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# REGIONAL COMMISSION FOR FISHERIES

**Report of the**

# FOURTH MEETING OF THE WORKING GROUP ON AQUACULTURE

**Muscat, Sultanate of Oman, 27–28 January 2009**

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2009

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## PREPARATION OF THIS DOCUMENT

This document is the final report of the fourth meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) held from 27 to 28 January 2009 in Muscat, Sultanate of Oman.

This report was prepared by the WGA Secretariat and endorsed by the WGA.

## ACKNOWLEDGEMENTS

Many thanks are due to the Ministry of Fisheries Wealth, Sultanate of Oman, particularly the Directorate General for Fisheries Research for the support and excellent hosting of the meeting.

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**ABSTRACT**

The fourth meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) was held in Muscat, Oman, from 27 to 28 January 2009 and was attended by the representatives from seven member countries. The WGA reviewed the recommendations and decisions of the Commission made at its fourth session (Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007) and noted that all planned and endorsed WGA activities had been duly implemented. The meeting extensively discussed the final activities and inputs to the Regional Aquaculture Information System (RAIS) in view of its imminent and official launching in March 2009. The participants discussed and agreed on: i) the RAIS User Manual, ii) the promotional flyer, iii) the press release, and iv) the overall communication strategy to launch and to further strengthen the information system. The WGA noted with regret that the start of the "Aquaculture legal and policy framework project" during the intersessional period was not possible as the agreed financial input from all the contributing Commission members had not been received. The WGA finalized its proposed programme of work for the new intersessional period based on the needs and recommendations resulting from the implementation of activities in the last biennium and emerging issues of importance for the region. The WGA recognized that the Commission, based on its current level of financial contribution, may not have the required budget to implement a comprehensive aquaculture programme and recommended that some activities could be implemented with extrabudgetary funds. The six main activities proposed in order of priority for the new work plan include: 1) application of risk analysis to aquaculture, 2) environmental monitoring in cage aquaculture, 3) impacts of red tides to aquaculture, 4) development of national strategies on aquatic animal health, 5) spatial tools and aquaculture zoning, and 6) aquaculture recirculation strategies. The WGA recommended that the Commission should also encourage and support more training and on-the-job cooperation in the field of aquaculture development among its members as well as in countries outside the region.

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## OPENING OF THE MEETING

1. The WGA Chairperson, Mr Dawood Suleiman Al-Yahyai, welcomed the participants from the RECOFI members and, on behalf of the Ministry of Fisheries Wealth, Sultanate of Oman, expressed his pleasure in hosting the fourth meeting of the of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI). The meeting was held at the Safeer International Hotel, Muscat, from 27 to 28 January 2009 and was attended by seven countries of the Commission mainly represent by the WGA Focal Points and Alternate Focal Points. The list of participants is provided in Appendix B.

2. Mr Alessandro Lovatelli, RECOFI-WGA Technical Secretary, welcomed the participants and presented the agenda of the meeting. He highlighted the importance of developing the new work plan proposal based on the needs of the region and recommendations of the two technical workshops on aquatic animal health and cage aquaculture development organized by the WGA as endorsed by the Commission at its fourth session (Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007).

## ADOPTION OF THE AGENDA

3. The agenda was presented by the WGA Chairperson indicating that the first day of the meeting would be entirely dedicated to the finalization of the Regional Aquaculture Information System (RAIS) in view of its official launching planned for March 2009. The second day of the meeting would review the intersessional activities of the Working Group and deliberate on its new work programme proposal for submission to the Commission at its Fifth session planned to take place from 12 to 14 May 2009 in Dubai, United Arab Emirates.

4. The annotated agenda attached as Appendix A, was adopted without changes. The list of the meeting documents appears in Appendix C.

## REVIEW OF INTERSESSIONAL ACTIVITIES

5. The meeting participants noted that all but one of the planned activities of the WGA endorsed by the Commission at its fourth session (Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007) were successfully implemented. These included two regional technical workshops on aquatic animal health (Jeddah, Kingdom of Saudi Arabia, 6–10 April 2008) and on marine cage aquaculture development (Muscat, Sultanate of Oman, 25–26 January 2009) and the finalization of the Regional Aquaculture Information System (RAIS).

6. It was noted that the only activity that was not initiated was the “Aquaculture legal and policy framework project” due to the fact that the funds from some of the contributing RECOFI countries had not been deposited.

## REGIONAL AQUACULTURE INFORMATION SYSTEM (RAIS)

7. In view of the imminent and official launching of the Regional Aquaculture Information System (RAIS) the WGA concurred that a full day was required for this activity. The Secretariat opened this Agenda item by briefing the participants on the developmental status of the Web-based information system and the current level of data uploaded following the WGA Technical meeting on the RECOFI Regional Aquaculture Information System held from 6 to 8 November 2007 in Safat, Kuwait.

8. It was noted that, although considerable effort had been carried out by the RAIS National Coordinators and the WGA Focal Points to feed the system with the required data, additional effort was envisaged prior to the official launching of RAIS. It was agreed that the RAIS National Coordinators would verify the correctness of the current national data in the system and ensure that the missing data and information would be uploaded with no further delay. Furthermore, Iraq, Qatar and Saudi Arabia were invited to finalize and submit their National Aquaculture Sector Overview (NASO). The Islamic Republic of Iran, Iraq, Qatar and Saudi Arabia were also requested to submit a description of their respective RAIS National Centre.

9. The meeting participants reported some technical malfunctions concerning the editing of data/information already uploaded in the system. These and other minor technicalities were dealt with during the meeting throughout the assistance of the Web developer based in FAO headquarters in Rome.

***Role of the RAIS Regional Centre***

10. In introducing this Agenda item the Secretariat reported that the delay in officially lauching and promoting the RAIS Web site was mainly due to the fact that the RAIS Regional Centre in Kuwait still required additional technical capacity building. This requirement was officially communicated to the Secretariat by the Public Authority for Agriculture Affairs and Fish Resources (PAAFR) hosting the system.

11. It was agreed that a training session would be organized in Kuwait prior to the launching of the Web site to enable the RAIS Regional Centre staff to independently operate the information system and enable daily maintenance actions. In this regard the Secretatiat informed the delegates that the mission of two experts would be covered through the extrabudgetary funds provided by Kuwait for the development of RAIS. It was also recalled that FAO would continue to provide the necessary technical assistance and backstopping to ensure a smooth operation of the system for an additional year.

***Presentation and adoption of the RAIS user manual***

12. The Secretariat presented the draft RAIS User Manual as discussed and agreed during the WGA Technical meeting on the RECOFI Regional Aquaculture Information System (Safat, Kuwait, 6–8 November 2007) and invited the participants to provide feedback on its contents and structure. The WGA endorsed the manual as being user friendly, agreed on the proposed layout and thanked the Secratariat for the excellent work carried out.

13. The WGA Focal Point for Bahrain volunteered to have the manual translated into Arabic so that the Secretariat could finalize, print and distribute the bilingual manual (Arabic and English) by the next session of the Commission. It was further agreed that a PDF version of the manual would be immediately posted on the RAIS home page. The draft RAIS User Manual is attached to this report as Appendix D.

***RAIS communication strategy***

14. The draft RAIS communication strategy was presented by the Secretariat Information Officer (RECOFI:WGA/IV/2009/2) to initiate discussions on how best to promote the RAIS at national and regional levels during its official launching planned for March 2009. The

delegates deliberated on the means to be used and actions to be taken to enhance the visibility of the system and to ensure an effective flow of data and information. The RAIS communication strategy is attached as Appendix G?

15. The WGA reiterated the importance of producing RAIS promotional material as well as the need of organizing ad hoc seminars in English and Arabic to promote the system at national level. In this regard the Secretariat presented a draft flyer and press release prepared for the meeting. The documents were discussed and finalized by the group, while the WGA Focal Point for Oman agreed to have then translated into Arabic. The draft flyer and press release are attached as Appendices E and F, respectively.

16. The delegates also agreed that the participation of RAIS representatives at targetted national and international aquaculture events and major aquaculture exhibitions would be an opportunity to promote the existence of the RAIS to a wider spectrum of potential users.

17. This Agenda item was concluded with the identification of the next activities that would lead to the finalization and official launching of the RAIS. The proposed and agreed calendar of activities is attached to this report as Appendix H.

***Other matter***

18. The Secretariat delivered a presentation on a series of new initiatives undertaken by the FAO Fisheries and Aquaculture Department including the development of a GIS-based database on aquaculture systems distribution and characteristics. This application would enable RECOFI members to easily set up an independent fish farm location monitoring system based on the available Google map technology. The information shared was well received by the participants who agreed to complete an MS-Excel form to collect the necessary data and farm coordinates. It was agreed that the outputs of this activity would be posted on the RAIS Web site provided that the information was fed to the Secretariat.

19. The participants finally recommended that the Secretariat should always include an agenda item on RAIS in future WGA meetings to have the opportunity to report and discuss on advances made and technical problems, if any, experienced by the National Coordinators.

**AQUACULTURE LEGAL AND POLICY FRAMEWORK PROJECT**

20. The WGA participants noted with regret that the launching of the "Aquaculture legal and policy framework project" (see RECOFI:WGA/IV/2009/Inf.3 – Appendix H) during the last intersessional period was not possible as the agreed financial inputs from all the contributing Commission members had not been received. The participants further reiterated the importance and relevance of this project also in view of the recent technical workshops organized by the WGA on aquatic animal health and cage culture development.

21. The Technical Secretary informed that by the end of January 2009 only the contributions from two countries had been deposited with FAO (Kingdom of Saudi Arabia and United Arab Emirates). He further informed the WGA that the Secretariat had sent out in November 2007 through the appropriate channels, as requested at the Fourth session of the Commission (Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007), an official letter to all Members requesting them to confirm their commitment to the project as well as providing an

invoice indicating the agreed amount (USD 22 500) and the RECOFI account details. These letters were copied to the officially nominated WGA Focal Points.

22. It was agreed that the WGA Focal Points of those countries that had not taken action to follow-up the matter with the relevant national authorities and report back to the Secretariat by the end of February 2009. The WGA Focal Points where informed to contact the Secretariat in Cairo, Egypt, in the event they required a new copy of the letter circulated.

## WGA PROGRAMME OF WORK FOR 2009–2011

23. The proposed programme of work of the WGA for the next intersessional period was extensively discussed during the meeting. The work plan is based on recommendations and needs resulting from the implementation of activities during the last biennium, and emerging issues of importance for the region.

24. In the preparation of the work programme the WGA recognized that the Commission, based on its current level of contribution, may not have the required budget to implement a comprehensive aquaculture programme. Hence, the programme proposed below lists of six activities presented in order of priority, some of which (a minimum of two is recommended), could be supported by the regular budget contribution of the Commission while others would require extrabudgetary funding rather than postponing their implementation to the next intersessional period. In this regard the WGA recalled that the establishment of the RECOFI Regional Aquaculture Information System (RAIS) was possible due to the contribution from the State of Kuwait and felt that the Commission members should continue supporting WGA activities also through this funding mechanism.

25. In addition to the six technical activities proposed by the WGA (see below), it was agreed that the next work plan would likely include the implementation of the aquaculture legal and policy framework project, if the funding shares from all contributing Commission members are received, as well as a continued technical support aimed at further strengthening the Regional Aquaculture Information System (RAIS).

### *Application of risk analysis to aquaculture* (Activity 1)

26. The WGA endorsed the report of the Regional technical workshop on aquatic animal health held in Jeddah, Saudi Arabia, from 6 to 10 April 2008 which identifies a number of capacity building themes which ideally should be carried out at the regional level. Two of these activities were discussed at the meeting. The application of risk analysis to aquaculture was proposed as the top priority activity for inclusion in the next work plan of the Working Group.

27. Risk analysis is recognized as having a wide applicability to aquaculture as an important tool that provides insights and assists in making decisions that will help to avoid the negative impacts (e.g. environmental degradation; introduction and spread of pathogens, pests and invasive species; genetic impact; unsafe foods; and negative social and economic impacts), thus helping the growth of aquaculture to proceed in a more socially and environmentally responsible manner.

