

REGIONAL COMMISSION FOR FISHERIES

Report of the

SECOND MEETING OF THE WORKING GROUP ON AQUACULTURE

Muscat, Oman, 29–30 November 2005



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PREPARATION OF THIS DOCUMENT

This document is the final report approved by the participants at the second meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) held in Muscat, Oman, from 29 to 30 November 2005. The document also contains the report of the first meeting of the WGA held in Manama, Bahrain from 18 to 20 April 2004, along with the recommendations to RECOFI on the formation of the Working Group on Aquaculture. This document finally contains the *Note verbale* produced during an ad hoc meeting held in Kuwait from 16 to 18 February 2003, when the practical implications of establishing a regional aquaculture subsidiary body under RECOFI including benefits to the member countries and financial implications were initially discussed.

Distribution:

Participants in the meeting
RECOFI mailing list
FAO Fisheries Department
FAO Regional and Subregional Fisheries Officers

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ABSTRACT

The second meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) was held in Muscat, Oman, from 29 to 30 November 2005 and was attended by experts from all the members of the Commission. The WGA reviewed the decisions and recommendations of the third session of the Commission held in Doha, Qatar, from 9 to 11 May 2005, and the activities of the WGA that followed. Among the activities, the experts acknowledged that progress had been made with regards to the technical arrangements that would lead to the preparation of the RECOFI Regional Aquaculture Information System (RAIS). However, it was noted that the system could not be developed as the budgeted funds had yet to be submitted by the hosting country. In this regard, the expert from Kuwait reconfirmed the commitment and willingness of its Government to host and finance the system and that the funds would be submitted by the end of the calendar year. The delay of remitting the funds was due to internal procedures involving different national authorities. It was agreed that should there be a further delay the system would be hosted by the Islamic Republic of Iran. The WGA acknowledged that the legal and policy framework project proposal remained a major regional priority and agreed to actively seek funding support from the Commission members as well as to approach regional donor agencies through the coordination of the RECOFI Secretariat. Other activities discussed at the meeting included the introduction of exotic species to the region and the preparation of a regional technical workshop on marine stock enhancement and artificial reefs. The WGA reviewed and adopted the structure of the technical guidelines for the control and responsible use of alien species in fisheries and aquaculture drafted by the Fisheries Department of the Food and Agriculture Organization (FAO) and other organizations in support of the Code of Conduct for Responsible Fisheries (CCRF).

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OPENING OF THE MEETING

1. The Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) held its second meeting in Muscat, Sultanate of Oman, from 29 to 30 November 2005.
2. The Meeting was attended by thirteen experts representing the eight RECOFI Member countries and one observer from the Republic of Yemen. The Meeting was attended for the first time by a representative of the Republic of Iraq. The list of experts and observer is given in Appendix B to this report.
3. The Meeting was called to order by Mr Abdul Redha Shams, Chairperson of the Commission WGA, who welcomed the country experts, Mr Mohammad Saif, RECOFI Secretary, and Mr Alessandro Lovatelli, RECOFI WGA Technical Secretary. He expressed, on behalf of the Commission, appreciation for their presence at this Meeting.
4. A welcoming speech was delivered by Dr Ahmed Hareb Al-Hosni, Assistant Director-General of Fisheries Research and Extension, Directorate General of Fisheries, on behalf of H.E. Salim bin Hilal Al-Khalili, Minister, Ministry of Agriculture and Fisheries, Sultanate of Oman. In his opening remarks the Minister underlined the growing importance of the aquaculture sector in the region and emphasised the need of collaboration and information exchange among the countries of the Commission. He finally recalled that the RECOFI WGA was established for this purpose. The opening statement of Dr Al-Hosni is attached as Appendix D.

ADOPTION OF THE AGENDA AND MEETING ARRANGEMENTS

5. The Chairperson presented the Provisional Agenda and announced a series of logistical arrangements including an optional visit to the Marine Sciences and Fisheries (MSFC) and Fish Quality (FQC) centres on the morning of the second day of the Meeting. The WGA experts agreed that all decisions and recommendations be summarised and endorsed at the end of the 2-day session whilst the Meeting report be officially adopted as soon as it is circulated by the Secretariat.
6. The Agenda attached as Appendix A to this report was adopted. The documents which were submitted to the WGA are listed in Appendix C.
7. Prior to entering into the technical discussions of the Agenda items, the WGA Technical Secretary briefly summarized all the decisions and recommendations related to the work of the WGA which were adopted at the Third session of the Commission held in Doha, Qatar, from 9 to 11 May 2005. This was done in order to refresh the actions ahead of the Meeting. A copy of the Commission's Third session report was made available at the meeting (RECOFI:WGA/II/2005/Inf.4). The decisions and recommendations mentioned are available in Appendix E of this report.
8. Mr Mohammad Saif and Mr Alessandro Lovatelli, RECOFI Secretary, were designated as rapporteurs.

RECOFI REGIONAL AQUACULTURE INFORMATION SYSTEM

9. The Secretariat presented the progress in regards to the establishment of the RECOFI Regional Aquaculture Information System (RAIS) based on the working document RECOFI:WGA/II/2005/3. A short summary of the events in relation to the creation of the information system that had taken place since the Second session of the Commission (Muscat, Oman, 18–21 May 2003) was provided. The experts were reminded that the Commission strongly recommended going ahead with the development of the system at its third session (Doha, Qatar, 9–11 May 2005). At this session the Government of Kuwait officially confirmed its offer to host and finance the system.

10. A prototype of the RAIS home page developed by the Inland Water Resources and Aquaculture Service (FIRI), Fisheries Department, Food and Agriculture Organization (FAO), was presented in order to provide an idea on the coverage as well as the work and inputs still required in setting up the system. The Secretariat reminded the experts that the initial contents of the system had been discussed and agreed upon following the last session of the Commission and proposed different suggestions in terms of information and statistics presentation. The home page of the Information System for the Promotion of Aquaculture in the Mediterranean (SIPAM) under the General Fisheries Commission for the Mediterranean (GFCM) was shown as an example of a functional system.

11. In the discussions that followed, the experts agreed that the system should also incorporate a forum area for discussion on subjects of interest where people can exchange ideas and suggestions, also realizing that all forums require active moderators for them to function properly. Suggestions were made from the experts to add an area for links to relevant research and higher educational institutions in and outside the region as well as a page dedicated to regional training opportunities in the RECOFI countries. Other suggestions included a “Search Engine” to facilitate the browsing of the home page and an area for relevant regional and international events such as trade fairs and aquaculture conferences and workshops.

12. With reference to the language of the RAIS Web site, the experts were informed that the site would be developed in English. However, the options for having the same site in Arabic would be built in by the system developers. Placing this latter version online would then be a matter of obtaining the same text in the English pages and translating it to Arabic. This could be coordinated by the RAIS Regional Centre with inputs from all WGA Focal Points.

13. The Secretariat informed the experts of the WGA that it has identified competent and currently available developers in Rome (Italy) for the elaboration of the information system as requested by the Commission. The Meeting urged the Government of Kuwait to deposit the agreed funds of US\$30 000 to the account of the Commission so as to initiate the development of the system without further delay. In this regard the expert from Kuwait reconfirmed the commitment and willingness of its Government to host and finance the system and informed that the delay in the funds transfer was due to internal procedures involving a number of national authorities. He further informed that Kuwait had requested the Secretariat for certain technical and payment procedural clarification which had contributed to such delay. However, he reported that all formalities are being finalized and that the funds would likely be deposited before the end of the calendar year. The Secretariat informed that

the breakdown of the cost and timeframe to develop the RAIS was forwarded to the Government of Kuwait in July 2005 (see Appendix F).

14. The WGA Focal Points unanimously agreed that if by the end of December 2005 the hosting government had yet to fulfil its commitment, the Secretariat would, by the second week of January 2006, send an official letter to the governments of Kuwait and the Islamic Republic of Iran informing that the latter RECOFI Member country would now be eligible to host and finance the RAIS as agreed during the last session of the Commission (see Appendix E – Decision and Recommendations of the third session of the Regional Commission for Fisheries, Doha, Qatar, 9–11 May 2005). In the event that Iran (Islamic Republic of) reconfirms its interest and position, the transfer of the required funds should be made within and not later than three months after confirmation of their position to host the system.

15. All correspondence related to this issue should be copied to WGA chairperson and to the RECOFI Secretary and RECOFI WGA Technical Secretary.

16. With regards to the establishment of the RAIS the Secretariat clarified that the budgeted cost of US\$30 000 is a one time payment. However, future running and maintenance costs of the system, after its setting-up, would be borne by the host country including manpower resources and the cost for retaining the domain name. Furthermore, the WGA Focal Points clearly acknowledged that each participating member country would have to ensure that updated data and information is regularly collected and fed into the system through the regional centre. The collection of national inputs would be the sole responsibility of each Member country.

17. The domain name of the system was raised and the Secretariat recommended that the hosting country proceed with its registration (e.g. www.rais.org) and to provide the technical characteristics of the server that would host the RAIS. With regards to the domain name it was agreed that it should include the acronym of the Commission and the following addresses were suggested “www.recofirais.org”, “www.recofi-rai.org” or “www.recofi_rai.org”. It was nevertheless agreed that the internet site address should be simple enough for existing search engines to locate the site and for potential users to memorize the name or to identify it through simple intuition. The Secretariat was finally requested to provide an input in this regard and to communicate at the earliest to the WGA Chairperson possible alternatives and procedures to register the domain name. This information would then be forwarded to the hosting country to proceed with the registration.

18. Finally all those countries that had yet to submit to the Secretariat the agreed initial information to feed into the system were kindly reminded to do so as it would be used by the system developers when designing the system. So far only Oman and Qatar had collected and submitted the information. The document requesting the type of information to be collected by the WGA Focal Points is attached for reference to this report in Appendix G.

AQUACULTURE LEGAL AND POLICY FRAMEWORK PROJECT PROPOSAL

19. The Secretariat presented a summary on the preparation and progress with regards to the finalization of the project proposal to strengthen the legal and policy framework of aquaculture in the region on the basis of document RECOFI:WGA/II/2005/4. The project proposal was formally presented at the Third session of the Commission in Doha, Qatar (9–

11 May 2005) at which time it was agreed that all RECOFI members would submit their comments and suggestions to the Secretariat and to explore possibilities of funding the project through alternative sources including a Unilateral Trust Fund (UTF) arrangement in view of the limited resources available by FAO.

20. Since the last session of the Commission only the Governments of Bahrain and Oman provided comments on the proposal. However, these were minor and the proposal essentially remained that was submitted to the members of the Commission in Doha. Some WGA Focal Points informed that the proposal was not provided to them following the last session of Commission and therefore the Secretariat provided again hard and electronic copies of the document. The final draft of the project proposal is attached as Appendix H to this report.

21. As no follow-up had been undertaken with regards to exploring alternative funding sources of the proposal, the Secretariat invited the WGA Focal Points to discuss the matter at the Meeting. The WGA Chairperson put forward the idea that all RECOFI members could contribute to an equal part of the estimated project proposal sum or alternatively to investigate the possibility of having the project financially supported by the private sector. The experts endorsed the suggestion made and agreed to explore such possibilities at the national level by contacting the relevant authorities and to report to the WGA Chairperson of the outcome.

22. Following the request from the WGA Focal Points it was further agreed that the RECOFI Secretary would send an official letter to the relevant ministries of all the RECOFI countries inviting them to consider the project cost-sharing proposal discussed by the WGA. This letter would be duly copied to all WGA Focal Points for their reference and follow-up.

23. Furthermore it was agreed that the Secretariat would approach the Gulf Cooperation Council (GCC) as well as other donors in the region (e.g. Kuwait Fund for Arabic Economic Development, Islamic Development Bank, Abu Dhabi Fund for Development, Saudi Fund for Development) in close consultation with the Chairperson of the WGA.

24. The experts fully recognized and acknowledged that timely follow-up actions would be required to move ahead with the activity and not to wait for the next WGA meeting to report on actions taken by each RECOFI member.

INTRODUCTION OF EXOTIC SPECIES IN THE RECOFI REGION

25. The WGA Focal Points agreed that a regional approach for the responsible use and control of alien species in aquaculture and fisheries is required recognizing, however, that the introduction of certain species in the region (e.g. tilapia and gilthead seabream) have contributed to the growth of the regional aquaculture industry.

26. The Technical Secretary reported on recent international actions involving FAO and other organizations such as the Network of Aquaculture in Asia and Pacific (NACA) and International Union for the Conservation of Nature and Natural Resources (IUCN) with regards to the preparation of specific technical guidelines for the control and responsible use of alien species in fisheries and aquaculture. It was further indicated that the guidelines would have no formal status and that they are intended to be eventually used on a voluntary basis and support the implementation of the Code of Conduct for Responsible Fisheries (CCRF).

27. The WGA reviewed and endorsed the structure of the technical guidelines included in document RECOFI:WGA/II/2005/5. The key elements to be included in such technical guidelines appear in Appendix I. The experts at the Meeting urged FAO to produce the guideline for use in the RECOFI region at the earliest and possibly before the next session of the Commission planned to take place in May 2007.

28. The WGA Chairperson invited all RECOFI countries to inform all members of the Commission on intentions to introduce alien species and to follow the precautionary approaches and guidelines referred by the Convention on Biological Diversity (CBD), the CCRF (see Articles 2f, 2g and 7.2.2d) and the International Council for the Exploration of the Sea (ICES) Code of Practice on the Introduction and Transfers of Marine Organisms.

29. With regards to the country Database on Introductions of Aquatic Species (DIAS) printout, circulated by the Secretariat at the meeting, it was noted that some of the information in such documents was inaccurate or missing. It was agreed that the Technical Secretary would check with the responsible officer in FAO Headquarters to ensure that the information provided in the DIAS Aquatic Species Introduction Reports submitted by the RECOFI WGA Focal Points was duly entered in the database. The countries furthermore requested for FAO to submit to the WGA Chairperson updated and corrected DIAS printouts for all RECOFI countries.

30. All WGA Focal Points were invited to eventually submit new or missing information related to the introduction of exotic species once they had received the updated DIAS printout for their respective country. The experts were provided with copies of the form to report on species introduction and informed that it can also be downloaded from the FAO Web site from the following address http://www.fao.org/fi/figis/introsp/Input_form.doc.

WORKSHOP ON MARINE STOCK ENHANCEMENT AND ARTIFICIAL REEFS

31. The status on the activities related to marine stock enhancement and artificial reefs in the region was discussed by the WGA as requested by the Commission at its third session in Doha. The Focal Point for Qatar mentioned that the Supreme Council of Environment and the Qatar University have started working on concrete artificial reefs placed in sandy bottoms and that the monitoring programme was continuing. Mr Saif briefly reported on the difficulties in monitoring the restocking activities of *Metapenaeus semisulcatus* in the waters of Kuwait.

