Report of the

FORTALEZA FAO/NACA/GOVERNMENT OF BRAZIL EXPERT WORKSHOP ON GUIDELINES FOR AQUACULTURE CERTIFICATION

Fortaleza, Brazil 31 July – 3 August 2007



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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS THE NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC SPECIAL SECRETARIAT FOR AQUACULTURE AND FISHERIES BRAZIL

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PREPARATION OF THIS DOCUMENT

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ABSTRACT

The expert workshop on guidelines for aquaculture certification was organised by FAO and NACA, and hosted by the Government of Brazil, in response to the recommendations of the Aquaculture Sub-committee (ASC) of the FAO Committee on Fisheries. The workshop was the second in a series of expert meetings to assist the development of guidelines for aquaculture certification. The workshop was attended by 57 participants from 13 countries, including several major aquaculture producing and consuming nations. The participants included experts from government agencies, private business, experts involved in certification schemes and food safety, and non-government organizations.

The workshop gave stakeholders in the Americas a unique opportunity to get together with international stakeholders to discuss certification and in particular the development of the draft FAO/NACA guidelines for aquaculture certification. The workshop participants worked in groups to further develop and build consensus on the guidelines. The process and the development of the guidelines were supported by all participants and it was agreed to continue the process to develop the guidelines document further after the workshop.

The workshop recommended that there is a strong need for an aquaculture certification guideline document to inform and guide stakeholders towards responsible and sustainable aquaculture. The first draft guideline document based on the meeting in Bangkok, Thailand in March 2007 is a good base to further develop the guidelines. Overall the guidelines are on the right track but more work and stakeholder input is still needed to finalize the document. The workshop noted that it is important to have a set of minimum requirements in the final version of the guidelines document. A number of comments related to this chapter in the guidelines were given at the Brazil workshop and the chapter should be developed along these recommendations and comments.

It was recommended that more expert workshops were held before the final draft submitted to the FAO Aquaculture Sub Committee of the Committee on Fisheries (COFI).

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INTRODUCTION

- 1. Global production from aquaculture has grown substantially, contributing increasingly significant quantities to the world's supply of fish for human consumption. This increasing trend is projected to continue in forthcoming decades. It is envisioned that the sector will contribute more effectively to food security, poverty reduction and economic development by producing with minimum impact on the environment and maximum benefit to society 83 million tonnes of aquatic food by 2030, an increase of 37.5 million tonnes over the 2004 level1.
- 2. The expert workshop on guidelines for aquaculture certification is organised by FAO and NACA, and hosted by the Government of Brazil, in response to the recommendations of the Aquaculture Sub-committee (ASC) of the FAO Committee on Fisheries. This workshop is the second in a series of expert meetings to assist the development of guidelines for aquaculture certification, being hosted in Brazil, with a strong emphasis on aquaculture products from aquaculture producers in the Americas.
- 3. The workshop discussions will be informed by a draft set of aquaculture certification guidelines developed from the Bangkok workshop, and selected number of experience presentations from participants. All participants will be invited to bring documentation and other materials describing certification programs, and experiences in aquaculture certification. The major part of the workshop however will be spent on discussions and working together, rather than presentations, and further development of the aquaculture certification guidelines.

AQUACULTURE CERTIFICATION

- 4. Over the years there have been attempts to respond to the public perceptions and market requirements for sustainable aquaculture practices and products. Food safety standards have been elevated and international trade regulations tightened. Policy and regulations governing environmental sustainability have been put in place in many countries, requiring aquaculture producers to comply with more stringent environmental mitigation and protection measures. In some countries these changes were initiated by the aquaculture sector itself, usually within the more organized private industry sector to ensure its sustainability and protect operations from poorly managed activities. The private sector has made significant advances in the management of its activities and there are many examples of improved management of farming systems that have reduced environmental impacts and improved efficiency, including profitability, in all regions.
- 5. Owing to the need for responding to these environmental and consumer concerns on aquaculture production and in order to secure better market access, there is increasing interest in certification of aquaculture production systems, practices, processes and products from aquaculture. For example, recent legislation in both Europe and the United States of America require mandatory identification of aquatic products, whether they are cultured or captured. These markets increasingly recognize that some form of certification is a way of assuring buyers, retailers, and consumers that fishery products are safe to consume and originate from aquaculture farms or capture fisheries adopting responsible management practices. Certification has been introduced to capture fisheries for some time. Guidelines for eco-labelling of capture fishery products have been developed by FAO in 20052 and efforts are being made to develop eco-labelling guidelines for inland fisheries 3. There is a need for harmonization of fish quality and safety standards within aquaculture, implying increased development and wider use of internationally agreed, scientifically-based standards is necessary.
- 6. The principles of achieving harmonization of standards and equivalency in food control systems and the use of scientifically-based standards are embodied in two binding agreements of the World Trade Organization (WTO): the Agreement on the application of sanitary and phytosanitary (SPS) measures and the Agreement on technical barriers to trade (TBT). The SPS agreement confirms the right of WTO member countries to apply measures necessary to protect human, animal and plant life and health. The objective of the TBT Agreement is to prevent the use of national or regional technical requirements, or standards in general, as unjustified technical barriers to trade. The

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¹ State of World Aquaculture: 2006. Fisheries Technical Paper No. 500. Rome FAO. 2006 134p.

² FAO. Guidelines for Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries. Rome., FAO. 2005. 90p.

³ Expert Consultation - Guidelines on Ecolabelling of Fish and Fishery Products from Inland Fisheries Rome, Italy. 23 May 2006- 26 May 2006

agreement covers standards relating to all types of products including industrial products and quality requirements for foods (except requirements related to SPS measures).

- 7. An important aspect of certification is food quality and safety. FAO's normative work in food safety and quality is focused on food standards linked to the Codex Alimentarius and developed in close collaboration with the World Health Organization (WHO), and related capacity-building. Codex Alimentarius includes standards for all principal foods (whether processed, semi-processed or raw) for distribution to the consumer, with provisions related to food hygiene, food additives, pesticide residues, contaminants, labelling, presentation, methods of analysis and sampling. The Codex Secretariat, housed in the FAO Food and Nutrition Division (ESN), has primary responsibility for normative work on food safety.
- 8. In several countries, aquaculture producers are introducing environmental certification of aquaculture products, either individually or in a coordinated manner, in order to credibly demonstrate that their production practices are non-polluting, non-disease transmitting and/or non-ecologically threatening 4,5. Some countries have introduced state-mediated certification procedures to certify that aquaculture products adhere to food safety standards, and some have developed schemes for farming in accordance with certain environmental standards6. Most of the work done on certification and improved management has been on salmon and shrimp, mainly due to their high commodity value, cost absorption capacity and the importance attached as the most internationally traded products, but interest in certification now spans a wide range of trade aquaculture commodities.