28. The WGA concurred that an integrated approach to risk analysis and application of risk management measures will assist the sector in reducing risks to successful operations

from both internal and external hazards and can similarly help to protect the environment, society and other resource users from adverse and often unpredictable impacts.

29. The activity proposed is therefore the organization of a training workshop on the introduction of risk analysis as applied to the aquaculture sector. This introductory course would consist of lectures on the principles of risk analysis process, its application to the risk sectors affecting aquaculture, and group exercise using pathogen risk analysis as a model in the application of the risk analysis process to aquaculture.

30. Oman offered to eventually host the workshop.

***Environmental monitoring in cage aquaculture*** **(Activity 2)**

31. During the Regional technical workshop on sustainable marine cage aquaculture development held in Muscat, Oman, from 25 to 26 January 2009, held back-to-back with the Fourth WGA meeting, several follow-up actions had been identified and activities recommended. One priority activity identified concerned the development of a specific fish cage culture monitoring programme for the region.

32. The participants attending the above mentioned technical workshop suggested that monitoring programmes adopted in countries which have a flourishing fish cage farming industry could be used, however recognized that these would need to be adapted to local environmental conditions. Furthermore, the importance of monitoring results against environmental specific threshold impact limits (Environmental Quality Standards [EQS]) was emphasized by the group.

33. The WGA recommended that a group of marine biologist postgraduates from the region be responsible for the adaptation of an existing monitoring programme and EQS by establishing contacts and undergoing training with a recognized research institution that holds expertize in cage farming environmental impact and monitoring. The activity proposed for the next WGA work plan would consist of a short hands-on training activity abroad. This activity would ensure quick and effective transfer of expertize that would allow the trainees, in close collaboration with the partner institution, to adopt the monitoring programmes and EQS to local conditions.

34. The WGA invited the WGA Technical Secretary to identify a suitable research institution where such training could be carried out and to eventually make the necessary arrangements should the activity be endorsed by the Commission.

***Impacts of red tides to aquaculture*** **(Activity 3)**

35. In view of the recent major red tide event in the region that seriously affected fish cage aquaculture, the WGA recommended the organization of a technical workshop on the impacts of hazardous algae on aquaculture with a focus on how the fish cage culture sector could handle the problem by developing suitable counter measures in case of an algal bloom outbreak. The WGA further recommended that the organization of the proposed workshop be coordinated and possibly co-organized with the Regional Organization for the Protection of the Marine Environment (ROPME; www.ropme.org) in view of the relevant mandate of this organization and the recent meetings organized covering algal blooms in the region.

36. Kuwait offered to eventually host the workshop.

***Development of a national strategy on aquatic animal heath*** **(Activity 4)**

37. At the aquatic animal health workshop organized by the WGA (Jeddah, Kingdom of Saudi Arabia, 6–10 April 2008) it was agreed that national and international aquatic animal health programmes are becoming essential to ensure the sustainable development of aquaculture and protect existing capture fisheries, aquaculture and aquatic biodiversity from negative impacts of exotic pathogens and diseases. Such national programmes need to be harmonized at both regional and international levels and particularly with programmes of neighbouring and major trading partners in order to achieve maximum effectiveness particularly for the safe transboundry movement of aquatic animals. Such national strategy provides a country with a road map, using the concept of phased implementation based on national needs and priorities to achieve the desired aquatic animal health status.

38. This planning workshop will elaborate on the essential elements of a "National Strategy on Aquatic Animal Heath" (i.e. policy, legislation and enforcement; risk analysis; pathogen lists; information systems; health certification; quarantine; disease surveillance; monitoring and reporting; zoning; emergency preparedness; research; institutional structure; human resources development; regional and international cooperation; and including farm-level health management) and the steps required in its development and implementation.

***Spatial tools and aquaculture zoning*** **(Activity 5)**

39. The WGA concurred that recommending and finding sites for fish cage farming or other aquatic practices in the region has been and will be a challenge for the authorities and the industry. The WGA further acknowledged that coastal zoning through the use of appropriate spatial tools would allow the identification and possible allocation of specific geographical areas (zones and sites) to aquaculture practices particularly in those countries in the region that have limited natural resources and which are in high demand by competing users. Furthermore, zoning would also simplify the process of farm site selection.

40. It is proposed to review the regional competence in the use of spatial planning tools (e.g. GIS, remote sensing) and organize an inception workshop that would synthesize the knowledge acquired in the region and to recommend a road map on how to move forward in aquaculture zoning.

***Aquaculture recirculation technologies*** **(Activity 6)**

41. In view of the geographical conditions in the region and limitations of specific resources, the WGA felt that there is a need to introduce alternative fish farming technologies in the region such as recirculation systems including aquaponics. The advantages of such technology are multiple including the possibility of farming marine species on land-based facilities and the reduced requirements of freshwater in case freshwater species are farmed. The WGA therefore recommended the organization of a technical workshop on recirculation systems by inviting experts from the private sector including from those commercial companies that provide such technology. Independent experts that may provide an economic insight on such farming systems should also be invited. The WGA also proposed to replicate the format of the advance course on recirculation technology and systems organized in Tarragona, Spain, from 10 to 14 March 2008 by the International Centre for Advanced

Mediterranean Agronomic Studies (CIHEAM) through the Mediterranean Agronomic Institute of Zaragoza (Instituto Agronómico Mediterráneo de Zaragoza – IAMZ), in Zaragoza, Spain.

***Aquaculture legal and policy framework project***

42. The WGA noted that although the Commission members at its Fourth session (Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007) agreed to contribute in equal parts to the budget for the funding of the "Aquaculture legal and policy framework" project, at the time of the meeting only two members had transferred their contribution to the RECOFI account. It was agreed that the implementation of the legal project would be included in the new WGA biannual work programme assuming that all contributions would be received by the next session of the Commission (May 2009).

***Regional Aquaculture Information System (RAIS)***

43. The WGA noted and agreed that, although the RAIS Regional Centre staff in Kuwait would be in a position to respond and deal with most technical issues related to the functioning of the information system following its official launching of RAIS in March 2009, a limited budget allocation should be reserved for further strengthening the system. Such funds would enable the WGA to implement specific tasks that may include the establishment of new databases, organize additional training activities for newly authorized RAIS users, printing of promotional material, etc.

**ANY OTHER MATTER**

***Regional training cooperation***

44. The WGA recommended that the Commission should encourage and support more training and on-the-job cooperation in the field of aquaculture development among its members as well as outside the region.

***Confirmation of WGA Focal Points and Alternate Focal Points***

45. The list of the WGA Focal Points (FP) and Alternate Focal Points (AFP) was reviewed and updated following the transfer of former nominees to other postings. It was noted that most countries had officially nominated both the FP and the AFP. The representative of Kuwait and the FP of Qatar agreed that they would provide to the Secretariat the name and contact details of their AFP at the soonest possible. The updated name list of the FPs and AFPs, including their addresses and contact details, is attached to this report as Appendix I.

**NOMINATION OF THE WGA CHAIRPERSON**

46. The nomination of the current Chairperson of the WGA, Mr Dawood Suleiman Al-Yahyai (Oman), was reconfirmed for the next intersessional period. The WGA acknowledged his excellent support and coordination during his previous mandate period.

## DATE AND VENUE OF THE FIFTH MEETING

47. The WGA agreed that the next meeting should be preferably held prior and back-to-back with the organization of one of the next technical workshops if the proposed programme of work of the Working Group is endorsed by the Commission. It was further agreed that all regular WGA meetings should be attended by at least the WGA Focal Point or Alternate Focal Point, or both, to ensure continuity in the discussions and national reporting.

48. The WGA Focal Points raise the possibility of organizing some of its meetings (including regular WGA meetings and technical workshops) outside the region and in neighbouring countries in order to reduce expenses as well as to have the possibility to visit commercial aquaculture operations and other research facilities. Some of the locations suggested included Sharm El-Sheikh and Hurghada in Egypt or even in the premises of the FAO regional office in Cairo. It was agreed that this recommendation be put forward to the Commission for consideration.

## ADOPTION OF THE REPORT

49. The Chairperson thanked all participants for their contributions in the discussions particularly towards the finalization of the new work programme proposal of the WGA. The report of the meeting was subsequently adopted through email exchanges on Monday 23 March 2009.

**APPENDIX A**

**Annotated agenda**

**Tuesday, 27 January 2009**

| 09:00-17:15 | Regional Aquaculture Information System "RAIS" |
|---|---|

**1. General overview and development status of RAIS**

Presentation of national data uploaded by RECOFI member countries.

Agenda objective: Brief participants on the status of the data stored in the system since the last meeting held in Kuwait in November 2007. RAIS National Coordinators will be requested to report technical problems they have encountered during data entry. The agenda item will also raise the issue on data/news updating and entry frequency. The WGA Focal Points and/or the RAIS National Coordinators are requested to report on the status of data collection and entry. The Secretariat will report on the preparation of the National Aquaculture Sector Overviews (NASO) for the region.

**2. Role of the RAIS Regional Centre**

The role of the RAIS Regional Centre include: i) Regular maintenance of the information system; ii) Interaction between Regional Centre and National Centres; iii) Establishment of partnership with other regional aquaculture information system; and iv) Collection and submission of news items of interest to the regional aquaculture community.

Agenda objective: To clearly inform the RAIS Regional Centre staff and the RAIS National Coordinators of the supporting role and tasks to be performed by the different parties in managing the regional information system.

**3. Presentation and adoption of the RAIS User Manual**

Presentation of the RAIS User Manual to the RAIS National Coordinators and WGA Focal Points.

Agenda objective: To present the new RAIS User Manual prepared by the Secretariat and to receive feedback prior to its finalization and translation into Arabic.

**4. Establishment of a common communication strategy to promote RAIS**

These include: i) Regional/national communication strategies; ii) Preparation of a flyer for the promotion of the system; and iii) RAIS National Coordinators' role and interaction with the Regional Centre.

Agenda objective: to discuss with the National Coordinators the main issues related to widening and improving the effectiveness of the RAIS network and promoting RAIS at national, regional and international levels.

**5. Any other matter**

These include: i) new developments (e.g. mailing lists and newsletter); and ii) how to stimulate advertisement on the RAIS Web site by external users/clients.

Agenda objective: to discuss with the country participants potential and future areas of development within the information system.

**6. Activities for the next biennium**

The workshop participants will be invited to identify and prioritize activities to further develop and strengthen RAIS which will be included in the next biennium work plan of the WGA.

Agenda objective: to identify and prioritize activities for inclusion in the programme of work for the next (2009–2011) to be submitted to the Commission in May 2009 and determine budget requirements.

**Wednesday, 28 January 2009**

| 09:00–17:15 | **Fourth RECOFI-WGA Meeting** |
|---|---|

**1. Recommendations of the Fourth Commission session and WGA activities implemented**

The Secretariat will present the work carried out by the WGA during the last intersessional period in relation to the approved work plan (NB: RAIS activities will be covered the previous day).

> Agenda objective: issues related to the implementation of the WGA work plan and difficulties encountered will be raise and discussed under this agenda item.

**2. Presentation and prioritization of cage culture development follow-up activities**

The key activities discussed and follow-up actions identified by the participants attending the cage culture development workshop will be presented as project concept notes for discussion and prioritization.

> Agenda objective: One or more key follow-up activities will be identified for inclusion in the next RECOFI-WGA biennium work plan.

**3. Aquaculture legal and policy framework project proposal**

The RECOFI-WGA Focal Points will be invited to report whether their country has contributed the budget share for the implementation of the aquaculture legal and policy framework project proposal.

> Agenda objective: to report to the Commission at its fifth session (May 2009) and provide actions on how to progress with this long standing activity.

**4. WGA work plan preparation for next biennium (2009–2011)**

The RECOFI-WGA Focal Points will require identifying and prioritizing activities for inclusion in the next biennium work plan. The work plan may include activities as follow-up to the two workshops on Aquatic Animal Health and on Sustainable Marine Cage Aquaculture Development as well as other issues of emerging importance for the region to be presented and discussed by the WGA Focal Points.

> Agenda objective: to finalize the next WGA work plan for the 2009–2011 intersessional period.