32. The WGA Chairperson reminded the experts that at the last session of the Commission Bahrain had accepted hosting a technical meeting on the subject matter. It was noted that even though only some of the countries have started such activities, all agreed on the importance of this issue in light of dwindling fisheries resources. It was also noted that the two activities may have a shared jurisdiction by both aquaculture and fisheries. The discussion also considered the possibility of splitting the two subjects and concentrating on the stock enhancement issue.

33. It was decided to proceed with preparations for an ad hoc meeting on both issues to be held in Bahrain in early September 2006 following the FAO COFI Sub-Committee on Aquaculture (New Delhi, India, 4–8 September 2006). It was further agreed that the meeting would be held back-to-back with the Third meeting of the WGA. The Chairperson and the Technical Secretary of the WGA were requested to prepare the agenda for this technical meeting and the terms of reference for selected international experts to be invited. The cost of

participation of technical experts would be investigated in due course. Options included participation from FAO experts and private companies engaged in these technical areas.

RECOFI WORKING GROUP ON AQUACULTURE FOCAL POINTS

34. The WGA Chairperson stressed the importance of each country appointing a Focal Point and his/her alternate and to ensure the attendance of the WGA meetings by the same experts so as to ensure the positive influence on the effectiveness of such meetings. It was also noted that a number of countries had made their official appointments. The experts from Kuwait and Iraq were requested to follow-up with their nominations for both posts with the RECOFI Secretariat. Saudi Arabia and Iran (Islamic Republic of) were requested to nominate their Alternate Focal Point. The Focal Point of the United Arab Emirates presented the nomination of his Alternate at the meeting (Mr Thomas Cherian).

35. All participants were requested to send their official nominations in writing to the RECOFI Secretariat and the WGA Chairperson along with their address and full contact details. Furthermore, the WGA Chairperson suggested that the Alternate Focal Points would not be required to participate in the meetings of the WGA, but would need to be fully informed on the activities, recommendations and actions taken by the Working Group.

DATE AND PLACE OF THE THIRD MEETING

36. It was agreed that the Third meeting of the WGA would be held in Manama, Bahrain, in September 2006 back-to-back with the technical meeting on marine stock enhancement and artificial reefs. The WGA Focal Points would be approached in due course by the Chairperson to fix the exact dates.

OTHER MATTERS

37. The Technical Secretary presented options of the new RECOFI logo developed and modified following the discussions held during the First WGA meeting held in Manama, Bahrain (18–20 April 2004). The new logo included a map of the RECOFI region with both Gulfs clearly visible. It was agreed that only one logo should exist for the Commission rather than separate ones for the Commission and its working groups. The WGA experts voted for the logo (Logo “A”) which has the outer ring text on a white background. It was nevertheless decided to make a few minor colour grading alterations and present both versions to the next Commission session for formal adoption. The logos appear in Appendix J.

38. With specific regards to the preparation of the National Aquaculture Sector Overviews (NASOs) for all RECOFI members, the WGA Chairperson informed all Focal Points that the FAO Inland Water Resources and Aquaculture Service (FIRI) is reviewing the documents and may forward them back to the authors for further data and information inputs if required. The experts were invited to take immediate action upon receipt of the documents and to return them to FAO with the missing and corrected information. The group was further informed that once the NASOs contained all the required information they would be properly edited, translated in the five official languages of FAO, placed on the FAO Web site and eventually on the RAIS Web site when available.

39. The WGA Chairperson invited the FIRI Aquaculture Information Officer (Mr Valerio Crespi) to provide an updated list on the preparation of the NASOs for the region so that he could assist with follow-up actions with the different Focal Points.

40. In view of an increase need to strengthen regional aquaculture cooperation and information exchange, the WGA expressed the importance to tie links with other organizations engaged in the sector. The experts invited the WGA Chairperson and Technical Secretary to specifically contact NACA to explore grounds for future collaboration particularly in the area of technical training. Learning and exchanging knowledge on progress made on grouper culture in South East Asia was one example raised by the group.

41. The expert from Oman highlighted the importance to exchange among the RECOFI members information of new research projects and publications in order to assist the countries to establish joint research activities and sharing of results. In this regard, the importance of promptly establishing the RAIS was reinforced. The Focal Point of Iran (Islamic Republic of) encouraged seeking training exchanges through the FAO Technical Cooperation among Developing Countries (TCDC) mechanism.

42. The WGA Focal Point of Qatar delivered a presentation on the establishment of the new Aquaculture Centre providing details on all sections of the future centre. The centre will provide technical and training assistance to the private sector so as to encourage the sector to grow as well as to produce fingerlings for restocking programmes.

43. A field visit to the Marine Sciences and Fisheries Centre (MSFC) and Fish Quality Centre was organized by the WGA Focal Point of Oman. The MSFC was established in 1986 mainly to investigate the spawning season of commercially important species and for conducting stock assessments and aquaculture farming activities. The centre is working with a number of species including abalone (*Haliotis mariae*), the exotic Gilthead seabream (*Sparus aurata*) and yellow tail tuna. The centre also studies traditional fishing gear and boats and carries out project to improve their efficiency and selectivity. The FQC was established under a cooperation agreement with the Japan International Cooperation Agency (JICA) and is engaged in assuring the quality of fish exports mainly to the European markets.

44. The WGA requested the Secretariat to publish the report of this meeting along with the previous meeting reports related to the activities of the RECOFI WGA as a FAO Fisheries Report.

45. The Secretariat staff, on behalf of all the RECOFI WGA experts, expressed their appreciation to the Government of the Sultanate of Oman for hosting the Second meeting of the RECOFI WGA and for its hospitality and excellent facilities and services provided.

ADOPTION OF THE REPORT

46. The Chairperson thanked all participants for their hard work in finalizing the objectives of the Working Group and adjourned the meeting. The Report was subsequently adopted through email exchanges on Thursday 22 December 2005.

Agenda

1. Opening of the Meeting
2. Adoption of the Agenda and Meeting arrangements
3. Progress with regards to the establishment of the RECOFI Regional Aquaculture Information System
4. Progress with regards to the finalization of the project proposal to strengthen the legal and policy framework of aquaculture in the RECOFI region
5. Introduction of exotic species in the RECOFI region
6. Proposal for the regional workshop on marine stock enhancement and artificial reefs
7. Nomination of the RECOFI Working Group on Aquaculture Focal Points and Alternates Focal Points
8. Other matters
9. Date and place of the third meeting of the RECOFI Working Group on Aquaculture
10. Adoption of the Report

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List of documents

RECOFI:WGA/II/2005/1	Annotated Provisional Agenda
RECOFI:WGA/II/2005/2	Draft regional review of the status and trends of aquaculture development in the Near East and North Africa
RECOFI:WGA/II/2005/3	Progress with regards to the establishment of the RECOFI Regional Aquaculture Information System (RAIS)
RECOFI:WGA/II/2005/4	Progress with regards to the finalization of the project proposal to strengthen the legal and policy framework of aquaculture in the RECOFI region
RECOFI:WGA/II/2005/5	Elements of technical guidelines for the control and responsible use of alien species in fisheries and aquaculture
RECOFI:WGA/II/2005/6	Proposed RECOFI logo
RECOFI:WGA/II/2005/Inf.1	Provisional List of Documents
RECOFI:WGA/II/2005/Inf.2	Provisional List of Participants
RECOFI:WGA/II/2005/Inf.3	Report of the First RECOFI Working Group on Aquaculture Meeting (Manama, Bahrain, 18–20 April 2004)
RECOFI:WGA/II/2005/Inf.4	Report of the Third Session of the Regional Commission for Fisheries (Doha, Qatar, 9–11 May 2005)

Opening statement
by
Dr Ahmed Hareb Al-Hosni
Assistant Director-General Fisheries Research and Extension
Directorate General of Fisheries, Ministry of Agriculture and Fisheries
Sultanate of Oman

Distinguished FAO experts, delegates from RECOFI Member countries and Yemen:
A'Salaam Alaikum.

At the very outset, on behalf of the Government of Sultanate of Oman, I would like to welcome all delegates of the RECOFI Member countries participating in this meeting. I would like to also convey to you the regards from H.E. Salim bin Hilal Al-Khalili, Minister of Agriculture and Fisheries. He wishes you all a very successful meeting.

Aquaculture is recognized as an important and growing sector which provides food, income and job opportunities. RECOFI Member countries fully realize the importance and are committed to develop this sector in a sustainable manner. The total aquaculture production in the RECOFI region increased from 32 234 tonnes in 1994 to over 106 400 tonnes in 2003 with a value increase from US\$77.2 million to US\$283 million in the same period.

The development of aquaculture in the RECOFI area varies from one member country to another in terms of commercial production and research. Therefore, the Commission at its Second session held here in Muscat in 2003 approved the establishment of this Working Group on Aquaculture (WGA) so as to play a vital role in increasing the cooperation between members in the field of aquaculture.

This was reflected at the First meeting of the WGA in the Kingdom of Bahrain in April 2004, where two important projects were proposed. These were the establishment of Regional Aquaculture Information System (RAIS) and a project on strengthening the legal and policy framework of aquaculture in the RECOFI area. We hope this meeting in Muscat will finalize these important projects which will significantly add to the development process of the sector.

The WGA provides opportunities for aquaculture officers from RECOFI members to meet regularly and discuss joint issues and obstacles facing the development of aquaculture in the area and sharing information and experiences.

Distinguished delegates, the Ministry of Agriculture and Fisheries, while hosting this meeting, wishes you all fruitful discussions and the deliberation of appropriate recommendations to ensure an increasing regional cooperation in the aquaculture sector. It is expected that this industry will play its role in developing the economics of the RECOFI members and in contributing towards food security in the region.

Finally, both personally and on behalf of my colleagues in the Ministry of Agriculture and Fisheries, we wish you a good stay in Oman and good wishes for a successful meeting.

Thank you.

**Decisions and recommendations of the
third session of the Regional Commission for Fisheries
(Doha, Qatar, 9–11 May 2005)**

CAPTURE FISHERY STATISTICS IN THE RECOFI AREA

1. The Commission stressed the need for *continuing improvement of the disaggregation by species* of capture reported data.
2. The Commission stressed the need for *continuing technical assistance from FAO* to enable standards of data collection and reporting within the Commission region to be raised.
3. The Commission recalled that the *deadline to submit the calendar year data* is the *end of August* of the subsequent year.
4. Several delegates requested *FAO to help in improving the quality of fisheries data* that are collected through development of harmonized methods.

AQUACULTURE IN THE RECOFI AREA

5. The *RECOFI Aquaculture Information System (RAIS) format* was accepted and the Commission strongly recommended going *ahead with this project*.
6. The *Country hosting the RAIS Regional Centre* would provide the budget required for the development of the system.
7. Regarding hosting, *Kuwait is requested to take a final decision not later than the end of July 2005*. In case of a negative decision it was agreed that the Islamic Republic of Iran would host and fund the system.
8. The Commission agreed that *RECOFI RAIS should be developed by FAO* as soon as the necessary funds would be made available by the country hosting the Regional Centre.
9. Regarding the project proposal to *strengthen the legal and policy framework for aquaculture* in the RECOFI area, it was agreed that *all RECOFI members will submit their comments and suggestions to FAO* through the Secretariat within one month following the Session, after which FAO will finalize the project proposal.
10. The Commission acknowledged the offer made by Oman to host the regional workshop referred to in the project proposal.
11. The *Member countries* were invited to *explore other possibilities of funding* the project.
12. The Commission decided to *refer the issue of the introduction of exotic species by individual countries to the WGA* for further study and discussion.

REGIONAL ISSUES OF CONCERN

13. The Commission agreed on the *need to strengthen cooperation with regards to aquaculture development* in the region. The Commission agreed that *the issues related to*

marine stock enhancement and artificial reefs should be further discussed within the terms of references of the WGA.

14. The Commission welcomed the proposal of Bahrain to host an ad hoc meeting of WGA. The Commission noted that the presence of international experts should be appropriated.

15. The delegate of UNEP noted the concerns of his organization with regard to the health of the marine habitats and ecosystems and stated that UNEP is ready to assist with any regional action programme to be developed.

16. The Commission agreed to have country reports prepared with concepts relating to regional issues and to be presented at the sessions of RECOFI.

PROGRAMME OF WORK AND BUDGET

17. The Commission agreed to *adopt the estimated budget of Programme of Work.*

18. *The Secretary is requested to update the budget continuously (each three month) and inform all Member countries on any changes.*

19. The Commission agreed that, for future, *the Secretary should prepare a full and comprehensive financial report including statement from the previous biennium.*

ANY OTHER MATTERS

20. The Commission *supported the initiative for the developments of the National Aquaculture Sector Overviews (NASOs) and the Prospective Analysis of Future Aquaculture Development (PAFADs).*

21. Member countries agreed to *submit by the 31 July 2005 information on the national aquaculture sector* according to the distributed Terms of Reference.

22. The Commission *welcomed the proposal of organizing a regional workshop* to review and discuss this information. The workshop should be held *back-to-back with the next meeting of the Working Group on Aquaculture.*

23. The Commission agreed that *Working Groups could meet more* during the intersessional period.

24. The Commission agreed that *the next WGA meeting will be held at the end of November 2005.*

25. The Commission requested the *Kingdom of Saudi Arabia to confirm* its interest on hosting the next WGA meeting *before the end of May 2005.* In case a positive confirmation is not received the meeting will be hosted by Oman.

26. *All members are requested to confirm the WGA Focal Point and to nominate an alternate* to replace the Focal Point when absent.

DATE AND VENUE OF THE FOURTH SESSION

27. The Commission agreed to hold the *fourth session of RECOFI in the Kingdom of Saudi Arabia during the second week of May 2007.*

Estimated cost and timeframe for the development of RAIS

The present document (sent to the RECOFI Secretary on 4 July 2005) was prepared following a request from the RAIS hosting country on details of the proposed budget expenditures for the development of the information system.

Personnel Services (US\$30 000)

FAO-FIRI contribution

Aquaculture Information Officer – The FAO FIRI Aquaculture Information Officer will be the Focal Point between the RECOFI Member countries and the Web developers. He will coordinate the work, assisting the Regional Centre in validating the documents to be sent by the RAIS Focal Points (FAO's contribution – not included in the amount indicated).

Contribution by the RAIS funding country

Task force team – The development of RAIS will require:

- 2 Web developers for three (3) months
Estimated budget: US\$3 000/month/person. Total: US\$18 000
- 1 database administrator for one (1) month
Estimated budget: US\$2 000/month/person
- 1 Web designer for one (1) month
Estimated budget: US\$4 000/month/person
- Preparation of detailed training material and technical documentation
Estimated budget: US\$3 000

Contribution by the RECOFI Secretariat

Official travel – Duty travel of one developer to Kuwait. He will present the RAIS Web site and will assist the Regional Centre in understanding all the functionalities and technical characteristics of the information system. Travel costs and per diem will be covered by the RECOFI Secretariat in Cairo, Egypt.