RECOMMENDATIONS BY THE FAO COMMITTEE ON FISHERIES SUB-COMMITTEE ON AQUACULTURE

- 9. The FAO Committee on Fisheries Sub-Committee on Aquaculture, while recognizing value of BMPs and certification for increasing public and consumer confidence in aquaculture production practices and products, also noted that many non-governmental (private sector) certification schemes have resulted in higher costs for producers without delivering significant price benefits to small-scale producers. It was pointed out that the costs of such schemes were disadvantageous to small-scale producers, adding to the costs of market access, and recognized that there are different needs between small-scale and large-scale producers and that these differences should be adequately addressed. The Sub-Committee commented that the emergence of a wide range of certification schemes and accreditation bodies was creating confusion amongst producers and consumers alike and stated that there was a need for more globally accepted norms for aquaculture production, which could provide more guidance and serve as a basis for improved harmonization and facilitate mutual recognition and equivalence of such certification schemes.
- 10. Within the context of the application of the FAO Code of Conduct for Responsible Fisheries (CCRF), the Sub-Committee requested FAO to organise an Expert Workshop/Consultation to make recommendations regarding the development of harmonised shrimp farming standards and review certification procedures for global acceptance and transparency, which will also assist in elaborating norms and reviewing the diverse options and relative benefits of these approaches. In this regard, the Sub-Committee encouraged FAO to play a lead role in facilitating the development of guidelines which could be considered when national and regional aquaculture standards are developed. Several members of the Sub-Committee as well as a number of inter-governmental organizations offered to cooperate at national, regional and international level, and requested FAO to provide a platform for such collaboration. The Sub-Committee also requested setting up of an expert group on reviewing certification of shrimp farming systems.
- 11. The Sub-Committee on Trade held in Spain 2006 also recommended work to be done related to certification and harmonization. The Sub-Committee on Trade supported future work by the FAO to widen and expand the implementation of the Hazard Analysis Critical Control Point (HACCP)-based safety and quality systems and use of risk assessment as the basis for the development of fish standards; to promote equivalence and harmonization; to monitor the border sanitary and quality controls used to regulate, restrict or prohibit trade including their economic consequences. FAO was also requested to broaden the perspective and discussion on the topic to include (i) how developed countries could support the integration of small-scale fisheries into international trade

⁵ The state of world aquaculture 2006. FAO Fisheries Technical Paper. No. 500. Rome, FAO. 2006. 134p

⁴ ABCC. 2004. "Código de conduta para desenvolvimento sustentável e responsável da carcinicultura brasileira". ABCC

⁻ Association of shrimp growers of Brazil.

 $^{^6}$ FAO: TCP/CHI/3002 Certification of the compliance of the environmental regulations by the aquaculture industry in Chile.

through, for example, standards setting; (ii) intermediation including financing issues; (iii) potential loss of bargaining power of small-scale fishers in getting fair prices for their products; (iv) traceability and eco-labelling; and (iv) value chain analysis.

OBJECTIVES AND OUTPUTS

- 12. The purpose of the workshop was to bring together diverse stakeholders involved in aquaculture certification to continue the process of preparation of the international guidelines for certification of aquaculture products as mandated by the COFI Aquaculture Sub-committee. The Fortaleza Expert Workshop was the second expert workshop in a series of workshops to discuss and support the process for development of FAO international guidelines for aquaculture certification as requested by the COFI/SCA. After the first expert workshop in Bangkok in March 2007 a first draft of the guidelines for certification of aquaculture products were developed. The Brazil workshop was intended to review this first draft and comment as necessary on the draft document and contribute to the ongoing process to develop the guidelines. In addition, the workshop considered certification issues specific to the Latin American region.
- 13. The expected outputs from the workshop, driven by the discussions and perspectives of the participants, were as follows:
 - Stakeholders in the Americas brought together to contribute to development of guidelines on certification of aquaculture products.
 - Aquaculture certification status and potential clarified and key issues and constraints identified for the Americas region.
 - Further consensus built on the draft guidelines for certification of aquaculture products.
 - Agreement reached on a continued process of working together among stakeholders to develop/complete the guidelines
- 14. The Agenda for the Expert workshop is provided in Annex 1.
- 15. A series of orientation presentations was prepared for the workshop, outlining the general issues facing the development of aquaculture certification guidelines, the status of the ongoing process to develop an international guideline for certification of aquaculture products and issues of special importance to certification. Furthermore a number of presentations were given from countries in the Latin American region on the state of aquaculture and certification. There were 10 presentations made by participants at the workshop covering the above issues.

PARTICIPATION

16. The Expert workshop was attended by 57 participants from 13 countries, including several major aquaculture producing and consuming nations. The participants included experts from government agencies, private business, experts involved in certification schemes and food safety, and non-government organizations. The list of participants is provided in Annex 2.

OPENING CEREMONY AND INTRODUCTION

- 17. The opening ceremony included welcome addresses by representative of FAO, Rome (Dr Lahsen Ababoush and Dr. Rohana Subasinghe) FAO Representative of Brazil (Dr. Gustavo Chianca) NACA (Dr. Michael J. Phillips), State of Ceara, Brazil (Mr. Maximiniano P. Dantas), Government of Brazil (His Excellency, Minister Altemir Gregolin).
- 18. The FAO Representation in Brazil represented by Dr. Gustavo Kauark Chianca, thanked the Minister, members of the Board and all the participants for joining together for this important workshop. FAO has been working together with SEAP (Brazilian Aquaculture and Fisheries Secretariat) and given support to this Secretariat in various programs and projects in Brazil. Aquaculture has grown a lot in Brazil in recent years and this has to be done in a sustainable manner. The Brazilian government and FAO in Brazil are working together to carry out the recommendations of the FAO Aquaculture Sub-Committee (ASC) in outlining Guidelines for Aquaculture Certification which will benefit aquaculture globally.