**5. WGA Chairperson**

The WGA Focal Points will be invited to present candidates for the next WGA Chairperson and proceed with the election. Confirmation of the WGA Focal Points and Alternate Focal Points.

> Agenda objective: Nomination of WGA Chairperson for the next intersessional period.

**6. Any other matter**

**7. Date and place of the fifth meeting**

**APPENDIX B**

**List of participants**

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**APPENDIX C**

**List of documents**

| | |
|---|---|
| RECOFI:WGA/IV/2009/1 | Provisional annotated agenda |
| RECOFI:WGA/IV/2009/2 | Draft user manual of the Regional Aquaculture Information System (RAIS) |
| RECOFI:WGA/IV/2009/3 | Draft communication strategy of the Regional Aquaculture Information System (RAIS) |
| RECOFI:WGA/IV/2009/4 | Draft promotional flyer of the Regional Aquaculture Information System (RAIS) |
| RECOFI:WGA/IV/2009/Inf.1 | List of documents |
| RECOFI:WGA/IV/2009/Inf.2 | Report of the Fourth Session of the Regional Commission for Fisheries, Jeddah, Kingdom of Saudi Arabia, 7–9 May 2007 |
| RECOFI:WGA/IV/2009/Inf.3 | Report of the Second Meeting of the Working Group on Aquaculture, Muscat, Sultanate of Oman, 29–30 November 2005 |
| RECOFI:WGA/IV/2009/Inf.4 | Report of the Regional Workshop on Aquatic Animal Health, Jeddah, Kingdom of Saudi Arabia, 6–10 May 2008 |

**APPENDIX D**

**Regional Aquaculture Information System**
**Draft User Manual**

| **Summary** |
|---|
| The Regional Aquaculture Information System (RAIS) is a Web site based on open source Typo3 software (a Content Management System). It has been established by the Food and Agriculture Organization (FAO) under the *aegis* of the Regional Commission for Fisheries (RECOFI) to facilitate the exchange of aquaculture information in the Gulf area among regional experts and stakeholders, and to promote and develop a sustainable aquaculture industry. This simple user manual is addressed to all RAIS authorized users who wish to gain a better understanding on how the system works and to exploit all its functionalities. |


| | |
|---|---|
| **Author** | RECOFI Secretariat (Responsible Officer: Mr Valerio Crespi) |
| **Version** | 1.0 |
| **Project** | Regional Aquaculture Information System (RAIS) |
| **Distribution** | RECOFI-WGA Focal Points, RAIS National and Regional Coordinators |
| **Object** | RAIS User Manual |
| **Saved** | 27 March 2009 12:06 PM |

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3. HOW TO MODIFY A RECORD 29
4. How to PERFORM A search 30

## 1. OVERVIEW AND LOGIN

The RAIS has been designed applying the most up-to-date information technology and database management in accordance with international Information Technology (IT) standards: i.e. the Open Source Content Management System TYPO3.[1] The system is user-friendly and allows rapid data entry from the administrators and easy retrieval by end-users. The use of specific tools such as the "white page" directories also allow the easy development of additional Web pages created upon request to provide preliminary outlooks on the major emerging regional aquaculture issues.

The first step in order to add new records in the RAIS consists in the login of authorized users (Figure 1).

- Step 1 - Click on the following address: **http://www.raisaquaculture.net/**
- Step 2 - Enter your username in the username box
- Step 3 - Type your password
- Step 4 - Click on the *Login* button

To logout, just click on the *Logout* button.

**Figure 1.** Login box

## 2. HOW TO ADD NEW RECORDS

Nine main databases have been currently developed to store data and information. They are available on the left hand side of the RAIS home page (Figure 2).

**Figure 2.** The current nine RAIS databases

[1] TYPO3 is a **free Open Source Content Management System** for enterprise purposes on the Web and in intranets. It offers full flexibility and extendability while featuring an accomplished set of ready-made interfaces, functions and modules (See www.typo3.org for more technical information).

The **Annual aquaculture statistics** database provides national aquaculture statistics by year: total production volume, in tonnes and value in USD, grouped under cultured species (common name and scientific name), farming system (intensive, semi-intensive, extensive, and integrated aquaculture), system of culture (cage, pond, longlines, etc.) and areas (marine, brackishwater, and freshwater). To add a new record, an authorized user should click on the selected item (Aquaculture statistics) and subsequently a new sub-item called "*Add new record*" will appear. By clicking on this sub-item the user is lead to an online submission form (Figure 3) which should be duly completed providing the following data: *year* of reported statistics; name of the cultured *species* (select one species from the scroll-down menu); *farming system* (select one farming system from the scroll-down menu); *system of culture* (select one system of culture from the scroll-down menu); production in *tonnes* and *value* in USD. Additional pertinent information can be added in the *other information* box, if needed. This box provides basic formatting tools. Finally, the name of the *country* is required. Once the user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

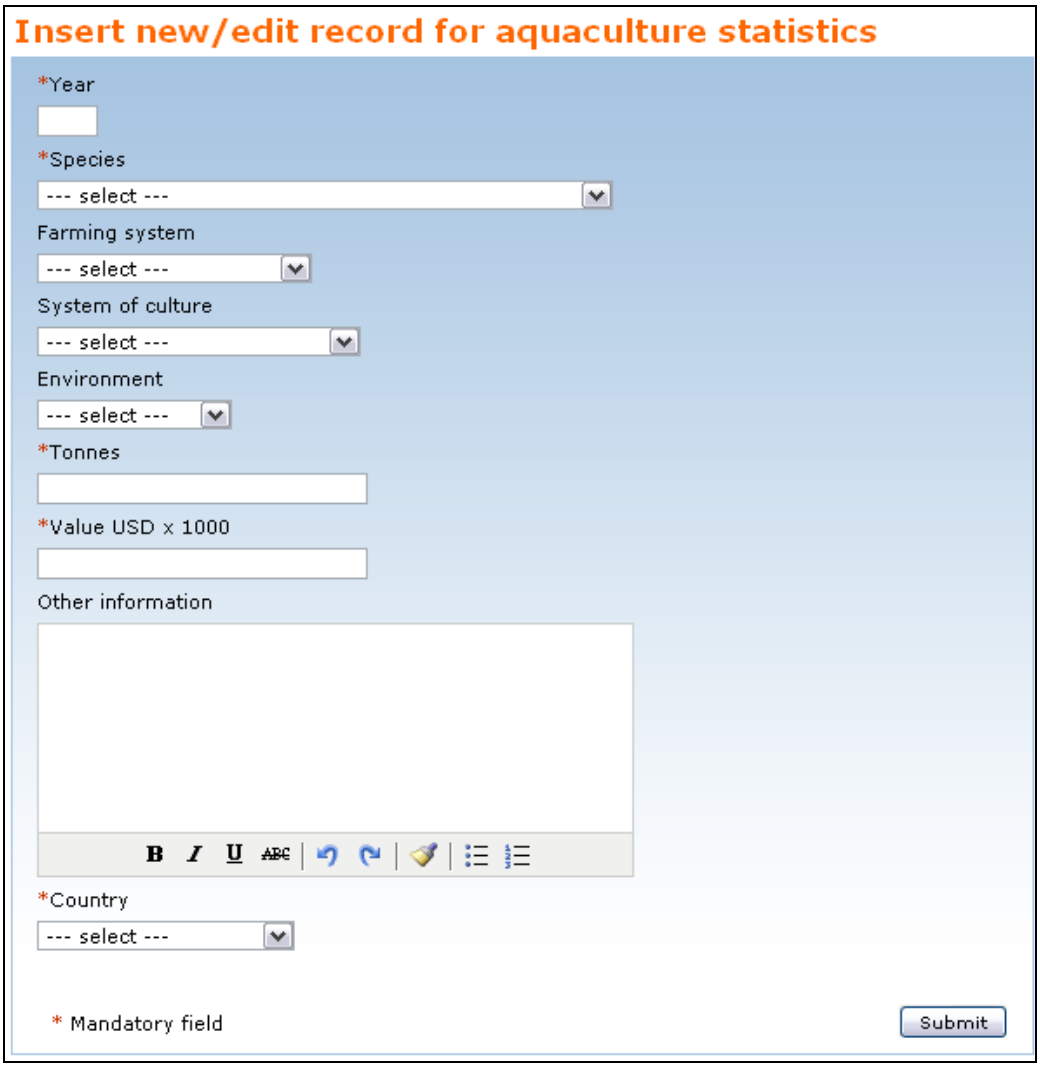


**Figure 3.** Annual aquaculture statistics

The directory on **Aquaculture experts** includes a list of regional experts by country with their respective address, field of expertise and curriculum vitae, when available. Authorized users must click on the selected item (Aquaculture experts) and a new sub-item called "*Add new record*" will appear. By clicking on this sub-item it will lead users to an online submission form (Figure 4) that should be duly completed by providing the following data: gender; *first name* and *family name* of the expert (first letter always capital letter); *nationality*; *country*; *company/affiliation*; *working postal address*; *city*; business *telephone number* and *mobile* (specifying the international country dialling code, e.g. +973-number); *fax* (same as previous); valid *email* address; *qualification level* (select one item from the scroll-down menu); *expertise* (choose one or more than one item in the scroll-down menu); *curriculum file* (upload the CV of the expert as a .pdf or .doc file); *current position* (provide a few lines describing the current position/job/main activities of the expert; *photo file* (include a passport photo of the expert, if available and desired). Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

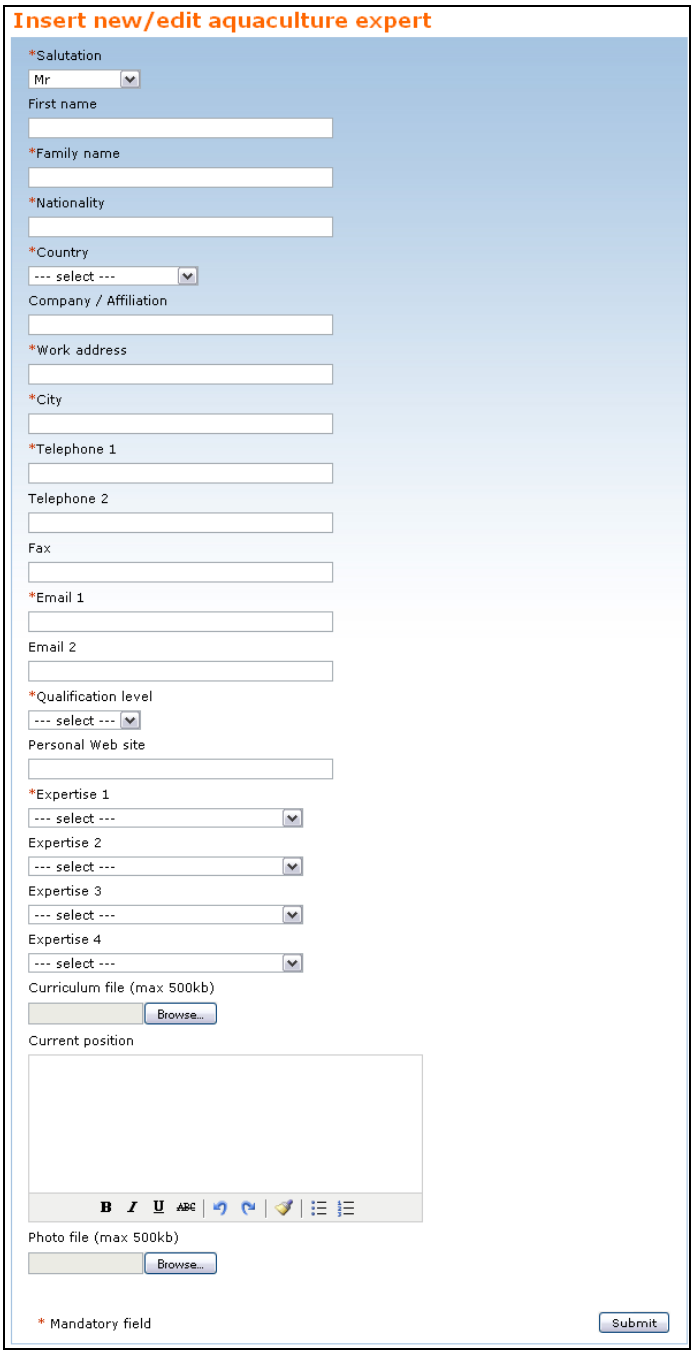


**Figure 4.** Aquaculture experts

The directory on **Production centres** provides a list of producer companies (from the public and private sector) in each country with the name, address, cultured species, technology and type of products farmed. Authorized users should click on the selected item (Production centres) and a new sub-item called "*Add new record*" will appear. By clicking on this sub-item it will lead the users to an online submission form (Figure 5) which should be duly completed. Authorized users must provide the following data: complete name of the *company*; the *acronym*, if it exists; company *type* (select one field in the scroll-down menu); *postal address*; *country*; provide at least one *telephone number* (specifying the international country dialling code, e.g. +973-number); *fax*; valid *email* address; *first name* and *family name* of the designated person to be contacted; *type of product* (select one item from the scroll-down menu); *species* (select one species from the scroll-down menu); *number of fish* (in case the company produces fish, provide the estimated number of fish produced). Once the user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

