# REPORT OF THE FOURTH MEETING OF THE ASIA REGIONAL ADVISORY GROUP ON AQUATIC ANIMAL HEALTH


**Network of Aquaculture Centres in Asia-Pacific**

**Bangkok, Thailand**

**22-24 October 2005**

**Preparation of this document:**
This report was prepared by the Asia Regional Advisory Group (AG) on Aquatic Animal Health (AGM-4) that met at Hotel Taj Samudra, Colombo, Sri Lanka, on the 22nd - 24th October 2005.

The Advisory Group was established by the Governing Council of the Network of Aquaculture Centres (NACA) to provide advice to NACA members in the Asia-Pacific region on aquatic animal health management, through the following activities: (a) Review and evaluation of quarterly regional aquatic animal disease reporting; (b) Review and evaluation of implementation of the *Technical Guidelines*; (c) Revision of the *Technical Guidelines*[1], *Manual of Procedures*[2] and *Asia Diagnostic Guide for Aquatic Animal Diseases*[3] as required; (d) Development of procedures for advising on Technical Guideline implementation; and (e) Advise on identification and designation of regional aquatic animal health resources, including specialist advisers, Regional Reference Laboratories and Resource Centres. Members of the Advisory Group include invited aquatic animal disease experts, World Animal Health Organization (OIE), Food and Agricultural Organization of the United Nations (FAO) and collaborating regional organizations.



Reference: NACA 2006. Report of the Fourth Meeting of the Asia Regional Advisory Group on Aquatic Animal Health. Published by the Network of Aquaculture Centres in Asia-Pacific, Bangkok, Thailand.

[1] Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing consensus and Implementation strategy, 2000. FAO/NACA. Fisheries Technical Paper No 402
[2] FAO/NACA. 2001. Manual of Procedures for the Implementation of the Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals. *FAO Fisheries Technical Paper*, No. 402, Suppl. 1. FAO, Rome. 2001. 106 p.
[3] Bondad-Reantaso, MG, McGladdery SE, East, I and Subasinghe, RP. (Eds.). Asia Diagnostic Guide to Aquatic Animal Diseases. *FAO Fisheries Technical Paper*, No. 402, Suppl. 2. FAO, Rome. 2001. 236 p.

## Abbreviations and Acronyms

| | |
|---|---|
| AADCP-RPS | ASEAN Australia Development Cooperation Program-Regional Partnership Scheme |
| AAHSC | Aquatic Animal Health Standards Commission of the OIE |
| ADG | Asia Diagnostic Guide |
| AG | Advisory Group |
| AGM | Advisory Group Meeting |
| APEC | Asia Pacific Economic Cooperation |
| ASEAN | Association of South East Asian Nations |
| BKD | Bacterial Kidney Disease |
| BMP | Better Management Practices |
| CVO | Chief Veterinary Officer |
| DAFF | Department of Agriculture, Fisheries and Forestry |
| FAO | Food and Agricultural Organization of the United Nations |
| FHS | Fish Health Section of the Asian Fisheries Society |
| GAV | Gill Associated Virus |
| GC | Governing Council of NACA |
| GCRV | Grass Carp Reo Virus |
| KHV | Koi Herpes Virus |
| ICES | International Council for Explorations of the Seas |
| IMN | Infectious Myonecrosis |
| IMNV | Infectious Myonecrosis Virus |
| IHHNV | Infectious Hypodermal and Haematopoeitic Necrosis Virus |
| IPN | Infectious Pancreatic Necrosis |
| MBV | Monodon Baculovirus |
| MrNV | *Macrobrachium rosenbergii* Noda Virus |
| MSGS | Monodon Slow Growth Syndrome |
| NACA | Network of Aquaculture Centres in Asia-Pacific |
| NAQDA | National Aquaculture Development Authority of Sri Lanka |
| NARA | National Aquatic Research and Development Agency |
| NC | National Coordinator |
| NHP | Necrotising hepatopancreatitis |
| OIE | World Animal Health Organization |
| PCR | Polymerase Chain Reaction |
| QAAD | Quarterly Aquatic Animal Disease |
| RRC | Regional Resource Centre |
| RRE | Regional Resource Expert |
| RRL | Regional Reference Laboratory |
| SAARC | South Asian Association for Regional Cooperation |
| SEAFDEC | South East Asian Fisheries Development Center |
| SPC | South Pacific Community |
| SPF | Specific Pathogen Free |
| SFR | Specific Pathogen Resistant |
| SVC | Spring Viraemia of Carp |
| SVCV | Spring Viraemia of Carp Virus |
| TAC | Technical Advisory Committee of NACA |
| TG | Technical Guidelines |
| TS | Taura Syndrome |
| TSV | Taura Syndrome virus |
| WSD | White Spot Disease |
| WSSV | White Spot Syndrome Virus |
| WTD | White Tail Disease |
| WTO | World Trade Organization |
| XSV | Extra Small Virus |

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## Opening session

The fourth meeting of the Asia Regional Advisory Group on Aquatic Animal Health (AGM-4) was held at Taj Samudra, Colombo, Sri Lanka on 22nd-24th October 2005.

Dr D.E.M. Weerakoon, Director General of the National Aquaculture Development Authority of Sri Lanka (NAQDA) formally opened the meeting. He welcomed the Advisory Group (AG) members and the co-opted members to Sri Lanka and thanked them for their active involvement in the regional aquatic animal health program. In view of the threats posed by aquatic animal health problems to the sustainable development of aquaculture in the region, Dr Weerakoon highlighted the important role played by the AG. He also underlined that, although great progress has been made on aquatic health management in the region, some countries are still lagging behind especially in the fields of risk analysis and surveillance. Dr Weerakoon also reported the importance of addressing shrimp diseases in Sri Lanka. Thanks were extended to NACA and FAO for choosing Sri Lanka as the venue for this meeting and other important events.

Following the welcome remarks, Dr Supranee Chinabut took over as Chairperson of the Meeting and requested the AG members to review the agenda. The participants reviewed and adopted the AG Meeting agenda (Annex A). The list of participants is given as Annex B.

The meeting noted apologies from the Vice-Chairperson Dr Eva-Maria Bernoth for not being able to attend the meeting. Her commitment in preparing presentations and documents for the meeting was greatly appreciated and acknowledged.

## SESSION 1: Progress since AGM-3 and expected outputs from AGM-4

*1.1 Progress report since AGM-3 and expected outputs from AGM-4*

A report detailing recent activities and progress made since the third meeting of the AG in November 2004 was presented by Dr C.V. Mohan. The report identified issues for discussions during the meeting.

Among others, the presentation highlighted the following:

- The aquatic animal health work program for 2005 developed largely based on the AGM-3 recommendations, was presented to, and approved by, the Governing Council at the 16th GC Meeting held in Los Banos, Philippines ( 20-23 March 2005);
- During the 8th Technical Advisory Committee (TAC-8) meeting held in Ramsar, Iran (1-3 October 2005) the outcomes of the 2001-2005 work programme were reviewed and the progress made in the region was appreciated. Elements for the new 2006-2010 work program were also discussed and it was recommended that the present program purpose, outputs and implementation mechanisms be continued. In addition, TAC supported the secondments of officers from member countries to be based in NACA office;
- QAAD reports continued to be published regularly and significant improvements were recognized, although some countries are not submitting reports. A 100% compliance to the reporting system will be sought;
- Transboundary diseases are still hampering or threatening the sustainable development of aquaculture in the region:
    - The spread of diseases, such as KHV and Taura Syndrome Virus, was recognized as a serious issue;
    - Emerging diseases such as Red spot disease (red hemorrhagic disease) in grass carp; White Tail Disease (WTD) in *Macrobrachium rosenbergii*; White body

disease, slow growth syndrome and Mourilyan virus (MoV) in *P. monodon*, and abalone viral mortality were recognized;

- Disease cards were recognized as important tools in information dissemination and capacity building. The number of disease card downloads from the NACA website indicates its usefulness;
- The importance of regional cooperation was highlighted at the FAO workshop on emergency preparedness, after which regional experts provided support to Viet Nam for the establishment of a National Advisory Committee for aquatic animal health. Progress on other cooperation programs include:
    - Priorities identified by countries through the DAFF/NACA survey matched the priority areas already being addressed by the regional programme;
    - The importance of NACA as a mechanism to provide emergency assistance to countries was highlighted with reference to the recent assistance provided to I.R. Iran to address a WSD outbreak;
- A range of projects are now ongoing and are serving as vehicles for capacity building in the region. Several projects have also been submitted for funding. In-country activities can be used as a platform to achieve broader implementation of Technical Guidelines (TG);
- The Regional Resource Base has made great contribution to the program over the past year.
- NACA has been invited to participate in the 24th OIE Asia-Pacific Regional Conference to be held in Seoul (November 2005);

Following the presentation, the report was opened for questions and comments. The AG congratulated NACA for the progress made, adopted the progress report and made the following recommendations.