- 19. Mr. Maximiniano P. Dantas (Ceara State Government) was honoured to attend the expert workshop and to see so many stakeholders attend this important event. Aquaculture has expanded during recent years and there is potential for further development. However development of aquaculture has to be done sustainably with respect for surrounding ecosystems and should furthermore be social responsible. Brazil has favourable conditions like climate and water resources to develop aquaculture and especially the state of Ceara have suitable conditions for both fresh water and marine/brackish aquaculture. Therefore aquaculture is a priority area for the state and we see the international guidelines for aquaculture certification as a tool to develop aquaculture in a responsible and sustainable manner. The state of Ceara welcomes the expert participants to this workshop and to Ceara. We hope that you will have a fruitful meeting and also have time to enjoy the city of Fortaleza.
- 20. Dr. Michael J. Phillips representing the Network of Aquaculture Centres in Asia-Pacific (NACA), on behalf of Director General of NACA, Professor Sena De Silva, thanked Minister, Mr Gregolin, friends, colleagues and participants. He noted that NACA is pleased to be able to join as a partner in this expert workshop with FAO and the Government of Brazil. Certification is one of the key aquaculture issues that have an important influence to NACA members in Asia, and international trade. With increasing numbers of certification schemes, our members were concerned about the risk of confusion, duplication and costs to farmers. NACA members have requested the organisation to work with FAO on the development of internationally accepted guidelines and, as we often do, we joined with FAO to develop a global consensus document that would be acceptable to both producing and importing countries. After a very active and fruitful workshop in Bangkok during March, hosted by Thailand, NACA is very pleased to see the process proceeding, with a wide stakeholder input, towards this next step. This is an important workshop for NACA, and we are pleased to be able to participate, both as representatives of the Secretariat, and with participants from our members from Thailand, Vietnam, China and India. The guidelines are now starting to take shape into a draft prepared based on the discussions and outcomes of the Bangkok workshop during March, and we look forward to their further development during this meeting and your further inputs to the development of these important guideline documents for all aquaculture producing nations.
- 21. Dr. Lahsen Ababoush, FAO thanked NACA and the Government of Brazil for together with FAO to organize this important expert workshop on further development of the guidelines for aquaculture certification. Certification of aquaculture is a complex matter involving social issues, food safety issues, aquatic animal health, environmental issues and economic considerations. There are an increasing number of certification schemes developing. There is a genuine interest from both importing and exporting governments to involve in certification as well as from the private sector, NGOs and other stakeholders. Certification are seen by these stakeholders as one tool to make aquaculture sustainable and help develop the sector in the right direction. Therefore there is a need for an international reference when it comes to certification. After the first workshop in Bangkok in March we have a good first draft of the guidelines and we expect that there will be more good input to the guidelines from this workshop also.
- 22. The opening address by *Dr. Rohana Subasinghe*, FAO underlined the importance of this expert workshop. The workshop has been requested by FAO member countries to develop international acceptable guidelines of certification of aquaculture products. This is the second workshop and is following up on the workshop held in Bangkok in March 2007. We have agreed on the road map already and we have, based on the workshop discussions in March, developed a first draft of the guidelines for certification in aquaculture. The scope of this workshop is to further develop these guidelines and include experiences from the Latin American Region. The focus will be on group discussions but there will also be a smaller number of presentations especially from the Americas but also on important international issues like small-scale producers.
- 23. His Excellency Minister *Mr. Altemir Gregolin*, Secretary of Aquaculture and Fisheries from Brazil welcomed the participants and expressed his gratitude to FAO and NACA for the realization of the Expert Workshop on Guidelines for Aquaculture Certification in Thailand and in Brazil, attending a recommendation from the COFI Sub-Committee of Aquaculture. Aquaculture certification is a global tendency as the national and international markets that are increasingly demanding guarantees that aquaculture products are produced in a sustainable way in terms of environmental, social and food safety issues. He highlighted the need for certification schemes to be developed using a participatory approach, involving all stakeholders to assure its legitimacy and transparency. He also expressed the need for such certification schemes to consider the difficulties and constrains of small scale producers, in order to avoid the creation of trade barrier especially for developing countries and also to allow better prices for their products. As a signatory of the Code of Conduct for the Responsible Fisheries CCRF, Brazil greets the FAO, the NACA and other members

of the Consortium on Shrimp Farming and Environment, for the elaboration of the International Principles for the Responsible Shrimp Farming. The Government of Brazil understands that this document can be used as a base for national discussions involving all stakeholders interested in a more sustainable shrimp farming industry.

PRESENTATION SESSION I: INTRODUCTION

Chair: Dr. Eduardo Ono

Rapporteurs: Jesper Clausen, Koji Yamamoto and Michael Phillips

24. Dr. Rohana Subasinghe requested Dr. Eduardo Ono to chair the first session of the workshop announced that the chair of the first session and Dr. Ono accepted to chair the first session.

25. International guidelines for aquaculture certification: Background, progress and objective of the Brazil workshop: Dr. Rohana Subasinghe (FAO) and Dr. Michael Phillips (NACA): The presenters introduced the purpose, scope and organization of the Expert Workshop. The presentation reviewed the general status and trends in global aquaculture. Aquaculture is currently producing approximately 45 percent of the global fish supply for consumption and this is achieved from a high diversity in production systems. At the Sub-COFI on Aquaculture held in India in September 2006, FAO was requested by its members to work on guidelines for certification of aquaculture. That is the background for FAO and NACA together with member countries to have this workshop and the first Expert Workshop already held in Bangkok, Thailand March 2007. Dr. Subasinghe gave an updated status of the progress of developing the guidelines since the last Expert Workshop. It was noted that good progress has been made so far with input from many stakeholders both at the workshop and in written comments. The first draft of the guidelines for aquaculture certification have been developed and distributed to a wide number of stakeholders including the participants here today. It was underlined that it is important that everybody comment on this draft so we can further develop it in the right direction.

26. After the presentation the participants were invited to give general comments. The discussions raised the following points:

- There was a question on how the working groups would work. It was clarified that the working groups would be announced on the second day and working group guidelines would be presented in plenary before splitting into groups.
- INFOPESCA: It was asked if there was a real concern among consumers on environmental and social issues related to aquaculture. It was noted that there were some consumer/retailer concern, and that increased retailer influence was important in driving the demand for certified aquaculture product.
- FAO and NACA have been requested by their members to address issues related to aquaculture certification, which was becoming a factor in international trade. The process of developing a guideline for certification in aquaculture has to involve varied stakeholders and be transparent for the guidelines to be reliable and internationally recognised. It is very important to FAO to make the guidelines applicable to developing countries as well as more developed countries.
- It was noted that private certification should focus on areas not already covered by mandatory certification schemes: Trade issues related to certification are addressed in WTO agreements on TBT and SPS regularly, and food safety and quality issues are mandatory and covered by governmental mechanisms.
- Participants were very interested in how to follow the development of the guidelines after the workshop. It was noted that the participants involved in the workshops would receive information about the progress and the draft guidelines are available on an aquaculture certification website www.enaca.org/certification.
- It was suggested by participants that equal importance be given to environmental, social and economic issues in the guidelines. It was considered very important that this expert workshop had such a balanced group of people together.