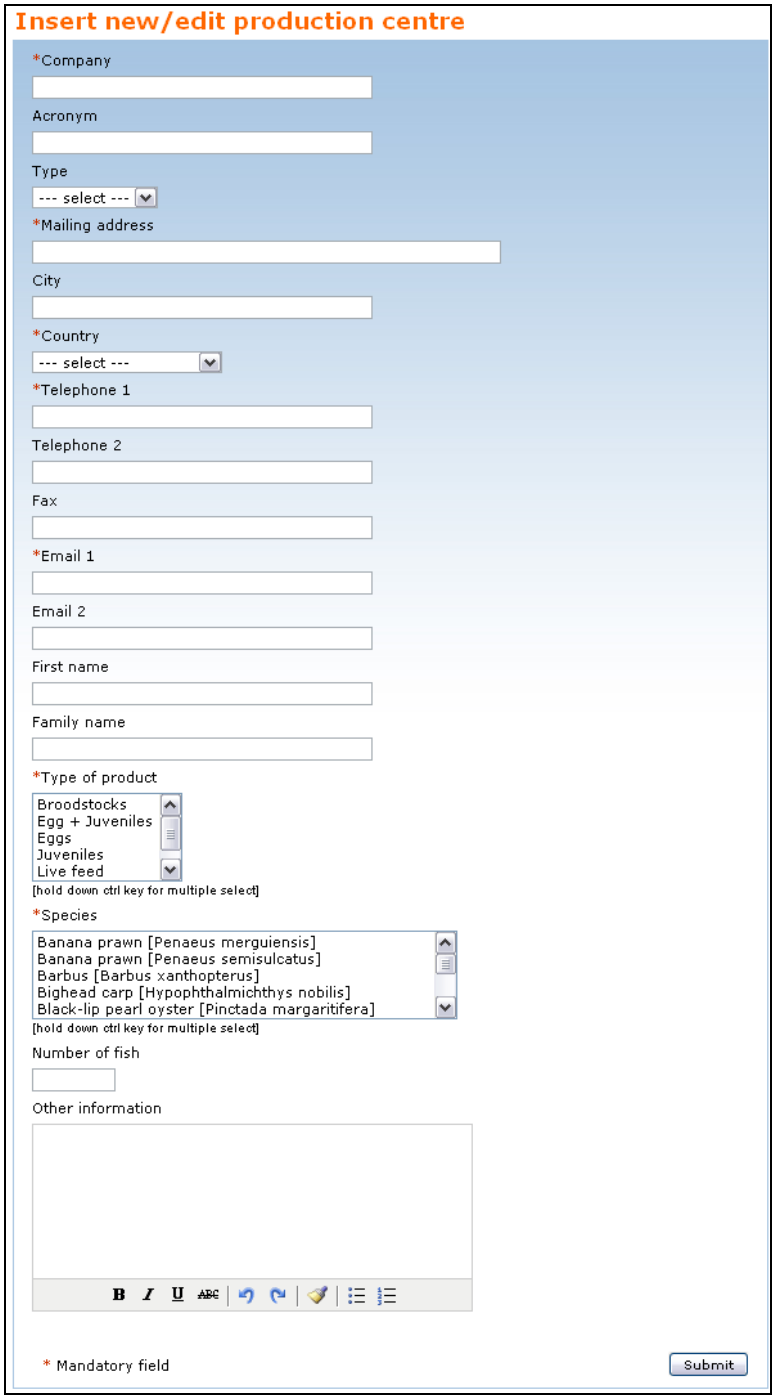


**Figure 5.** Production centres

The directory on **Suppliers** or producers of aquaculture equipment contains a list of supplier companies (from the public and private sector) in each country with the name, address and speciality of supplier (e.g. feeding equipment, cages, nets, chemical analysis). Authorized users must click on the selected item (Suppliers) and a new sub-item called "*Add new record*" will be generated. By clicking on this sub-item it will lead the users to an online submission form (Figure 6) which should be duly completed. Add the complete name of the *company*; the *acronym*, if it exists; *postal address*; name of the *city*; *country*; provide at least one *telephone number* (specifying the international country dialling code, e.g. +973-number); *fax*; valid *email* address; *first name* and *family name* of the designated person to be contacted; type of product (select one product or more than one from the scroll-down menus). At least one *type of product* must be selected. Once the user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

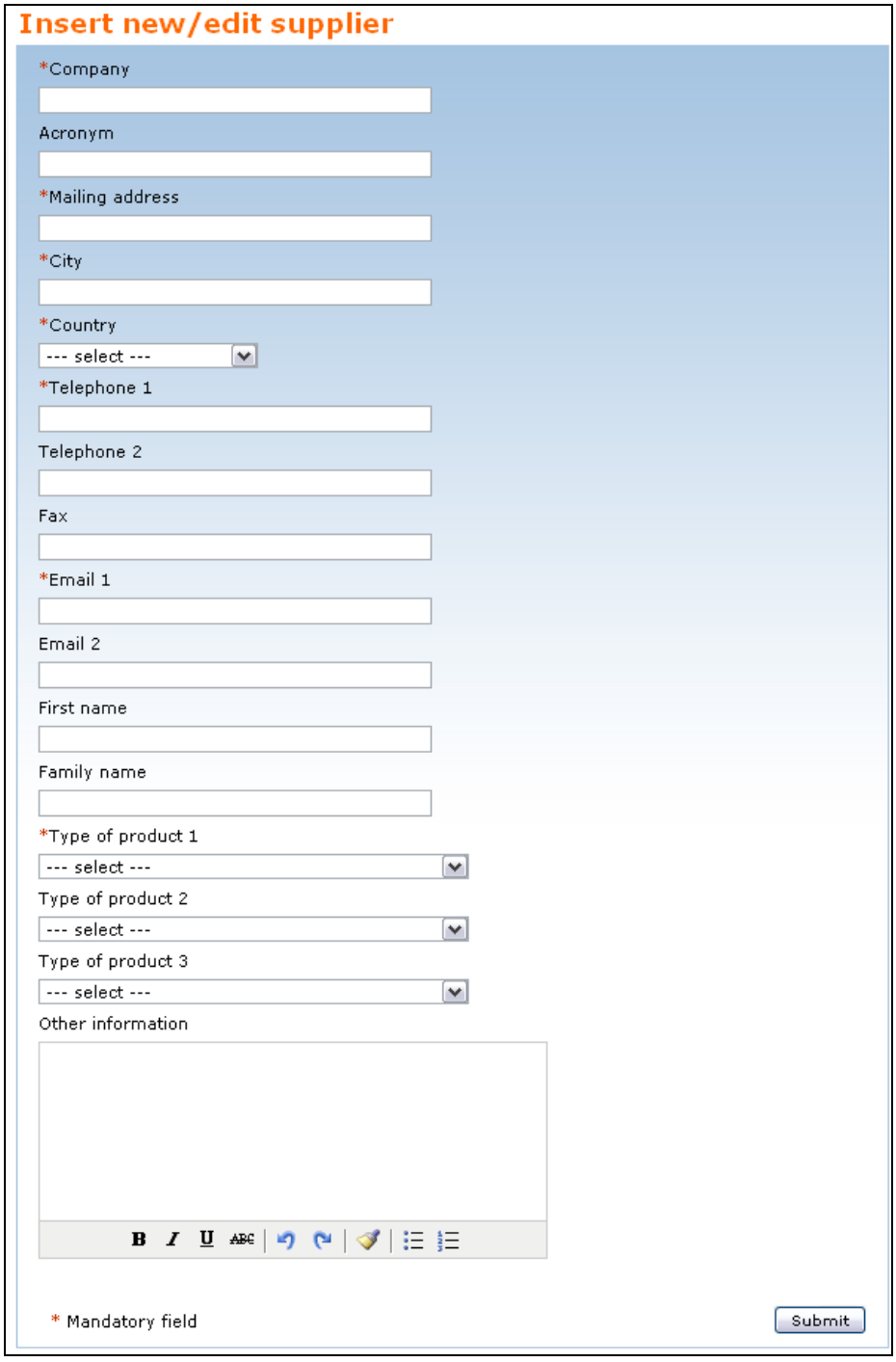


**Figure 6.** Suppliers

The directory on **Research institutions** contains a list of existing research institutions in the Region and sorted by country. Name, specialization, main research activities and address are provided. Authorized users must click on the selected item (Research institutions) and subsequently a new sub-item called "*Add new record*" will be generated. By clicking on this sub-item the user is lead to an online submission form that should be duly completed (Figure 7). Insert the complete name of the *research institution*; the *acronym*, if it exists; *postal address*; name of the *city*; *country*; provide at least one *telephone number* (specifying the international country dialling code, e.g. +973-number); *fax*; valid *email* address; URL address of the *Web site*, if exists; main *fields of research* (one or more can be selected). Other information on the research institution can be added in the appropriate box, if needed. Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

