

OIE Meeting Accra Ghana March 2012

Need for collaboration /networking for aquatic animal disease information management across SS Africa:

Incorporating range of individuals including Fisheries Depts and Aquatic animal producers into national information sharing collection & monitoring of aquatic animal health.

Providing incentives for a sustainable system

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UNIVERSITY OF
STIRLING

History & Current Status Aquatic Animal Health (AAH) Information Exchange & Monitoring across Africa. **Why do we need Networks?**

- 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 – **Need for Network(s)**



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 ?

Also increasingly in Aquaculture not wild Fisheries?

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

Intensification of livestock production system -> disease



Now 2012 & finally Intensification of aquaculture across SS Africa

Disease & associated fish treatments coming

Recent/current examples :

Shrimp white spot virus Mozambique - implications.....

Nigerian Clarias hatchery sector – antibiotics tonics widely used - un regulated

Ghana – cage culture Volta Lake – increasing parasitic and fungal problems - isolation of first bacterial pathogens.....

Ghana - recent large fish kill in cages - contaminated commercial feeds Aflotoxins -compensation?

Zimbabwe - Lake Kariba commercial cage culture - parasite outbreaks



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 – thank goodness!!
- 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 including 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



Increasing (Unregulated?) Movements of live fish in SS African aquaculture.....

-Fingerlings and broodfish now being moved (unregulated?) across borders and water catchments

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

-Now commonly fingerlings transported live Kenya <->Uganda <-> Tanzania<->Rwanda?

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

-Air freight – Current controls – ornamentals loop hole ? Thai tilapia strains into Mozambique...and elsewhere

-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 How many producers have OIE codes and manuals? Access to? Format they are written – do people read them?

-Same goes for knowledge of regulatory framework of national or int organisations for many producers Recent example malachite green on sarnissa forum.....

-For Regulators

-Minimum data and information of fish health status of fish farms in their country.... Not a priority..... Yet??

-Also equally of movements of live fish ?



Learning from Asia: Sustainable Ethical Aquaculture Trade (SEAT) Project www.seatglobal.eu

In 2011 SEAT Surveyed and Interviewed 400 fish (Tilapia, Pangasius) and shrimp and fw prawn producers of all scales in each of 4 countries: China, Vietnam, Thailand, and Bangladesh

When asked what their main challenge was

In all 4 countries and for all 4 groups ...
Each group without exception ranked fish/shrimp health/disease their main problem and also challenge for the future.....

Can/will Africa learn from this?



So how can these problems be addressed in SS Africa ?

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/investors need more information & publications on fish health, treatments, minimising risk, biosecurity in a format they can read and understand 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..... Incentives

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 requirementrun by Fisheries Dept??

Recently being implemented in Nigeria, also certification of hatcheries in Uganda - now Ghana? - 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 – 19,000MT per annum farmed fish production in Uganda – this (ab)use of stats has to stop – not helping anyone

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/three forms of questionnaire dependent on scale of farm – a. One pond or b. Up to 10 ponds and 10 cages. C Above this Set 3? categories of farm in registration process

To collect data from each Farm - A 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 – give producers ownership and pride.....

To give fish farmer annual Registration certificate which can be used in helping to sell /market fish – similar with certification of hatcheries

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

Annual data collected then analysed to produce :

User friendly report on fish farm production sent out all on regd list

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 understood by all



National then Rolling out to Regional Basis

- Pilot/Trial Farm Registration System in One Country eg Ghana 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 Benin, Nigeria etc
- 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... if not OIE ineffective and in the dark
- 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

Existing Networks for Aquatic Animal Health for SS Africa..... And outside.....

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International Standard Setting

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Aquatic Animal Health Code

The OIE *Aquatic Animal Health Code* (the *Aquatic Code*) sets out standards for the improvement of aquatic animal health and welfare and veterinary public health worldwide, including through standards for safe international trade in aquatic animals (amphibians, crustaceans, fish and molluscs) and their products. The health measures in the *Aquatic Code* should be used by the veterinary authorities of importing and exporting countries to provide for early detection, reporting and control agents pathogenic to aquatic animals and, in the case of zoonotic diseases, for humans, and to prevent their transfer via international trade in aquatic animals and aquatic animal products, while avoiding unjustified sanitary barriers to trade.

