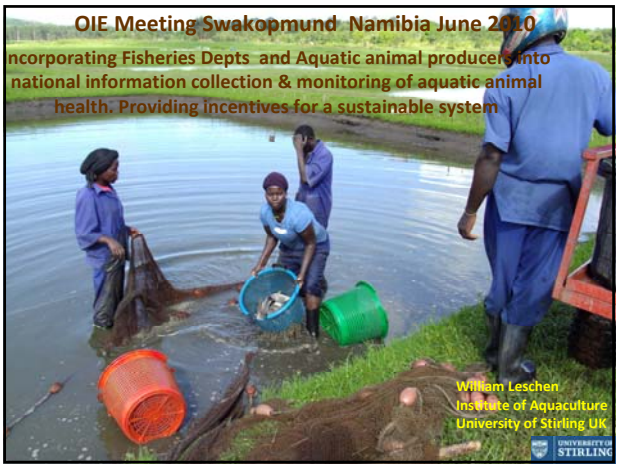
OIE Meeting Swakopmund Namibia June 2010

ncorporating Fisheries Depts and Aquatic animal producers into national information collection & monitoring of aquatic animal health. Providing incentives for a sustainable system



William Leschen
Institute of Aquaculture
University of Stirling UK

History and Current Status Aquatic Animal Health (AAH) Information Exchange & Monitoring across Africa

- Current situation globally concerning exchange of information & data on aquatic animal health between national, legislative govt Fisheries Depts, commercial & private sector individuals involved in aquaculture and fisheries considerably varied in scale

-Ultimately dependant on funding /resources available within countries.

Regulation & monitoring of aquatic animal health in N America, Europe, & Australia well documented & also through regional and international organisations (OIE , EC) regulated to monitor & inform of disease outbreaks and movements of live animals transnationally & transcontinently.

In other continents ie Africa & many developing countries where aquatic animal health not a key priority within govt budgets, regulation & information flows between key stakeholders still largely still absent.

More Recently in Sub Saharan Africa: Situation Beginning to Change?

Disease problems/mortalities in wild fisheries and /or aquaculture?

Recent EUS Epizootic Ulcerative Syndrome outbreak in Zambesi basin

Lake Naivasha fish mortalities Kenya

This from wild fisheries context.....

But where will the aquatic animal health problems originate from in the future ?

Aquaculture not wild Fisheries .....?

I would contest that they are already here in aquaculture in sub Saharan Africa

Intensification of livestock production system -> disease

Changing Face of Aquaculture and Aquatic Animal Health (AAH) in Africa.....

Aquaculture beginning to commercialise across continent ... Development away from livelihoods poverty alleviation approach of last 40 yrs.....

Nigerian Clarias culture now very much an industry - & growing ...

Larger scale fw fish farms developing in Zimbabwe, Ghana , Uganda and Kenya

Large scale shrimp farms in Madagascar, Mozambique

Nascent Oyster, abalone and fish mariculture industries in RSA, Namibia and East Africa?

Small to Medium Enterprise SME development coming to the fore in (some) planners minds

This increasing intensification has consequences for AAH & all of us at this meeting ....

Currently in sub Saharan African SSA aquaculture.....

Hatchery sector

- Increasing supply of fingerlings & private hatcheries across SSA
-Increasing (unregulated?) use of antibiotics in Clarias hatcheries Nigeria – elsewhere?
-In last 2-3 yrs beginnings of health, particularly bacterial /parasitic problems in larger tilapia farming companies hatcheries especially those using Recirc RAS systems

Ongrowing

Larger tilapia lake cage producers recently (1-2yrs) experiencing problems with parasites causing significant economic losses

Nascent southern african mariculture industry experiencing copepod - lice problems

Antibiotics also being used widely in Nigerian Clarias grow out industry

Currently in sub Saharan African SSA aquaculture.....

-Movement of live Fish
-Fingerlings and broodfish now being moved (unregulated?) across borders and water catchments

-West Africa Benin, Nigeria, Ghana, Cote D'Ivoire?

-Now Kenya <->Uganda <->Rwanda?

-Also Malawi <->Zambia <-> Mozambique?

-Air freight – Current controls – ornamentals loop hole ?

-Disease consequences? Also biodiversity issues...

Information flow between all stakeholders

-Outside of major shrimp and tilapia/clarias producers:

-For Producers
-Minimal flow of information or publications available on AAH – identification , diagnosis, treatment, biosecurity

-Same goes for knowledge of regulatory framework of national or int organisations for many producers

-For Regulators
-Minimum data and information of fish health status of fish farms in their country

-Also equally of movements of live fish ?