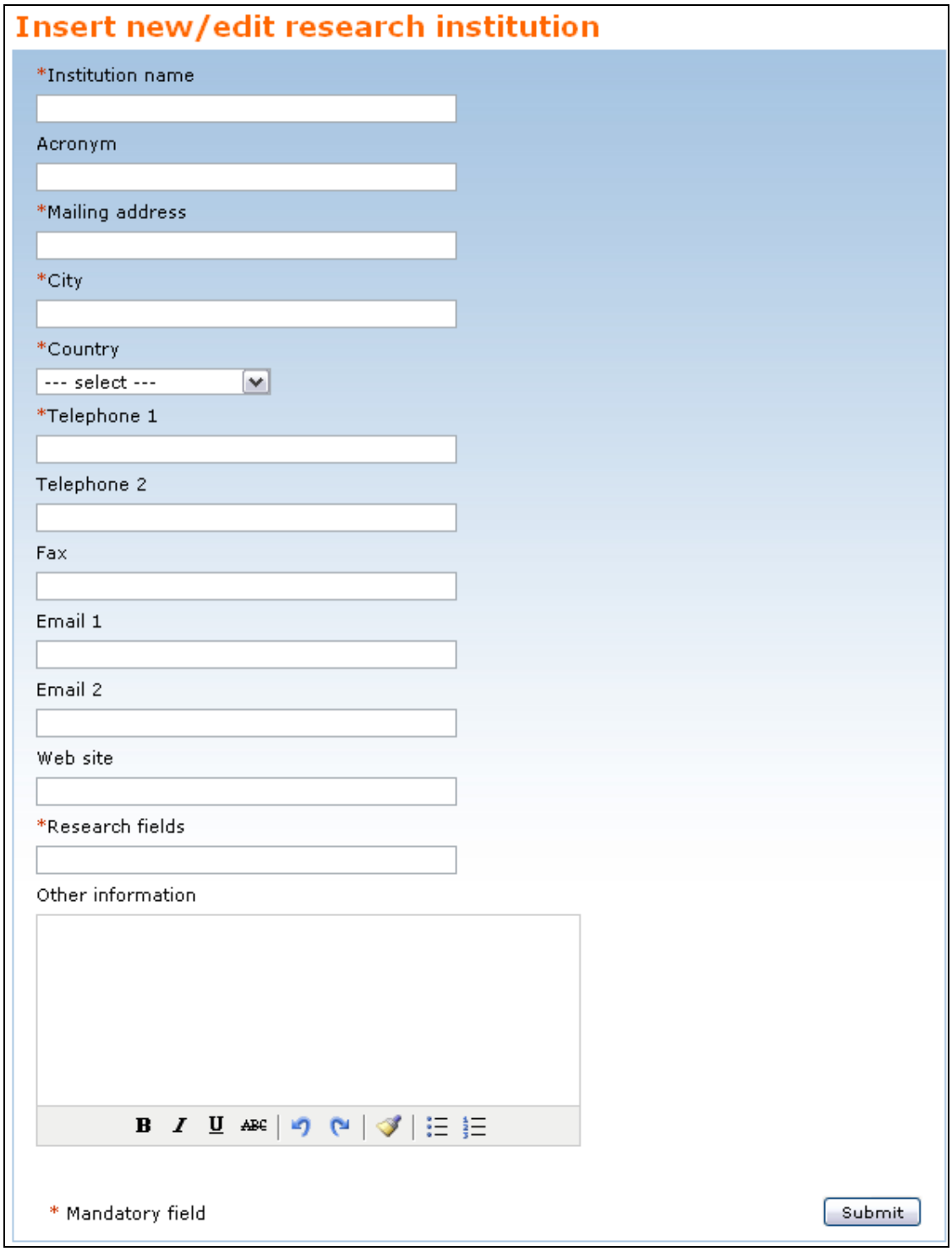


**Figure 7.** Research institutions

The **Research and development programme** directory provides information on past and ongoing research and development projects dealing with aquaculture in the Region. Authorized users must click on the selected item (Research and development programme) in order to generate a new sub-item called "*Add new record*". By clicking on this sub-item leads the user to an online submission form which has to be duly completed (Figure 8). For each project a half page summary should be provided including: project *title*; *participating institutions*; *objectives*; *expected outputs* (if the research is ongoing) or *main results* achieved (if the research project has terminated). Moreover, start and end dates should be provided along with the name of the project's coordinator, his/her email address and country. A blank box (*Comments*) allows user to add comments or additional information, if required. Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

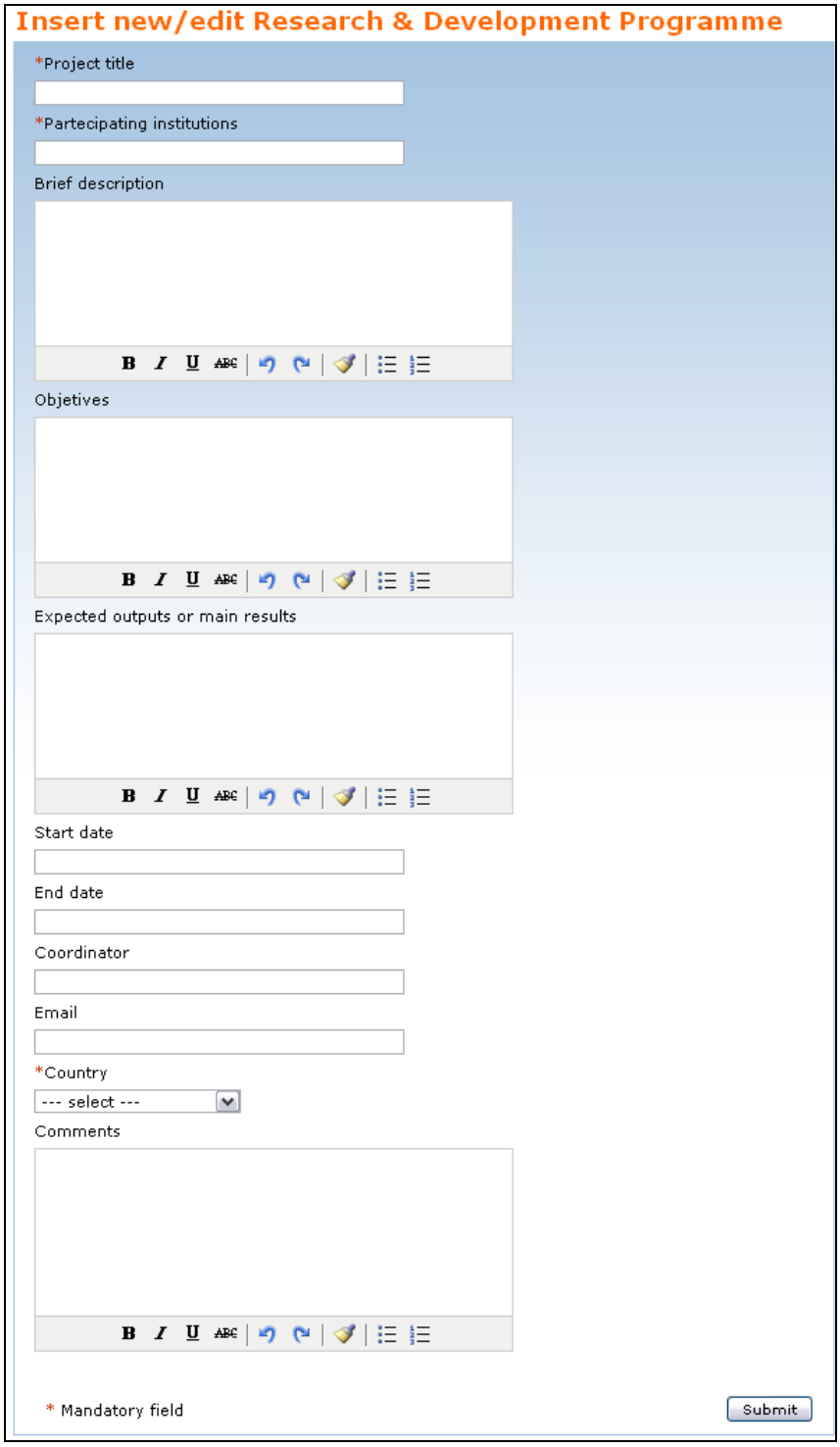


**Figure 8.** Research and development programme

**News & Events directory**. Through an online submission form authorized users have the possibility to submit information relevant to the RECOFI area for inclusion in the RAIS Web site, particularly aquaculture-related news items and events of interest to the Region. The users need to complete the specific form shown in the figure below (Figure 9). The following information is requested: *title* of the news item or event (title should be self-explanatory); *description* (provide a brief description/summary of the news item/event); *country*; *file* (by clicking on the *browse* button user can upload an electronic file (.pdf; .doc; .html) or the links related to the specific news item or event (*related URL*). In the case of an event, users are requested to add the dates of the event (*event from* and *event to*), the venue of the event (*where*) and the name of the organizer (*organizer*). Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

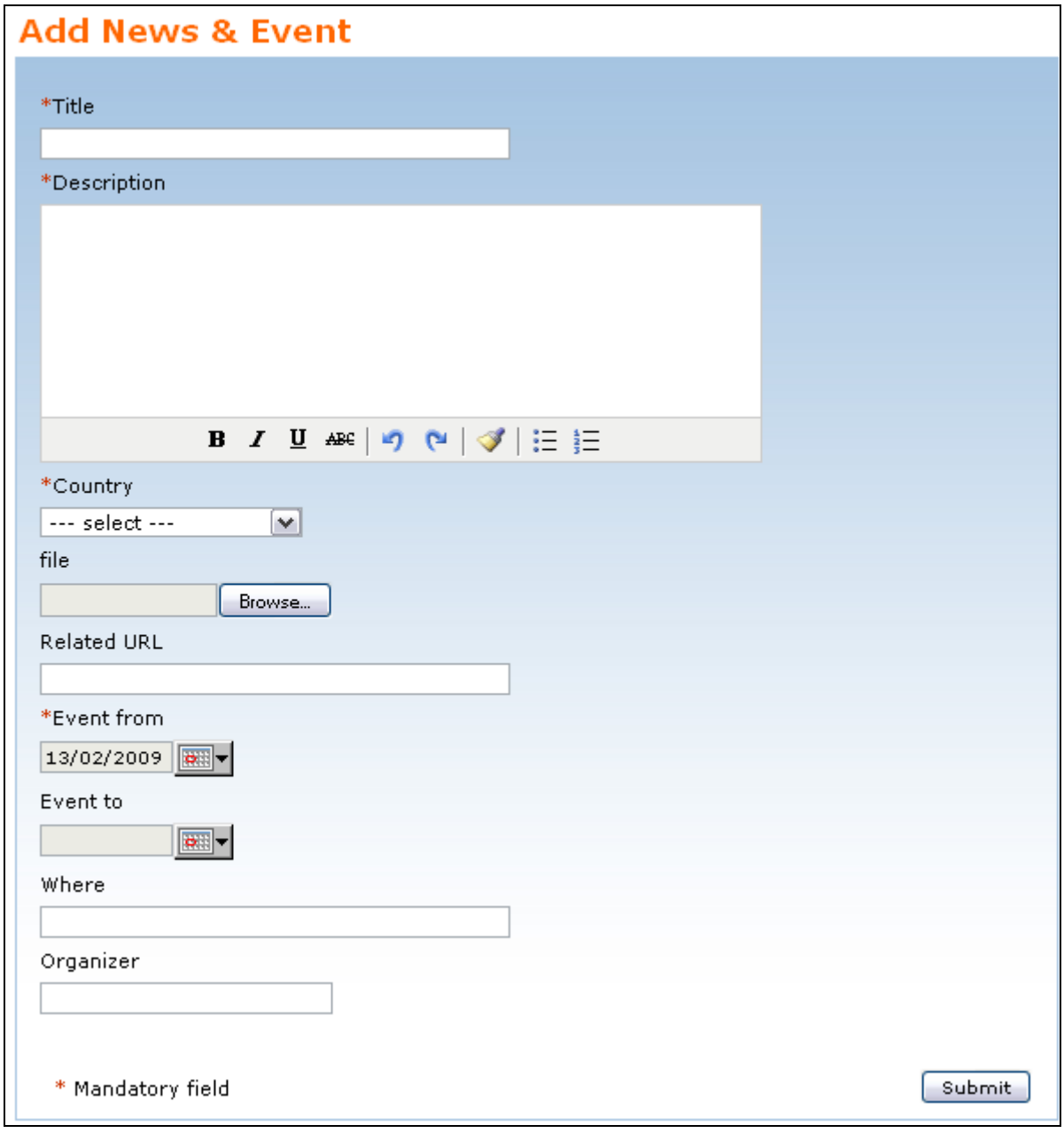


**Figure 9.** News & Events

A **Photo library** has been developed for storing and searching high quality and relevant photos of regional aquaculture. Authorized users have to click on the selected item (Photo library) and a new sub-item called "*Add new record*" will be generated. Clicking this sub-item leads the user to an online submission form that should be duly completed (Figure 10). For each photo the following metadata should be provided: upload the *photo* (JPG file; size not exceeding 2 MB) by clicking on the *browse* button; insert a *title* of the photo; brief *description* of the image; *author*'s name; *location*, where the photo was taken; *year*; *country*; *category* (choose one of the ten categories listed in the scroll-down menu). Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