The health measures in the *Aquatic Code* have been formally adopted by the World Assembly of the Delegates of the OIE Members. This 14th edition incorporates the modifications to the *Aquatic Code* agreed during the 79th General Session in May 2011. The 2011 edition includes revised information on the following subjects: glossary; diseases listed by the OIE; criteria to assess the safety of aquatic animal commodities; quality of Aquatic Animal Health Services; criteria for listing aquatic animal disease; control of hazards in aquatic animal feeds; introduction to the recommendations for controlling antimicrobial resistance; welfare of farmed fish during transport; welfare aspects of stunning and killing of farmed fish for human consumption; disinfection of salmonid eggs for infectious haematopoietic necrosis, infectious salmon anaemia and viral haemorrhagic septicaemia; epizootic haematopoietic necrosis; Taura syndrome and aquatic animal products listed in in Articles X.X.3. and X.X.11. (amphibians and fish chapters) / X.X.12. (crustaceans and molluscs chapters) all disease chapters (except epizootic haematopoietic necrosis, Taura syndrome, *B. ostreae*).

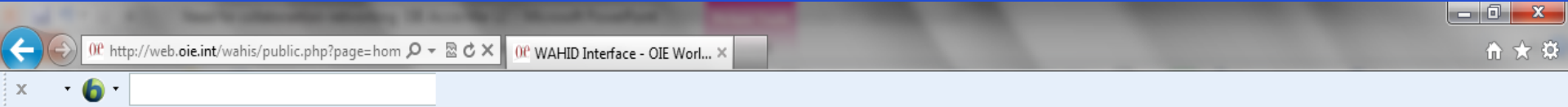
This edition includes one new chapter on principles for responsible and prudent use of antimicrobial agents in aquatic animals.

The development of these standards and recommendations results from the ongoing work of one of the OIE's Specialist Commissions, the OIE Aquatic Animal Health Standards Commission (Aquatic Animals Commission). This Commission, which comprises six elected members and two observers, meets twice yearly to address its work programme. The Commission also draws upon the expertise of internationally renowned specialists to prepare draft texts for new chapters of the *Aquatic Code* or revise existing chapters in light of advances in veterinary knowledge. The views of the National Delegates of OIE Members are systematically sought through the circulation of draft and revised texts. As well, the Aquatic Animals Commission collaborates closely with the OIE Terrestrial Animal Health Standards Commission on issues needing a harmonised approach, and with the Biological Standards and Scientific Commissions to ensure the Aquatic Animals Commission's work is based on the latest scientific information.

The standards published in the *Aquatic Code* are the result of consensus among the veterinary authorities of OIE Members and are references for World Trade Organization (WTO) Members under the Agreement on the Application of Sanitary and Phytosanitary Measures, in regard to which the OIE provides the health standards for safe

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WAHID



- Country information**
Information about a specified country, including exceptional disease event reports, animal health status, veterinary services, population, vaccination, etc.
- Disease information**
Information about a particular disease, including global disease distribution maps, outbreaks maps, lists of countries indicating their sanitary statuses, etc.
- Disease control measures**
Lists and maps of the prophylactic and control measures used by countries and by disease.
- Countries sanitary situation comparison**
Compare the animal health situation of two countries for trade purposes. This identifies which diseases may pose a hazard for countries importing animals or animal products from another country
- Data between 1996 and 2004**
Data between 1996 and 2004



World Animal Health Information Database (WAHID) Interface

The WAHID Interface provides access to all data held within OIE's new World Animal Health Information System (WAHIS). It replaces and significantly extends the former web interface named Handistatus II System.

A comprehensive range of information is available from:

- Immediate notifications and follow-up reports submitted by Member Countries in response to exceptional disease events occurring in these countries as well as follow-up reports about these events,
- Six-monthly reports describing the OIE-listed disease situations in each country
- Annual reports providing further background information on animal health, on laboratory and vaccine production facilities, etc.