PRESENTATION SESSION II: GENERAL

Chair: Dr. Eduardo Ono

Rapporteurs: Jesper Clausen, Koji Yamamoto and Michael Phillips

27. Aquaculture certification in Brazil: Perspectives of government and private sector: Felipe Suplicy: Brazil aquaculture production reached 260 000 tonnes in 2005. The main product of Brazilian aquaculture is freshwater finfish (70.4%), followed by shrimp (23.5%) and mollusk farming (5.9%). Aquaculture is present in all federation states and it contributes significantly to poverty alleviation, in particular in coastal traditional communities and in freshwater reservoirs. Experience in aquaculture certification started with the Brazilian Shrimp Farmers Association (ABCC) through initial discussions with the Aquaculture Certification Council (ACC). The ABCC subsequently decided to develop its own Quality Management Program (QMP), with support from the Federal Government and having as certifiers SGS and DQS. Codes of Conduct were elaborated for shrimp hatcheries, farms, feed mills and processing plants. Discussions were also initiated with EurepGap, but these discussions did not develop into any certification from this body. The International Principles for Responsible Shrimp Farming are being considered as an important input on how to develop certification schemes in Brazil. The Federal Government is currently working on zoning of coastal areas for bivalve and seaweed production as well as in the establishment of a National Shellfish Sanitation Program (NSSP) with traceability of mollusk batches. In spite of the significant freshwater finfish production, and its contribution to the total volume of national aquaculture production, there is no certification scheme for this sector to date and this is a priority subject to be addressed in the years to come. The Government of Brazil sees the development of an internationally recognized set of guidelines for aquaculture certification as a useful and timely support to the certification situation in Brazil.

28. Consumer Assurance: Market-based quality schemes, certification, organic labels, ecolabelling and retailer specifications: Melanie Siggs (presented by Rohana Subasinghe on behalf of author): The presentation focused on consumers and buyers in Europe. Labels are now required by the buyers and the retailers to make sure they get a safe high quality product. There are many kinds of labels: Business to business, Business to consumer, eco-labeling, organic certification that goes beyond minimum requirements. Surveys conducted by the seafood choices alliances show that 80% of consumers are concerned about the oceans and 56% were aware of over fishing. Most consumers are very concerned about the environmental impacts from seafood products (including both aquaculture and fisheries). The survey also shows that EU consumers are willing to pay a premium for higher animal welfare and around 50% would change their shopping choice if a higher animal welfare product was available. There is a huge potential for aquaculture if it is "done right". There is a need for an internationally recognised label or guidance and working on FAO guidelines for aquaculture certification is an important step in this direction. There is a need for a multi stakeholder driven approach to gain credibility by buyers, NGOs and thus consumers. The economic, environmental, and social issues need to be taken into consideration and traceability throughout the supply chain is key.

Discussion points

- 29. The discussions following the presentations raised the following points:
 - There was a question related to retailers where only larger retailers were addressed. It should be noted that there is a huge number of smaller retailers (fish mongers, local markets, etc.). The surveys done are done by independent poling companies and are independent from the larger retailers.
 - It was questioned if consumers are actually willing to pay for example for higher animal welfare. There is some discussion if consumers are really willing to pay more. If asked they might say yes, but they might act differently when they have to make the real choice in the shop. However, MSC products are increasing its sales and this indicates there is a trend towards consumers actually paying the premium for the products.

PRESENTATION SESSION III: EXPERIENCES AND PERSPECTIVES OF AQUACULTURE CERTIFICATION

Chair: Mr. Ivan Soto

Rapporteurs: Jesper Clausen, Koji Yamamoto, and Michael Phillips

- 30. Aquaculture certification in Ecuador: Lorena Schwarz: There are two main aquaculture species in Ecuador, namely shrimp and tilapia. The shrimp industry has had some problems with disease (Taura Syndrome Virus). The shrimp industry has recovered and production (by volume) is now at the level of before the disease outbreaks. Ecuador is one of the main tilapia producing countries. The production of tilapia started as an alternative to shrimp production at the time of the taura syndrome virus outbreaks and have since been a main species. There is little aquaculture certification in Ecuador at this time but there is some progress towards getting aquaculture practices certified. There are internal certification programs, a few international certification systems and a national control plan. It should be noted that the national control plan certifies all aquaculture farms and are mandatory whereas the international certification schemes are voluntary.
- 31. Aquaculture certification in Peru: Ivan Soto: Peru has four major commodities in its aquaculture production. Marine aquaculture production is mainly dominated by shrimp and scallops (around 95% of total mariculture production) while inland aquaculture reflects mainly the production of trout and tilapia (around 90% of total inland aquaculture). The Peruvian aquaculture legislation considers special permits for "populating and re-populating water bodies" although the areas involved are not considered for the statistical analysis of this report. Diversification of Peruvian aquaculture is taking time and lots of effort from the government and it is expected that the private sector will soon aggressively develop this sector. Likewise, small scale aquaculture is also part of the aquaculture reality in Peru and the importance of this practice in the rural areas is increasing rapidly. In regards to the aquaculture certification scheme, the Peruvian government has developed recently a legal framework which is currently implemented by the local authority Servicio Nacional de Sanidad Pesquera (SANIPES). The private sector has been going through different international accreditation processes as a way to ensure the quality of their products as well as to accomplish the requirements and regulations of targeted markets. It is expected that Peruvian aquaculture will increase in quantity and quality in the following years and that the accreditation and/or certifying system will be consolidated enhancing a strong offer of Peruvian aquaculture products to the main markets.
- 32. Aquaculture certification in Vietnam: Nguyen Tu Cuong and Nguyen Dinh Truyen: Aquaculture in Vietnam is an important sector both as a source of income from export (mainly shrimp and Pangasius) but also as an important source for food security in rural areas. To develop aquaculture sustainably through controlling epidemic disease, ensuring food safety and reducing pollution of aquaculture environment, the government of Vietnam in company with other relevant stakeholders have been building and improving aquaculture technologies (i.e. responsible use of chemicals, traditional aquatic animal health treatment, closed and semi closed farming systems and biological water treatment and so on). Furthermore, in 2006 the International Principles for responsible Shrimp Farming that were approved by Sub-COFI Aquaculture have been applied in Vietnam with some modifications to adapt to the situation in Vietnam. Sustainable aquaculture development in Vietnam is being promoted and current activities in Vietnam include a revised system on audit and certification of raising Black tiger shrimp in a responsible and sustainable way and appliance with International Shrimp Principles and a national certification system involving schemes on Better Management Practices (BMP), Good Aquaculture Practices (GAqP) and a Code of Conduct (CoC). The National Fisheries Quality Assurance and Veterinary Directorate (NAFIQAVED), a department under the Ministry of Fisheries is the main responsible institution leading the efforts in aquaculture certification.
- 33. Aquaculture markets, trading and certification in Latin America; present status and future prospects: Roland Wiefels: Latin American aquaculture is still at its very beginning, compared to its potential. By 2004, only 5 groups of species were produced over 100.000 MT: salmons, shrimps, bivalves, tilapias and trouts. The increase in aquaculture production is however accelerating in all countries. For some species, mainly salmons and shrimps, the export market is the main objective, particularly for those countries having relatively small population and domestic markets. For other countries (i.e. Brazil and Mexico) the domestic markets are big enough to absorb significant quantities of their aquaculture production of any species. As a matter of fact, the regional Latin American market absorbs 60% in value (and much more in volume) of its total