***Recommendations***

- The aquatic animal health work programme should focus on implementation. Implementation should consider simple and practical strategies that could be taken up by countries with the existing resources;
- Country-specific strategies for the implementation of the TG should be identified. Countries should play a major role in the development and implementation of those strategies with the NACA secretariat acting as supporting rather than implementing body;
- Countries should consider identifying a staff for secondment, based on the TAC-8 recommendations, to support NACA in the implementation of country-specific aquatic animal health work programme.

*1.2 Outcomes from the OIE General Session (May 2005) and the Aquatic Animal Health Standards Commission meeting (August 2005)*

Two reports, the outcomes of the 73rd General Session of OIE (May 2005) and the Aquatic Animal Health Standards Commission meeting (August 2005), were presented on behalf of Dr. Eva-Maria Bernoth, President of the Aquatic Animal Health Standards Commission (AAHSC). The reports provided details of the OIE list of aquatic animal diseases - current (May 2005) version and revised draft for 2006, and OIE's new disease reporting obligations.

The presentation highlighted the following issues:

- All previously listed diseases have now been assessed against the new listing criteria (adopted in 2003);
- Some diseases did not meet the listing criteria, and the International Committee in May 2005 adopted the removal of those diseases from the list;

- The delisting of 4 diseases (IPN, BKD, Infection with *Mikrocytos mackini,* Infection with *Perkinsus olseni*) and the addition of 3 diseases (Koi herpesvirus disease, NHP and IMN) appear [as under study] in the currently valid version of the list in the 8th edition 2005 of the *Aquatic Code* (Annex C);
- Following more scientific debate, the Aquatic Animal Health Standards Commission suggests the delisting of IPN, BKD, and Infection with *Mikrocytos mackini*, and the retention of Infection with *Perkinsus olseni* (suggestions are currently with Member Countries for comment by 1 February 2006);
- The Commission also suggests the addition of Abalone viral mortality under emerging disease listing criteria ;
- The listing of Koi herpesvirus disease remains under study, because of diametrically opposed views among international experts;
- The listing of IMN and NHP remains under study for the time being because the *ad hoc* group on crustacean diseases could not meet prior to the Commission's August 2005 meeting.

The AG was also informed regarding the development of the new online reporting mechanism which will include the reporting of:

- The status of all OIE-listed diseases to be conducted every six months;
- Findings of epidemiological significance for non-listed diseases on a six-monthly basis;
- Other information of significance to other countries on an annual basis (information to be collected through questionnaire);
- The occurrence of emergencies within 24 hours
    - For listed diseases: Specified events (e.g. first occurrence or re-occurrence; new host; new strain; new manifestation; new zoonotic potential);
    - For non-listed diseases: emerging disease or pathogenic agent should there be findings that are of epidemiological significance to other countries;
- Weekly follow-up reports on emergencies until the situation is sufficiently stable to revert to six-monthly reporting, in which case the reporting of an emergency should conclude with a final report.

The report also highlighted that:

- The circumstances for regular as well as immediate notification do not require the presence of clinical disease or mortality;
- Disease that do not fulfil the full set of listing criteria can now be added as "emerging diseases"*;*
- New *ad hoc* groups on aquatic animal health surveillance, amphibian diseases, aquatic animal meals have been established;
- Activities planned for the March 2006 meeting of the Aquatic Animals Commission are:
    - New draft guidelines on the handling and disposal of carcasses and wastes of aquatic animals
    - New draft chapters on aquatic animal welfare (transport of finfish by land and water; slaughter and killing of finfish)
- The 5th edition of the Aquatic Manual will be adopted in May 2006 (drafts to be circulated to Member Countries, starting in November 2005);
- The first OIE Global Conference on Aquatic Animal Health will be held on 9-12 October 2006 in Bergen, Norway with the objective of improving the collaboration between veterinary and fisheries authorities;
- An issue on "Changing trends in managing aquatic animal disease emergencies" has been planned for publication in 2007 in the OIE Scientific and Technical Review series.

The AG noted with appreciation the commitment and dedication of Dr Eva-Maria Bernoth (President of AAHSC) to inform the AG members of recent developments in OIE and for her continuous input to the Health programme.

***Recommendations***

- NACA should disseminate the recent developments within the OIE to the National Coordinators (NCs) and relevant fisheries authorities;
- The regional reporting system should take into consideration the revisions made to the OIE disease list;
- The AG identified the need for conducting an assessment of the regional importance of diseases which have been removed from the OIE list before removing them also from the regional list;
- The AG recognized the need to continue promoting cooperation between veterinary and fisheries authorities and recommends that NACA be represented at the meeting in Norway to share experiences from the region.

## Session 2: Review of regional disease status

*2.1 Regional disease status-brief summary of QAAD reports*

The AG was informed of the status of the QAAD reports. It was emphasized that China is still not reporting because of a shift in the responsibility for aquatic animal health reporting from fisheries to veterinary authorities. The increasing importance of KHV and the threat posed by the disease to countries with an important common carp or koi carp industry (e.g. Sri Lanka) was recognized. The spread of TSV was also recognized as a serious concern. The use of the QAAD reports to identify emerging problems was also highlighted.

***Recommendations***

- Because of the importance of the private sector in providing diagnostic services, collaboration between government and private sectors should be encouraged during the collection of information submitted to the QAAD reporting system;
- NACA secretariat should contact countries that are inconsistently or unsatisfactorily contributing to the reporting system and identify what their difficulties are in complying with the reporting system and how these difficulties can be addressed.

*2.2 Emerging shrimp diseases in the region*

The AG was informed of the emerging shrimp diseases in the region. Highlights included:

- The cryptic nature of viruses and their often high prevalence even in the absence of clinical disease has strong aquatic animal health management implications. A clear example of this is represented by *P. monodon* which can carry viruses (e.g. IHHNV, HPV, GAV) at high prevalence;
- New viruses associated with aquatic animals are continuously being identified;
- The high number of variant of the same virus (e.g. TSV) represent a threat of unknown proportions that exemplifies the need for virulence studies;
- Transboundary movement of broodstock plays a major role in the spread of shrimp pathogens;
- The fact that *P. vannamei* has now replaced *P. monodon* as the leading cultivated species in Asia has several aquatic animal health implications:

    - The use of SPF shrimp represents an important way forward, and the fact that non-SPF *P. vannamei* has been used leading to the emergence of several health problems (e.g. TSV, NHP) was recognized;
    - Important lessons can also be drawn looking at the spread of IHHNV to the Western hemisphere;
    - IMNV was first reported in *P. vannamei* in Brazil and may represent a threat to *P. vannamei* farming in the region;
- The practices of holding broodstock of different species in the same holding space by brokers should be avoided;
- Implementation of effective quarantine measures is an essential step, as witnessed by the experience of New Caledonia, that could prevent the introduction of TSV;
- Although Rickettsia infections could be treated easily using common antibiotics, because of the lack of effective quarantine they represent a shrimp health hazard;
- Monodon Slow Growth Syndrome (MSGS) is still under investigation.

*2.3 Status of white tail disease in Macrobrachium rosenbergii in the region*

The importance of White Tail Disease of *M. rosenbergii* was reiterated. The disease appears to be present in increasing number of countries, although this is not yet reflected in the QAAD. Checking broodstock for presence of MrNV and XSV is an important strategy for the prevention of the disease. This strategy has already been adopted in some countries (e.g. Thailand and Viet Nam) as a way to identify MrNV and/or XSV free broodstock populations in order to prevent the spread of the disease within countries. It was also reported that the implementation of a case control study aimed at identifying factors associated with WTD is currently ongoing in Thailand.

In view of the report on emerging crustacean diseases, the AG made the following recommendations

***Recommendations***

- Countries should promote the development, understanding and use of specific-pathogen-free (SPF) stocks and identify strategies for the implementation of guidelines for the responsible movement of shrimp and other aquatic animals;
- In view of the still poor understanding of SPF and specific-pathogen-resistant (SPR) concepts in the region, NACA should promote information dissemination on SPF and SPR on the NACA webpage and other multimedia outlets;
- In view of the existence of practices (e.g. same hatchery facility used for different species) that facilitate the movement of pathogens across species, there is the need for countries to disseminate the adoption of health management strategies;
- NC should utilize in-country mechanisms to collect information on emerging diseases such as WTD to allow their reporting in the QAAD;
- Standard diagnostic methods for MrNV and XSV should be identified;
- A disease card for Infectious Myonecrosis Virus (IMNV) should be developed.