To start, select one of the headings on the left. You can then explore available information

- by country (or group of countries),
- by disease,
- focusing on control measures, or
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Sustainable Aquaculture Research Networks in Sub Saharan Africa A new era for strengthening African Aquaculture



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- 4) African aquaculture general forum for regd users: Frans Swanepoel
- 5) African aquaculture general forum for regd users: Kapenta farming
- 6) African aquaculture general forum for regd users: Looking to buy catfish fingerlings in Kenya
- 7) African aquaculture general forum for regd users: NEED HELP - How do you artificially reproduce African Catfish fingerlings?
- 8) African aquaculture general forum for regd users: Need Help Sourcing Materials in Uganda for New Fish Farm
- 9) African aquaculture general forum for regd users: Does Anyone Here Farm Oreochromis Mortimeri?

Ghana

[FAO Ghana Aquaculture sector overview \(English\)](#)

Anson Farm, Senchi

Cage tilapia demonstration Farm

For arranging visit please contact Owner Paul Anson, email pewage1@yahoo.com phone  +233244673379 .

Aqua Farms, Ltd.

PO Box KIA 30443, Accra Contact NAJJAR, Raja A.



Tel  (233) 21 286 214  email aquafarms@cctcgroup.com

[Aquaprima Ghana Ltd](#)

[Asuboi Apostolic Church Fish Farm](#)

Bosomtwi Integrated Aqualife Village

Fingerling Supplier. Fishery and Angling Lakes Contact Mr Poku Gyinaye Email gyipoku@hotmail.com

P.O. Box KS 4483, Adum, Kumasi Tel  +233244531637 



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ONG Aquaculture et Développement Durable (AquaDeD ONG), Recherche et Développement liés à l'Aquaculture, la Pêche, les zones Humides et le Développement Communautaire; 08BP790 tripostal Cotonou, Bénin; Tél: 00229 95182936/ 98712114/ 90023036; Fax: 00229 21303084; E-mail: aquaded_ong@yahoo.fr ; Contact: Dr Ibrahim IMOROU TOKO (président de l'ONG), Biologiste, Spécialiste en Aquaculture et Développement Durable.

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Aquatic Animal Health Page

SARNISSA provides below links to websites related to Aquatic Animal Health both in Africa and also globally



International

- [OIE Aquatic Animal Diseases Commission](#)
- [OIE Aquatic Animal Health Code and Manual of Diagnostic Tests for Aquatic Animals - free downloads - follow links](#)
- [Commercial suppliers](#)
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 **IDRC / CRDI Carlos Pérez del Castillo**, chair of the CGIAR consortium board, an organization ...
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[Sarnissa] Malachite green Legal position in each African country..... Moving forward

edwin muga otmuga at yahoo.com
Sun Feb 26 11:37:07 GMT 2012

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Dear Will,
Hope you are having a restful weekend.

As concerns the legal position in Kenya, the the Fisheries (Safety of fish, fishery products and fish feed) Regulations, 2007 which fall under the Fisheries Act Cap 244. It states under the registration and distribution of veterinary drugs no therapeutic products may be applied to fish unless they are approved for use under the terms of Under Cap 244 malachite green (with the IUPAC name 4 - ((4 - dimethylaminophenyl) phenyl - methyl) - N, N - dimethylaniline does no fall in the list contained therein

Kind regards.

E Muga
MOFD
Kisii,
KENYA

HI Will, You will find that most (all?) African governments do not have a position on the use of drugs in aquaculture. Veterinary medicines can obtained under prescrip

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ASEM Aquaculture: Health

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- EC Import Regulations - Ornamental fish
- EC Regulation 346/2010

Fun

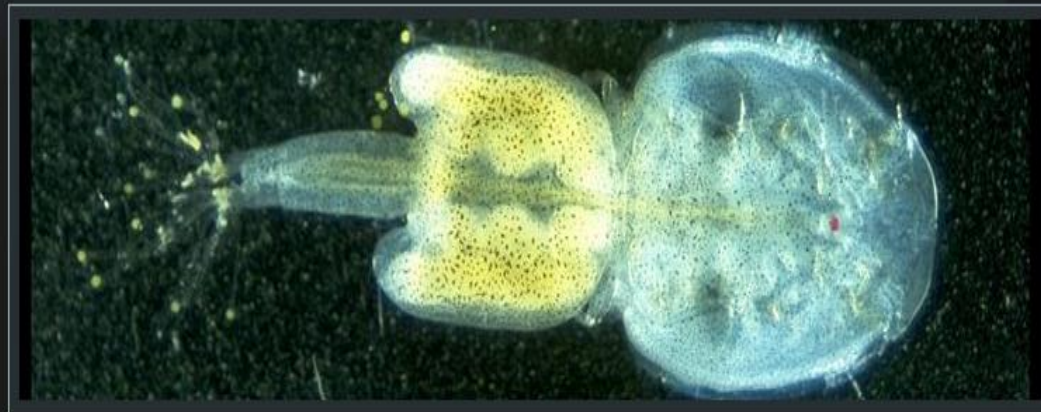
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Project Summary