seafood production while 40% are destined to other regions, mainly the US, the EU, Japan and China. With a still very low average per capita consumption of seafood, compared to other regions of the world, Latin American domestic markets have very promising possibilities of expansion. As for the Latin American consumers and retailers, there is still no survey or study available demonstrating a strong need to be reassured about specific issues of aquaculture through certification. Some certifications and labels are however well known in the region, like the national sanitary inspection ones. For tuna and wild shrimp exporters to the US market, the "dolphin safe" and the "turtle safe" certifications are particularly well known. As for organic products, there is a wide range of certification bodies, many of them of foreign origin and some with mitigated results, oriented to small domestic or export market niches. Some experiences have already been conducted in the field of geographic certificates of origin for aquaculture products. Beside the presence of diverse private certification bodies for a great variety of purposes, the main certifications currently existing for aquaculture are those provided by the national governments, through the enforcement of legislation and regulations addressing food safety, environment, animal health, social, economical and financial issues.

- 34. **Organic certification of aquaculture products: criteria and standards on sustainability:** *Deborah Brister.* Is aquaculture moving toward a sustainable trajectory? The ever-increasing number of eco-labeling schemes throughout the world indicates the wide interest in this question. Identifying commonality between certification schemes is important to prevent confusion by consumers, prevent the excessive economic burden of multiple certifications on producers, and prevent unnecessary paperwork for regulators, certification bodies and retailers. The plethora and evolving nature of aquaculture certification schemes poses a significant challenge for developing countries to become major participants in the production and trade of certified aquaculture products. We propose a systematic and comprehensive approach, called an aquaculture sustainability matrix, which combines the concept of life cycle analysis with sustainability goals that have emerged from major international deliberations. The matrix combines environmental, economic and social sustainability goals with consideration of potential drivers of impact on these goals via step-by-step examination of each life cycle phase.
- 35. Certification of small-scale farming sector: constraints and challenges: Michael J. Phillips, Rohana Subasinghe, Simon Funge-Smith, Koji Yamamoto and Jesper Clausen: This presentation is mainly based on experiences from Asian case studies on what constraints and challenges small-scale farmers are facing related to certification. However some of the presentations today already show that there are similar issues related to some countries in the Americas region. It is difficult to clearly define what a small-scale farmer is and in fact there is not a firm international definition in place. It would be useful to get some input to the definitions of small-scale farmers. Small-scale farms are a significant contributor to aquaculture production globally and are in the Asian-Pacific region the main contributor. It is therefore important to address small-scale issues in the guidelines to aquaculture certification. One of the ways to assist farmers in reaching the market is to organize farmers in groups, "Aquaclubs" or clusters to increase their influence in the sector. Aquaclubs for example have also proven very useful in adoption of better management practices in India. This is to the advantage for both farmers (savings on farm operations budget) and for the surrounding environment and stakeholders (due to decreased environmental impact). The workshop participants were requested to consider small-scale issues in the working groups.
- 36. Aquaculture certification: NGO perspectives: Soraya Vanini Tupinambá: The crisis of unsustainability presently afflicting many aquatic cultures demands that certification be considered as a possibility for pushing or driving this activity towards sustainability. A range of other essential initiatives are necessary to complement certification, such as land-use planning, water management, environmental control, among others. At this time, while we would be willing to pursue discussions on this issue, we would underscore nevertheless the low value attributed to social and environmental aspects in aquaculture certification schemes developed hitherto. Another existing substantial limitation is the low effective participation of interested parties, above all of the human groups impacted by aquaculture developments. Analyzing the development of aquaculture in Brazil which was initiated at the end of the 1990's, one sadly observes the repetition of the same trend of unsustainability in countries such as Ecuador, Honduras and others of the South. It is anticipated that upon the adoption of the certification standards by countries, consideration would also be given to the introduction of national legislations and careful monitoring would be undertaken so as to avoid the installation of processes which legitimize environmental and social damages left by previous cycles of aquaculture development, while concurrently efforts are taken to promote new production cycles. The production crises in the shrimp culture industry and in other aquatic cultures are mirrored in the example of shrimp farming in Brazil, simultaneously a crisis of ecological and economic nature. Our participation in dialogues on certification intends to contribute to the identification of elements of unsustainability in the global development of

aquaculture, presenting new directions for contemplation on a wide range of public and private initiatives, and never omitting citizen initiatives in defence and in affirmation of the rights of traditional populations and small producers.

Discussion points

37. There was a good discussion held in a good atmosphere after the presentations and the following summaries the main points arising after the presentations.