*2.4 Status of emerging finfish viral diseases in the region*

The AG was informed on the status of emerging finfish viral diseases in several countries in the region. Highlighted issues were:

- The status of KHV spread in Indonesia was reviewed. It was reported that the KHV outbreak heavily affected both common carp and koi carp and it has been associated with huge economical losses;
- Implementation of quarantine in Singapore allowed the effective eradication of a KHV infected batch, thereby preventing the spread of the disease to other susceptible populations;

- KHV was detected in Malaysia using nested PCR, but not when using 1-step PCR;
- Despite the effort of Thailand to prevent a KHV outbreak, an outbreak in March 2005 was detected in one pond of a koi carp hobbyist. An emergency response was put into place. Difficulties in dealing with hobbyists for implementing disease control strategies were highlighted. During the outbreak, there was no report of mortality in common carp cultured in the country. Since August 2005, no new farm was affected by the outbreak;
    - Mapping of the KHV outbreak in Thailand and some preliminary epidemiological investigation was conducted in collaboration with the RRE in Aquatic Epidemiology;
    - As an outcome, Thailand requests a health certificate for koi carp from exporting countries which must indicate that the fish are free from KHV and SVCV using nested PCR techniques;
- KHV was detected in China in 2003;
    - Because KHV is not yet listed by OIE, there are no OIE reference diagnostic methods available at present. The lack of a standard diagnostic procedures and the presence of differences in the genome of viruses identified in China raises questions on whether the virus detected is indeed KHV or not. Although PCR is often the preferred diagnostic method by the OIE for other diseases, care has to be taken concerning the fact that different PCR protocols may differ significantly in terms of accuracy;
- Several efforts towards the control of SVC are ongoing in China. Nevertheless, this year SVC was isolated again from koi carps produced in the Beijing area and the absence of clinical disease made the detection of the virus difficult;
    - Molecular analysis indicated that SVC isolated from fish in China have a closer relationship with each other than SVC isolated from European countries;
- A survey for SVC conducted by SEAFDEC in several countries in the region led to negative results;
- Hemorrhagic disease of grass carp (GCRV) may have been transferred from China to Viet Nam;
- The use of an attenuated vaccine proved effective at reducing losses associated with GCRV;
- VNN was reported as being present in several fish species in Malaysia.

***Recommendations***

- In view of the fact that for pathogens which are not listed by OIE no standard diagnostic method is available and the fact that OIE does not differentiate between infection and disease, it is recommended that different diagnostic methods and case definitions be established for assessing the presence of diseases under different circumstances (e.g. for eradication, export, etc.);
- AG and NACA should contribute to the ongoing discussion on whether KHV should be listed or not by the OIE;
- The AG encourages countries to strengthen their surveillance system. This could be achieved also with the support of organizations such as SEAFDEC, FAO and the OIE;
- Information on emerging diseases should be provided to decision makers and financial support for disease surveillance should be provided by governments;
- For effective disease control, countries should utilize strategies that combine awareness building and development of regulations.

*2.5 Emerging finfish bacterial diseases and vaccination strategies to limit their impact*

The AG was informed on the status of emerging finfish bacterial diseases. The following points were highlighted:

- Bacterial diseases play an important role in finfish aquaculture;
- The “normal” mortality rate in an Asian fish farm is high (20 – 60%);

- There are few publications on finfish bacterial diseases in the region. This is a reflection of the fact that some of the work remains unpublished and lack of proper diagnosis techniques such as the trend towards molecular techniques rather than the use of traditional bacteriological methods;
- To develop an effective control measure, epidemiology data is needed and the role of Intervet in this direction was recognized;
- In view of the inconsistent efficacy of the antibiotics used as treatment and the increasing concerns on food safety, the benefits of vaccination were recognized;
- Streptococcosis (caused by *Streptococcus iniae* and *S. agalactiae*) was recognized as a major health problem worldwide, affecting both marine and freshwater species and responsible for an annual impact to aquaculture of over US$ 100 million*;*
    - The presence of *S. iniae* and *S. agalactiae* has been detected in an increasing number of species and countries;
- Infection with *Tenacibaculum maritimum* was recognized as an underestimated fish disease of marine fish because of the difficulty of isolation. The pathogen affects all stages of marine species (though small fish are more susceptible) and can cause up to 90% mortality in fingerlings;
- Nocardiosis caused by *Nocardia seriolae*, which usually causes chronic mortality and an accumulated mortality of 10 – 30%, is an important health problem for both marine and freshwater fish. Its role in public health cannot be ruled out;
    - Nocardiosis is detected in an increasingly high number of countries in the region;
- The occurrence of a new *Vibrio* species associated with high mortalities in seabass was also reported from 3 countries (Indonesia, Singapore and Malaysia);
- Furunculosis, which previously was a problem mainly of salmon, is now associated with high mortality of turbot in China.
- Several other bacterial pathogens (*Flavobacterium columnaris*, *Edwardsiella ictaluri, E. tarda*, *Pasteurella damsela* subsp*. piscicida, Vibrio anguillarum, Aeromonas salmonicida, Lactococcus garvieae,* and Rickettsia-like organism) are associated with losses in finfish aquaculture.

***Recommendations***

- The AG recognized the importance of bacterial disease and may consider the inclusion of bacterial diseases into the QAAD reporting system at AGM5 based on the criteria for listing of diseases into the regional list.

*2.6. Emerging diseases in Tilapia*

The importance of Tilapia aquaculture worldwide was recognized. Within the last 10 years, Tilapia has emerged from being a little known (primarily) African fish to become the 2nd biggest aquatic species group in volume after carps, with a worldwide harvest of over 2 million MT. In Asia (as well as in Central America and Africa), tilapia farming is important for supply of animal protein and generation of income for the locals. It was underlined that Tilapia aquaculture is affected by diseases, which are estimated to cause a loss of at least US$50 million each year to the industry. This is likely to be an underestimation of the true impact since little information is available on the frequency and impact of diseases. Losses are associated with a range of health problems including streptococcosis, Iridoviral infections, columnaris diseases, Rickettsia-like organisms and others.

***Recommendations***

- It is recommended that surveys aimed at identifying the impact of health problems should be conducted. This could be conducted with the support of RRE in aquatic epidemiology, following the example of already ongoing activities in Viet Nam.

- Intervet and NACA together take initiative in preparing a health management manual on tilapia.

*2.7 Emerging mollusk diseases in the region*

The status of emerging mollusk diseases in the region was presented to the AG and the following points were highlighted:

- In spite of the recognized impact of molluskan diseases, little reporting is conducted through the QAAD and this is likely due to poor diagnostic capability in the region;
- *Marteilioides chungmuensis* has recently been identified in 2 new species, including the economically important Manila clam;
- A new host for *Perkinsus olseni* was also identified recently in the region;
- *Marteilia sydneyi* was also detected in 2 new hosts and new outbreaks with peculiar manifestations have been reported in the region;
- Viral gametocytic hypertrophy was also recently reported in Korea and France and flagged as potential emergencies;
- Already present in the region but considered insignificant, Herpes virus of oysters (OsHV) showed increased virulence during outbreaks in the US;
- An outbreak of *Bonamia exitiosa* in the US was also reported in imported *Crassostrea ariakensis*. The importance of this oyster species in Asia (mainly in China) is source of concern;
- A Rickettsia-like organism associated with massive infection in *Crassostrea ariakensis* in China was also reported.

***Recommendations***

- The AG identified the need to assess the socio-economical impact of diseases on mollusks. It was suggested that a regional program should be developed to collect such information. The potential financial support of FAO was suggested;
- The need to develop a practical surveillance system that consists of a combination of active and passive surveillance was recognized;
- The need to explore alternative training approaches for developing capacity on molluskan disease diagnostics was highlighted by the AG.

## Session 3: Review of regional reporting system

*3.1 Progress in regional reporting*

The AG was informed about the progress in regional reporting. The FAO/NACA/OIE regional quarterly aquatic animal disease (QAAD) reporting came into effect from the 3rd quarter of 1998. Until June 2005, a total of 28 reports have been published. Of the 21 participating countries, reports could be obtained from 17 (2004/3), 20 (2004/4), 19 (2005/1) and 17 (2005/2) countries for the respective quarters. The quality of reports and epidemiological comments provided by countries has improved significantly over the years. The advantages of the regional reporting especially in terms of supporting countries in the region to address diseases which are significant beyond trade considerations were reported.