▼ Project updates

- 9th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health
- AqASEM at the Asian Fisheries & Aquaculture Forum

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****NEW: Help us identify priorities for future activities by completing THIS SURVEY***

The Project

The objective of the workpackage on Disease and Health Management (WP5) under the ASEM Aquaculture Platform is to build partnerships between Asia and Europe to work together to improve cultured aquatic animal health and welfare and to address issues of major economic

Project Updates

AQUAEXCEL The Second Call for Access to EU Aquaculture Research Infrastructures was published today at http://www.aquaexcel.eu/call_for_access. Funding is available for short projects involving mobility from ...

Posted Feb 3, 2012 9:43 AM by John Bostock

John Bostock's Presentation at DAA8 The slides used in John Bostock's presentation to the 8th Symposium on Diseases in Asian Aquaculture are now available in the File Store (Project Files Section) - <https://sites.google.com/...>



Aquatic Animal Health

Issue 0

15th Conference of the European Association of Fish Pathologists

The 15th Conference of the European Association of Fish Pathologists (EAFP) was held in Split, Croatia, between the 12th and 16th September, 2011. The Conference which was attended by approximately 415 delegates from 25 countries was its usual high standard and consisted of a number of oral sessions covering the following subjects:

- Fish and shellfish immunology
- Host parasite interactions
- Environmental and toxicological diseases
- Aquatic animal epidemiology
- Bivalve and crustacean disease
- Bacterial diseases
- Immunostimulants
- Myxozoa



Events d

11-14 October 2011
FAO/SPC Regional Conference on
Development of
Regional Cooperation
[Melba Reantas](#)

18-21 October 2011
Aquaculture Europe
<http://www.easo.org/article/180>

26-28 October 2011
Mastering Interdisciplinary
Research, Higher Education
Development - Europe
European Centre for
and Latin America
<http://www.ecra.org/111.htm>



News

10th Meeting of the Asia Regional Advisory Group on Aquatic Animal Health

Posted by Eduardo Leano | 18/12/2011 | 864 reads | Tags: Health

The two-day meeting was held in the Board Room of Hotel Motimahal, Mangalore, India on 19-20 November 2011. The meeting was attended by all the AG members including representatives from:

- OIE-AAHSC (Dr Barry Hill, President).
- OIE Regional Representation for Asia and the Pacific (Dr Hnin Thidar Myint).
- FAO (Dr Rohana Subasinghe).
- DAFF Australia (Drs Ingo Ernst and Brett Herbert).
- SEAFDEC AQD (Dr Edgar Amar).
- NACA (R&D Manager Dr CV Mohan and Aquatic Animal Health Programme Coordinator Dr Eduardo Leano).
- Private sector (Dr Siow Foong Chang, Merck Animal Health).
- Aquatic animal health expert from the region (Prof. Timothy Flegel, Thailand).



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European Association of Fish Pathologists

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Welcome to the EAFP

The objectives of the Association are to promote exchange of knowledge and co-ordination of research related to fish and shellfish pathology.

Bulletin contents 32 (1)

FEBRUARY 7, 2012 AT 02:32 PM

News and Views

Epidemiological survey of digenean trematodes affecting razor clams, *Ensis arcuatus*, from Galicia (NW Spain)

M. Ruiz, D. Iglesias, S. Darriba, R. Rodríguez and C. López

Spin-off from routine parasite diagnostics of Atlantic salmon; first report of *Gyrodactylus alexanderi* in Norway

H. Hansen, A. Jørgensen and T. A. Mo

Note

Ultrastructural findings of spontaneously occurring seminoma in an adult ornamental cyprinid (*Cyprinus carpio* L.)