- Is there any linkage between the National control plan and international certification schemes in Ecuador? There is at present no linkage between these.
- What are the links between the certified units at the different links in the production system in Ecuador? There have to be assured traceability from hatchery to the processing plant.
- Is there in Ecuador any office dealing with environmental issues and are these involved in licensing shrimp farms? Shrimp farms need a licence from the government to start operating and there is an environmental office involved in this process.
- It was asked if there are many environmental problems and discussions in Peru related to aquaculture. There are environmental impacts from especially shrimp farming, and social conflicts around scallop farming with capture fisheries stakeholders. The issues are discussed openly and addressed the best way possible.
- Vietnam has GAP.BMP and COC programs. These are different levels of administrative documents. BMP are based on 12 practical principles that can be used at the farm level and are species specific. GAP refers to food safety and COC is a guiding set of principles that are not species specific.
- Naturland certification and GAA are private initatives. How does the government of Vietnam deal with these schemes? Food safety is certified by government and organic standards or other voluntary certification schemes are not dealt with by the government but with private companies/certification bodies.
- The validity of the COC certification in Vietnam is three years. There is regular monitoring during this three year period and frequency of the inspections depends on the performance of the compliance.
- Is it possible to apply the IFOAM matrix approach in a real aquaculture situation, especially in developing country? The development of IFOAM matrix is still at an initial stage, the matrix consists "Issues and drivers" and "not indicators and criteria" there for application is possible for any aquaculture operations.
- So many certification schemes are around. Is it possible to adjust/learn from the experiences of the Brazilian shrimp association to learn from these.
- When starting up farmer clusters/aqua clubs the time span is about 2-3 years based on experiences in some Asian countries. It is important that farmers will be keep motivated with economical incentives for formation of clusters.
- The issues related to social and environmental impacts from aquaculture are the concern of both us here at the workshop, the NGO's (south and north). There are issues to be addressed and that is why we need these expert workshops and a wide stakeholder input.
- The presentations today have been focussing on the positive aspects. None of the presentations mentioned much of the negative impacts both environmental and social. This opportunity should also be taken to focus on the negative impacts that need to be changed.

• The meaning of small-scale farming is different in Latin languages. The wording in the guidelines needs to be consistent with regional/national variation and understanding of language.

DAY 2 - 4: WORKING GROUP SESSIONS

38. Dr. Subasinghe and Dr. Phillips made an introduction to the draft document on Guidelines for Aquaculture Certification. The working groups that would be formed later in the day were asked to keep in mind that the work over the next couple of days should focus on giving input to this document. Each working group will review and develop the draft guidelines further. Each group reviewed the guideline sections with reference to: i) Overall structure ii) Content and iii) Address the questions in the boxes. Each group was also asked to develop as needed the section on *special considerations for small-scale producers*. Each of the working groups was also asked to spend time on the chapter in the draft guideline dealing with minimum substantive requirements and criteria. The terms of reference for the four working groups are presented in Annex 3.

39. The reports below only summarise the main discussions and findings of each Working Group. The detailed comments provided by each group on the draft guidelines will be incorporated into the next revision of the aquaculture certification guidelines document.

Day 2 - 4 Working Group 1 on social issues

Chair: M. Sudarsana Swamy. Co-chair: Soraya V Tupinambá

Rapporteures: Deborah J. Brister, Rohana Subasinghe

Group members: Siri Ekmaharaj, Dhirendra Thakur, Roland Wiefels, Luciana Queiroz, Diana Camem A.N. de Oliveira, Cristina Marques, Glauber Gomes de Oliveira, Jose Juamam Batuta Corvallo

40. In countries there have been considerable social issues related to development of aquaculture. In most countries there have been both negative and positive impacts created by aquaculture over the years. Social issues related to aquaculture have been recognized as one of the important areas in writing the guidelines. The group working on social issues had the following main comments to the draft guidelines with special emphasis on social issues in the minimum substantive requirements and criteria:

- Small scale producers are important and do require special emphasis but are not separated from other farming groups. The standards on, for example, food safety issues will be the same for small and large scale farms. The better management practices required to reach the standards will be different but the standards are the same.
- Wide stakeholder participation is crucial in development of any certification scheme dealing
 with the production level. The vocabulary used should go beyond the market. Stakeholders
 outside the aquaculture industry and the market are also interested in aquaculture.
- It was recommended to incorporate the word "responsibility" into the guideline document since this is what you are certifying in order to enhance and achieve sustainability. You can make people more responsible by providing some standards to achieve.
- Small scale farmers should play a role in setting certification standards. Small scale farmers are important for the aquaculture sector due to the large contribution and to the large amount of people's livelihoods that depend on aquaculture. We need to engage them by empowering them and giving them a voice since they as individuals are not strong enough.
- Special attention should be given to traditional and indigenous communities. This includes
 the right to access fishing ground as well as use of traditional and indigenous knowledge.
- Corporate social responsibility should be recognised and encouraged.

Day 2 - 4 Working Group 2 on environmental issues

Chair: Ana Carolina Hazin. **Co-chair:** Ivan Soto **Rapporteures:** Michael Phillips, Jesper Clausen

Group members: Frederico Cavalcanti Montenegro, Jeovah Meireles, José Augusto Negreiros Aragão, Marco Antonio de Araujo Capparelli, Clemeson José Pinheiro da Silva, Putth Songsangjinda, Felipe M. Suplicy, Francisco Osvaldo Barbosa, Marcos Brandão, Marcelo Costa, Daniel Lee, Juan Carlos Cardenas.

41. The Working Group provided detailed comments on the draft guidelines. The points below summarise the main discussion points that arose within this group.

- The working group on environmental issues had useful and wide ranging discussions and perspectives on the environmental issues and impacts should be addressed in the document. The group discussed how much detail should be included in a guideline document covering all types of aquaculture. A number of potential environmental impacts were mentioned. The group reached consensus on nine overall environmental areas of impacts, or minimum criteria that should be considered in any certification scheme.
- The minimum criteria will apply in addressing environmental issues in aquaculture certification schemes. It must be recognised that management practices to address these environmental issues in aquaculture can differ substantially for different types and/or scale of aquaculture and for different aquaculture farming systems. The nine areas identified are:
 - 1. Responsible feeds and feeding sourcing feed ingredients and management
 - 2. Farm siting and protection of habitats
 - 3. Water quality and effluents
 - 4. Biodiversity protection
 - 5. Communities
 - 6. Landscape and visual impacts
 - 7. Drugs and chemicals
 - 8. Environmental restoration
 - 9. Traditional knowledge and management
- It was emphasized that certification should include procedures for identifying, evaluating and addressing the spatial and cumulative environmental impacts of aquaculture.
- Certification should be able to cover both groups of farmers and large farms. There should be flexibility in the definitions of "farm units" so different cases can be covered. The definition we use in the guidelines should be open so it covers for broad use of certification both at individual farm level and at a group or a cluster of farms.
- Certification is useful at the production level and is one tool to improve the sector both environmentally but also in respect to other impacts, including those related to social issues.
- If a group of farmers are certified it would likely be a group of small-scale farmers. There need to be both internal and external audit of the involved farms to ensure the quality of the certification scheme.