*3.2 Way forward with regional reporting*

A presentation was given on the current status of the OIE reporting, during which the structure of the new OIE online reporting system was presented. Emphasis was put into the collaboration between the OIE and FAO in collecting information annually on: non-listed diseases; veterinary services; livestock populations; human cases of zoonoses.

It was emphasized that veterinary services need to be able to substantiate reports on their animal health situation by sound surveillance programmes and that a national epidemiological system should incorporate: surveillance and monitoring for significant pathogens; descriptions of host population characteristics; environmental assessment

The AG was also informed of the newly established Global Framework for progressing the control of Transboundary Animal Diseases (GF-TAD). This is a join effort between OIE and FAO, which as for now does not yet cover aquatic animal diseases.

***Recommendations***

- The AG noted the significant improvement of QAAD disease reporting in the region over the years, and emphasized the need to further strengthen such regional reporting;
- It was decided that the regional reporting system should keep its quarterly format, but that changes could be made at a later stage in view of the experiences gathered by the OIE through their six-monthly online reporting. Changes to the regional reporting should be made phase by phase;
- For all the countries in the region, the AG strongly recommends use of existing structures (e.g. government institutions, private sector, research institutions, etc.) within the country to collect information to be used for the regional disease reporting;
- NACA should provide countries with technical assistance to strengthen surveillance, especially passive surveillance;
- Following the positive experiences gathered through ongoing projects in Viet Nam, NCs should be encouraged to put greater focus on Level 1 diagnosis;
- It is recommended that efforts should be exerted by member countries towards the development of surveillance systems for commodities other than shrimp;
- Member countries should strongly consider providing officers on secondments to NACA, to strengthen the implementation of simple and practical surveillance and reporting systems;
- Considering the veterinary expertise available in member countries, the AG strongly recommends that member countries should consider involving the veterinary authorities in disease surveillance and emergency response;
- In view of the importance of receiving regular reports from China, and to the fact that China for now does not comply to the regional reporting system, the AG recommends that efforts to involve China in the regional reporting system should be continued;
- Continuous efforts should be devoted particularly to support the establishment of surveillance systems and the regional reporting in DPR Korea, Cambodia and Laos PDR. Emphasis should be put on passive surveillance and on making effective use of available resources;
- The ongoing efforts devoted by NACA to maximize the number of meetings between NCs were acknowledged. To strengthen the reporting system and the regional cooperation towards the management of aquatic animal diseases, NACA should explore opportunities to bring together NCs at a workshop. The possibility of ASEAN, SEAFDEC and NACA sharing the costs to support NCs meetings should be explored;
- Member countries should be encouraged to support their National Coordinator to attend NC meetings.

*3.3 Review of diseases listed in QAAD, revision of reporting form and instructions*

The relation between the OIE and regional reporting was noted and the differences in focus of the 2 reporting systems were highlighted, especially concerning the focus of the OIE on diseases which have trade implications. In view of these considerations, it was stated that, although all OIE listed diseases should be included into the regional reporting system, delisting of diseases by the OIE should not lead to their automatic delisting from the regional list.

The AG considered the revisions required to the regional QAAD list. Revisions take into account changes in the OIE list plus diseases of regional concern not listed by OIE. The QAAD list will include all diseases listed by the OIE plus diseases of regional concern. The following revisions to the QAAD list were approved by the AG.

***Under Diseases Prevalent in the Region***

***Finfish diseases:***

- *Onchoryncus masou* Virus Disease will be delisted;
- Infection with koi herpes virus moved from non-OIE listed diseases relevant to the region to OIE listed diseases prevalent to the region. A note will be included stating that the disease is "under study" for listing by OIE;
- Viral encephalopathy and retinopathy will be included under non-OIE listed diseases relevant to the region;
- Enteric septicemia of catfish will be included under non-OIE listed diseases relevant to the region.

***Mollusc diseases:***

- Infection with *Mikrocytos roughleyi* will be delisted;
- Infection with *Haplosporidium nelsoni* will be delisted;
- Infection with *Martelia sydneyi* will be included under non-OIE listed diseases relevant to the region.

***Crustacean diseases:***

- Spawner isolated mortality virus disease will be delisted;
- Necrotising hepatopancreatitis moved from non-OIE listed diseases relevant to the region to OIE listed diseases prevalent in the region. A note will be included stating that the disease is "under study" for listing by OIE;

***Under Diseases Presumed Exotic to the region, but listed by the OIE***

***Finfish diseases:***

- White sturgeon iridoviral disease will be delisted

***Mollusc diseases:***

- Infection with *Haplosporidium costale* will be delisted.

***Crustacean diseases:***

- Infectious Myonecrosis will be included under diseases presumed exotic to the region, but listed by OIE. A note will be included stating that the disease is "under study" for listing by OIE

***Under a new category of "Diseases presumed exotic to the region, not listed by OIE, but of potential relevance"***

- Channel catfish virus disease will be listed;
- Piscirickettsiosis will be listed.

***Other suggested changes***

- Replace "Infection with *Perkinsus olseni/atlanticus*[b]" with "Infection with *P. olseni*";
- Remove "*Candidatus*" from "Infection with *Candidatus Xenohaliotis californiensis*".

The QAAD reporting form was revised accordingly. The new disease reporting form will be effective from January 2006. The form will be circulated with a brief background document and a joint OIE/NACA letter to all NCs and Chief Veterinary Officers (CVOs). The revised disease reporting form is provided in Annex D.

Additional recommendations following the discussion during the revision of the QAAD list were:

***Recommendations***

- Following the OIE example, the AG recommends to develop clear criteria for listing and de-listing of diseases of the regional list. A working group (2-3 people) should be established to carry out this task. Tentative members of the working group include Drs Rohana Subasinghe, C.V. Mohan and Frank Berthe. The criteria are expected to be circulated within the next 6 months. The 2007 QAAD list will be based on the developed criteria;
- Changes in the regional disease list and discussion points raised through the development of criteria for listing should be considered during the designing of the revised version of the ADG;
- Following the example of Prof. Timothy Flegel, who is providing evidence to the Thai authorities for encouraging the de-listing of MBV by the OIE, it is recommended that other AG members conduct similar assessments and efforts in this direction.

## Session 4: Review and evaluate implementation of the Technical Guidelines

*4.1 National Aquatic Animal Health Strategies*

*4.1.1 Progress in TG implementation*

The AG was informed of the progress in implementation of the various elements in the 'Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals'. The report highlighted differences between member countries in TG implementation as an issue of concern.

***Recommendations***

- Considering the differences in TG implementation across countries, the AG recommended that the status of TG implementation highlighting the differences should be presented to the NACA Governing Council (GC);
- A country specific strategy for TG implementation should be developed to bridge the differences between countries;
- NACA should initiate activities to assess the economic impact of aquatic animal diseases and the consequence of poor implementation of TG elements;
- NACA should encourage member governments to look into national resource allocation for aquatic animal health compared to other food producing sectors (e.g. livestock)*;*
- The AG emphasized the need to achieve better degree of standardization and harmonization in quarantine procedures;
- Since a practical manual for implementing quarantine of aquatic animals is lacking (ICES has protocols for new introductions), a manual on processes and procedures to establishing and managing quarantine systems for aquatic animals should be developed based on the current knowledge of risks. The AG requested FAO and NACA to collaborate in developing this manual;
- The AG suggested that NACA monitor the progress of TG implementation in the countries;
- NACA should explore opportunities to secure funding support for initiating projects, which can assist in implementation of TG, in some of the member countries where there has been limited progress;
- The AG recognized the different levels of progress made by the individual countries and recommended that each country reviews the TG elements and develops a country specific strategy for their implementation;
- The AG recommended that more responsibilities should be given to the countries to progress implementation of TG. Secondments from countries should be strongly considered to strengthen the process of implementation;

- Considering the need to increase awareness on the importance of TG amongst governments and policy makers, the AG recommended that NACA take up publicity and awareness programmes more aggressively;
- NACA should assist countries in their efforts to prioritize the implementation strategy based on the available resources and facilities**.**

*4.1.2 Role of FAO in progressing the implementation of TG*

FAO informed the meeting of its past and ongoing regional activities, which are contributing to progress the implementation of TG in the Asia-Pacific region. Important outputs and activities in this direction include:

- Publishing a document on surveillance and zoning guidelines ;
- Publishing regional guidelines for emergency preparedness and response;
- Publishing a document on introduction and movement of shrimp in the Asian region;
- Publishing guidelines for improving biosecurity in *P. vannamei* and *P. monodon* hatcheries;
- Completion of a shrimp health management project in India;
- Supporting the development of international guidelines for responsible movement of aquatic animals;
- Supporting the development of a new initiative on creating information base for commodity based risk assessment;
- Initiating a shrimp seed certification project in Bangladesh;
- Initiating a shrimp health project in Sri Lanka.