Training of the staff of the Regional Centre in Kuwait on the structure/architecture of the RAIS Web site; Web server access procedures; administration procedures, etc. Three days training (estimated cost: US\$3 000).

Installation – Domain registration and installation in a local server (not included in the costs). The domain registration should be done by the Regional Centre in a local server in Kuwait. Detailed technical characteristics needed for the Web site hosting are provided below.

RAIS SERVER – General features

	Slight	Fair/Good	Good	Excellent	Best
Processor	Celeron 2.0 GHz 128k cache	P4 1.6 Ghz 256k cache	P4 2.4 Ghz 512k cache	P4 2.4 Ghz 512k cache HD 2x 40GB U.ATA 100 Raid 1	Dual Xeon 1.8 Ghz 512k cache (or superior) HD 2x36GB SCSI 160 Raid 1 (Mirroring)
Ram	256Mb	512Mb	512Mb	1Gb	1Gb
IDE/SCSI	IDE	IDE	IDE	IDE	SCSI
Raid 1	No	No	No	Yes	Yes
Raid 5	No	No	No	No	No
Hard Disk	40Gb	60Gb	80Gb	40Gb	36Gb
Motherboard	Intel	Dell or Hp	Intel	Dell or Hp	Dell or Hp
CD-Rom	Yes	Yes	Yes	Yes	Yes
Floppy	Yes	Yes	Yes	Yes	Yes
Double Power Supply	No	No	Yes	Yes	No

Accessibility Internet/Software, general:

Accessibility:

Fireline band (connectivity)

Band (band used by consume)

These vary according to the forecasted flux of users, more is the number of accesses and more powerful the band is.

Software

A strong FIREWALL and an efficient ANTIVIRUS, is suggested.

Contents of the RAIS

The following items will be developed and included in the RAIS Web site architecture. The system will include ad hoc ASP submission forms that will allow users to immediately forward new information to the RAIS administrators at the Regional Centre who will validate and place the information on-line.

1. The **entry page** should be attractive as much as possible using a visible and rational Web design (e.g. colours, font, logo). An *introductory page* will be prepared to explain the scope and activities of the network and the role of the information system.
To be prepared by the Secretariat
2. A page with the **RAIS components and locations** will be developed. In this page the list of the RECOFI Member countries, national centres details, focal point names and addresses, and regional centre team and address will be provided¹.
To be provided by the RECOFI WGA Focal Points
3. Directory of **National Aquaculture Sector Overview (NASO)** for each country. NASO is a concise and comprehensive product that gives a general overview of the aquaculture and culture based fisheries aspects in the country.
To be provided by the RECOFI WGA Focal Points
4. Directory on **annual aquaculture statistics** (total production volume, in tonnes and value in US\$), grouped under *species*, *farming system* and *areas* (marine, brackishwater, freshwater). The statistics will be provided by each Member country in form of excel tables to the Regional Centre.
To be provided by the RECOFI WGA Focal Points
5. Directory of **aquaculture experts** includes the list of regional experts by country with their address and field of expertise.
To be provided by the RECOFI WGA Focal Points
6. Directory of **production centres** provides the list of all producer companies (from public or private sector) in each country with the name, address, cultured species, technology and type of products produced.
To be provided by the RECOFI WGA Focal Points
7. Directory of **suppliers** of equipment for aquaculture: the list of all supplier companies (from public or private sector) in each country with the name, address and speciality of supplier (e.g. feeding equipment, cages, nets, chemical analysis).
To be provided by the RECOFI WGA Focal Points

¹ The following information is to be provided by the WGA Focal Points: *Name of the Institute* (Name of the institute where the WGA Focal Point is based); *Photo of the Institute*; *Full mailing address of the Institute* (name, street, zip code, city, country); *Names and addresses of the WGA Focal Points and Alternative Focal Points*; *Location* (Describe where the institute is located and how to reach it from the main airport); *Overview* (Describe the mandate of the Institute and main ongoing activities); *Staff* (Numbers and profile of people working at the Institute – e.g. scientific, technical, administrative personnel); *Facilities* (Description of the main facilities of the *institute* – e.g. hatcheries, laboratories, vessels).

8. Directory of **research institutions** contains an exhaustive and updated list of the existing research institutions in the region. Name, specialization, main research activities and address are provided.
To be provided by the RECOFI WGA Focal Points
9. Directory on **aquaculture laws and regulations** contains comparative national overviews (template already provided) of laws and regulations that are relevant to aquaculture.
To be provided by the RECOFI WGA Focal Points
10. **Research and development programmes.** A directory in which all the past and ongoing research and development projects dealing with aquaculture in the region are stored. For each project a half page summary will be provided including: title, objectives, expected outputs (if ongoing) or main results (if closed).
To be provided by the RECOFI WGA Focal Points
11. **Photo gallery.** A photo gallery will be developed for storing and searching high quality and relevant photos of regional aquaculture.
Photos to be provided by the RECOFI WGA Focal Points
12. A **virtual library** will be developed for storing and providing rapid online search of relevant documents (in PDF; .doc; html) on aquaculture.
Documents to be provided or suggested by the RECOF WGA Focal Points
13. The page “**Links**” provides useful national and international links dealing with aquaculture. Private sector Web site addresses will be included in a separate page.
Links to be provided and suggested by the RECOFI WGA Focal Points
14. **Viewers’ inputs** page. Through online submission forms users may submit information relevant to the RECOFI area for inclusion in the RAIS Web site particularly new items, suggested Web links, publications, photographs, names of aquaculture experts, names of aquaculture suppliers, aquaculture production centres and research institutions. All items will be cleared by RAIS Regional Centre before they are posted on the Web site.
Information to be continuously provided by the WGA Focal Points and external users

RECOFI legal and policy framework project proposal

Region:	Near East
Countries:	Bahrain, Iran (Islamic Republic of), Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.
Project Title:	Strengthening the legal and policy framework for aquaculture development in the RECOFI Member countries.
Starting Date:	January 2006
Completion Date:	June 2007
Government Ministry responsible for project execution:	The Ministries responsible for fisheries and aquaculture of the participating countries
FAO Contribution:	US\$157 700 (tentative)

Signed:

(on behalf of Government)

Signed:

Jacques Diouf
 Director-General
 (on behalf of FAO)

Date of Signature:

Date of signature:

I. BACKGROUND AND JUSTIFICATION

By Agreement of 11 November 1999, the Kingdom of Bahrain, the Islamic Republic of Iran, the Republic of Iraq, the State of Kuwait, the Sultanate of Oman, the State of Qatar, the Kingdom of Saudi Arabia and the United Arab Emirates established the Regional Commission for Fisheries (“RECOFI” or “the Commission”) within the framework of FAO. One aim of the Commission is to promote the sustainable development of aquaculture in the Gulf, being the water resource shared by all the RECOFI member countries. In addition, marine aquaculture is conducted in the Red Sea (Saudi Arabia) and the Gulf of Oman and the Arabian Sea (Oman).

Recognizing the growing importance of aquaculture in the region, the Commission – during its Second Session from 18 to 21 May 2003 in Muscat, Sultanate of Oman – established the Working Group on Aquaculture (WGA) with a mandate focusing on marine and brackish water aquaculture. The Commission identified the collection of laws and regulations from all RECOFI Member countries and a comparison of the degree of development among the countries as priority activities for the WGA. The aim is for an external evaluation of the existing legislation, highlight improvement areas, where needed, and make recommendations on common regulations that could be adopted at a regional level. During its first meeting from 18 to 20 April 2004 in Manama, Bahrain, the WGA further discussed the level of development of aquaculture legislation among the RECOFI Member countries. Upon recommendation of the WGA, a preparatory mission was conducted in March 2005 with the assistance from FAO to Bahrain, Oman and Saudi Arabia with the objective of developing a regional Technical Cooperation Project (TCP).

There are currently more than 120 million people living in the sub-region, with Iran (Islamic Republic of) accounting for over 67 million, Iraq for over 23 million and Saudi Arabia for over 22 million people. Whereas the total production from capture fisheries in the RECOFI Member countries has been relatively constant over the last decade at around 680 000 (tonnes) per year, aquaculture production has increased rapidly from a total production of 39 870 (tonnes) in 1999 to 108 059 (tonnes) in 2003, representing an average annual increase of 28.3 percent. Although inland production accounts for over 80 percent of the total aquaculture production, the fastest growing sector is the mariculture sector, accounting for nearly 20 percent of aquaculture production in 2003. The large majority of this production consists of Indian white prawn (*Penaeus indicus*) with Saudi Arabia and Iran (Islamic Republic of) being the major producers. In addition, mariculture production of gilthead seabream (*Sparus aurata*), European seabass (*Dicentrarchus labrax*) and the native sobaity seabream (*Sparus hasta*) has increased in recent years, with more countries in the region reporting production.

At present, the aquaculture sector still only represents 13.6 percent of the overall fish production in the sub-region compared to the average 31.9 percent for global aquaculture production². In many countries, however, there are good opportunities for marine aquaculture and, accordingly, governments have placed priority on the development of this sector. Due to population growth and local stocks coming under pressure from both changing environmental conditions and overexploitation, some countries are primarily interested in supplementing local supplies from capture fisheries. Attracted by the increasing price of fish and shrimp, others are also interested in exporting farmed products. The growing sector also provides new employment opportunities. Private investment is encouraged in some countries and many applications to set up and operate aquaculture farms are currently under review of the relevant authorities, in particular in Oman and Saudi Arabia.

With few exceptions, the existing legislative arrangements for marine aquaculture in the region are uncertain and inappropriate, which seriously hinders the sustainable development of the sector. There is a general need to streamline authorization processes for the establishment and operation of aquaculture farms, including specification of standard terms and conditions related to submission and reporting of information, payment, duration, suspension and renewal of authorizations, as well as other rights and obligations of authorization holders. Streamlining authorization processes also includes identification of

² Including fish, crustaceans and molluscs but excluding aquatic plants, of which there is no production in the RECOFI member countries.

sites suitable for marine and brackish water aquaculture and integration of the sector into resource and development planning.

There is increasing concern in the sub-region about the environmental impacts of marine and brackish water aquaculture. This includes the discharge of wastewater and the increasing use of chemicals and drugs in the industry causing pollution and contamination of the aquatic environment. Another potentially serious effect on the environment is the introduction of exotic or non-indigenous species by individual countries, which could impact the entire region. Closely related to the introduction of exotic species is the introduction and use of aquatic GMOs. Although some countries require an environmental impact assessment to be carried out as a precondition before setting up and operating major development projects, there are no specific procedures and guidelines available for the establishment and operation of aquaculture farms.

There is a need to introduce and harmonize legislation dealing with aquatic animal health certification and quarantine measures to facilitate regional trade in living aquatic animals, while minimising the risk of spreading diseases. An effective system of health certification and quarantine measures based on risk analysis will also increase protection of surrounding resources, in particular protection of the environment and native faunas from the deleterious impacts of exotic species or diseases. In addition, legislation should be developed to control the spread of infectious diseases within the countries. This includes, *inter alia*, provisions to regulate the movement of living aquatic animals between farms, disease reporting requirements, installation of surveillance systems, contingency planning and approval of chemicals and veterinary drugs to be used in aquaculture.

The quality and safety of aquaculture products is another area of concern. Some countries in the region have adopted specific standards, including the introduction of the Hazard Analysis and Critical Control Point (HACCP) system, for products intended for export to the European Union, amongst others. In other instances, however, adequate quality and safety standards and requirements related to food hygiene, labelling, additives and residues of chemicals and veterinary drugs are virtually non-existent. Additionally, there are no specific restrictions upon the kinds and amounts of feed that may be used in aquaculture. Introduction and harmonization of quality and safety standards across the region would not only increase the quality and safety of aquaculture products but also facilitate regional trade.

Effective monitoring and law enforcement is critical if aquaculture management objectives are to be achieved. To this end, the RECOFI Member countries are required to establish appropriate monitoring procedures and introduce measures to sanction infringement of relevant laws and regulations. At present, however, monitoring and enforcement is a weak link in all countries. Although in many instances this is also due to budget restraints and insufficient staff, monitoring and enforcement provisions are often inadequate and should be improved. This includes the obligation of the farmer to keep records and submit periodic monitoring reports, as well as having adequate sanctions in place, including fines and/or imprisonment, suspension or revocation of licenses, temporary or permanent closure of aquaculture facilities and payment of compensation for damage caused to the environment.

Aquaculture is traditionally affected by a variety of issues and hence regulated under a wide range of legislation that is not necessarily specific to aquaculture. Varying from country to country, aquaculture can be affected by land and water laws, environmental legislation, regulations on chemicals and veterinary drugs, animal health legislation and food safety laws,

amongst others. Another complicating factor is that the applicable laws and regulations are often administered and enforced by different government departments and agencies. Despite these limitations, however, aquaculture legislation across the globe has developed some commonality in terms of approach and the required minimum elements for its sound management. Increasingly, issues such as authorization and access, planning and management and the many environmental impacts of aquaculture are dealt with in a more consistent manner and captured in a single aquaculture law or regulation.

In other parts of the world, the rapid and largely unregulated expansion of marine and brackish water aquaculture has already led to serious health, environmental and social problems. With the sector in the region still being in an early start-up phase, the development and circulation of a basic set of model aquaculture legislation will help anticipate these problems in time and provide the necessary legal basis for the implementation of aquaculture policies and the application of best management practices. The basic set of legislation will lay down the required minimum elements for sound aquaculture management, while taking into account and building on the FAO Code of Conduct for Responsible Fisheries and other relevant international instruments. A regional approach towards strengthening the legal framework for aquaculture is particularly opportune since it will lead to harmonization of laws and regulations across the region, and thus facilitate regional trade in living aquatic animals and aquaculture products. Moreover, in the present environment of shrinking resources not all countries in the region have similar access to the international and individualized advice and consultation that is required in order to independently update their national legal frameworks.

Although there is great value to the development and circulation of a basic set of model aquaculture legislation, it will, however, still require work at the national level to tailor the model to national circumstances, especially where the aquaculture area is rife with overlaps and gaps among responsible authorities. In order to facilitate implementation of the proposed legislation at the national level, the project includes the preparation of a set of drafting guidelines or explanatory notes, recommendations towards enhancing aquaculture policy/planning and management, as well as technical assistance on issues that require a harmonized approach, including the establishment of aquatic animal health certification and quarantine inspection systems and the development of procedures for the quality and safety of aquaculture products. On conclusion of the project, the Governments will consider follow-up projects and seek further support for implementation of the proposed legislation leading to the achievement of the project objectives.