Day 2 - 4 Working Group 3 on food safety issues

Chairs: Suwimon Keerativiriyaporn. Co-chair: Rodrigo Carvalho

Rapporteures: Paul Holthus, Lahsen Ababouch

Group members: Marcelo Chammas, Laura Misk de Faria Brant, Sara Fabiana Aguiar, Jorge Rios Alveal, Alexsandra Carmen Caseiro, Eduardo Akifumi Ono, Walter M. Maia Jr., Song Yi, Luis Felipe Reimann, Francisco das Chagas Silva.

42. Working group 3 worked with a focus on food safety issues related to aquaculture production. The group made strong references to the work being done by the Codex Alimentarius and the recommendations and standards set in the Codex. Below are the main points discussed in the group:

- A fundamental issue that was discussed in the food safety group was whether the guidelines should cover certification of legal and regulatory requirements along with voluntary requirements, or not. Indeed, in several countries, government institutions have developed regulatory requirements on food safety and quality and are responsible for the verification of their implementation by producers, processors and traders.
- How can the FAO/NACA guidelines on certification in aquaculture set minimum criteria and guide on procedures to enable recognition of these official (government) systems and schemes?
- There are also an increasing number of private certifying bodies that claim retailers have tasked them to certify aquaculture production and products because the retailers want a supplementary certification of the current government certification practices. There is a risk that there will be overlap if the efforts are not coordinated and this could potential add costs to producers which could distort trade.
- Fish farms should be located in areas where the risk of contamination by biological, chemical, or physical food safety hazards is minimal and where sources of pollution can be controlled. Potential sources of contamination from the surroundings should be evaluated and considered. In particular, fish farming should not be carried out in areas where the presence of potentially harmful substances would lead to an unacceptable level of such substances in fish.
- All international requirements should be listed in the guideline document.
- Guidelines for post-harvest components have already been developed therefore this guideline will focus on the production level only.

Day 2 - 4 Working Group 4 on animal health and welfare

Chair: Lorena Schwarz. Co-chair: Malinee Smithrithee

Rapporteurs: Paulo Lyon, Koji Yamamoto

Group members: Nguyen Tu Cuong, Nguyen Dinh Truyen, Marcela Alvarez, Supranee Chinabut.

- 43. The fourth group made comments to the draft guideline document with special emphasis on animal health and welfare: The following point were raised in the group discussions and should be included in the guidelines under minimum criteria to be included in a certification scheme:
 - The group recommended following the work done by OIE. OIE is currently undergoing a process to address animal welfare. It is recommended that the guideline document defer to the outcome of this process with respect to animal welfare.
 - There should be recommendations in the guideline document to routinely monitor and record animal health to detect any developing problems.
 - Implementing management strategies that avoid or reduce the likelihood of disease transmission within and between aquaculture facilities.

- Thoroughly preparing the culture environment before stocking.
- Maintaining optimal environmental conditions through management of stocking densities, aeration, feeding, water exchange and phytoplankton bloom control. etc.
- Use of rigorous quarantining when necessary.

PLENARY DISCUSSIONS

44. Following working group presentations, there was a plenary session to discuss cross-cutting issues. The points raised during plenary discussion are given below:

It was mentioned that the guidelines refer to ISO and ISEAL which are essentially standards set by private groups. It was noted that both ISO and ISEAL provide useful guidelines which are internationally recognized and widely accepted

- It was mentioned that certification is one tool toward sustainable aquaculture industry, but that other approaches such as a zoning, participatory management approach, comanagement, and investment management practices are also available. Certification should not be seen as the only solution to all issues facing aquaculture.
- Clarify the meaning and use in the guidelines of the words "developing countries". It was suggested not to restrict the guidelines to developing countries. However, it is a valid point that developing countries need most support to comply with certification standards.
- Technical assistance is required for the small-scale sector to engage in certification schemes. State support for the small scale need to be further strengthened, especially as the trend towards market driven certification is increasing. Industry also may consider supporting small scale farmers more proactively, such as through cooperate social responsibility approaches.
- Under the food safety section of the minimum requirements, the harvest practices for mollusk aquaculture should be included, especially for quality of the products and the condition of the culture environment.
- The government role on food safety inspection and certification is complying with CODEX and other importing country mandatory regulations. The importance of making clear distinctions between mandatory and voluntary schemes was emphasized.
- Competency is the key for any certification scheme structure and there should be no conflict of interest between the certification entities which are; standard setting body, accreditation body, and certification body.
- Results of certification should be communicated to stakeholders to promote competition for transparency. Communication should be considered for all certification schemes. Internal communication issues are discussed in section 10 of the guidelines, whereas external communications are considered in section 9.
- OIE is the internationally accepted standard setting body for animal health movement and animal welfare, and it is important that this guideline is referred to. It was noted that OIE only addresses certain animal diseases concerning trade and does not include other aquatic diseases that impact aquaculture production. Therefore, the certification guidelines should incorporate other references to complete the cover of the scope.

RECOMMENDATIONS OF THE EXPERT WORKSHOP AND THE AGREED FOLLOW-UP ACTIONS

45. During this final plenary discussion session, the Expert Workshop agreed on the following points and recommendations:

- There is a strong need for an aquaculture certification guideline document that should inform and guide stakeholders towards responsible aquaculture.
- The first draft guideline document based on the meeting in Bangkok, Thailand in March 2007 is a good base to further development. Overall the guidelines are on the right track but more work and stakeholder input is needed to further develop the document.
- The scope of the document has to be clearly stated. There needs to clear guidance on what is covered in the guidelines with reference to: 1) Process and/or product certification, 2) Guidance on voluntary and/or mandatory certification, and 3) Guidance on certification schemes covering only the production level or including processing also.
- It is important to have a set of minimum requirements in the guideline document and this chapter need to be developed further based on the working group and plenary discussions during the Brazil Expert Workshop.
- It was recommended that more Expert Workshops are held before the final draft is submitted to the Aquaculture Sub-Committee.