R. Sirri, C. Brachelente, H. Schmidt-Posthaus, G. Vitellozzi and L. Mandrioli

Note

Detection of herpesvirus variant (OsHV-1 μ var) in Pacific oysters (*Crassostrea gigas*) in Spain and development of a rapid method for its differential diagnosis

Latest Headlines

Bulletin contents 32 (1)

New book 'Salmon lice'

New edition - Fish Diseases & Disorders: Viral, Bacterial & Fungal Infections

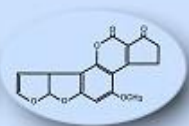
Fish disease course-Histopathology

Post-doctoral 2.5 years position on Fish

Pathology/Immunology

Joint bi-annual conference of the German, Austrian and Swiss branches

Bulletins 2008



Fish Health Section



Welcome to the Fish Health Section of the American Fisheries Society

New Website Under Development

The Fish Health Section (FHS) is one of the largest and most international sections of the [American Fisheries Society](#). The FHS was formed in 1972 to give fish biologists, diagnosticians, researchers, aquaculturists, veterinarians, administrators, and others involved in fish health, an organization for communication and interaction.

[The old website can be accessed here.](#)

Goals and Mission

- Maintain an association of persons involved in safe-guarding the health of fish and other aquatic animals.
- Focus attention on aquatic animal health issues through research, national and international meetings, education and dissemination of appropriate information to the public.
- Encourage effective fish health practices through communication and cooperation with government and private interests.

Contact Information

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Larry Hanson, President-Elect


Phone: 662.325.1202

Email: Hanson@cvm.msstate.edu

Browser tabs: aqua.merck-animal-health.com/a-clear-vision.aspx, A clear vision from Intervet ...

Browser address bar: aqua.merck-animal-health.com/a-clear-vision.aspx

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Animal Health

Page Header: Search  **Aquatic Animal Health**

Page Header: A Clear Vision Cold Water Temperate Water Warm Water What's New? Country ▾

Home > A clear vision from Intervet Aquatic Animal Health

A clear vision from Intervet Aquatic Animal Health

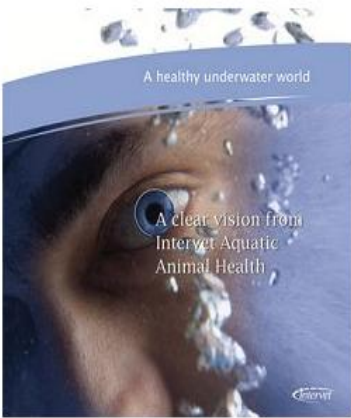
We see the challenges ahead!

Sustaining the world's growing appetite for fish and shellfish puts a heavy responsibility on those engaged in aquaculture - the farming of aquatic animals. Not only are aquatic animals a rich source of safe low-fat high-protein nourishment for several billion people the world over, they also provide important fatty acids (like omega-3), minerals and vitamins, all of which are vitally linked to human growth, health and longevity. The UN's Food and Agriculture Organisation (FAO) is focusing on fish, and especially the rapidly expanding aquaculture sector, to help meet the world's projected food production requirements.

However, modern fish farming brings new challenges that threaten the health of stocks. Thankfully, vaccination, a cost-effective and practical way of preventing many infectious diseases, is already available for a growing number of aquatic animal species. In fact, it is the method of choice to protect stocks from disease, providing a very effective prophylactic defence against bacterial and viral pathogens. However, as well as vaccination and strict sanitary measures, just like for human healthcare, there will always be a need for other safe and effective medicines to help keep our food fish healthy.


Setting our sights on a healthy future together

With in-house knowledge and experience going back over 20 years, Intervet Aquatic Animal Health is a renowned pioneer in providing superior aquatic animal health products. It is an integral part of Intervet International (headquartered in Boxmeer, The Netherlands), one of the world's leading animal



A healthy underwater world

A clear vision from Intervet Aquatic Animal Health



We have successfully grown along with the fast developing professional aquaculture industry

Taskbar: Windows, Explorer, Media Center, Internet Explorer, Word, PowerPoint, Outlook, XPS Viewer

System tray: 19:32, 19/03/2012

INTERVET AQUATIC ANIMAL HEALTH: contact Neil Wendover

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The end of the day and start of a new one.....
Thank you