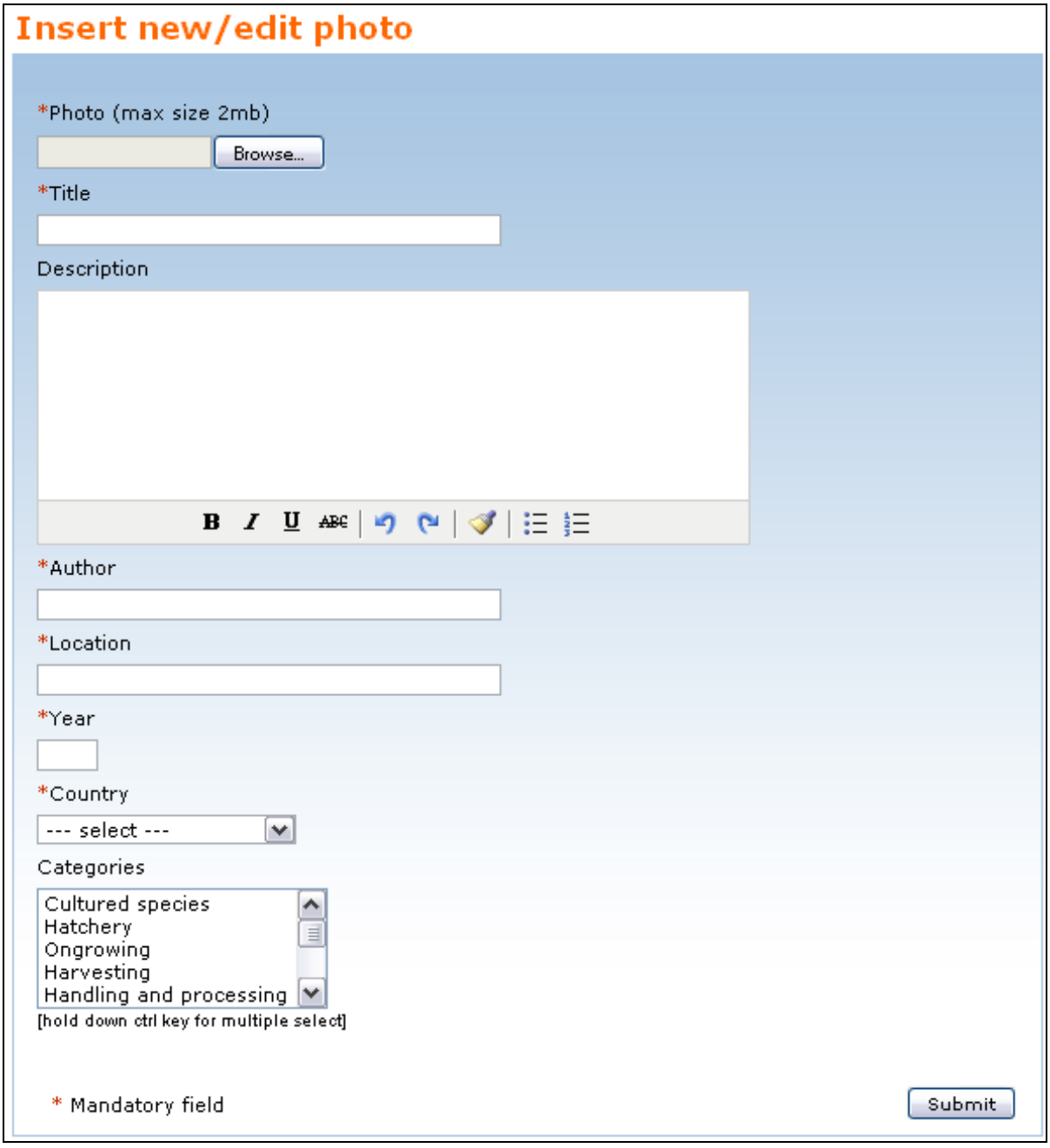


**Figure 10.** Photo library

A **Virtual library** has been implemented for storing and searching relevant and updated documents in electronic format (.pdf; .doc; .html) on regional aquaculture. Authorized users have to click on the selected item (Virtual library) and a new sub-item called "*Add new record*" will be generated. Clicking this sub-item leads the user to an online submission form (Figure 11) that should be duly completed providing the following information: *year* of publication; upload the electronic copy of the *document* (.pdf, .doc or .html format) by clicking on the *browse* button; *title* of the document; brief *description* or abstract including name of the author/s; *country* where the document has been produced. Once a user has completed the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

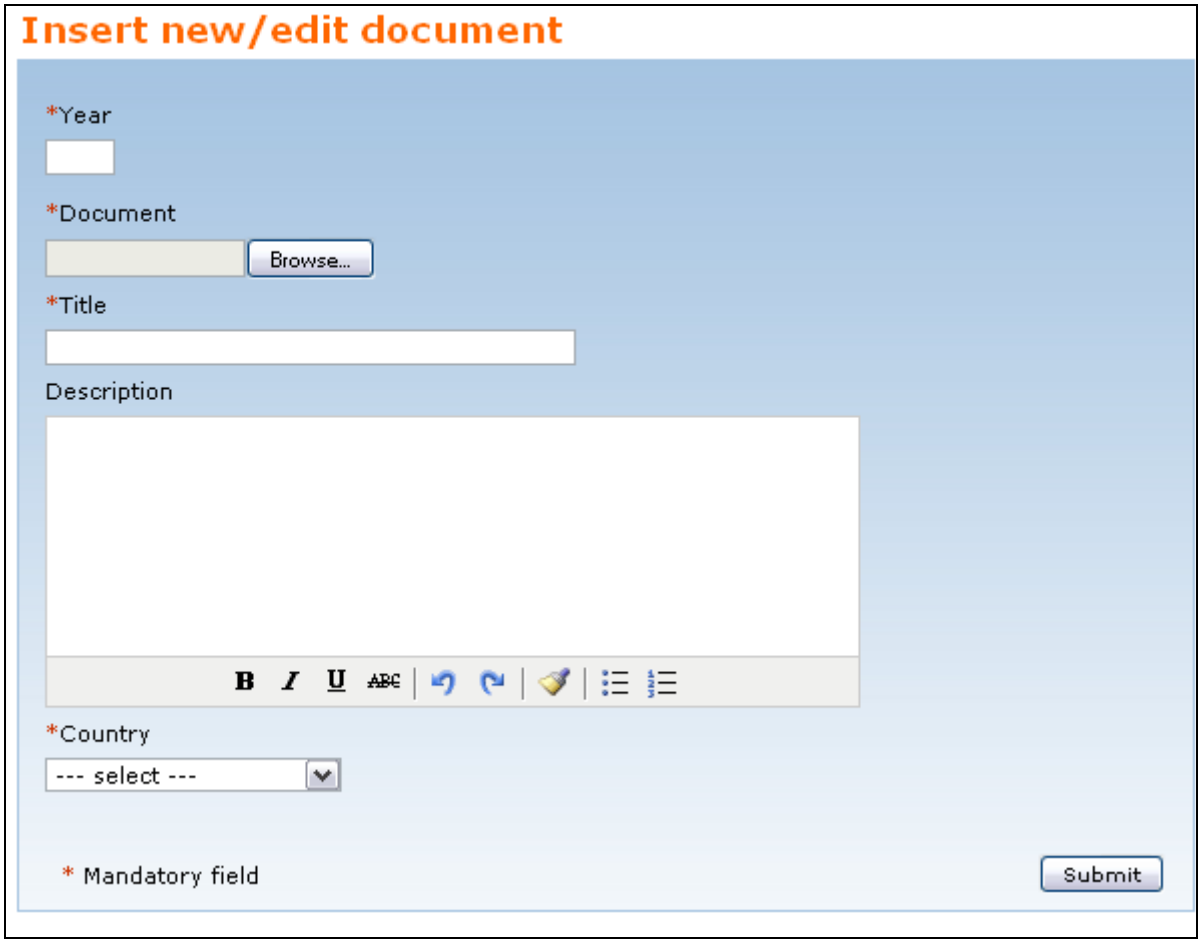


**Figure 11.** Virtual library

The **Aquaculture links** directory provides useful national, regional and international links dealing with aquaculture. Authorized users have to click on the selected item (*Aquaculture links*) and a new sub-item called "*Add new record*" will be generated. Clicking this sub-item leads the user to an online submission form (Figure 12) that should be duly completed by providing the *URL* (internet address of the Web site); *image*, in other words the icon or banner of the home page to display (when available); complete *title* of the Web site; brief *description* of the Web site contents; *country* where the Web site is hosted. Once a user has filled in the submission form, the new record can be immediately posted on the internet by clicking the *submit* button placed at the bottom right corner of the form.

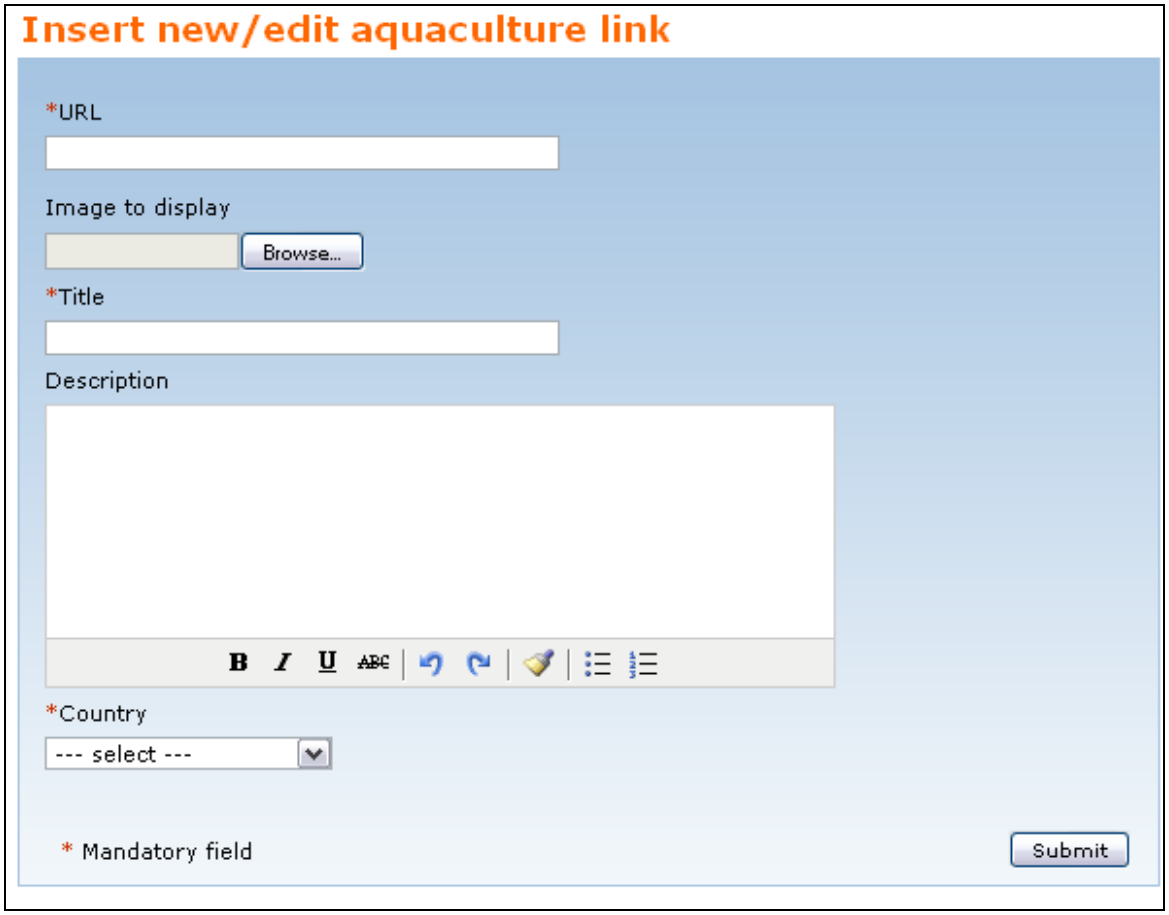


**Figure 12.** Selected links

## 3. HOW TO MODIFY/DELETE A RECORD

Only authorized users have the right to edit/modify and/or delete the "uploaded" records. Once logged in, users should click on one of the nine databases on the vertical banner located on the right side of the RAIS home page. The user will then perform a search, by using available filters, of the record he/she wishes to modify or delete. A table with the results will be generated and in the last column of the aforementioned table two action (formatting) tools, represented by a *pencil* (to modify) and a *bin* (to delete), will appear. Clicking on the pencil's icon will lead the user to the filled online submission form that can be modified and re-submitted. By clicking on the bin's icon the record will be completely erased. Once the record has been modified click on the *submit* button to post it back online.