CLOSING CEREMONY

46. The Expert workshop was closed with remarks from FAO, NACA and the Government of Brazil. The speakers thanked the participants for their active and fruitful involvement in the meeting, and looked forward to further co-operation in the development of the aquaculture guidelines and implementation of the recommendations.

ANNEX 1: AGENDA OF THE EXPERT WORKSHOP

Day 1: 31 July 2007

Opening Ceremony

09.00 - 09.30	Opening remarks: Address by FAO Address by NACA Address by State of Ceara, Brazil Address by the Hon. Minister of Aquaculture and Fisheries,
Introduction	Brazil
09.30 – 10.00	International guidelines on aquaculture certification: Background, progress and objectives of the Brazil workshop
10.00 - 10.30	General discussion
10.30 - 11.00	Coffee/Tea

Presentation Session I - General

11.00 – 11.30	Aquaculture certification in Brazil – perspectives of government and private sector
11.30 – 12.00	Certification of aquaculture products and retail market chains: present status and future prospects
12.00 - 12.30	General discussion
12.30 - 14.00	Lunch

Presentation Session II – Experiences and perspectives of aquaculture certification

14.00 - 14.20	Aquaculture certification in Ecuador
14.20 - 14.40	Aquaculture certification in Peru
14.40 – 15.00	Aquaculture certification in Vietnam
15.00 – 15.20	Aquaculture certification in Chile
15.20 - 15.40	Discussion
15.40 – 16.00	Coffee/Tea
16.00 - 16.20	Certification of organic aquaculture products
16.20 - 17.40	Further invited presentations on aquaculture certification in the Americas and seafood buyer/consumer and NGO perspectives
17.40 - 18.00	General discussion
19.30 -	Official dinner hosted by the Government of Brazil

Day 2: 1 August 2007

Session III - Working Groups

08.30-09.00	Guidelines on aquaculture certification: status of draft guidelines and introduction to working groups – Secretariat
09.30 - 09.30	Plenary presentations on selected key themes for consideration – Secretariat
09.30 - 12.30	Working group discussions
12.30 - 14.00	Lunch
14.00 – 16.00	Working Group discussions
16.00 - 17.30	Working Group presentations and plenary discussions

Day 3: 2 August 2007

Session III - Working Groups (continued)

08.30 - 10.30	Working Groups
10.30 - 11.00	Coffee/Tea
11.00 - 12.30	Working Groups continue
12.30 - 14.00	Lunch
14.00 - 15.30	Working Groups continue
15.30 – 16.00	Coffee/Tea
16.00 - 17.30	Working Group presentations and plenary discussions

Day 4: 3 August 2007

Session IV - Plenary discussions

08.30 - 10.30	Working Group presentations to plenary
10.30 - 11.00	Coffee/Tea
11.00 - 12.30	Plenary discussions continue
12.30 - 14.00	Lunch
14.00 - 15.30	Workshop achievements and way forward
15.30 – 16.00	Coffee/Tea
16.00 - 17.00	Final discussion and closing ceremony

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ANNEX 3: WORKING GROUP TERMS OF REFERENCE: DAY 2-4

Purpose

The purpose of the workshop is to bring together diverse stakeholders involved in aquaculture certification to continue the process of preparation of the international guidelines for certification of aquaculture products as mandated by the COFI Aquaculture Sub-committee.

Expected outputs

- Stakeholders in the Americas brought together to contribute to development of guidelines on certification of aquaculture products.
- Aquaculture certification status and potential clarified and key issues and constraints identified for the Americas region.
- Further consensus built on the draft guidelines for certification of aquaculture products.
- Agreement reached on a continued process of working together among stakeholders to develop/complete the guidelines

Working groups

There will be four working groups during day 2 of the workshop. Each working group will review and develop the draft guidelines

- 1. Introduction
- 2. Scope
- 3. Principles
- 4. General Considerations
- 5. Small-scale Producer Considerations
- 6. Procedural and Institutional Considerations
- 7. Communication Considerations
- 8. Terms and Definitions

Each group will review these guideline sections with reference to:

- Overall structure
- Content
- Questions (boxes) identified in the draft guidelines text

The groups will review and develop as needed the section on special considerations for small-scale producers.

Then each group will focus on specific parts of the draft Minimum Substantive Requirements and Criteria for Aquaculture Certification

Group 1: Social

Group 2: Environment

Group 3: Food safety

Group 4: Animal health and welfare

The groups will prepare suggestions for further work (or continue on 4 themes) on day 3

Each group will have a Chair, co-Chair, Rapporteurs and a translator.

ANNEX 4: PROSPECTUS OF THE EXPERT WORKSHOP

Background:

The expert workshop on guidelines for aquaculture certification is organised by FAO and NACA, and hosted by the Government of Brazil, in response to the recommendations of the Aquaculture Sub-committee (ASC) of the FAO Committee on Fisheries. This workshop is the second in a series of expert meetings to assist the development of guidelines for aquaculture certification, being hosted in Brazil, with a strong emphasis on aquaculture products from aquaculture producers in the Americas. Further background is provided in a separate Concept Note available at www.enaca.org/certification.

Workshop Purpose:

The purpose of the workshop is to bring together diverse stakeholders involved in aquaculture certification to continue the process of preparation of the international guidelines for certification of aquaculture products as mandated by the COFI Aquaculture Sub-committee.

Expected Outputs:

The expected outputs from the workshop, driven by the discussions and perspectives of the participants, are as follows:

- Stakeholders in the Americas brought together to contribute to development of guidelines on certification of aquaculture products.
- Aquaculture certification status and potential clarified and key issues and constraints identified for the Americas region.
- Further consensus built on the draft guidelines for certification of aquaculture products.
- Agreement reached on a continued process of working together among stakeholders to develop/complete the guidelines

Workshop Organisation:

The workshop will be held in Marina Park Hotel, Fortaleza, Brazil, involving 50-60 invited participants with different experiences and perspectives on certification of aquaculture products. The workshop discussions will be informed by a draft set of aquaculture certification guidelines developed from the Bangkok workshop, and a selected number of experience presentations from participants. All participants will be invited to bring documentation and other materials describing certification programs, and experiences in aquaculture certification. The major part of the workshop however will be spent on discussions and working together, rather than presentations, and further development of the aquaculture certification guidelines.