***Recommendations***

- Considering the contributions of FAO towards supporting the implementation of technical guidelines in the region, the AG recommended that NACA should work closely with FAO in its ongoing and future programs so as to facilitate the implementation of the technical guidelines in the region;
- Recognising the importance of regional and international guidelines (OIE, FAO), the AG stressed the need to develop practical implementation documents (e.g. quarantine manual) to support the countries in the development of effective aquatic animal health management strategies;
- The AG recommends Asian countries to follow OIE and FAO guidelines and urged NACA to continue its efforts to take the implementation process forward.

*4.1.3 Progress in implementation of TG in Vietnam - Lessons learnt from ongoing projects and regional implications*

The meeting was informed of various activities being carried out in Vietnam under different ongoing projects of NACA and how the opportunity is being used to progress the implementation of technical guidelines. Considering the accomplishments, the AG recognized the value of in-country projects in progressing the implementation of technical guidelines.

***Recommendations***

- Considering the significant advantages of in-country projects in progressing TG implementation, the AG recommends NACA to get projects in selected countries and use these as entry points;
- NACA should disseminate widely the experiences from Vietnam to allow other countries to learn from them;
- NACA should widely publicize this information, so that other countries can take similar steps;

- NACA should investigate the development of simple and practical surveillance systems in other countries based on the lessons learned in Vietnam using automated digital systems (for example, developing a procedure that provides guidelines for member countries using automated digital report (SMS) for surveillance).

*4.2 Strengthening National Coordination and Communication*

*4.2.1 Meeting of National Coordinators*

The meeting was informed of initiatives taken by NACA to promote communication between NCs and Chief Veterinary Officers (CVOs) and NCs and aquatic animal health networks at the country level. The AG discussed the need for a workshop/meeting of NCs. The objective of such a workshop should be to provide a platform to bring all the NCs from the Asia-Pacific region together to discuss ways to promote in-country networking and explore opportunities to optimize the utilization of existing resources for better aquatic animal health surveillance, reporting and emergency preparedness.

***Recommendation***

- Considering the advantages of bringing National Coordinators together, the AG recommend that NACA should explore opportunities to bring National Coordinators together at regional and sub-regional levels, where possible.

*4.2.2 Promoting cooperation between Veterinary and Fisheries Authorities*

The attention of the AG was drawn to the Noumea Recommendations to the member countries, which states that "Where primary responsibility for aquatic animal health rests with an authority other than the Veterinary Services, nominate an 'aquatic national focal point' from the other authority, so that the OIE may circulate Aquatic Animal Commission reports to the 'aquatic national focal point' at the same time as when circulating to national Delegates (providing comments back to the OIE must take place through, and with the endorsement of, the national Delegate to the OIE).

Progress made on the implementation of the "Noumea Recommendations" through the OIE and through Member Countries was presented to the meeting on behalf Dr Eva-Maria Bernoth as President of OIE AAHSC. The meeting was also informed of the proposed first OIE Global Conference on Aquatic Animal Health: defining roles and responsibilities with the subtitle: A conference towards improved cooperation between veterinary and fisheries authorities during 9-12 October 2006, Bergen, Norway. The AG was informed that FAO is exploring the possibility of being a partner with OIE in organizing the workshop.

The AG was pleased to hear that more countries from the region were sending comments on the reports of AAHSC. As of August 2005, 7 countries in the Asia-Pacific region had nominated an aquatic national focal point.

***Recommendation***

- The AG appreciated the role played by NACA in working with the fisheries authorities towards helping member countries to send comments to reports of AAHSC and in the nomination of aquatic national focal points. The AG recommended that NACA continue working in this direction and facilitate implementation of "Noumea OIE recommendations" in the region;
- Considering the proposed OIE global conference in Norway (October 2006) to promote cooperation between veterinary and fisheries authorities, the AG recommended that NACA

should explore opportunities to bring fisheries authorities (e.g. National Coordinators) to the meeting;
- The AG recommended that NACA initiate discussions with OIE and FAO to bring the fisheries authorities to the conference in October 2006, in Norway to improve further cooperation between veterinary and fisheries authorities.

*4.2.3 Towards developing a model system in Sri Lanka for promoting cooperation between veterinary and fisheries authorities*

On the theme of promoting cooperation between veterinary and fisheries authorities, a model system proposed for Sri Lanka was presented to the AG. The AG appreciated the proposed cooperation model and made the following country specific recommendations to progress this further.

***Recommendations***
- NACA should facilitate formation of a national advisory committee on aquatic animal health in Sri Lanka. The committee should have representatives from Veterinary authority, NAQDA, NARA, Department of Fisheries and Aquatic resources and Universities;
- NACA should provide technical assistance to the national committee, so that national strategy could be developed with the involvement of both veterinary and fisheries authorities;
- NACA should report the mechanism developed in Sri Lanka at the 24th OIE Regional conference in Seoul, Korea;
- NACA should work closely with the aquatic focal point for OIE and the National Coordinator so that a single disease report from the country is sent to OIE/NACA;
- To support the veterinary-fisheries cooperation model developed in Sri Lanka, NACA should consider supporting some training and capacity building activity in Sri Lanka.

*4.3 Revision of the Technical Guidelines[4], Manual of Procedures[5] and Asia Diagnostic Guide for Aquatic Animal Diseases[6] as required*

The need for revision of the TG and Manual of Procedures was discussed in detail. The AG members felt that these two documents are very broad and cover all the aspects required for responsible movement of live fish and saw no need for revision at this time. The meeting was informed of the forthcoming (1-4 November 2005, Colombo) FAO expert consultation for developing internationally agreed guidelines for responsible movement of live aquatic animals and it was suggested that necessary revisions for the TG and Manual of Procedures should be considered only later.

*4.3.1 Development of a detailed plan of action for ADG revision*

Considering the revisions carried out to the OIE disease list and the inclusion of several diseases of regional concern in the QAAD, the AG had a detailed discussion on the need to revise the Asia Diagnostic guide and made the following recommendations.

***Recommendations***
- The AG agreed that the ADG should be revised and recommended that NACA initiate appropriate steps required to accomplish this;

[4] Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing consensus and Implementation strategy, 2000. FAO/NACA. Fisheries Technical Paper No 402
[5] FAO/NACA. 2001. Manual of Procedures for the Implementation of the Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals. *FAO Fisheries Technical Paper*, No. 402, Suppl. 1. FAO, Rome. 2001. 106 p.
[6] Bondad-Reantaso, MG, McGladdery SE, East, I and Subasinghe, RP. (Eds.). Asia Diagnostic Guide to Aquatic Animal Diseases. *FAO Fisheries Technical Paper*, No. 402, Suppl. 2. FAO, Rome. 2001. 236 p.

- The AG suggested that the revised ADG should contain all the QAAD listed diseases and additional diseases which the AG considers important for the region (e.g. streptococcosis);
- In addition to the hard copy, web based interactive versions and CDs of the revised version should also be produced;
- NACA should consult the former ADG editors and seek their support in the revision process;
- NACA should develop the list of new editors at the earliest;
- New editors should develop a concept paper giving details on the process of revision, template, authors for different chapters, timeline and resources required and provide to AG for endorsement;
- RREs should be considered as potential authors for different chapters;
- The AG suggested that NACA should approach FAO for funding support.

*4.3.2 Aquatic animal disease chapters in the Aquatic Code (8th ed 2005) and drafts for 2006*

Information about aquatic animal disease chapters in the Aquatic Code (8th edition 2005) and drafts for 2006 was presented on behalf of Dr Eva-Maria Bernoth as President of the Aquatic Animal Health Standards Commission (AAHSC). Main changes included are about surveillance and commodities. Some of the important highlights include:

- New requirements for surveillance regarding declaration of freedom from disease has been included (Science-based approach to surveillance);
- Identification of commodities for which Competent Authorities, when authorising import or transit, should not require any conditions pertaining to the disease under consideration (the realities of trade);
- Provide guidance on disease-specific measures to manage the risk associated with the importation of other commodities (risk based approach to commodities);
- There are commodities for which, when authorising import or transit, Competent Authorities should not require any conditions relating to the disease in question, regardless of the status of the exporting country, zone or compartment for that disease;
- For all other commodities, a key aspect of the new disease chapters – which is consistent with the SPS Agreement – is that importing countries should not simply reject a commodity because it is deemed "too risky".