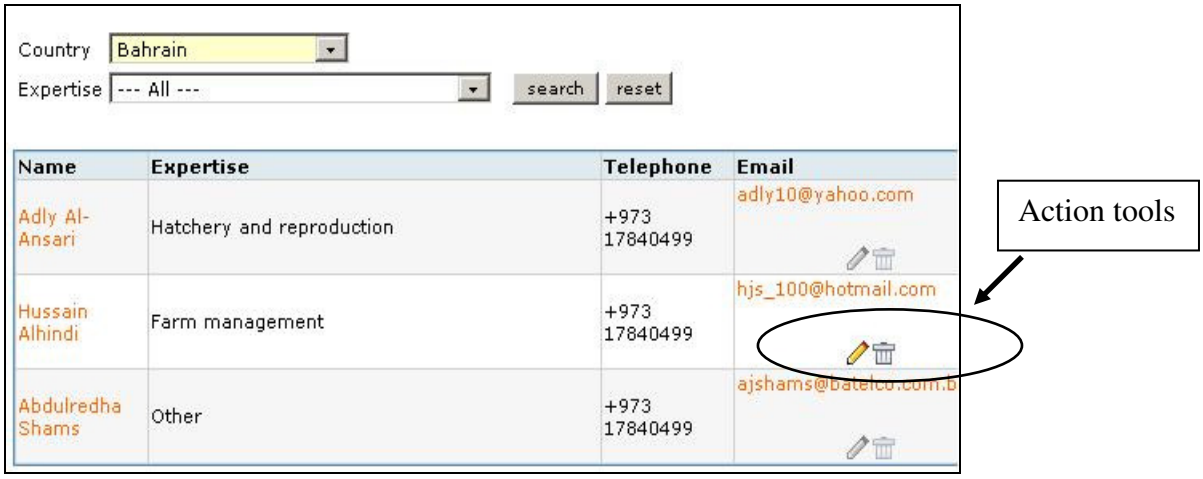


**Figure 13.** Action (formatting) tools

## 4. HOW TO PERFORM A SEARCH

All records and metadata stored into the system can be easily searched and retrieved by using the filters available or through the RAIS search engine by typing a single word. The criteria to perform such a search in each directory are listed below.

In the *Annual aquaculture statistics* database users can perform a search: by **layout**, aggregated list or flat list; by **country** (use the scroll-down menu to select the desired country); by **year** (or range of years); and by cultured species **common name** and **scientific name** (Figure 14).

**Figure 14.** Annual aquaculture statistics

In the *Aquaculture experts* database the search criteria are the following: by **country** (use scroll-down menu to select the desired country) and/or by **field of expertise** (use the scroll-down menu to select area of expertise) (Figure 15).

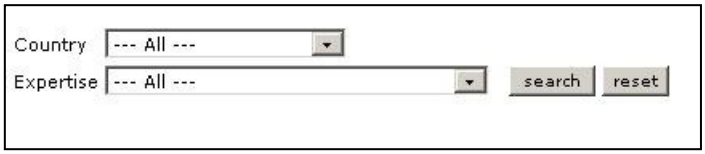


**Figure 15.** Aquaculture experts

*Production centres* can be searched by **region** (*All*) or by **country** (use the scroll-down menu to select the desired country) and/or by **type of product** (use the scroll-down menu to select aquaculture products) (Figure 16).

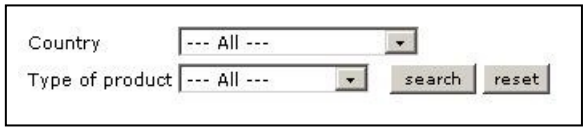


**Figure 16.** Production centres

Criteria to be used in the directory of *Suppliers* are the following: by **region** (*All*) or by **country** (use the scroll-down menu to select the desired country) and/or by **type of product** (use the scroll-down menu to select product and service) (Figure 17).

**Figure 17.** Suppliers

*Research institutions* can be searched by **region** (*All*) or by **country** (use the scroll-down menu to select the desired country) (Figure 18).

**Figure 18.** Research institutions

*Research and development programme* can be search by **region** (*All*) or by **country** (use the scroll-down menu to select the desired country) (Figure 19).

**Figure 19.** Research and Development programme

*News and events* can be easily searched by **country** (use the scroll-down menu to select the desired country) or the full list of news and events in chronological order (Figure 20).

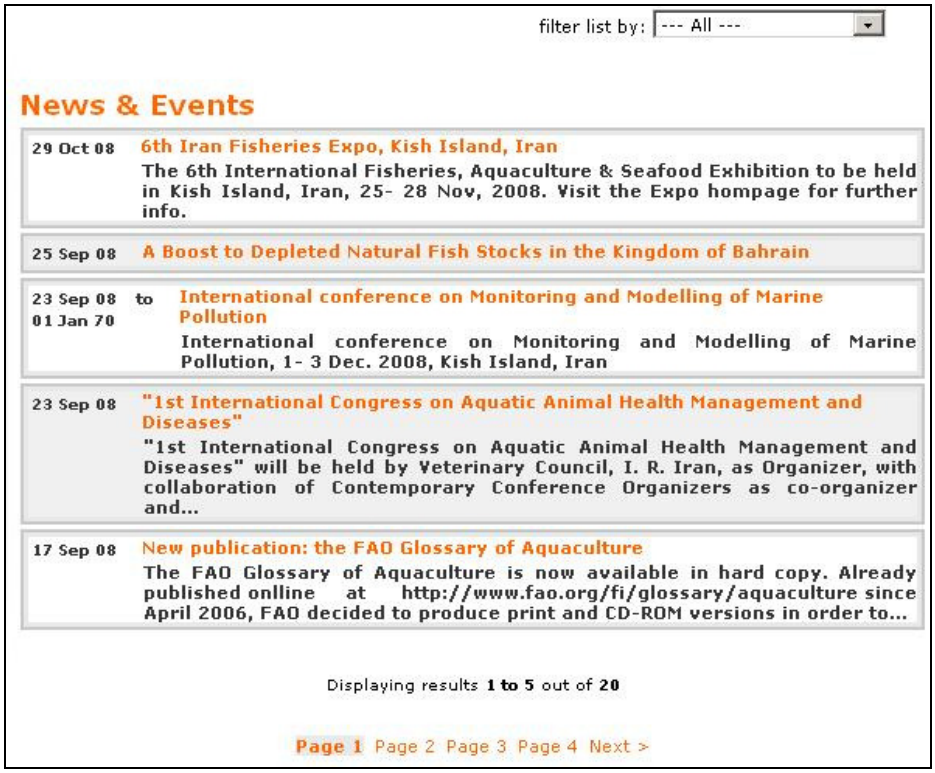


**Figure 20.** News and Events

In the *Photo library*, high quality photos can be easily found by selecting one of the ten photo **categories** or by **country** (use the scroll-down menu to select the desired country) (Figure 21).

**Figure 21.** Photo library

In the *Virtual library*, relevant and updated documents (.pdf; .doc; .html) on regional aquaculture can be searched and retrieved by using the list of documents and/or by **country** (use the scroll-down menu to select the desired country) (Figure 22).

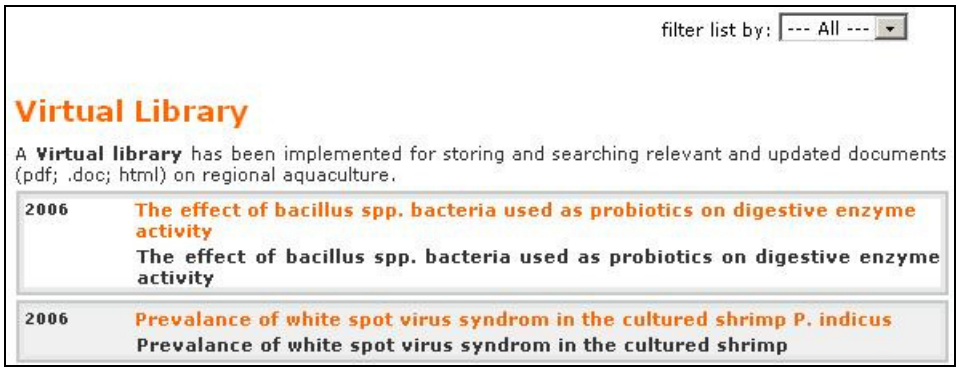


**Figure 22.** Virtual library

In the *Links* page useful national and international suggested links dealing with aquaculture are provided. A search can be performed by using the list of links and/or by **country** (use the scroll-down menu to select the desired country) (Figure 23).

**Figure 23.** Aquaculture links

Detailed data on the *RAIS National Centres* can be found by clicking on the item called RAIS National Centres in the right vertical banner of the page.

Item *Contact us* contains updated names and addresses of the RAIS National Coordinators, RAIS Regional Centre staff, RECOFI-Working Group on Aquaculture Focal Points and the RECOFI Secretariat.

**APPENDIX E**

**Regional Aquaculture Information System**
**Draft flyer**

RAIS

Regional
Aquaculture
Information
System

RAIS member countries

RAIS
Regional Aquaculture Information System

**WHAT IS RAIS?**
RAIS, is a regional aquaculture information system designed to assist both the private and public sectors to have a quick and easy access to the Gulf regional aquaculture information for the sustainable development of the sector.

It supports and serves as a tool for the regional aquaculture research and development networks which operate in the Gulf region under the umbrella of the Regional Commission for Fisheries (RECOFI).

The RAIS groups all member countries of RECOFI (Bahrain, Islamic Republic of Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) which have decided to establish a web-based information system to facilitate the exchange of aquaculture information in the area.

**WHY WAS RAIS DESIGNED?**
To respond to the growing importance of aquaculture in the region; to the lack of structured and easy accessible information on aquaculture; to promote cooperation between RECOFI member countries and to develop a modern monitoring system facilitating decision making.

**RAIS ONLINE**
The new aquaculture information system is now up-and-running and it is available at the following address:

**www.raisaquaculture.net**

**THE STRUCTURE**
The Web site is organized in nine databases (Annual aquaculture statistics; Aquaculture experts; Production centres; Suppliers; Research institutions; Research and development programmes; Photo library; Virtual library; Selected links) to store and retrieve national and regional aquaculture information.
The RAIS is organized and maintained through a regional and national mechanism: (1) a Regional Centre located in Kuwait City and linked to the FAO in Rome and to the RECOFI Secretariat in Cairo, Egypt; and (2) a National Centre in each RECOFI member country under the supervision of an officially nominated RAIS National Coordinator. All authorized users have the right to directly post new information through user friendly online submission forms.

**HOW CONTRIBUTE?**
The system has been conceived to be as user-friendly as possible and allows rapid data entry from the administrators and authorized users and easy data retrieval. Users who want to contribute by submitting new items into the system are kindly requested to contact the RAIS Regional Centre or the RAIS National Coordinators. Full addresses are provided in the "Contact us" section accessible from the RAIS entry page.

**HOW TO ADVERTISE ON RAIS**
RAIS offers space on its home page to facilitate the private sector to advertise in the new aquaculture information system of the Gulf region. Placing your Web site address or company logo with a hyper-link to your site is a common form of advertising on the internet to enhance visibility and to promote your business.

**HAVE A QUESTION?**
For further details you are invited to contact:
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Public Authority of Agriculture Affairs
and Fish Resources
STATE OF KUWAIT
Tel.: +965-22254111
Fax: +965-22254103
E-mail: info@raisaquaculture.net

**APPENDIX F**

**Regional Aquaculture Information System**
**Draft press release**

**A NEW WEB-BASED INFORMATION SYSTEM FOR AQUACULTURE DEVELOPMENT: THE REGIONAL AQUACULTURE INFORMATION SYSTEM (RAIS)**

A new Web site has been established by the Food and Agriculture Organization (FAO) under the *aegis* of the Regional Commission for Fisheries (RECOFI) to facilitate the exchange of aquaculture information in the Gulf area among regional experts and stakeholders, and to promote and develop a sustainable aquaculture industry.

RECOFI member countries (Bahrain, Islamic Republic of Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) are responsible for the timely data entry and validation along with the promotion of the information system at the national, regional and global level.

The new aquaculture information system is now up-and-running and it is available at the following address:

**www.raisaquaculture.net**

The Web site is organized in nine databases (*Annual aquaculture statistics; Aquaculture experts; Production centres; Suppliers of technology; Research institutions; Research and development programmes; Photo library; Virtual library* and *Selected links*) to store regional aquaculture information.