The Governments of the participating countries fully recognize the urgent need to strengthen their aquaculture legal framework to ensure that the sector develops in a sustainable manner. Through this project FAO, which is well known for having a strong record in strengthening aquaculture legal frameworks across the globe, will help addressing this urgent need and contribute to the sustainable development of aquaculture in the region, in accordance with the widely accepted FAO Code of Conduct for Responsible Fisheries. Although the focus of the project will be on developing legislation for marine and brackish water aquaculture, coverage of inland water aquaculture issues of regional concern will not be excluded since elements of the proposed legislation will be applicable to inland aquaculture as well. By assisting the participating Governments in developing and implementing aquaculture legislation, the project will serve as a catalyst for aquaculture sector development in the region and help increase the future contribution of the sector to the economy and food security. The project will also encourage the Governments to strengthen regional cooperation and establish links

with ongoing initiatives in regional organizations, such as the Gulf Cooperation Council (GCC) and the Regional Organization for the Protection of the Marine Environment (ROPME) with a view to ensure synergies and establish a basis for concerted follow-up actions.

II. OBJECTIVES OF THE ASSISTANCE

The overall objective of the assistance is to strengthen the aquaculture sector of the participating countries and to increase its contribution to the economy and food security by providing a basic set of model aquaculture legislation, including drafting guidelines and other technical assistance and support for its implementation at the national level. This will enable the Governments of the participating countries to develop and manage aquaculture in a sustainable manner.

III. PROJECT OUTPUTS

The project outputs are the following:

1. A systematic and comparative review and analysis of existing aquaculture legislation of the participating countries.
2. A basic set of model aquaculture legislation, including, as appropriate, regulations.
3. Drafting guidelines for implementation of the proposed legislation at the national level.
4. Recommendations towards enhancing aquaculture policy/planning and management.
5. Increase the capacity of the participating countries' institutions responsible for aquaculture management to develop and implement aquaculture policy and legislation.
6. Improved awareness and better understanding by aquaculture staff and other stakeholders of aquaculture policy, management and legislation through public consultations and a regional workshop.
7. Publication of the basic set of model aquaculture legislation and the drafting guidelines as a FAO publication for wider distribution and use.

IV. WORK PLAN

The expected time frame for project implementation is 18 months. It is essential that the project starts not before 1 January 2006 since Ramadan (i.e. the ninth month on the Islamic calendar during which Muslims fast) takes places from 4 October to 3 November 2005 and many government staff are on leave in the period thereafter. An additional advantage of this time frame is that the first mission under the project will be carried out during winter/spring 2006 and the regional workshop will take place during winter/spring 2007 when temperatures in the region are generally pleasant.

At the start of the project, the following proposed work plan will be reviewed by the Team Leader and updated as necessary:

Month 1:

- Identification and recruitment of the project experts, and identification of the National Project Coordinators.

Month 2:

- National Project Coordinators of Iran (Islamic Republic of), Kuwait, Qatar and United Arab Emirates start collecting relevant documents and other information related to aquaculture policy, management and legislation.

Months 3–4:

- First mission by the Legal Expert, the Aquaculture Expert and the Aquaculture Policy Expert to Iran (Islamic Republic of), Kuwait, Qatar and United Arab Emirates to review existing aquaculture legislation, functions and structures of aquaculture management institutions, existing aquaculture policies and development plans, and the overall national development objectives. Discussions will be held with representatives of relevant ministries and government authorities, as well as the private sector, NGOs and other aquaculture interest groups, if appropriate³.

Months 5–6:

- The Legal Expert, the Aquaculture Expert and the Aquaculture Policy Expert will prepare a report with the review's findings and conclusions, taking into account and integrating the findings and conclusions of the preparatory mission.
- The Legal Expert will make a systematic and comparative review and analysis of existing aquaculture legislation of the participating countries and a basic set of model aquaculture legislation, including regulations, as appropriate, as well as drafting guidelines for implementation of the legislation at the national level.

Months 7–10:

- The experts' report, the basic set of legislation and the drafting guidelines will be circulated for review and comments through the National Project Coordinators of each participating country among all concerned institutions/stakeholders, and among the other project experts involved.

Months 11–14:

- A one-week regional workshop will be prepared by the project experts and officers from LEGN, FIRI and FIPP.

Months 15–16:

- The project experts will prepare a report based on the conclusions and recommendations of the workshop.
- The Legal Expert will finalize the basic set of model aquaculture legislation and the drafting guidelines, and prepare, in consultation with the other project experts, a final report with the technical outputs of the project.

Months 17–18:

- The model legislation and the drafting guidelines will be published as an FAO publication.

³ Relevant documentation and information has already been collected and reviewed, and discussions with relevant stakeholders have already been held, in Bahrain, Oman and Saudi Arabia during the preparatory mission in March 2005. A separate report contains the findings and conclusions of the preparatory mission.

Description of the workshop

A one-week regional workshop will be organized by the project experts in [*Country hosting the regional workshop*] to discuss the legal review and the basic set of model aquaculture legislation with a view to its implementation at the national level. In addition, the workshop will provide recommendations towards enhancing aquaculture policy/planning and management as well as technical assistance on issues that require a harmonized approach, i.e. the establishment of aquatic animal health certification and quarantine inspection systems and the development of procedures for the quality and safety of aquaculture products.

The workshop will be held with up to [40] participants, including the project experts and officers from LEGN, FIRI and FIPP. The workshop will be attended by the National Coordinators and by at least [2] senior Government officials from each participating country who have specific expertise in or are responsible for aquaculture policy, management and legislation. Those officials that participate and benefit from the workshop will guarantee to disseminate the information and knowledge obtained to other government staff where relevant.

In addition, relevant NGOs, private sector or industry and other interest groups will be invited to attend the workshop. Invitations will also be sent to relevant regional organizations, including, *inter alia*, the Gulf Cooperation Council (GCC), the Regional Organization for the Protection of the Marine Environment (ROPME), the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA), the Arab Organization for Agricultural Development (AOAD) and the Network of Aquaculture Centres in Asia and Pacific (NACA).

V. CAPACITY BUILDING

The project will strengthen the capacity of the participating countries to develop and implement aquaculture policy and legislation. The contributions of the project experts will provide an opportunity to evaluate and compare aquaculture policy, management and law approaches, in both the participating countries and other relevant countries. At the end of the project, countries will be better positioned to face the challenges created by their expanding aquaculture sectors.

VI. INPUTS TO BE PROVIDED BY FAO

1. Personnel

International consultants:

- One Legal Expert/Team Leader (eight weeks in two missions, including work at home base) – TOR in Annex 1
- One Aquaculture Expert (six weeks in two missions, including work at home base) – TOR in Annex 2
- One Aquaculture Policy Expert (six weeks in two missions, including work at home base) – TOR in Annex 3
- One Expert on Aquatic Animal Health Certification and Quarantine Inspection (two weeks in one mission, including work at home base) – TOR in Annex 4

- One Expert on Quality and Safety of Aquaculture Products and HACCP (two weeks in one mission, including work at home base) – TOR in Annex 5

FAO Advisory Technical Services (ATS):

- One LEGN Technical Backstopping Officer (two weeks in one mission, including work at FAO Headquarters) – TOR in Annex 6
- One FIRI Technical Backstopping Officer (two weeks in one mission, including work at FAO Headquarters) – TOR in Annex 7
- One FIPP Technical Backstopping Officer (two weeks in one mission, including work at FAO Headquarters) – TOR in Annex 8

2. Duty travel

Provision for official travel of consultants and FAO staff within the participating countries in connection with the project activities.

3. General operating expenses

General operating expenses to cover miscellaneous expenses required in the field for the operation of the project.

4. Direct operating expenses

Direct operating expenses to cover miscellaneous expenses at FAO Headquarters connected with the implementation of the project.

5. Training

One-week regional workshop in [*Country hosting the regional workshop*].

VII. REPORTING

The project experts and the Technical Backstopping Officers of LEGN, FIRI and FIPP will prepare mission reports in accordance with their respective terms of reference. At the end of the project, the basic set of model aquaculture legislation and the drafting guidelines will be published as a FAO publication for wider distribution and use.

VIII. GOVERNMENT CONTRIBUTION AND SUPPORTING ARRANGEMENTS

The Governments of the participating countries, through their Ministries responsible for fisheries/aquaculture, will be responsible for the project execution.

The Governments of all participating countries will:

- appoint, at no cost to the project, National Project Coordinators (TOR in Annex 9) in each country for the coordination of project activities;
- cover travel costs and other allowances of the National Projects Coordinators and other Government officials participating to the regional workshop.

- make available to the project experts and FAO staff all the relevant documentation and other information on aquaculture policy/planning and legislation and provide for a summary of this documentation and information in English.

In addition, the Governments of Iran (Islamic Republic of), Kuwait, Qatar, United Arab Emirates and [*Country hosting the regional workshop*] will:

- provide office accommodation and other secretarial/clerical/logistical support to the project experts and FAO staff while on mission in the countries;
- provide any permits necessary for the importation and, where appropriate, the subsequent exportation, of equipment, materials and supplies required for use in connection with the project and exemption from the payment of all customs duties or other levies or charges relating to such importation or exportation;
- exempt from the payment of sales or other tax on local purchases of equipment, materials and supplies for use in connection with the project;
- pay transport costs within the country, including handling, storage, insurance and all other related costs, with respect to equipment, materials and supplies for use in connection with the project;
- provide for the prompt issuance, free of charge, of any visas or permits required;
- provide any permits necessary for the importation of property belonging to and intended for the personal use of the project experts and FAO staff, and for the subsequent exportation of such property;
- provide prompt customs clearance of equipment, materials, supplies and property referred to above;
- assist the project experts and FAO staff, to the extent possible, in obtaining suitable accommodation.

In addition, the Government of [*Country hosting the regional workshop*] will:

- host the one-week regional workshop and in this connection provide meeting rooms and operational equipment.

The Governments of all participating countries will, on the conclusion of the project, take the necessary measures to ensure that the basis set of model aquaculture legislation is processed in an effective and expeditious manner with a view to its implementation at the national level. The Governments will consider preparation of an implementation programme of the legislation and seek support for implementation as appropriate.

IX. PROJECT BUDGET COVERING FAO INPUTS (in US Dollars)

The following costs are an estimation of the required budget covering FAO inputs. These costs may be lower if FAO decides to fund the TCP and use can be made of retired FAO experts in some instances.

TENTATIVE Budget	
Item	US\$
TRAVEL	
2-week mission of 3 experts to Iran (Islamic Republic of), Kuwait, Qatar and the United Arab Emirates.	15 000
1-week mission of 5 experts and 3 FAO Backstopping Officers to the RECOFI country hosting the final workshop.	17 000
FEES	
For a total of 168 days of consultancy	67 200
HONORARIUM ADVISORY TECHNICAL SERVICES (ATS)	
For a total of 42 days	16 500
DAILY SUBSISTANCE ALLOWANCE (DSA)	
First mission by 3 experts to the Islamic Republic of Iran (5 days), Kuwait (3 days), Qatar (3 days) and the United Arab Emirates (3 days).	10 500
During workshop for 5 experts and 3 FAO Backstopping Officers	9 500
TRAINING	
Workshop	5 000
MISCELLANEOUS	
General and direct operating expenses	12 000
Publication of legislation and guidelines	5 000
TOTAL	157 700

Notes:

TRAVEL – These are approximate calculations based on current travel prices. The travel cost of each consultant will depend on time of travel and departure point.

FEE – A flat fee of US\$400/day has been used (7 days/week)

ATS – A standard rate of US\$393/day has been used (7 days/week)

DSA – The DSA value used has been calculated as a mean of the current capital city DSA for each of the 4 countries (i.e. US\$203/day).

Project beneficiary countries will provide for travel + allowances of government staff (3/country) participating to the workshop. They will also provide secretarial and logistical support, etc., to the experts during the missions. The RECOFI country hosting the final workshop will provide the meeting rooms and operational equipment.

Annex 1**TERMS OF REFERENCE****LEGAL EXPERT (INTERNATIONAL LEGAL CONSULTANT/TEAM LEADER)**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Development Law Service (LEGN), and in close collaboration with the Inland Water Resources and Aquaculture Service (FIRI) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the other project experts, the Legal Expert will:

First mission:

- Visit Iran (Islamic Republic of), Kuwait, Qatar and United Arab Emirates and hold, in collaboration with the Aquaculture Expert and the Aquaculture Policy Expert, discussions with representatives of the relevant ministries and government authorities as well as the private sector, NGOs and other aquaculture interest groups, if appropriate.
- Collect, review and analyse first hand information on the legal framework for aquaculture, make a preliminary evaluation of its adequacy and effectiveness for the sustainable development and management of aquaculture and identify the principal needs and priorities regarding legislative change.
- Consider comments and views expressed by stakeholders and evaluate the best options for handling each of them.
- Based on the foregoing, in collaboration with the Aquaculture Expert and the Aquaculture Policy Expert, prepare and submit to FAO a report with findings and conclusions, taking into account and integrating the report on the preparatory mission to Bahrain, Oman and Saudi Arabia. The report includes:
 - (a) a systematic and comparative review of existing aquaculture legislation of all participating countries;
 - (b) a draft basic set of model aquaculture legislation, including, as appropriate, regulations, as well as drafting guidelines for its implementation at the national level.

Second mission:

- Assist in the preparation and lead the conduct of the regional workshop and act as a resource person.
- Make a presentation on the findings of the legislative review and the components of the proposed basic set of model aquaculture legislation, including the drafting guidelines for its implementation at the national level.
- Based on the conclusions and recommendations of the regional workshop, finalize the proposed set of model aquaculture legislation, including the drafting guidelines.
- In collaboration with the project experts, prepare and submit to FAO:
 - (a) a final report with all the technical outputs of the project;

(b) the model legislation and the drafting guidelines for publication.

Duration:

8 weeks (first mission of two weeks, second mission of one week and five weeks at home base).

Duty station:

Iran (Islamic Republic of), Kuwait, Qatar, United Arab Emirates, [*Country hosting the regional workshop*] and home base.

Qualifications:

- Law degree.
- Experience in legal drafting.
- Excellent knowledge of fisheries/aquaculture law and related issues, in particular in the RECOFI area.
- Excellent command of English language.

Annex 2**TERMS OF REFERENCE****AQUACULTURE EXPERT**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Inland Water Resources and Aquaculture Service (FIRI), and in close collaboration with the Development Law Service (LEGN) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the other project experts, the Aquaculture Expert will:

First mission:

- Visit Iran (Islamic Republic of), Kuwait, Qatar and the United Arab Emirates and hold, in collaboration with the Legal Expert and the Aquaculture Policy Expert, discussions with representatives of the relevant ministries and government authorities as well as the private sector, NGOs and other aquaculture interest groups, if appropriate.
- Review and analyze current fisheries/aquaculture management structures and objectives and ongoing aquaculture programmes under the overall national development policies and goals, identify management approaches and mechanisms to be incorporated into the basic set of model aquaculture legislation and contribute as required to the legal advice under the technical assistance.
- Consider comments and views expressed by stakeholders and evaluate the best options for handling each of them.
- Based on the foregoing, in collaboration with the Legal Expert and the Aquaculture Policy Expert, prepare and submit to FAO a report with findings and conclusions, taking into account and integrating the report on the preparatory mission to Bahrain, Oman and Saudi Arabia.