The AG recognized that the proposed changes have huge positive trade implications for the region. According to the new code, managing risks would be seen as a shared responsibility between exporting and importing countries.

***Recommendation***

- The AG took note of the suggested changes to the Aquatic code and emphasized the need to use appropriate tests for different commodities. For example, use of nested PCR for testing viral pathogens in processed shrimp was considered inappropriate by the AG.

## Session 5: Development of procedures for advising on Technical Guideline implementation

*5.1 Role of two recently approved AADCP-RPS projects in ASEAN*

The meeting was informed that the two recently approved projects- (1) Strengthening Aquatic Animal Health Capacity and Biosecurity in ASEAN and (2) Operationalise Guidelines on Responsible Movement of Live Food Finfish in ASEAN- would contribute significantly towards developing procedures and harmonized approaches for advising on implementation of Technical

Guidelines in ASEAN member countries. The AG took note of the following objectives of the project:

- Development of harmonized approaches to aquatic animal health management and biosecurity in ASEAN;
- Improving capacity to implement ASEAN harmonized national aquatic animal health and biosecurity strategies***;***
- To develop an inventory of ASEAN Member Countries' health certification and quarantine procedures for live food finfish and finalize the ASEAN model to specify the scope of Standard Operating Procedures;
- To develop a set of ASEAN Standard Operating Procedures for health certification and quarantine measures for international trade in live food finfish**.**

***Recommendations***

- The AG recommended that NACA should use the project activities to progress the implementation of important elements contained in the Technical Guidelines in the ASEAN member countries;
- Recognizing the value of the project to other NACA member countries, the AG suggested that NACA should explore opportunities to involve member countries from south Asia in the programme, where possible. The AG suggested that additional funds required may be requested from international organizations (e.g. FAO).

*5.2 Lessons being learned from the introduction of Penaeus vannamei to the region*

The meeting was informed of the present status of *P. vannamei* culture in the region and the good and bad lessons learned following introductions. Considering the emergence of exotic diseases (e.g. TSV) following *P. vannamei* introductions to the region, the AG recognized the need for countries to be more proactive in disseminating aquatic animal health messages (e.g. meaning of SPF, etc.).

Based on a comparison between aquatic (e.g. KHV) and terrestrial (e.g. avian flu) disease events, the contingency planning for dealing with aquatic animal disease emergencies was considered inadequate in the region. Crisis management was the approach often adopted by the aquatic sector to deal with disease emergencies.

***Recommendations***

- Considering the increasing trend of transboundary movement of live aquatics for aquaculture, the AG recommended a continued sharing of regional experiences and lessons learned;
- Considering the practical difficulties with implementation of responsible introductions based on international protocols (e.g. ICES), the AG emphasized the need for all stakeholders to exercise their responsibilities in minimizing the risk of spread of transboundary pathogens ;
- The AG recognized that it is difficult for regional and international organizations to recommend blanket ban on introduction of exotic species, however, the AG considered that it would be worthwhile to discourage irresponsible introduction of exotic species.

*5.3 Progress made with the DAFF/NACA initiative to improve disease reporting and emergency preparedness in the Asia-Pacific region*

The representative from DAFF presented a brief progress report on the DAFF/NACA initiative "to enhance regional capability to quickly and effectively respond to aquatic animal disease emergency incidents, through the development of coherent emergency disease plans and by enhancing the emergency management framework within the region". The proposed cooperation consists of different activities; (1) Identification of current capability within the region and modification of the Australian disease identification field guide to become a Asia-Pacific regional field guide (2)

modification of AQUAVETPLAN to become a regional resource (3) Testing of contingency plans/modified AQUAVETPLAN (4) Improving aquatic animal disease reporting within the region, and (5) Developing general biosecurity principles.

The AG appreciated the progress made with respect to the survey in identification of current aquatic animal health capability in the region and the modification of Australian disease identification field guide. The AG welcomed the ongoing cooperation of the Department of Agriculture, Fisheries and Forestry, Australia, as being very useful to improve aquatic animal health management in the region.

***Recommendation***

- The AG recommended that NACA work closely with DAFF to modify the Australian disease identification field guide to become an Asia-Pacific regional disease identification field guide.
- Working Group established for this initiative should decide upon the next steps under the initiative, following analysis of survey results.

## Session 6: Identification and designation of regional aquatic animal health resources, including regional resource experts (RRE), regional reference laboratories (RRL) and regional resource centres (RRC)

*6.1 Regional Resource Base*

The AG was informed of the progress made in the operation of the three tier regional resource base on aquatic animal health. The AG noted with appreciation the contributions of RREs and RRCs in developing disease cards, contributing to training programs, providing special technical assistance to member countries on a case by case basis. The meeting was informed of the potential utility of the regional resource base in terms of assisting member countries in dealing with disease diagnosis and responding to disease emergencies. The AG recognized the fact that the regional resource base, specifically, the regional reference laboratory, can be established only for regional diseases not listed by OIE and for the benefit of the region. The AG discussed the need to expand the regional resource base and identify RRL for White tail disease in *Macrobrachium rosenbergii* (MrNV and XSV).

***Recommendations***

- Considering the potential utility of the regional resource base, the AG recommended that the number of RREs and RRCs be expanded to include new subject areas, to follow the specific elements within the Technical Guidelines (epidemiology, surveillance, risk analysis, disease diagnosis);
- Recognizing the fact that WTD is spreading in the region and that robust diagnostic methods are available in select number of laboratories, the AG recommended that a regional reference laboratory for WTD be identified and made operational. It was suggested that NACA should call for expression of interest from interested laboratories and place the applications received before the next AGM for final decision;
- Encourage the establishment of RRL in the country which has experienced the specific disease.

*6.2 Capacity building activities in the region and their integration*

The meeting was informed of the various capacity building activities carried out by important regional organizations like SEAFDEC. Capacity building and training activities carried out in the area of disease diagnosis and surveillance were recognized by the AG as very useful and relevant to

the region. The AG appreciated the online aquatic animal health course being coordinated by the SEAFDEC since the last 4 years.

***Recommendation***

- The AG recognized the benefits of the SEAFDEC online course and recommended the identification of a mechanism to expand this activity and involve RRE as mentors. Potential expansion pathways could go through the translation of the material into other languages to allow the conduct of the course also to non-English speaking participants

## Session 7: Regional and International Cooperation

The AG was briefed of the various ongoing and planned regional and international cooperation in regional aquatic animal health. The AG was pleased to note the excellent regional and international cooperation that had contributed to the development and implementation of the regional aquatic animal health program in Asia. It was generally agreed that such cooperation should be further pursued, and the AG took note of various opportunities to further strengthen cooperation with regional and international bodies to support Asia in effective implementation of the regional aquatic animal health program.

*7.1 World Organization for Animal Health (OIE)*

AG thanked Dr. Eva-Maria Bernoth, President, OIE-AAHSC, for the excellent contributions made to the meeting. AG appreciated the suggestions and requested the Secretariat to follow-up to ensure NACA activities, in particular the disease reporting will be complementary to the changes to be made to the OIE disease reporting system, and to provide necessary assistance and support to the member governments in improving aquatic animal health and reducing the risks of disease.

The AG thanked the OIE Regional Representation in Tokyo for its continuing collaboration and cooperation in implementing the regional QAAD reporting system. The AG also appreciated the support and contributions of the OIE Asia-Pacific Regional Representation, in the form of supporting workshops, seminars and networking. OIE Regional office expressed its support to the countries in the Asia-Pacific region, the AG and NACA to strengthen the aquatic animal health program

*7.2 Food and Agriculture Organization (FAO)*

FAO expressed its support to the AG and the NACA regional aquatic animal health program and emphasized its importance in coordinating aquatic animal health activities in the region. FAO welcomed the AG report of progress in implementation of the TG. The AG thanked FAO for its continuing support to NACA.

*7.3 Department of Agriculture, Fisheries and Forestry, (DAFF) Australia*

The AG recognized the continued contribution of DAFF to the regional aquatic animal health activities and appreciated the progress made in the recent DAFF/NACA initiative on emergency preparedness and response to aquatic animal diseases.

*7.4 Asia Pacific Economic Cooperation (APEC)*

The AG appreciated the outcomes of the APEC funded project “Capacity and Awareness Building on Import Risk Analysis (IRA) for Aquatic Animals” and thanked APEC for its support to the regional aquatic animal programme.

