures and practices in fishery/aquaculture facilities in selected African countries

Compulsory face mask – disposable plastic gloves			Social distancing (in offices, fields, meetings, etc.)			Compulsory temp checks - self-quarantine - admit to hospitals			Spraying disinfectants in suspected - infected locations		
Yes	No	NE	Yes	No	NE	Yes	No	NE	Yes	No	NE
7	1	1	8		1	4	5	0	3	4	2
78%			89%			44%			33%		

NE = Not enforced

Nigeria 1: It should be noted that the use of disinfectant around the farm could be a dangerous practice in the fish farm

A note from the author on preventive measures



Large-scale spray for buildings and roads is usually done by governmental bodies
Smaller size spray can be done by local administrations



Credit: ReliefWeb



It took some time till people apply preventive measures



Credit: Youm7 newspaper

Level of awareness among fishermen and coastal communities about the COVID-19 possible impacts

Sufficient	Moderate	Weak	Not reaching
	6	2	1
	67%		

Purpose of physical distancing as clarified by the governmental authorities are perceived by fishery or farming communities

Trusted and could be adopted	Trusted but difficult to implement	Confusing	Useless
	7	2	
	78%		

Malawi 1: Physical distancing becomes difficult especially when fish buyers are bidding on fish price

Ghana: Fishermen in Ghana were exempted from the lockdown which was implemented for few weeks. Fishermen are still entreated to adhere social distancing and wearing of face masks

Related to COVID-19 - Reasons of the reduction of the pre-allocated 2020 budget for fishery sector has (if occurred) – n=12

Overall economic stress related to COVID-19	More budget has been allocated to the public health sector	Social support to casual labor and who have been laid off	Additional unexpected costs (masks, gloves, alcohol, disinfectants, etc.)	The pre-allocated budget remained unchanged
3	4	1	1	3

Ghana: Not Applicable. The reviewed mid-year budget is yet to be presented

Operation levels in aquaculture projects because of COVID-19

Operating as before the outbreak	Operating at lower level	Temporary stopped	Closed permanently
1	8	0	0
			

Overall concerns on aquaculture in selected African countries (rank 1 highest – 7 lowest)

Difficulty in acquiring fish seeds 41 points	Shortage of fish feed or at high cost if available 48 points 	Reduced farm gate prices 38 points	Laying off workers 41 points
---	---	--	--

Rank	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
#	2	1	2	2	0	1	1	4	1	1	0	3	0	0	3	2	0	0	0	1	3	2	1	3	1	0	0	2

Extra work safety expenses (disinfectants, masks, gloves, etc.) 36 points	Delay in next year stocking 34 points	uncertainty of aquaculture sustainability 39 points
---	---	---

Rank	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
#	1	1	1	3	1	1	1	1	1	2	1	1	1	2	1	3	0	2	1	1	1

Causes for the reduced supply (consumption) of fish in general (capture – farmed) related to COVID-19

	Pressure on household budget (additional expenses) 27 points					Restaurants are closed 34 points 					Village markets are not allowed 28 points				
Rank	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
#	2	2	1	2	2	5	0	2	1	1	1	3	3	0	2



	Curfew 19 points					Layoff and loss of income 22 points					Reduced causal jobs (those which could be postponed) 24 points				
Rank	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
#	1	1	1	1	5	2	0	1	3	3	1	2	2	1	3

Impacts of COVID-19 on small-scale fish farmers/fishermen in selected African countries – n=19

Lack enough bargaining power in selling their fish	Forced to sell their fish at much declined prices	Market has become a real obstacle as many middlemen stopped serving or limited their fish purchase from farmers	In order to earn some income to meet their daily needs, some of them switched professions to become laborers
4	7	4	4



Impact of COVID-19 on international fish export in selected African countries(n-17)

Export order cancellation	Exports temporary stopped	Importers ask for reduced prices	Fishermen reduced or stopped fishing until the situation is over	Processing plants have temporary stopped	Laying-off workers
5	5	1	1	2	3



Impact of COVID-19 on aquaculture extension activity in selected African countries (n=15)

Implemented as planned	The one-one extension method stopped	Focusing more on other means of contacts (electronic publications, phone contact, others)	Suspended for the moment as farmers are worry on other vital issues
2	4	5	4

Impact of COVID-19 on bank loan applications -payments and remaining credit for aquaculture in selected African countries (n=7)

New loan applications – proceed as normal	Payment proceeds as normal	Rescheduling the remaining part of the loan	Suspending the payment for this year	Alleviating a part of the interest rate
2	3	1	0	1

Nigeria 1: An intervention for reducing the effect of COVID-19 was introduced by the CBN through NIRSAL at a reduce interest rate

Impact of COVID-19 on the capacity building programs in aquaculture in selected African countries (n-11)

Suspended until further notice	Done online using electronic programs	Cancelled and its budget was allocated to other activities	Allocated budget is saved to be used when Corona is over
7	1	2	1



Impact of COVID-19 on public education in schools and universities in selected African countries (n-16)

The school year continued but with physical distancing policy	The school year temporary suspended till further notice	Adopting innovative remote learning technology	Substituting classroom activities with other educational systems done at home (e.g. research subjects)
1	8	4	3



Survival potential of aquaculture systems beyond COVID-19 in selected African countries

	Traditional fish farm (earthen ponds) 44 points <input checked="" type="checkbox"/>						Semi-intensive/intensive farms (Tanks) 38 points						Freshwater cage farms 31 points					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Rank	4	3	1	0	0	1	3	0	4	1	0	1	1	2	1	2	2	1
#																		

1 highest



6 lowest

	Freshwater hatchery 32 points						Marine hatchery 16 points						Integration with agriculture – animals) 40 points					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Rank																		
#	0	3	2	2	1	1	0	0	1	2	0	6	4	2	1	0	0	2

Conclusion

Aquaculture – like many other sectors- has been affected by the outbreak of COVID-19

The real impact of COVID-19 on aquaculture is not technical in nature. Rather than that, the production economics and trade has been the triggering impact

Aquaculture like all food security systems has to live with Corona but with sufficient preventive measures; without the initial shock we had already

Once effective vaccines and/or effective treatment become available, the Corona era turns to a sad experience the whole world went through with much lesson to be learnt.

Hopefully, this occurs soon