Second mission:

- Assist in the preparation and lead the conduct of the regional workshop and act as a resource person.
- Make a presentation on management approaches taken in RECOFI Member countries and other relevant countries and recommend appropriate actions and enhanced practices to achieve sustainable aquaculture management.
- Based on the conclusions and recommendations of the workshop, prepare and submit to FAO a report with findings and conclusions.
- Contribute to the preparation of the final report with all the technical outputs of the project and to the model legislation and drafting guidelines for publication.

Duration:

6 weeks (first mission of two weeks, second mission of one week and three weeks at home base).

Duty station:

Iran (Islamic Republic of), Kuwait, Qatar, the United Arab Emirates, [*Country hosting the regional workshop*] and home base.

Qualifications:

- Degree in fisheries/aquaculture or natural resource management.
- Excellent knowledge of fisheries/aquaculture management issues, in particular in the RECOFI area.
- Excellent command of English language.

Annex 3**TERMS OF REFERENCE****AQUACULTURE POLICY EXPERT**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Fisheries Development and Planning Service (FIPP), and in close collaboration with the Development Law Service (LEGN) and the Inland Water Resources and Aquaculture Service (FIRI), the relevant national authorities and the other project experts, the Aquaculture Policy Expert will:

First mission:

- Visit Iran (Islamic Republic of), Kuwait, Qatar and the United Arab Emirates and hold, in collaboration with the Legal Expert and the Aquaculture Expert, discussions with representatives of the relevant ministries and government authorities as well as the private sector, NGOs and other aquaculture interest groups, if appropriate.
- Review and analyse current fisheries/aquaculture policies/plans, the overall national development policies and goals, identify policy approaches to be incorporated into or implemented by the basic set of model aquaculture legislation and contribute as required to the policy advice under the technical assistance.
- Consider comments and views expressed by stakeholders and evaluate the best options for handling each of them.
- Based on the foregoing, in collaboration with the Legal Expert and the Aquaculture Expert, prepare and submit to FAO a report with findings and conclusions, taking into account and integrating the report on the preparatory mission to Bahrain, Oman and Saudi Arabia.

Second mission:

- Assist in the preparation and lead the conduct of the regional workshop and act as a resource person.
- Make a presentation on policy/planning approaches taken in RECOFI Member countries and other relevant countries and make recommendations towards enhancing aquaculture policy/planning.
- Based on the conclusions and recommendations of the workshop, prepare and submit to FAO a report with findings and conclusions.
- Contribute to the preparation of the final report with all the technical outputs of the project and to the model legislation and drafting guidelines for publication.

Duration:

6 weeks (first mission of two weeks, second mission of one week and three weeks at home base).

Duty station:

Iran (Islamic Republic of), Kuwait, Qatar, the United Arab Emirates, [*Country hosting the regional workshop*] and home base.

Qualifications:

- Degree in fisheries/aquaculture policy.
- Excellent knowledge of fisheries/aquaculture policy issues, in particular in the RECOFI area.
- Excellent command of English language.

Annex 4**TERMS OF REFERENCE****EXPERT ON AQUATIC ANIMAL HEALTH CERTIFICATION AND QUARANTINE INSPECTION**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Inland Water Resources and Aquaculture Service (FIRI), and in close collaboration with the Development Law Service (LEGN) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the other project experts, the Expert on Aquatic Animal Health Certification and Quarantine Inspection will:

- Assist in the preparation and lead the conduct of the regional workshop and act as a resource person.
- Make a presentation on issues related to the establishment of aquatic animal health certification and quarantine inspection systems for the safe introduction and movement of living aquatic animals, including strategies and approaches taken in other relevant countries.
- Based on the conclusions and recommendations of the workshop, prepare and submit to FAO a report with findings and conclusions.
- Contribute advice generally and technical advice related to the establishment of aquatic animal health certification and quarantine inspection systems for the finalization of the basic set of aquaculture legislation.
- Contribute to the preparation of the final report with all the technical outputs of the project. and to the model legislation and drafting guidelines for publication.

Duration:

2 weeks (one mission of one week and one week at home base).

Duty station:

[*Country hosting the regional workshop*] and home base.

Qualifications:

- Degree in fisheries/aquaculture or natural resource management.
- Excellent knowledge of aquatic animal health certification and quarantine inspection issues.
- Excellent command of English language.

Annex 5**TERMS OF REFERENCE****EXPERT ON QUALITY AND SAFETY OF AQUACULTURE PRODUCTS AND HACCP PROCEDURES**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Inland Water Resources and Aquaculture Service (FIRI), and in close collaboration with the Development Law Service (LEGN) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the other project experts, the Expert on Quality and Safety of Aquaculture Products and HACCP Procedures will:

- Assist in the preparation and lead the conduct of the regional workshop and act as a resource person.
- Make a presentation on issues related to the development of procedures for the quality and safety of aquaculture products and HACCP, including strategies and approaches taken in other countries.
- Based on the conclusions and recommendations of the workshop, prepare and submit to FAO a report with findings and conclusions.
- Contribute advice generally and technical advice related to the development of procedures for the quality and safety of aquaculture products and HACCP for the finalization of the basic set of aquaculture legislation.
- Contribute to the preparation of the final report with all the technical outputs of the project and to the model legislation and drafting guidelines for publication.

Duration:

2 weeks (one mission of one week and one week at home base).

Duty station:

[*Country hosting the regional workshop*] and home base.

Qualifications:

- Degree in fisheries/aquaculture or natural resource management.
- Excellent knowledge of fisheries/aquaculture management issues, in particular on quality and safety of aquaculture products and HACCP.
- Excellent command of English language.

Annex 6**TERMS OF REFERENCE****FAO ADVISORY TECHNICAL SERVICES
TECHNICAL BACKSTOPPING OFFICER (LEGN)**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Development Law Service (LEGN), and in close collaboration with the Inland Water Resources and Aquaculture Service (FIRI) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the project experts, the LEGN Officer will:

- Assist with the identification and recruitment of the project experts.
- Assist in the preparation of a detailed work plan for the project and adjust the experts' terms of reference as appropriate.
- Consult with relevant government counterparts on the planning and preparation of activities under the project.
- Contribute to the review of existing legal frameworks and their adequacy and effectiveness for the sustainable development and management of aquaculture.
- Review the reports of the Legal Expert and assist in the review of the reports of the other project experts and make recommendations and amendments as appropriate.
- Assist in the preparation and conduct of the regional workshop and act as a resource person.
- Prepare a back-to-office report.
- Review the final report of the Legal Expert and finalize the basic set of model aquaculture legislation including the drafting guidelines as appropriate.
- Finalize publication of the model legislation and the drafting guidelines.
- Draft the concluding letter for the project in collaboration with the other Technical Backstopping Officers and the National Project Coordinators.

Duration:

2 weeks (one mission of one week and one week at FAO headquarters).

Duty station:

[*Country hosting the regional workshop*] and FAO headquarters.

Annex 7**TERMS OF REFERENCE****FAO ADVISORY TECHNICAL SERVICES
TECHNICAL BACKSTOPPING OFFICER (FIRI)**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Inland Water Resources and Aquaculture Service (FIRI), and in close collaboration with the Development Law Service (LEGN) and the Fisheries Development and Planning Service (FIPP), the relevant national authorities and the project experts, the FIRI Officer will:

- Assist with the identification and recruitment of the project experts.
- Assist in the preparation of a detailed work plan for the project and adjust the experts' terms of reference as appropriate.
- Consult with relevant government counterparts on the planning and preparation of activities under the project.
- Contribute to the review and analysis of current fisheries/aquaculture management structures and objectives and ongoing aquaculture programmes under the overall national development policies and goals, and the identification of management approaches and mechanisms to be incorporated into the basic set of model aquaculture legislation, and contribute as required to the legal advice under the technical assistance.
- Review the reports of the Aquaculture Expert, the Expert on Aquatic Animal Health Certification and Quarantine Inspection and the Expert on Quality and Safety of Aquaculture Products and HACCP Procedures and make recommendations and amendments as appropriate.
- Assist in the preparation and conduct of the regional workshop and act as a resource person.
- Prepare a back-to-office report.
- Assist in the review of the reports of the other experts and make recommendations and amendments as appropriate.
- Assist in drafting the concluding letter for the project in collaboration with the other Technical Backstopping Officers and the National Project Coordinators.

Duration:

2 weeks (one mission of one week and one week at FAO headquarters).

Duty station:

[*Country hosting the regional workshop*] and FAO headquarters.

Annex 8**TERMS OF REFERENCE****FAO ADVISORY TECHNICAL SERVICES
TECHNICAL BACKSTOPPING OFFICER (FIPP)**

Under the general supervision of the Office of the Regional Representative for the Near East (FAORNE) and the technical supervision of the Chief of the Fisheries Development and Planning Service (FIPP), and in close collaboration with the Development Law Service (LEGN) and the Inland Water Resources and Aquaculture Service (FIRI), the relevant national authorities and the project experts, the FIPP Officer will:

- Assist with the identification and recruitment of the project experts.
- Assist in the preparation of a detailed work plan for the project and adjust the experts' terms of reference as appropriate.
- Consult with relevant government counterparts on the planning and preparation of activities under the project.
- Contribute to the review and analysis of current fisheries/aquaculture policies/plans, the overall national development policies and goals, the identification of policy approaches to be incorporated into or implemented by the basic set of model aquaculture legislation and contribute as required to the policy advice under the technical assistance.
- Review the reports of the Aquaculture Policy Expert and make recommendations and amendments as appropriate.
- Assist in the preparation and conduct of the regional workshop and act as a resource person.
- Prepare a back-to-office report.
- Assist in the review of the reports of the other projects experts and make recommendations and amendments as appropriate.
- Assist in drafting the concluding letter for the project in collaboration with the other Technical Backstopping Officers and the National Project Coordinators.

Duration:

2 weeks (one mission of one week and one week at FAO headquarters).

Duty station:

[*Country hosting the regional workshop*] and FAO headquarters.

Annex 9**TERMS OF REFERENCE****NATIONAL PROJECT COORDINATORS**

One coordinator for the project will be designated in each country for the whole duration of the project and at no cost for the project and will be under the operational responsibility of the Office of the Regional Representative for the Near East (FAORNE) to facilitate project implementation and ensure effective liaison and cooperation between the Government and the project team. He/she will:

- Ensure liaison with senior staff in the counterpart Ministry and other national institutions involved.
- Ensure communication and coordination between the countries.
- Ensure that visas for all project experts and FAO staff are issued in a timely manner.
- Ensure the collection of all the essential documentation and information relevant to project implementation and provide for summaries of the documentation and information in English as requested.
- Arrange meetings, visits and interviews for the project experts with representatives of the relevant ministries and government authorities as well as the private sector, NGOs and other aquaculture interest groups.
- Provide other assistance and support to the project experts in carrying out project activities as may be required.
- Identify the participants to the workshop to be conducted under the project.
- Ensure that all travel documents are made available in a timely manner in order to guarantee the participation of Governments officials and other stakeholders to the workshop.
- Organize and facilitate the execution of the workshop, where appropriate, including assisting in organizing accommodation for the participants.
- Assist the FAO Technical Backstopping Officers in drafting the concluding letter for the project.

Duty station: [*Country hosting the regional workshop*] and home country.

Key elements to be included in the Technical Guidelines on Responsible Use and Control of Alien Species

The following elements, drafted at an FAO co-sponsored workshop⁴ and further endorsed at the Thirteenth Session of Committee on Inland Fisheries of Africa (CIFA), were thought to be of major importance and should be included in the Technical Guidelines on Responsible Use and Control of Alien Species.

- **Preamble** – This section will describe relevant decisions on aliens' species major international conventions and organizations, e.g. the CBD and CCRF.
- **Summary of agreements and other guidelines/codes of practice on alien species** – This section will briefly review the various international agreements with a complete listing in the Annex.
- **Description of an ICES-like code adapted to developing country conditions** – This section will describe the key elements of the ICES code with the addition of new elements appropriate for developing countries.
- **Summary of risks and benefits on using alien species in fisheries** – This section will describe the dangers and advantages in ecological and social/economic terms.
- **Risk assessment procedures including social and economic risks as well as environmental and ecological risks** – This section will summarize risk assessment procedures.
- **Decision trees** – This section will describe how to make informed decisions based on the above ICES codes.
- **The development of a set of criteria in order to establish a list of alien species of special concern in the region that could further promote awareness and responsible use** – This section will describe what biological characters of a species and what environmental characteristics of a habitat are important in establishing lists of species that should not be imported, could be imported under special circumstances, or that could be imported with no risk.
- **Recommendations for national implementation** – This section will describe what national actions are needed for responsible use and control.
- **Regional coordination** – This section will describe various modes and suggestions for coordinated regional action, for an example, but one that will not be in the final guidelines see Annex 3, Memorandum of Cooperation on Alien Species the CIFA Sub-Committee on Lake Tanganyika.
- **Recommendations for zoning areas where introductions can or can not be made** – This section will describe how geographic areas may be zoned for use by aquaculture and alien species based on a variety of criteria. This will be similar to World Organization for Animal Health (OIE) zoning based on disease status.
- **Special procedures for ongoing practices, i.e. the continued use of alien species** – This section will describe procedures for the continued use of alien species in areas where they are already present, e.g. stocking programmes, ornamental fish, or aquaculture.
- **Monitoring, fish health, and reporting** – This section will complement the one above and describe how and what to monitor and report, and the quarantine, diagnostic and treatment procedures necessary.
- **Annexes** – This section will contain details on many of the general sections in the main body of the Guidelines. For example: List of international instruments, ICES Codes, Opinionnaire.

⁴ FAO/NACA/MRC/UC SeaGrant/AIT/IUCN workshop *International Mechanisms for the Control and Responsible Use of Alien Species in Aquatic Ecosystems*, held 27–30 August 2003, in Xishuangbanna, People's Republic of China.

RECOFI logo proposal

LOGO A and B



REGIONAL COMMISSION FOR FISHERIES (RECOFI)
WORKING GROUP ON AQUACULTURE (WGA)
REPORT OF THE FIRST MEETING

Manama, Bahrain, 18–20 April 2004

OPENING OF THE SESSION

1. The first Meeting of the Regional Commission for Fisheries (RECOFI) Working Group on Aquaculture (WGA) was held from 18 to 20 April 2004 in Manama, Kingdom of Bahrain. Mr Mohammed Saif, Secretary of RECOFI, formally opened the Meeting on behalf of Dr Jacques Diouf, Director General, Food and Agriculture Organization (FAO). Mr Jassim Ahmed Al-Qaseer, Director of the Marine Resources Directorate, Kingdom of Bahrain, welcomed the participants to Bahrain and wished the Working Group well in their deliberations and discussions. The participants and observers were invited to introduce themselves. The list of participants is attached as Appendix A.

ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION

2. The Agenda was presented by Mr Abdulredha J. Shams, WGA Interim Chairperson, and was adopted with some minor modifications. The Agenda is attached as Appendix B and the list of meeting documents is attached as Appendix C. The election of the chairperson was deferred until the end of the Meeting.

RECOFI RECOMMENDATIONS RELATED TO THE WORKING GROUP

3. The Secretariat (Mr Alessandro Lovatelli, WGA Technical Secretary) reviewed the history and the purpose behind the creation of the Working Group on Aquaculture. The need for active participation from the countries through the assigned “Focal Points” was emphasized. The Working Group belongs to the participants and they need to take an active role in identifying the issues to be addressed in future meetings. Eventually members should put forth ideas for further work and develop project proposals for these initiatives with the technical assistance of the Secretariat.

4. It was stressed that this Working Group should make recommendations on how to move forward, including proposals to the Commission and to the national governments.

5. The Secretariat introduced for discussion the paper “Status Report on the RECOFI Working Group on Aquaculture” (RECOFI:WGA/I/2004/2). Two activities that had been previously suggested for the Working Group by RECOFI were identified for discussion during this session: (i) Consultation on regional aquaculture legislation including a review of existing laws and recommendations for a regional legislative structure; and (ii) Establishment of a regional aquaculture information system.

6. It had been proposed that the Working Group on Aquaculture adopt a logo. The Secretariat presented four possible designs that had been developed. The Working Group identified a favourite out of the submitted designs. The Group also made some suggestions including the inclusion of a map of the RECOFI region and the inclusion of a symbol particular to aquaculture such as a cage or a sketch of a life cycle for a species. It was recognized that all this may not be possible in a small logo. The Secretariat will send out a revised version for approval by the Focal Points.

7. The budget of the WGA was discussed. The RECOFI Secretary explained the current situation with the Commission's budget in general and invited the WGA to prepare a proposal with regards to its financial need. This proposal would be discussed at the next session of the Commission. The Group recognized that a budget allocation could only be approved by the Commission. However, considering that the next RECOFI session would be held in May 2005, the WGA Chairperson invited all Focal Points seek funds from their Governments as well as to contact private sector for possible contribution to the WGA budget.

UPDATES OF COUNTRY AQUACULTURE REPORTS

8. The WGA Focal Points were invited to present short updates on the status of aquaculture development in their country. In addition, written reports were distributed to the Group. The major changes and developments since the Second Session of RECOFI were discussed.

9. New aquaculture centres (e.g. Kuwait), new hatchery facilities (e.g. United Arab Emirates – UAE) and new species under production (e.g. Yellow fin tuna in Oman and *Panaeus vannamei*) were highlighted.

10. In addition, an observer from the National Prawn Company (Kingdom of Saudi Arabia) presented an overview of their experience developing fully-integrated shrimp farming in Saudi Arabia over the last 22 years. Additionally, their experience with experimental culture of marine fish was discussed.

NATIONAL AQUACULTURE SECTOR OVERVIEW (NASO)

11. The Secretariat (Mr Valerio Crespi, Fishery Resources Officer – Information) introduced the paper “National Aquaculture Sector Overview (NASO): An Activity of the FAO Fisheries Department” (RECOFI:WGA/I/2004/3).

12. The development of NASO has been requested by the FAO Member countries during the first two Sessions of the COFI Sub-Committee on Aquaculture in order to respond to the increasing public demand for transparency and accountability of information concerning aquaculture at a national level. The presentation detailed the main components of NASO. It is a comprehensive, concise, dynamic and a multi-domain product. The development process to produce NASO was presented and clarified.

13. The meeting participants appreciated the structure of NASO and expressed their interest in developing their own NASO. They agreed to provide a draft NASO for each of the RECOFI Member countries by the end of July 2004. A “Focal Point” for each country would need to be identified for this activity. Information should be written following the NASO template which will be sent to the Focal Points by the Secretariat.

ESTABLISHING A LEGAL FRAMEWORK FOR AQUACULTURE

14. Mr Melvin Spreij, FAO Legal Consultant, introduced the paper “Establishing a Legal Framework for Aquaculture” (RECOFI:WGA/I/2004/5).

15. The collection of laws and regulations from all RECOFI Member countries and a comparison of the degree of development among the countries were identified as priority activities in the WGA Proposed Work Programme 2003–2004 during the Second Session of the Commission. The aims are for an external evaluation of the existing legislation, highlight improvement areas, where necessary, and make recommendations on common regulations that could be adopted at a regional level.

16. A brief introduction was given to the establishment of a legal framework for aquaculture in general. The main international instruments were highlighted due to the influence they have on the development of national legislation. They include voluntary instruments such as the Code of Conduct for Responsible Fisheries (CCRF) and binding international agreements such as the Biosafety Protocol, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Agreement on Sanitary and Phytosanitary Measures (SPS) of the World Trade Organization (WTO). The International Aquatic Animal Health Code of the World Organization for Animal Health. Is also relevant.

17. Next, the place of aquaculture in the national legal framework was described. Some countries have no legislation on aquaculture whatsoever while others have comprehensive legal frameworks in place. Characteristically, aquaculture involves many issues. For instance, aquaculture depends on natural resources such and land and water as well as impacts on the environment through the discharge of wastewater, the use of chemicals and drugs and the introduction and movement of species. The protection of aquatic animal health is a major issue of concern and finally, the aquaculture product must be safe for consumption too. Consequently, aquaculture is often addressed under a wide range of various laws and regulations which makes it a difficult activity to regulate. In addition, enforcement is often identified as a weak link due to budget constraints, lack of manpower and overlap of laws of institutions.

18. It was stated that the challenge that RECOFI countries are beginning to address is the need to review and reform their regulatory framework applicable to aquaculture. This is to ensure that unnecessary legal and bureaucratic obstacles are removed and to ensure that the sector develops in a sustainable manner. Governments must recognize aquaculture as distinct agriculture sector, integrate aquaculture into resource and development planning, improve the management of aquaculture (in particular where it has the potential to be socially or environmentally unsustainable) and improve food safety standards.

19. The WGA identified several common issues of concern which may require a region-wide approach. They included the introduction and movement of exotic species, the protection of aquatic animal health, the application and implementation of strict food safety standards required by major importing countries such as the European Union and the United States of America and the pollution of marine waters caused by aquaculture farms.

20. The participants were invited to present a brief overview on the status of aquaculture legislation in their country. To a certain extent, the level of development of legislation is

related to the importance of aquaculture in the various countries. Oman already has adopted rules and regulations on many of the issues that are relevant to aquaculture. Iran (Islamic Republic of) reported to have established special guidelines for aquaculture in 1999. Some countries have included several articles on aquaculture in their basic fisheries law which is dealing mainly with the application process (UAE, Saudi Arabia). Kuwait reported to be in the process of developing aquaculture legislation. Countries that still have no or little aquaculture activity have limited their regulation of aquaculture to a so-called “enabling clause” in their basic fisheries law (e.g. Bahrain), or to the preparation of standard application forms for the issuance of aquaculture licenses, discharge permits and environmental authorizations (e.g. Qatar).

21. It was recommended by the WGA for the Secretariat to seek assistance from FAO through a preparatory mission to develop a regional Technical Cooperation Project (TCP) which should eventually culminate in the drafting and preparation of regional guidelines or a code of conduct for sustainable aquaculture development in the region. It was agreed that on the long-term, the best results would be obtained by following a comprehensive approach to set up and carry out the project. The preparatory mission should therefore be carried out by a legal consultant and an aquaculture expert in order to review and assess the national legislation in the various RECOFI countries and to review their aquaculture management frameworks and policies. The legal consultant and the aquaculture expert should prepare a report with findings, conclusions and detailed recommendations, including the preparation of a work plan and the final TCP document. This should be followed by discussion and approval of the report, including the work plan and the final TCP proposal, during a workshop.

22. The WGA agreed upon the Terms of References (TOR) for the legal consultant and for the aquaculture expert. In addition, it formulated the justification for the preparatory mission, its objective and its results (see Appendix D). The Focal Points invited the Secretariat to approach FAO to see whether an advance allocation for a regional TCP is possible. It was pointed out that the granting of an advance allocation does not automatically guarantee that the total TCP will be funded.

23. It was agreed that FAO will prepare a draft letter with an official request for a sub-regional TCP. This request must be sent by all RECOFI countries (preferably at ministerial level) to the Director General of FAO and copies to the Deputy Director General, Assistant Director General of the Fisheries Department and to the Office of the Legal Counsel. A sub-regional TCP can be justified only if the Director General receives a request from at least three RECOFI countries. It was further agreed that the Interim Chairman would also present a recommendation for a letter to the DG-FAO at the ministerial level at the coming Gulf Cooperation Council (GCC) Fisheries Committee scheduled in Riyadh, Kingdom of Saudi Arabia on 4 May 2004.

24. Finally, it was agreed that the WGA Secretariat will be informed within two weeks about the estimated budget that is required for carrying out the preparatory mission. If funding is not readily available by FAO, or FAO cannot fund the entire TCP, other sources of funding will be required. The WGA agreed that the RECOFI countries will use all their efforts to explore the possibilities of other funding.

DATA AND STATISTICS FOR AQUACULTURE IN THE RECOFI REGION

25. The Secretariat (Mr Alan Lowther, Fishery Statistician – Aquaculture) introduced the topic of improving the collection of aquaculture data and highlighted the topics in the paper “Current Status of Aquaculture Data in the Gulf region: Improving the Statistics Concurrently with the Development of the Sector” (RECOFI:WGA/I/2004/4). Basic statistics on aquaculture production in the region were presented, followed by an overview of FAO procedures for the annual compilation of global aquaculture statistics. Basic concepts regarding data collection at a national level were outlined including the use of census and survey methodologies. It was stressed that the best data collection system for each country will depend on the nature of the activity and industry in the country.

26. A FAO Fisheries software product, the ARTFISH (Approaches, Rules and Techniques for Fisheries Statistical Monitoring) system for data collection, compilation and estimation was discussed. The development of this software for aquaculture data has been completed and is currently being tested. This software and related training materials will soon be available through the FAO Web page. The WGA expressed great interest in the ARTFISH system. The Secretariat will inform the members by e-mail when the information is available.

27. Some discrepancies were noted between the data presented earlier during the country updates and the data currently in the FAO database. The Secretariat and FAO Fisheries Information, Data and Statistics Unit (FIDI) will follow-up with the members to confirm the correct data. In addition, FIDI will send the names and addresses where the FAO fisheries statistical questionnaires are sent to the WGA Focal Points. This will allow FIDI to confirm that they are being sent to the appropriate persons.

28. The members of the WGA were invited to report on the data collection procedures in their countries. For some countries it was very simple because all aquaculture production comes from a small number of companies. Some of these members expressed interest in the ARTFISH system since they expect the sector to grow. For larger countries, more detailed systems were described.

DEVELOPMENT OF A REGIONAL INFORMATION SYSTEM

29. The Secretariat (Mr V. Crespi) presented the working paper on the “Establishment of a Regional Aquaculture Information System” (RECOFI:WGA/I/2004/6).

30. The development of a regional aquaculture information system has been requested by the RECOFI Member countries during the last two sessions of RECOFI in order to respond to (a) the increasing development of aquaculture in the region; (b) the increasing need to develop a regional system facilitating the exchange of information; (c) to assist the private and public sectors to have quick and easy access to information required for decision making, both on specific technical matters and for the design and assessment of new aquaculture projects; (d) to respond at the increasing public demand for transparency and accountability of information concerning aquaculture at national and regional level; and (e) to secure a position in the international information scene giving more visibility to the regional aquaculture development and related activities. The presentation detailed the main potential components of a Regional information system.

31. The purpose of this activity should consist in gathering information on the aquaculture sector in RECOFI Member countries (e.g. national aquaculture sector overview, statistics, bibliographies, reports and photos, names and addresses of private and government institutions involved in aquaculture activities, names of specialists working in aquaculture, training opportunities, ongoing research activities). This information could be collected in a common system and made available on a dedicated Web site.

32. The proposed name of the information system suggested was “RECOFI Aquaculture Information System (RAIS)”. This name was discussed but no final decision was taken. The “RAIS” network would consist of a regional centre composed by several professionals including a Regional Coordinator (Information Officer) and a Web Master located in one of the RECOFI countries as well as one National Centre for each RECOFI Member countries. Each National Centre would be represented by a National Coordinator.

33. The participants appreciated the structure of the proposed regional information system and expressed their interest in developing it. All the participants agreed to start with the development of a static information system simply based on HTML pages. In the future a regional database linked to the Web pages could be developed according to the requirements of the RECOFI Member countries. It was noted that both Kuwait and the Islamic Republic of Iran had offered to host the Regional Centre of “RAIS”. After a brief discussion the participants jointly agreed that Kuwait would be in a better position to host the Regional Centre.

34. With regards to timing and work flow the following steps were identified and agreed upon: (a) agreement on the final product that will be developed (e.g. static HTML pages, use of other specific software); (b) three months to organize the regional centre in Kuwait (e.g. space, equipment, developers); (c) three months to identify all the National Centres and nomination of the “National Coordinators”; (d) the Secretariat will provide a list of input that should be developed by each RECOFI Member countries in order to prepare the material that should feed into the system; (e) the Focal Point of Kuwait and FAO will provide a budget estimation for the development of RAIS and for its maintenance; (f) design RAIS together with FAO (e.g. contents, Web design). The participants asked technical support from FAO. The Secretariat ensured funding for the travel and DSA of an Information Officer; (f) the first draft of RAIS could be ready and presented at the next Commission session that will be held in Qatar in May 2005.

OTHER MATTERS

35. The Secretariat identified several common issues of concern which may require a region-wide approach. Among them the introduction and movement of exotic species should be reported to DIAS (Database on Introduction of Aquatic Species) which is one of FAO’s information systems. The Secretariat presented the DIAS Web site and its contents and distributed a hard copy of the input form to all participants. All the participants agreed on the importance to provide this information and also agreed to send all the information requested by filling in the input form as soon as possible. Periodically, this information will be validated and added to the DIAS database.

ACKNOWLEDGMENTS

36. The Meeting was expertly chaired by Dr A.J. Shams, Manager of the National Mariculture Center under the Directorate of Marine Resources of Bahrain and RECOFI-WGA Interim Chairperson. Dr Shams also ensured that the local and meeting arrangements were of superior quality. Activities outside of the Meeting were arranged including a visit of the National Mariculture Center and a tour of the Gulf Petrochemical Industries Company (GPIC). The hospitality of the Kingdom of Bahrain was greatly appreciated by the participants.

ELECTION OF THE CHAIRPERSON

37. The WGA Focal Points appreciated the excellent work carried out by the Interim Chairperson, Mr A.J. Shams who was unanimously elected as chairperson for the next three years to coincide with the organization of the Fourth Session of the Commission.