*7.5 South East Asian Fisheries Development Center (SEAFDEC)*

The meeting was informed of the various activities carried out by SEAFDEC in the area of aquatic animal health management in the ASEAN countries. The AG recognized the importance and value

of collaboration and partnership with SEAFDEC in regional aquatic animal health management activities and thanked SEAFDEC for its support to regional health activities.

*7.6 Fish Health Section of the Asian Fisheries Society (FHS/AFS)*
The AG was informed of the collaboration of NACA with FHS in coordinating the various activities in connection with the VI Symposium on Diseases in Asian Aquaculture (DAA VI) in Colombo, Sri Lanka, in October 2005. The AG appreciated the role played by NACA in regional aquatic animal health activities.

*7.7 Association of South East Asian Nations (ASEAN)*
The AG was informed of the two recently approved projects that will be implemented in the ASEAN in cooperation with the ASEAN Secretariat. The AG recognized the value of strong partnership with ASEAN and advised NACA to further strengthen the cooperation.

*7.8 Secretariat for the South Pacific (SPC)*
The AG was informed of the possible collaborations between NACA and SPC in the areas of risk analysis and health management.

*7.9 Private Sector*
Intervet representative and AG member offered to assist NACA in its aquatic animal health activities. In particular, Intervet offered for jointly developing and publishing extension material on aquatic animal health with NACA.

*7.10 South Asian Association for Regional Cooperation (SAARC)*
The AG requested NACA to initiate a dialogue with SAARC to explore opportunities for collaboration in aquatic animal health.

## Session 8: Any other business

*8.1 Any other business*

The AG thanked NAQDA for making all the local arrangements and assisting with the smooth conduct of the meeting.

Under any other business no item was taken up for discussion

*8.2 Review of the AG Terms of Reference*

The meeting reviewed the Advisory Group Terms of Reference, and suggested no revisions to the existing TOR.

The AG was informed that two new members will be appointed to the Advisory Group in 2006. NACA will submit the names to the NACA Governing Council in March 2006.

Recognizing the contribution of SEAFDEC in the region to research, capacity building and extension in aquatic animal health management, the AG recommended that SEAFDEC be considered as an institutional member on the NACA Advisory Group.

*8.3 Date of next meeting*

The meeting date for AGM-5 was fixed for November 2006. The NACA Secretariat will advise the final date in good time.

## Session 9: Presentation of Meeting Report and Closing

The draft report was adopted and the meeting closed.

## List of Appendices

Annex A: Meeting Agenda
Annex B: List of participants
Annex C: OIE list of diseases in the 8th edition 2005 of the *Aquatic Code*
Annex D: Revised QAAD reporting form

**Annex A: Meeting Agenda**

## *Saturday, 22nd October: Morning session 0900-1200h*

***Opening session***

- Welcome remarks (NAQDA Director General),
- Adoption of AGM-4 agenda
- Chair: Dr Supranee Chinabut
- Vice-Chair: Dr Eva-Maria Bernoth
- Election of Rapporteurs

***Session 1: Progress since AGM-3 and expected outputs from AGM-4***

1.1 Short progress report from NACA on progress since AGM-3 and expected outputs from AGM-4 – *presentation by Dr CV Mohan, followed by short discussion session as required.*

1.2 Outcomes from the OIE General Session (May 2005) and the Aquatic Animal Health Standards Commission meeting (August 2005)

- The OIE list of aquatic animal diseases - current (May 2005) version and revised draft for 2006- - *presentation by Dr Eva-Maria Bernoth*
- OIE's new disease reporting arrangements-- *presentation by Dr Eva-Maria Bernoth*

***Session 2: Review of Regional disease status***

2.1 Regional disease status-brief summary of QAAD reports – *presentation by Dr CV Mohan*

2.2 Emerging shrimp diseases in the region-*presentation by Prof Tim Flegel followed by discussion*

2.3 Status of white tail disease in *M.rosenbergii* in the region (appears to be spreading in the region, but no country is reporting it) – *short briefings by Drs C.V.Mohan, Flavio Corsin, Tim Flegel and Supranee Chinabut followed by discussion*.

2.4 Status of emerging finfish viral diseases in the region (e.g. KHV, SVC, GCRV, catfish viral diseases) – *Short presentations by Drs Mohammed Shariff, Supranee Chninabut, and Jiang Yulin followed by discussions*

2.5 Emerging finfish bacterial diseases and vaccination strategies to limit their impact – *short presentation by Dr Zilong Tan*

2.6. Emerging diseases in an emerging species – Tilapia– *short presentation by Dr Zilong Tan*

2.7 Emerging mollusk diseases in the region – short *presentation by Dr Franck Berthe followed by discussion*

## *Saturday, 22nd October: Afternoon Session 1330-1730*

***Session 3: Review of Regional Reporting System***

3.1 Progress in regional reporting – *presentation by CV Mohan*

3.2 Way forward with regional reporting

- Views of the OIE Regional Representation for Asia-Pacific-*short presentation by Dr Oketani*
- Views of FAO-*short presentation by Dr Rohana Subasinghe*
- Views of NACA- *short presentation by CV Mohan and Flavio Corsin*

3.3 Review of diseases listed in QAAD, revision of reporting form and instructions (group to consider changes made to the OIE list and diseases of regional concern) - *discussion session*

*End of Session: Preparation of recommendation for session 1, 2 & 3 by designated small group*

## *Sunday, 23rd October: Morning session 0900-1200h*

***Session 4: Review and evaluate implementation of the Technical Guidelines***

FAO Expert Workshop for the preparation of Technical Guidelines on Health Management for Responsible Movement of Live Aquatic Organisms (1-4 November 2005): Implications for the region – *short presentation by Dr Rohana Subasinghe*

***4.1 National Aquatic Animal Health Strategies***

4.1.1 Briefing on progress in implementation of the 'Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals'- *Dr CV Mohan followed by discussion*

4.1.2 Progress in implementation of TG in Vietnam - Lessons learnt from ongoing projects and regional implications - *presentation by Dr Flavio Corsin*

4.1.3 Evaluation of implementation of TG in each country by AG using the NC's feed back on DAFF/NACA survey and the knowledge of the AG members - *Discussion session*.

- Identifying country specific activities
- Considering secondments to progress TG implementation

4.1.4 Implementation of two recently approved AADCP-RPS projects in ASEAN to support TG implementation-*short presentation by Dr CV Mohan followed by discussions*

***4.2 Strengthening National Coordination and Communication***

4.2.1 Meeting of National Coordinators – *discussions by the AG*

4.2.2 Promoting cooperation between veterinary and Fisheries authorities

- Towards developing a model system in Sri Lanka - *presentation by Dr Amarasekara*
- Role of NACA, FAO and OIE – *Discussion session*
- Progress on nomination of aquatic national focal points-*brief comments by Drs Eva-Maria Bernoth and CV Mohan*

***4.3 Revision of the Technical Guidelines[7], Manual of Procedures[8] and Asia Diagnostic Guide for Aquatic Animal Diseases[9] as required;***

[7] Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals and the Beijing consensus and Implementation strategy, 2000. FAO/NACA. Fisheries Technical Paper No 402

4.3.1 Aquatic animal disease chapters in the *Aquatic Code* (8th ed 2005) and drafts for 2006- *presentation by Dr Eva-Maria Bernoth*

4.3.2 Development of detailed plan of action for ADG revision - *presentation by Dr Rohana Subasinghe and Dr CV Mohan*
Discussion to consider:

- Which diseases to include/delete in view of the recent OIE and QAAD list revisions
- template to be followed
- New chapters to be considered
- inclusion of disease cards
- Chapters to be contributed by group of authors
- Resources
- Process, protocol and timeline

## *Sunday, 23rd October: Afternoon session 1330-1730h*

***Session 5: Development of procedures for advising on Technical Guideline implementation***

5.1 Role of two recently approved AADCP-RPS projects in ASEAN – *brief presentation by Dr CV Mohan followed by discussion*

5.2 Lessons being learned from the introduction of *Penaeus vannamei* to the region – *presentation by Dr Mohammed Shariff followed by discussion*

5.3 Progress made with the DAFF/NACA initiative to improve disease reporting and emergency preparedness in the Asia-Pacific region – *presentation by Ms Karina Scott followed by discussion*

***Session 6: Identification and designation of regional aquatic animal health resources, including regional resource experts (RRE), regional reference laboratories (RRL) and regional resource centres (RRC)***

6.1 Short briefing on the progress in the operation and utility of three tier regional resource base – *brief presentation by CV Mohan followed by discussion*

6.2 Discussions to identify practical approaches to make the three tier regional resource base more useful to the region- *discussion by the AG*

6.3 Need for identifying RRL for white tail disease in *Macrobrachium rosenbergii* (MrNV and XSV) – *discussion by the AG*

6.4 Need for more RREs and RRCs – *discussion by the AG*

6.5 Capacity building activities of SEAFDEC and ways to implement an organized capacity building approach in the region- *brief presentation by Dr Celia Pitogo*

***Session 7: Regional and International Cooperation***

- Office International des Epizooties (OIE) (World Animal Health Organization)
- Food and Agricultural Organization of the United Nations (FAO)
- Department of Agriculture, Fisheries and Forestry (DAFF), Australia
- Southeast Asian Fisheries Development Center (SEAFDEC)

[8] FAO/NACA. 2001. Manual of Procedures for the Implementation of the Asia Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals. *FAO Fisheries Technical Paper*, No. 402, Suppl. 1. FAO, Rome. 2001. 106 p.
[9] Bondad-Reantaso, MG, McGladdery SE, East, I and Subasinghe, RP. (Eds.). Asia Diagnostic Guide to Aquatic Animal Diseases. *FAO Fisheries Technical Paper*, No. 402, Suppl. 2. FAO, Rome. 2001. 236 p.