So how can these problems be addressed?

The Govt and aquatic animal health regulators need regularly updated and accurate information on live fish movements and AAH from fish farmers in order to regulate and control fish diseases

The Fish farmers, Hatchery managers and potential entrepreneurs need more information & publications on fish health, treatments , minimising risk , biosecurity in order to make money !!

So how can this be achieved ? firstly within individual countries, then on a regional basis, ie W Africa?

Not running before one can walk.....

Firstly history shows for any activities or overall AAH system to be successful:

It has to be inclusive of all stakeholders: regulators, fish farmers, veterinarians , pharmaceutical companies, researchers.

It has to offer incentives and benefits for each stakeholder ie fish farmers - if not they will not take part

It has to be budgeted, managed and realistic in order to be sustainable

Start at Basics: Registration of Fish farmers: Setting a Legal Precedent then Importance of accurate statistics /data collection in African Aquaculture

National Registration system for all fish, shellfish, shrimp producers – making it a legal requirement and run by Fisheries Dept.

Recently being implemented in Nigeria, also certification of hatcheries in Uganda - still in its infancy – lessons to be learned

Needs to be thought through carefully - What is a fish farm ? Clear Definition ? Based on sales of fish ?

Previous use of statistics eg 3200 fish farmers in Malawi – this use of stats has to stop – not helping

Each regd farmer given Live fish movements records Book to record live fish in and out – also containing info on fish treatments , biosecurity etc

Registration of Fish farmers : Making it work

Farms visited at least once a year by Fisheries Dept staff in order to:

Ensure they are still a working fish farm - still trading – need evidence of producing fish and sales - if not after two yrs then taken off the list

To collect annual data - simple questionnaire for farm details also short section on fish health. Need to use two forms of questionnaire dependent on scale of farm – one pond or 12 ponds and 35 cages. Set 2 categories of farm in registration process

To collect data from Live Fish movements book

To give fish farmer annual Fisheries Dept calendar - information sheet for each month eg bath treatment for white spot in the hatchery , photos of individual fish farms .

To give fish farmer annual Registration certificate which can be used in helping to sell /market fish

Registration of Fish Farmers: User friendly Annual report & Annual Competitions.

Annual data collected then analysed to produce :

User friendly report on fish farm production

Simple Section on fish health – helping to illustrate risk factors to Fish Farmers

Confidentiality maintained – each Regd Fish Farmer then receive report again illustrated with farm photos and including poster map of all national regd Fish Farmers also a Fish farm equipment suppliers guide?

All Regd fish farmers entered into Annual Prize Draw Series of 5 prizes - eg 10? feed bags, aquaculture books, fish grader, 12V compressor for fish transport etc .

Also Annual Prize for National Most improved fish farmer

By feeding back information to fish farmers and giving incentive this will give them ownership of their own industry - also to some extent create constructive rivalry between them

Making the information available to a wider audience – going online.....

Set up Special website or additional pages on Ministry Site

List all Regd Farmers, Hatcheries contact details , national map of fish farms

Download of Annual Regd Fish Farms Report & other publications

Fish health page – weblinks, notes on fish movements, assessing risk for disease, case studies on specific farm disease outbreaks

Equipment Suppliers guide including chemicals and regd drugs

Photos gallery - what do tilapia with *Streptococcus iniae* look like?

Website uses language and terminology

Eye exophthalmia

National then Rolling out to Regional Basis

-Pilot/Trial Farm Registration System in One Country for 1-2 years

- Feedback from all concerned then make any modifications to structure

-Then roll out on sub regional basis ie 3 or more countries Kenya, Tanzania, Uganda

-Using original country's Fisheries Dept staff to train new country in collecting information, analysis , user friendly data presentation, website construction and maintenance

-Result should be standardised data collection and annual dataset across 3? more countries - fish farm details, production and simple fish health information - ability and power for true comparative analyses between countries

-Also in terms of fish health and control possibility of regional groups or zoning for future disease free status?

Conclusions : Observations

-Increasing intensity of African aquaculture production is leading to increased disease risks across the continent

- If not addressed these can lead to severe economic and environmental consequences

- Issues for Fisheries Depts budgets ? Who pays ? Commercial sponsorship?

-For any international (OIE) based aquatic animal health regulation and control strategy to work in Africa, there FIRST has to be a national infrastructure and regulation of Fish farms within each country

-Only effective building block for this is Legal Registration of all Fish Farms -> Annual data collection -> Recording of live fish movements -> Building in incentives for fish farmers to maintain certain records whilst increasing information flow back on fish health available to fish farmers so that they can begin to regulate themselves

-Advantages then to roll out on sub regional level