DATE AND PLACE OF THE SECOND WGA MEETING

38. The WGA Focal Points proposed to hold its next meeting sometime after the Third RECOFI Session scheduled for May 2005. The Focal Point of Saudi Arabia expressed interest to host the meeting. The exact dates of the meeting would be discussed and agreed upon during the next RECOFI Session.

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ANNEX 1B – Report Appendix B**Agenda**

1. Opening of the Session
2. Adoption of the Agenda and arrangements for the Session
3. Report on the discussion and recommendations of the WGA to the Second Session of RECOFI
4. WGA Status Report
5. Country aquaculture updates and presentation of the “National Aquaculture Sector Overview” (NASO) activity of the FAO Fisheries Department
6. Country aquaculture legislation reports – National institutional arrangements for aquaculture development and management
7. Aquaculture legislation and regional developments – Recommendations
8. Country aquaculture information system reviews
9. Current status of aquaculture data in the Gulf region: Improving the statistics concurrently with the development of the sector
10. Presentation of a regional aquaculture information system proposal
11. Assistance for aquaculture development in the region
12. Discussion and Recommendations
13. Future work plan and review of recommendation
14. Any other matters
15. Election of the Chairperson
16. Date and place of the Second RECOFI-WGA Meeting

ANNEX 1C – Report Appendix C**List of documents**

RECOFI:WGA/I/2004/1	Provisional Agenda and Timetable
RECOFI:WGA/I/2004/2	Status report on the RECOFI Working Group on Aquaculture
RECOFI:WGA/I/2004/3	National Aquaculture Sector Overview: An Activity of the FAO Fisheries Department
RECOFI:WGA/I/2004/4	Current status of aquaculture data in the Gulf region: Improving the statistics concurrently with the development of the sector
RECOFI:WGA/I/2004/5	Establishing a Legal Framework for Aquaculture
RECOFI:WGA/I/2004/6	Establishment of a Regional Aquaculture Information System
RECOFI:WGA/I/2004/Inf.1	Provisional List of Documents
RECOFI:WGA/I/2004/Inf.2	Provisional List of Participants
RECOFI:WGA/I/2004/Inf.3	Report of the Second Session of the Regional Commission for Fisheries (Muscat, Oman, 18–21 May 2003)

ANNEX 1D – Report Appendix D

Project justification, objectives and draft terms of references

Project justification

The aquaculture sector in the RECOFI region, although still in an initial stage, is rapidly expanding. Between the years 1997 and 2001 production in the area has nearly doubled. It is crucial for the protection and preservation of the marine aquatic environment and its natural resources in the RECOFI region that any further expansion of the sector takes place in a sustainable manner. Generally, the countries have few laws and regulations in place that regulates the aquaculture sector. If a country has some form of regulation, it is often limited, outdated and applied to the sector in an inconsistent manner. Only some countries require the carrying out of an environmental impact assessment before setting up and operating an aquaculture facility. In addition, in most countries there are overlaps and inconsistencies among the various ministries and government authorities and agencies involved. The following issues of common concern justify a region-wide approach: the introduction and movement of exotic species, the protection of aquatic animal health, the application and implementation of strict food safety standards required by major importing countries, and the pollution of marine waters caused by aquaculture establishments.

Objective

Strengthening the aquaculture sectors of the RECOFI Member countries, increase the sectors' contribution to the economy and to food security in the region and development of the aquaculture sector in a sustainable manner.

Output

- Systematic and comparative review of existing legislation related to aquaculture in the RECOFI Member countries.
- Review of the functions and structures of responsible aquaculture management institutions in the RECOFI Member countries, the existing aquaculture policies and the overall national development objectives.
- Preparation of a report with the review's findings and conclusions, as well as detailed recommendations toward the drafting of regional guidelines/code of conduct and the enhancement of aquaculture policy development and management. The report includes the preparation of a work plan and of a final project proposal in the TCP format.
- Workshop where the findings, conclusions and recommendations will be discussed and, where necessary, amended.

TOR for the Legal Expert

- Hold, in collaboration with the Aquaculture Expert and Aquaculture Policy expert, discussions with representatives of the relevant ministries and government authorities of Oman, Bahrain, Iran (Islamic Republic of) and Saudi Arabia, as well as the private sector, NGOs and other aquaculture interest groups.
- Collect, review and assess first hand information on legal framework for aquaculture in relevant RECOFI Member countries, and make a preliminary evaluation of its adequacy and effectiveness for the sustainable development of aquaculture resources;

- Consider relevant needs and views expressed by stakeholders and evaluate possible best options for dealing with them through a potential regional TCP.
- Based on the foregoing, in collaboration with the Aquaculture Expert and Aquaculture Policy expert, prepare and submit to FAO and the Commission a report with findings and conclusions, as well as detailed recommendations. This includes preparation of a detailed work plan and of the project proposal in the TCP format.
- Assist in the preparation and lead the conduct of the workshop, in collaboration with RECOFI Secretariat.

TOR for the Aquaculture Expert

- Hold, in collaboration with the Legal Expert and the Aquaculture Policy Expert discussions with representatives of the relevant ministries and government authorities of the RECOFI countries, as well as the private sector, NGOs and other aquaculture interest groups.
- Review and analyze current aquaculture management structures and objectives and ongoing aquaculture programmes under the overall national development policies and goals, and to recommend appropriate actions to achieve sustainable aquaculture resources management.
- Consider relevant comments and views expressed by stakeholders in writing and through meeting, and evaluate the best options for handling each of them.
- Based on the foregoing, in collaboration with the Legal Expert and the Aquaculture Policy Expert, prepare and submit to FAO a report with findings and conclusions, as well as detailed recommendations. This includes preparation of a detailed work plan and of the project proposal in the TCP format.

TOR for the Aquaculture Policy Expert

- Hold, in collaboration with the Aquaculture Expert and the Legal Expert, discussions with representatives of the relevant ministries and government authorities of Oman, Bahrain, Iran (Islamic Republic of) and Saudi Arabia, as well as the private sector, NGOs and other aquaculture interest groups.
- Collect, review and assess first hand information on institutional framework for aquaculture in Oman, Bahrain, Iran (Islamic Republic of) and Saudi Arabia, RECOFI Member countries, and make a preliminary evaluation of its adequacy and effectiveness for the sustainable development of aquaculture.
- Consider relevant needs and views expressed by stakeholders and evaluate possible best options for dealing with them through a potential regional TCP.
- Based on the foregoing, in collaboration with the Aquaculture Expert and the Legal Expert, prepare and submit to FAO and the Commission a report with findings and conclusions, as well as detailed recommendations. This includes preparation of a detailed work plan and of the project proposal in the TCP format.

TECHNICAL AQUACULTURE MEETING⁵

Recommendations to RECOFI on the formation of a Working Group on Aquaculture

Muscat, Oman, 18–19 May 2003

BACKGROUND

Regional cooperation on Aquaculture Development

1. During the first RECOFI Session in Oman (6–8 October 2001) and the last “Ad Hoc Technical Meeting on the Management of Shrimp Fisheries and Aquaculture” held in Kuwait (18–21 February 2003) it was agreed that regional cooperation was needed aimed at further developing and strengthening the aquaculture sector in the RECOFI region.

2. Although RECOFI formally established an Ad hoc Working Group on Aquaculture during its First Session to evaluate and advise on the formation of an aquaculture body, little progress had been made in terms of formally discussing at a regional level the modalities in which the aquaculture body would operate, plan and implement activities as well as report to the Commission.

3. The main purpose of convening the last technical meeting in Kuwait was to start technical preparations in support of the Second RECOFI Session. The objectives are clearly reported on section 18 of the *Note verbale* prepared and circulated following the above mentioned meeting. For convenience and reference these are listed below:

- a) To review the status of aquaculture in the Gulf region and identify key issues affecting the development of a sustainable aquaculture industry.
- a) To identify areas of regional interest and cooperation among the RECOFI member countries.
- b) To study the practical implications of establishing a regional aquaculture subsidiary body under RECOFI including benefits to the Member countries and financial implications.
- c) To elaborate and draft the Terms of Reference (TORs) of a formal Working Group on Aquaculture (WGA).

4. In summary, the technical meeting recommended that a working aquaculture body be established to discuss technical issues, areas of regional interest and possible activities to be implemented, if approved and funded, during the annual work plan period of the Commission. Terms of Reference for an aquaculture body have been discussed and drafted (see Annex III of RECOFI/2003/Info/3). Furthermore, a preliminary list of technical assistance areas needed in the region was discussed (See Annex II of RECOFI/2003/Info/3). Four RECOFI countries, i.e. Iran (Islamic Republic of), Bahrain, Oman and the United Arab Emirates, listed technical areas where assistance and acquired knowledge could be offered to the other RECOFI member countries. Similarly, areas where assistance was required at the national level were duly reported.

⁵ This document appears as Appendix D in the Report of the Second session of the Regional Commission for Fisheries (RECOFI) held in Muscat, Oman, from 18 to 21 May 2003. The document, generated during a technical aquaculture meeting immediately preceding the second session of the Commission, containing the recommendations on the form and structure of the aquaculture body along with a proposed work programme for 2003–2004 was prepared and submitted to the Commission for consideration and approval.

5. Based on the discussions held in Kuwait, the Second RECOFI Session working document on the "Review of the Aquaculture Situation in the RECOFI Area" (RECOFI/2003/4) summarizes the major priority areas as follows:

Facilitating commercialization

- Applied research on aquaculture has achieved reasonable success in certain fields.
- Efforts need to be focused on facilitating commercial applications.
- Preparation of feasible aquaculture investment projects.
- Meet product quality standards for both local and export markets.

Addressing development constraints and regional cooperation

- Various natural and technical constraints to the development of aquaculture have been identified.
- Research at the national level should be identified.
- Common concern to several countries should be identified for collective action and approaches to such cooperation discussed, agreed to and implemented.

Meeting information requirements

- In countries where the growth of aquaculture is accelerating, there is an increasing need for sound information (statistical and non-statistical) to guide research and development planning, monitoring and assessment.
- RECOFI Member countries may wish to re-examine the need for and implication of the regional aquaculture information.

Ensuring proper governance of the sector

- There is a need to put in place legislation and regulations to ensure sustainable development and the protection of public interest, the environment and natural resources.

Application of advanced methods and technologies

- There is a need to apply more up-to-date/cutting-edge technologies in aquaculture research, development and management. Biotechnology research in fish diseases, genetics, fish health and quarantine, food quality standards, feed technologies and stock restoration are all areas where work should be extended.

Addressing manpower needs

- New technical personnel should be developed using institutions within and outside the region. Specialised training facilities at high-school level should also be established and training courses encouraged at a regional level.

6. The same document suggests the following main recommendations in order to begin addressing the above priority areas for the development of aquaculture:

- a) RECOFI should consider establishing an "aquaculture subsidiary body or a recognized working group" that meets regularly to discuss relevant issues, activities and propose annual work plans. This body or working group would report directly to the main RECOFI Sessions. Member countries should appoint permanent focal aquaculture points.
- b) RECOFI should discuss and prioritize the preceding priority areas and request the "aquaculture subsidiary body or working group" to address one or more of those considered to be most urgent at its first meeting and to report to RECOFI at an appropriate time.

RECOMMENDATIONS and FIRST WORK PLAN (2003–2004)

7. The participants attending the Aquaculture Session from 18 to 19 May 2003 (Bahrain, Islamic Republic of Iran, Oman, Saudi Arabia and the United Arab Emirates) reviewed the recommendations made in Kuwait and discussed and concluded that the following issues should be taken-up by the Commission for consideration and approval:

Endorsement of the WGA

8. As mentioned above, the formation of an aquaculture body was considered during the First RECOFI Session and an *Ad Hoc* Working Group was formed to evaluate and advise on this matter during the Second Commission Session. However, subsequent formal and informal discussions have somewhat created confusion on the status of the RECOFI body dealing with aquaculture. The result of such confusion has slowed down the actual structuring and work organization of the said body. It is therefore *recommended* to the Commission that a Working Group on Aquaculture (WGA) be endorsed rather than the establishment of a Committee on Aquaculture. The main argument for such a proposal is to ensure that the WGA retains the flexibility required for carrying out its mandate and work plans which will be regularly submitted and discussed for approval at the annual sessions of the Commission.

WGA Structure and Annual Meeting

9. It is *recommended* that each RECOFI Member country identifies and officially communicates to the RECOFI Secretary a focal institute dealing with aquaculture and appoints a permanent and an alternate aquaculture specialist to the WGA. A WGA chairperson would then be nominated among the appointed specialists. He/she would act as chairperson for a period of two years. The main task of the chairperson would be to ensure that the approved work plan activities are initiated in a timely manner with the full support of the Focal Points in the other RECOFI Member countries and support and technical supervision from the RECOFI Secretariat. The other main task would be the organization of the annual WGA meeting, ensuring the preparation and timely distribution of an agenda that would allow the Focal Points to prepare all background material, if any.

10. It is *recommended* that the WGA meets on an annual basis to discuss (a) the progress of activities, and (b) the new annual work plan and budget requirements. The WGA would then report directly to the Commission. The first annual WGA meeting date and venue will be identified by the nominated WGA chairperson through correspondence with all other Focal Point members. The date and venue for the subsequent WGA annual meeting will be proposed and agreed upon as an agenda item during the preceding meeting. The Annual Meeting of the WGA would be hosted in different RECOFI countries and held at least one month prior to the Commission Session.

11. If the above recommendation is endorsed by the Commission it is understood that each RECOFI member country will enable its WGA Focal Point, and possibly a second person, to attend the Annual Meeting. Each RECOFI Member country will cover expenses for its Focal Point to attend the WGA Annual Meeting.

WGA Area of Coverage

12. It is *recommended* that the WGA focuses its mandate on marine and brackish water aquaculture since the Gulf is the water resource shared by all the RECOFI Member countries. Nevertheless, coverage of inland water aquaculture issues would not be excluded as issues of regional concern and importance will be raised and acted upon on a case-to-case basis following presentation and discussion at the annual WGA meetings.

WGA Proposed Work Programme 2003–2004

13. Due to the infancy of the WGA it is recommended that initially only the two activities described below are included in the next 1-year Work Programme and approved by the Commission.