- Permanent Advisory Network for Diseases in Aquaculture (PANDA)
- ASEM platform
- Collaboration with FHS-DAAVI
- Association of South East Asian Nations (ASEAN)
- Secretariat for the South Pacific (SPC)
- Private sector

***Session 8: Any other business***

8.1 Any other business

8.2 Review of the AG Terms of Reference
- Institutional membership
- Recruitment of new members

8.3 Date of next meeting

*End of Session: Preparation of recommendation for session 4, 5, 6, 7,& 8 by designated small group*

## *Monday, 24th October: Morning session 0900-1200h*

- Free/Draft report preparation

## *Monday, 24th October: Afternoon session 1400-1700h*

***Session 9: Closing Session***

- Adoption of the draft final report and recommendations

## Annex B: List of participants

| I Advisory Group Members | |
|---|---|
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**Annex C: OIE list of diseases in the 8th edition 2005 of the *Aquatic Code***

The following diseases of fish are listed by the OIE: Article 1.1.3.1

- Epizootic haematopoietic necrosis
- Infectious haematopoietic necrosis
- Spring viraemia of carp
- Viral haemorrhagic septicaemia
- Infectious pancreatic necrosis[1]
- Infectious salmon anaemia
- Epizootic ulcerative syndrome
- Bacterial kidney disease (*Renibacterium salmoninarum*)[1]
- Gyrodactylosis (*Gyrodactylus salaris*)
- Red sea bream iridoviral disease
- Koi herpesvirus disease[2]

The following diseases of molluscs are listed by the OIE: Article 1.1.3.2.

- Infection with *Bonamia ostreae*
- Infection with *Bonamia exitiosa*
- Infection with *Marteilia refringens*
- Infection with *Mikrocytos mackini*[1]
- Infection with *Perkinsus marinus*
- Infection with *Perkinsus olseni*[1]
- Infection with *Xenohaliotis californiensis*.

The following diseases of crustaceans are listed by the OIE: Article 1.1.3.3.

- Taura syndrome
- White spot disease
- Yellowhead disease
- Tetrahedral baculovirosis (*Baculovirus penaei*)
- Spherical baculovirosis (*Penaeus monodon*-type baculovirus)
- Infectious hypodermal and haematopoietic necrosis
- Crayfish plague (*Aphanomyces astaci*)
- Necrotising hepatopancreatitis[2]
- Infectious myonecrosis[2]

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[1] Delisting of this disease is under study.

[2] Listing of this disease is under study.

# Annex D: QUARTERLY AQUATIC ANIMAL DISEASE REPORT-2006

Country: _____ Period: _____

| Item | Disease status [a/] | | | Level of diagnosis | Epidemiological comment numbers |
|---|---|---|---|---|---|
| **DISEASES PREVALENT IN THE REGION** | Month | | | | |
| **FINFISH DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Epizootic haematopoietic necrosis | | | | | |
| 2. Infectious haematopoietic necrosis | | | | | |
| 3. Spring viraemia of carp | | | | | |
| 4. Viral haemorrhagic septicaemia | | | | | |
| 5. Infectious pancreatic necrosis[1] | | | | | |
| 6. Epizootic ulcerative syndrome (EUS) | | | | | |
| 7. Bacterial kidney disease[1] | | | | | |
| 8. Red seabream iridoviral disease | | | | | |
| 9. Infection with koi herpesvirus[2] | | | | | |
| **Non OIE-listed diseases relevant to the region** | | | | | |
| 10. Viral encephalopathy and retinopathy | | | | | |
| 11. Enteric septicaemia of catfish | | | | | |
| 12. Epitheliocystis | | | | | |
| 13. Grouper iridoviral disease | | | | | |
| **MOLLUSC DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Infection with *Bonamia exitiosa* | | | | | |
| 2. Infection with *Perkinsus olseni*[1] | | | | | |
| **Non OIE-listed diseases relevant to the region** | | | | | |
| 3. Infection with *Marteilia sydneyi* | | | | | |
| 4. Infection with *Marteilioides chungmuensis* | | | | | |
| **CRUSTACEAN DISEASES** | | | | | |
| **OIE-listed diseases** | | | | | |
| 1. Taura syndrome | | | | | |
| 2. White spot disease | | | | | |
| 3. Yellowhead disease | | | | | |
| 4. Spherical baculovirosis (*Penaeus monodon*-type baculovirus) | | | | | |
| 5. Infectious hypodermal and haematopoietic necrosis | | | | | |
| 6. Tetrahedral baculovirosis (*Baculovirus penaei*) | | | | | |
| 7. Necrotising hepatopancreatitis[2] | | | | | |
| **Non OIE-listed diseases relevant to the region** | | | | | |
| 8. Baculoviral midgut gland necrosis | | | | | |
| 9. White tail disease (MrNV and XSV) | | | | | |
| **UNKNOWN DISEASES OF A SERIOUS NATURE** | | | | | |
| 1. Akoya oyster disease | | | | | |
| 2. Abalone viral mortality | | | | | |
| | | | | | |
| | | | | | |
| **ANY OTHER DISEASES OF IMPORTANCE** | | | | | |
| 1. | | | | | |
| 2. | | | | | |
| | | | | | |
| | | | | | |

**Prepared by:**

Name: _____

Position: _____

Signature: _____

Date: _____

**Endorsed by (OIE Delegate):**

Name: _____

Position: _____

Signature: _____

Date: _____

**DISEASES PRESUMED EXOTIC TO THE REGION[b]**
**LISTED BY THE OIE**
**Finfish**: Infectious salmon anaemia; Gyrodactylosis (*Gyrodactylus salaris*)
**Molluscs**: Infection with *Bonamia ostreae*; *Marteilia refringens*; *Mikrocytos mackini*[1] ; *Perkinsus marinus*; *Xenohaliotis californiensis*;
**Crustaceans:** Crayfish plague (*Aphanomyces astaci*); Infectious myonecrosis[2]
**NOT LISTED BY THE OIE, BUT OF POTENTIAL RELEVANCE**
**Finfish**: Channel catfish virus disease; Piscirickettsiosis

a/ Please use the following symbols:

| | | | |
|---|---|---|---|
| + | Disease reported or known to be present | +( ) | Occurrence limited to certain zones |
| +? | Serological evidence and/or isolation of causative agent but no clinical diseases | *** | No information available |
| | | 0000 | Never reported |
| ? | Suspected by reporting officer but presence not confirmed | - | Not reported (but disease is known to occur) |
| | | (year) | Year of last occurrence |

[1] Delisting of this disease is under study by OIE.
[2] Listing of this disease is under study by OIE.
b/ If there is suspicion or confirmation of any of these diseases, they must be reported immediately, because the region is considered free of these diseases.

### 1. Epidemiological comments:

(Comments should include: 1) Origin of the disease or pathogen (history of the disease); 2) Species affected; 3) Disease characteristics (unusual clinical signs or lesions); 4) Pathogen (isolated/sero-typed); 5) Mortality rate (high/low; decreasing/increasing); 6) Death toll (economic loss, etc); 7) Size of infected areas or names of infected areas; 8) Preventive/control measures taken; 9) Samples sent to national or international laboratories for confirmation (indicate the names of laboratories); 10) Published paper (articles in journals/website, etc). and 11) Unknown diseases: describe details as much as possible.)

| Comment No. | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

### 2. New aquatic animal health regulations introduced within past six months (with effective date):