RAIS is organized and maintained through a regional and national mechanism: (1) a Regional Centre located in Kuwait City and linked to the FAO in Rome and to the RECOFI Secretariat in Cairo, Egypt; and (2) a National Centre in each RECOFI member country under the supervision of an officially nominated RAIS National Coordinator. All authorized users have the right to directly post new information through user friendly online submission forms.

The system has been conceived to be as user-friendly as possible and allows rapid data entry from the administrators and authorized users and easy data retrieval. Users who want to contribute by submitting new items are kindly requested to contact the RAIS Regional Centre or the RAIS National Coordinators. Full addresses are provided in the "*Contact us*" section accessible from the entry page.

**APPENDIX G**

**Regional Aquaculture Information System**
**Communication strategy**

## 1. OBJECTIVE

Promote RAIS at national and regional level. Implement and ensure an effective RAIS data and information flow. RAIS National Coordinators and authorized users regularly upload and retrieve data and information into/from the information system.

## 2. ACTORS AND ROLES

a) Regional Centre staff. Should ensure the regular maintenance of the system, stimulate data entry and provide technical assistance to all RAIS authorized users.

b) National Coordinators. They should focus on data entry and on the implementation of strategies to promote RAIS and its use as a tool for information exchange, planning and monitoring.

c) RECOFI Secretariat (FAO). During the launching phase and for the first year, the Secretariat will provide guidance and support to the National Coordinators on the design and implementation of a proper national RAIS promotion strategy.

d) National aquaculture stakeholders. They will be informed about the existence of RAIS, its contents and functionalities and will be encouraged to use RAIS as a repository system where aquaculture data and information can be posted and retrieved.

*Key stakeholder groups to be involved:*

- National decision makers (government authorities, advisors)
- Research institutions
- Producers
- Potential producers
- Investors
- Suppliers
- Aquaculture associations
- Traders
- Non-governmental organizations
- Local decision makers (local authorities, advisors)
- General public
- Others

## 3. EXPECTED RESULTS FROM THE COMMUNICATION STRATEGY

- A positive and collaborative *working environment* to be established with the Regional Centre staff, and among the various National Coordinators.
- RAIS users' *expectations and needs* to be identified and taken into consideration in the RAIS information and communication work plan.
- National Coordinators define and implement their National RAIS communication strategy and RAIS *launched and adequately promoted* in all member countries.
- Data, information and news items are *regularly published* by RAIS member countries.
- A national and regional Web analysis activated after the launching of the system: the dissemination of information products on RAIS and the publication of data on the portal increase

its usage in terms of number of *users*, number of *visits* (hits) and quantity of *information* uploaded and downloaded.

## 4. TOOLS

- Press release to be distributed to national, regional and international specialised journals. Once the date for the official launching of RAIS has been defined, the most appropriate channels for the distribution of the press release (in Arabic and English) should be identified. All National Coordinators should prepare a list of national journals to which to submit the press release.
- Exchange of links and information with national and regional aquaculture related Web sites. This should be a regular activity. A preliminary list of national and regional aquaculture related Web sites should be prepared by the Regional Centre in collaboration with the National Coordinators and the Secretariat. The Webmaster of selected Web sites should be contacted by the Regional Centre, the National Coordinator or the Secretariat to establish a linkage for information exchange. The linkage to RAIS should be made visible in the home page of each "partner" Web site. Particular attention should be paid to the involvement of the private sector.
- Positioning of RAIS in the search results of the main Internet search engines. Proper actions should be identified and implemented by the Regional Centre in collaboration with the Secretariat on this follow-up action.
- RAIS News & Events section *(to be continuously fed after the official launching)*. This section of the portal, *the most visible one*, will include news items concerning:
  - ✓ Aquaculture news of relevant interest for the region.
  - ✓ Aquaculture events and newly published documents relevant to the Gulf region.
  - ✓ Brief summaries on the content of the RAIS databases and newly available data sets, reports and functionalities.

  Apart from the National Coordinators, the Regional Centre staff and the Secretariat, RAIS authorized users will also be allowed to post news items. This opportunity should be properly publicised to potential national RAIS users.
- RAIS flyer. A light information product will be designed by the Secretariat and presented to the RAIS administrators. It will be translated into Arabic and made available to the National Coordinators for distribution to national aquaculture users. This product will provide a general overview of the new information system and contact details of the RAIS Regional Coordinator.
- RAIS mailing list. A national mailing list will be created by the National Coordinators. They will be responsible of collecting e-mail addresses of national aquaculture users and maintaining the national RAIS mailing list. At regional level, the national lists will be made available to the RAIS Regional Centre staff who will manage the regional list. The lists will be used to facilitate dissemination of communications related to the system, its content and functionalities. In the future an electronic RAIS bulletin could be developed.
- Targeted communications to national users to introduce RAIS and involve them in the information contribution process. They will include electronic and ordinary mailing campaigns, organisation of meetings and small events, participation and delivery of presentations during national aquaculture events, production and distribution of promotional material (flyer, poster, etc.), calls for contributions, and distribution of questionnaires. They will be prepared by the National Coordinators with the support of the Regional Centre and the Secretariat. The appropriate media and approach to be used will be identified according to the specific situation of the aquaculture sector in each country.
- Web statistic analysis. Regular Web analysis reports will be elaborated every three months by the Regional Centre staff and distributed to the National Coordinators to evaluate the overall usage and impact of RAIS.

## 5. PROPOSED CALENDAR OF ACTIVITIES

### 5.1. Preparatory phase – February-April 2009

- Additional training for the Regional Centre staff in Kuwait – *Mid-February 2009* (FAO).
- Finalization of the RAIS flyer in English and Arabic – *February 2009* (FAO-RAIS Regional Centre).
- Support National Coordinators in the design of a National RAIS Communication Strategy – *February 2009* (FAO-RAIS National Coordinators-RAIS Regional Centre).
- Encourage the National Coordinators to verify the correctness of national data uploaded so far into the system and upload missing data – *End of February 2009* (RAIS Regional Centre).
- Building up preliminary RAIS national mailing lists in collaboration with the RAIS National Coordinators – *February-April 2009* (RAIS National Coordinators-RAIS Regional Centre).
- Preparation of a list of national and regional aquaculture related Web sites for linkages exchange – *End of March 2009* (RAIS National Coordinators-RAIS Regional Centre-Secretariat).
- Designing "brief summaries" on the content of the RAIS databases and newly available data set – *February-mid-April 2009* (RAIS Regional Centre).
- Finalize and make available to the RAIS National Coordinators the RAIS flyer and press release – *February 2009* (Secretariat).

### 5.2. Official launching – 2 March 2009

- Official launching of RAIS and promotional strategy – *2 March 2009*.
- Stimulate RAIS National Coordinators to continuously post news items into the system – *Systematic* (RAIS Regional Centre).
- Assisting the RAIS National Coordinators in the promotion of RAIS at national level – *January-February 2007* (RAIS Regional Centre).
  - ✓ Distribution of the press release.
  - ✓ Establishment of linkages with other national and regional aquaculture Web sites.
  - ✓ Distribution of the flyer.

### 5.3. Consolidation phase – March 2009-onwards

- Positioning in the search result list of the main Search engines will be completed.
- The activities started during the launching phase will be continued and possibly expanded.
  - ✓ Exchange of linkages and information with national and regional aquaculture related Web sites.
  - ✓ Dissemination of the flyer.
  - ✓ Running the RAIS News & Events section as mentioned above.
- Web analysis reports to measure the *quantity* of data, information and news items uploaded and downloaded by the RAIS users.

## 6. ASSUMPTIONS

- The RAIS Regional Centre staff must ensure daily maintenance of the RAIS and assistance to the National Coordinators.
- National Coordinators must ensure continuously data entry and actively collaborate for the promotion of the information system at the national level by implementing the RAIS information and communication strategy.

**APPENDIX H**

**Agreed activities prior to the official launching of the Regional Aquaculture Information System**

**Proposed calendar of activities**

- Additional training for the RAIS Regional Centre staff in Kuwait – **16-18 February 2009** (*Action*: Secretariat and Regional Coordinator).
- Send comments on the RAIS flyer (contents and layout) and the press release to the Secretariat – **8 February 2009** (*Action*: RAIS National Coordinators-RAIS Regional Centre).
- Bahrain to translate the RAIS user manual into Arabic and forward it to the Secretariat – **15 February 2009** (Bahrain RAIS National Coordinator). The Secretariat to finalize the RAIS user manual in English and Arabic and post it in the RAIS Web site – **25 February 2009** (*Action*: Bahrain RAIS National Coordinator-Secretariat).
- Oman to translate the RAIS flyer into Arabic and forward it to the Secretariat – **15 February 2009** (*Action*: RAIS National Coordinator of Oman). Finalize and make available to all the RAIS National Coordinators the RAIS flyer and press release in English and Arabic – **End February 2009** (*Action*: Secretariat).
- RAIS Regional Centre staff to translate into Arabic the home page of RAIS including introductory pages – **End of February 2009** (*Action*: RAIS Regional Centre staff in collaboration with the Secretariat).
- RAIS National Coordinators to verify the correctness of national data uploaded into the system and upload missing data – **End of February 2009** (*Action*: RAIS National Coordinators).
- Qatar, Saudi Arabia and Iraq to finalize the preparation of the National Aquaculture Sector Overview (NASO) for their countries – **End of February 2009** (*Action*: RAIS National Coordinators with the assistance of the Secretariat).
- Islamic Republic of Iran, Iraq, Kuwait, Qatar and Saudi Arabia to prepare the RAIS National Centre description to be sent to the RAIS Regional Centre for publication on the Web – **15 February 2009** (*Action*: concerned RAIS National Coordinators and RAIS Regional Centre).
- Design the RAIS National Communication Strategy making reference to the "RAIS Communication Strategy" document made available during this meeting – **18 February 2009** (*Action*: RAIS National Coordinators and RAIS Regional Centre with the assistance of the Secretariat).
- Building up preliminary RAIS national and regional mailing lists – **End of February 2009** (*Action*: RAIS National Coordinators-RAIS Regional Centre).
- RAIS National Coordinators to nominate an alternate who can manage data entry into RAIS in his absence – **End of February 2009** (*Action*: RAIS National Coordinators).
- Official launching of the RAIS and national communication strategy – **2 March 2009** (*Action*: RAIS National Coordinators, RAIS Regional Centre staff and Secretariat).
- Promote the RAIS at national, regional and international level **– March 2009-onwards** (*Action*: RAIS National Coordinators, RAIS Regional Centre staff and Secretariat):
  - Distribution of the press release to national journals, newspapers, etc.
  - Establishment of linkages with other national and regional aquaculture Web sites.
  - Distribution of the RAIS flyers.

**APPENDIX I**

**National RECOFI-WGA Focal Points and Alternate Focal Points**

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**The fourth meeting of the Working Group on Aquaculture (WGA) of the Regional Commission for Fisheries (RECOFI) was held in Muscat, Oman, from 27 to 28 January 2009 and was attended by the representatives from seven member countries. The meeting discussed the final activities and inputs to the Regional Aquaculture Information System (RAIS) in view of its imminent and official launching in March 2009. The participants discussed and agreed on: i) the RAIS User Manual, ii) the promotional flyer, iii) the press release, and iv) the overall communication strategy to launch and to further strengthen the information system. The WGA noted that the start of the "Aquaculture legal and policy framework project" during the intersessional period was not possible as the agreed financial input from all the contributing Commission members had not been received. The WGA finalized its proposed programme of work for the new intersessional period. The WGA recognized that the Commission, based on its current level of financial contribution, may not have the required budget to implement a comprehensive aquaculture programme and recommended that some activities be implemented with extrabudgetary funds. The six main activities proposed in order of priority for the new work plan include: 1) application of risk analysis to aquaculture, 2) environmental monitoring in cage aquaculture, 3) impacts of red tides to aquaculture, 4) development of national strategies on aquatic animal health, 5) spatial tools and aquaculture zoning, and 6) aquaculture recirculation strategies.**

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