Activity No. 1	
Title:	Consultation on Regional Aquaculture Legislation – A review of existing laws and recommendations for a regional legislative structure.
Scope:	The main purpose of this activity is to collect existing specific and related aquaculture legislation from all RECOFI member countries and to compare the degree of development among the countries. The aim is for an external evaluation of the existing legislation, highlight improvement areas where necessary and make recommendations on common regulations that could be adopted at a regional level.
Main Activities:	<ul style="list-style-type: none"> • Collection of all relevant and existing aquaculture legislation at the national levels. <i>ACTION: WGA Focal Points.</i> • Evaluation, comparison and regional legislative framework proposal prepared by an external consultant. <i>TO BE IDENTIFIED.</i> • Distribution of the proposal to the WGA Focal Points for review and comments prior to approval by the WGA in its next meeting. <i>ACTION: WGA Focal Points.</i> • Submit final proposal to the Commission for review and comments in its next meeting and follow-up actions. <i>ACTION: WGA Chairperson.</i>
Budget:	US\$15 000

Activity No. 2	
Title:	Establishment of a Regional Aquaculture Information System.
Scope:	The purpose of this activity is to gather information on the aquaculture sector in RECOFI member countries (e.g. national aquaculture sector overview, statistics, bibliographies and reports, names and addresses of private and government institutions involved in aquaculture activities, names of specialists working in aquaculture, training opportunities, ongoing research activities). This information will be collected and made available on a dedicated Web site. This activity will also enable RECOFI member countries to regularly update the information. It will also facilitate contacts from international bodies to RECOFI aquaculture bodies and will also secure a position in the international information scene.
Main Activities:	<ul style="list-style-type: none"> • Compile and approve a list of information to be collected at the national level. <i>ACTION: WGA Chairperson and Focal Points.</i> • Collect information according to approved list. <i>ACTION: WGA Focal Points.</i> • Recruit an aquaculture information specialist and a Web designer to design and develop a regional aquaculture Web site. <i>ACTION: RECOFI Secretariat and WGA Chairperson.</i> • Distribution of the proposed Web site to the WGA Focal Points for review and comments prior to approval by the WGA in its next meeting. <i>ACTION: WGA Focal Points.</i> • Input of first set of data into the Web site. <i>ACTION: Web designer.</i> • Training on Web site data-input and up-dating for identified persons from each RECOFI member country. <i>ACTION: WGA Chairperson and Web site designer.</i>
Budget:	US\$8 000

Terms of Reference ⁶
Working Group on Aquaculture (WGA)
RECOFI

The Terms of Reference for the RECOFI Working Group on Aquaculture (WGA) shall be to:

- Advise RECOFI on technical and policy matters related to aquaculture.
- Identify and discuss major issues and trends in regional aquaculture development.
- Identify and establish national focal points.
- Encourage technical cooperation and coordination among the Member countries.
- Monitor development and trends of aquaculture practices in the region.
- Establish a system for regular collection, up-dating and dissemination of aquaculture information.
- Review existing legislations in Member countries and encourage regional coordination with a view to promote harmonization, as appropriate.
- Form ad hoc aquaculture working groups, as and when required.
- Carry out other duties related to aquaculture promotion and development that may be referred to it by RECOFI.

The regular activities of RECOFI Secretariat related to the function of the Working Group on Aquaculture will be:

- The organization of the annual meeting of the Working Group on Aquaculture.
- The participation of a member of the Secretariat in the annual meeting of the Working Group on Aquaculture.
- The overall coordination and supervision of ad hoc working groups through nominated chairpersons.
- The preparation, publication and dissemination of the Working Group on Aquaculture meeting reports.

In addition to the regular activities of the Working Group on Aquaculture, indicated above, there could be additional activities which would require extra-budgetary resources which could take the form of specific projects, or a direct financial coverage of the activities by the countries hosting or participating in them, and which would be discussed by the Working Group on Aquaculture and RECOFI on a case-to-case basis. Example of these extra activities could be:

- Special reports on aspects of aquaculture development.
- Surveys linked to the development of aquaculture and to the generation of information.
- Training courses, seminars and workshops.
- Technical consultations on an ad hoc basis.
- Organization of study tours.

⁶ The Commission endorsed the recommendation to establish a standing Working Group on Aquaculture (WGA) and its Terms of Reference at its second session held in Muscat, Oman, from 18 to 21 May 2003.

NOTE VERBALE**Ad hoc Meeting on the Management of Shrimp Fisheries and Aquaculture
RECOFI Region ⁷****16–18 February 2003
Salmiyah, Kuwait****ORGANIZATION OF THE MEETING**

1. The Meeting was kindly hosted by the Mariculture and Fisheries Department of the Kuwait Institute for Scientific Research (KISR), Salmiyah, Kuwait. After a short introductory session, the participants separated into two parallel sessions dealing with fisheries management and aquaculture, respectively.
2. The Meeting was attended by ten officials from six countries of the region, namely Bahrain, Iran (Islamic Republic of), Kuwait, Oman, Saudi Arabia and the United Arab Emirates. Three FAO officers attended the meeting, one from the Regional Office for the Near East (Cairo, Egypt) and two from the FAO headquarters (Rome, Italy). The list of participants is attached as Annex I [*not attached to this report*].
3. It was noted that a major purpose of the Meeting was to start technical preparations in support of the next RECOFI Session to be held in Muscat, Oman 13–14 of May 2003. It is intended that technical meetings will precede the Commission Session (11–12 May) to further interim technical activities and to deal with issues that may be raised by the formal Commission meeting
4. It was agreed that the Meeting would produce no formal report, rather a *Note verbale* would be written by the Meeting's Secretariat, which would be made available in draft form to the participants.

FISHERIES MANAGEMENT

5. The meeting unanimously stressed the importance of having the same technical experts attend successive meetings to ensure that an institutional capacity and 'corporate' memory is developed – it was noted that this is essential if participants are to avoid starting from 'square one' at each technical meeting. It was also noted that the participants must be the appropriate experts from the relevant departments.
6. The meeting discussed how the technical group might support the Commission in making relevant and necessary fisheries management decisions. It was noted that a chairman or coordinator would be needed for a Shrimp Management Sub-committee or Working Group and that participants should begin to think about suitable nominees for this position (and indeed, other working groups/sub-committees that might be established).
7. It was noted that to initiate the process of providing support current efforts should be first restricted to what were believed to be two important issues (see points i. and ii.) though issues to do with fisheries for lobster and *Scomberomorus* were also identified. It was agreed that the Commission's views and confirmation should be sought on this issue.

⁷ This meeting was called by the RECOFI Secretariat to start technical preparations in support of the second session of RECOFI held in Muscat, Oman 13–14 May 2003.

- i. Management of marine shrimp capture fisheries; and
- ii. Preparations to start activities of a RECOFI aquaculture subsidiary body or working group.

8. In an extended discussion on the need for statistics to support management of fisheries in the RECOFI region, options for addressing fisheries statistical issues were discussed. It was noted that a chairman or facilitator would be needed to coordinate any activity in the region.

9. In relation to the issues of statistics, it was agreed that there would be two requirements: (a) general reporting at the level of the Commission to communicate general trends in capture fisheries and (b), detailed information at the level of the fishery that is needed for stock assessment and provision of resource management advice.

10. It was explained that the purposes of undertaking the preparation of a RECOFI-region Shrimp Stocks Status Report were twofold. First, to document the status of shrimp fisheries, their management and relative research, and second, to provide an assessment approach that can be used for other important fisheries stocks at a regional level, e.g. Spanish mackerel (*Scomberomorus commerson*), the Serranid (harmoor) species complex and other more regionally restricted species.

11. The importance of addressing statistical issues was raised and whether an attempt should be made to address this explicitly in time for the first Commission Meeting. In this context, it was stressed that the collection and availability of accurate data describing catches and fishing effort by gear type is essential for effective fisheries management. In this context, another option considered was to address statistical issues within the context of the different species that are addressed by the specific species working groups.

12. The importance of CPUE in management of shrimp resources as an indicator of trends in abundance of shrimp biomass was noted. It was agreed that it would be of great benefit to undertake a regional (perhaps global) review of factors affecting “effort creep” – i.e. technological innovation in shrimp trawlers. The Iranian delegate offered to host such a meeting in his country if FAO would undertake its organization. The experience of Australia in this regard was noted and it was agreed that FAO should attempt to facilitate the participation of Australian and other similar experts in such a consultation.

13. The meeting discussed the benefits from on-board observer programmes, but no conclusion was reached on how this issue should be dealt with in the future.

14. The topic of how technical groups should be structured so as to best support the Commission was addressed (again). The model most in favour was that in which the activities of Aquaculture, Fisheries Management and Statistics directly reported to the Commission. The other option was for all technical activities report through a single Scientific Committee (as implied by the Commission’s Convention).

15. It was agreed that there would be benefits from the preparation of a regional bibliography of reports dealing with management of shrimp fisheries in the RECOFI area. This bibliography should be managed by an appropriate body of RECOFI. This issue was seen within a longer-term vision that would lead to a Web site for marine science, fisheries and affairs of the RECOFI region.

16. The participant from Iran noted the issue of stock enhancement as a topic for possible RECOFI consideration. No conclusion was reached on this issue as some thought this subject would be better dealt with by the aquaculture group, if established.

17. The meeting requested that FAO explore/determine the regional interest in a technical meeting prior to the Commission Meeting to discuss management issues relating to *Scomberomorus commerson* and lobster.

Recommendations

- i. Managers should collect information from processors on the packing grade and species composition. In this regard, it was noted that processors automatically collect this information and there is no disincentive for them to not provide such data or to misreport the data. This information should be made available to the regional shrimp stock assessment working groups.
- ii. Wherever possible, resource biologists should independently collect data on the species, sex and size composition of the catch, either by dockside sampling for daily fisheries or the periodic use of on-board “observers” who would directly measure a sample of the catch at the time of capture. This would enable real-time monitoring of recruitment to the fishery and possibly – with the support of the fishery – short-term or area closures when a preponderance of small shrimp occur in the catch.

AQUACULTURE

18. The objectives of the meeting were: (1) to review the status of aquaculture in the Gulf region and key issues affecting the development of a sustainable aquaculture industry; (2) to identify areas of regional interest and cooperation among the RECOFI Member countries; (3) to study the practical implications of establishing a regional aquaculture subsidiary body under RECOFI including benefits to the Member countries and financial implications; (4) to elaborate and draft Terms of Reference.

19. One representative of each of the following countries, Bahrain, Iran (Islamic Republic of), Oman, Saudi Arabia and the United Arab Emirates, attended the aquaculture session. The session was also partly attended by a representative of the Public Administration for Agriculture and Fisheries (PAAF) of Kuwait as an observer due to the absence of the appropriate technical officer.

20. The participants provided to the Secretariat written country reports on the status of aquaculture development (not included) with highlights on the status of aquaculture production. This provided the opportunity for each delegate to inform the meeting of the major constraints faced by their industry as well as areas in which it was felt that technical competence was achieved. Each delegate outlined technical areas where assistance and the acquired knowledge could be offered and shared with the neighbouring member states (Annex II – *not attached to this report*).

21. The session participants unanimously agreed that regional collaboration among RECOFI Member countries was required in order to support the development of a sustainable aquaculture industry in the region. It was acknowledged that such regional collaboration could be strengthened and properly achieved if RECOFI formally endorsed at its next session the creation of a subsidiary body to study and report on aquaculture matters.

22. Based on the recommendations of previous meetings in the region (e.g. Oman, October 2002) the participants discussed and drafted a first set of terms of reference for a RECOFI subsidiary body (possibly a “Committee on Aquaculture” or Working Group) that would deal exclusively with aquaculture issues. The draft terms of reference, attached as Annex III (*not attached to this report*), would be submitted to the next RECOFI Session (Oman, May 2003) for consideration and approval should the relevant subsidiary body be established.

23. The participants agreed that this subsidiary body should meet regularly, preferably on a yearly basis and before each session of the Commission. It was noted that the establishment of an aquaculture subsidiary body would have administrative and financial implications to the RECOFI Member countries. The budget requirement for the organization of the meeting was briefly discussed, however it was agreed that this issues should be discussed as an agenda item in the next RECOFI session. It was also recognized that during the course of the subsidiary body on aquaculture, extra costs may arise

from time to time, for example in the creation of ad hoc working groups and commissioning of review papers. For participating member governments and observers the additional obligations would consist mainly of provision of information and direct participation in meetings.

24. With regards to the Rules of Procedures, the subsidiary body would adopt those of the parent body, RECOFI discussed and adopted during the first Commission Session held in Muscat, Sultanate of Oman from 6 to 8 October 2001.

25. The meeting also recognized that ad hoc working groups would have to be established, if necessary, to deal with specific or emerging technical issues of regional interest. A number of possible ad hoc working groups (e.g. marine fish cage farming, aquaculture laws and legislation, fish disease) were proposed. However, it was felt that such groups could be formed once a formal aquaculture subsidiary body is approved and established.

26. The aquaculture participants also discussed the importance of having the same technical experts attend successive meetings to ensure continuity and institutional development. The importance of the above was particularly felt should technical working groups be organized and established. It was noted that a chairman or facilitator would be needed to coordinate the work in the region and participants agreed that suitable nominees should be identified.

27. It was also recognised that RECOFI member countries would have to enable national experts to travel in the region in order to attend such technical meetings. Furthermore, it was recognized that the role of FAO would be limited to that of a facilitator as all main activities and decisions would be undertaken and agreed on by RECOFI members.

Recommendations

i. RECOFI member country officers attending the next Commission session should clearly report on (1) the technical areas of expertise available in each member country and technical assistance that could be offered, and (2) areas where technical assistance is required. This exercise will enable the Member countries to outline a possible programme of activities for the aquaculture subsidiary body and identify areas where technical assistance needs to be attracted from outside the Gulf region.

ii. RECOFI Secretariat prepare a working paper for discussion at the next RECOFI session on the indicative financial requirement of the aquaculture subsidiary body that would include the preparation, processing and distribution of documentation, interpretation if needed, staff time and travel costs.

The second meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) was held in Muscat, Oman, from 29 to 30 November 2005 and was attended by experts from all the Members of the Commission. The WGA reviewed the decisions and recommendations of the third session of the Commission held in Doha, Qatar from 9 to 11 May 2005, and the activities of the WGA that followed. Among the activities, the experts acknowledged that progress had been made with regards to the technical arrangements that would lead to the preparation of the RECOFI Regional Aquaculture Information System (RAIS). However, it was noted that the system could not be developed as the budgeted funds had yet to be submitted by the hosting country. In this regard, the expert from Kuwait reconfirmed the commitment and willingness of its Government to host and finance the system and that the funds would be submitted by the end of the calendar year. The delay of remitting the funds was due to internal procedures involving different national authorities. It was agreed that should there be a further delay, the system would be hosted by the Islamic Republic of Iran. The WGA acknowledged that the legal and policy framework project proposal remained a major regional priority and agreed to actively seek funding support from the Commission Members as well as to approach regional donor agencies through the coordination of the RECOFI Secretariat. Other activities discussed at the meeting included the introduction of exotic species to the region and the preparation of a regional technical workshop on marine stock enhancement and artificial reefs. The WGA reviewed and adopted the structure of the technical guidelines for the control and responsible use of alien species in fisheries and aquaculture drafted by the Fisheries Department of the Food and Agriculture Organization (FAO) and other organizations in support of the Code of Conduct for Responsible Fisheries (CCRF).

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