

March 2015

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联合国  
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Food and  
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de las  
Naciones Unidas  
para la  
Alimentación y la  
Agricultura

## REGIONAL COMMISSION FOR FISHERIES (RECOFI)

### Eighth Session

Muscat, Sultanate of Oman, 12 - 14 May 2015

### Fishery social and economic survey in the RECOFI region

#### Executive Summary

This working document provides a summary of the socioeconomic work undertaken in the intersessional period, including the development of a survey questionnaire, its circulation and the results presented at the eighth meeting of the Working Group on Fisheries Management (Cairo, Egypt, 8–10 December 2014). The work of the socioeconomic Task Group is highlighted as well as the current members. The results of the survey questionnaire are briefly discussed, as well as potential ways forward.

#### The commission is invited to:

- Review and comment on the activities of the Task Group over the intersessional period and recommend a way forward in terms of new information that can be collected as well as enhancing the existing information that has been collected, and recommend future actions for the Task Group.
- Update the Task Group members, as needed.

## **BACKGROUND INFORMATION**

1. The workshop Social and Economic Aspects of Fisheries in the RECOFI region was held in Manama, Kingdom of Bahrain from 22 to 24 April 2012, following the agreement at the sixth session of the Regional Commission for Fisheries, held in Rome from 10 to 12 May 2011.
2. A Task Group was established, (current Task Group members listed in Appendix 1), with a Terms of Reference (Appendix 2) which included the following elements:
  - Keep the relevant national authorities and counterparts informed on the RECOFI socioeconomic work plan and activities.
  - Identify and liaise with the existing social and economic expertise in each country.
  - Promote and coordinate the implementation of the fishery socioeconomic activities in the Member countries including basic information gathering, collation and compilation.
  - Contribute to the implementation of the RECOFI socioeconomic work including the revision and pilot execution a survey questionnaire.
  - Ensure the effective flow of communications regarding the RECOFI activities to and from national scientific and institutional counterparts, and from relevant stakeholders.

## **OUTCOMES OF THE SEVENTH SESSION OF RECOFI**

3. The Commission unanimously agreed that social and economic considerations are critical, noting that the success and effectiveness of management measures relies on how these factors are taken into account. The relevance of socioeconomic work to implement an ecosystem approach to fisheries/aquaculture (EAF/A) was stressed.
4. The Commission suggested developing guidelines for the social and economic aspects of fisheries for the RECOFI region, in terms of data collection and monitoring so that Member countries can adapt to their own contexts, while ensuring that tools are developed to facilitate comparability.

## **SEVENTH AND EIGHTH MEETINGS OF THE WGFM**

5. At the seventh meeting of the WGFM (Kuwait, 5–7 November 2013), the meeting reviewed the draft questionnaire developed by the Task Group. The Task Group member from Oman, Ms Ruqaiya Al-Bulushi, with the support of the Secretariat, developed the revised version of the national questionnaire. The meeting endorsed the revised version with the integration of the comments and proposed changes, to be circulated to Task Group members and filled out for each country. The WGFM recommended that some topics that would be omitted at this stage are relevant and important for socioeconomic work and should be taken up at a later stage. The WGFM requested the Secretariat to circulate the revised questionnaire to the Task Group members. The Task Group would then report the results of questionnaire survey to the eighth meeting of the WGFM.
6. At the eighth meeting of the WGFM (Cairo, Egypt 8–10 December 2014) it was acknowledged that this survey questionnaire, while general, marked a good start to ascertaining the available information and to establish the foundations for the socioeconomic work of RECOFI, and in particular the information on price, trade and crew composition are useful.
7. It was recognized that further information should be identified to collect and analyse at the regional level to build on this questionnaire, and could focus on operational/running costs and employment issues. The meeting agreed that the SocioEconomic Task Group should take this forward, including the design and circulation of the new survey to be completed and analysed. The meeting acknowledged the need to ensure that the Task Group members are updated, play a more proactive role and are less reliant on the Secretariat.

## SOCIO ECONOMIC SURVEY RESULTS

8. The completed surveys were received by seven Member countries, including Iraq, Iran IR, Kuwait, Saudi Arabia, United Arab Emirates, Oman and Qatar (detailed survey results are attached below in Appendix 3). The level of information from each country varied, and the information provided by Member countries was encouraging, in particular as a starting point for gathering information on markets about pricing, as well as consumption by species.

9. A summary of the results are as follows (full questionnaire results are detailed in Appendix 3):

- **Question 1 - Price:** Prices for key species of interest were obtained for 2013, by month; the point of this question was to gauge whether price information was available, how it fluctuated throughout the year, and the comparability in prices between RECOFI member countries. No immediate trends were apparent based on this question alone, rather it provided a picture of what type of information was available. Three species, orange-spotted grouper (*Epinephelus coioides*), king mackerel/narrow-barred Spanish mackerel (*Scomberomorus commerson*), and the rabbitfish (*Siganus canaliculatus*) were the species for which the majority of countries were able to provide pricing data. Follow-up information that could help supplement the information gathered would be to understand factors affecting supply and demand of these species throughout the year, the current state of government price regulations on any particular species, the role of middle people in pricing, the factor by which prices increase from catch to table, etc.
- **Question 2 – Destination Markets:** The results of this question showed that all priority species (with a few exceptions) are consumed, at least to some extent, locally in all RECOFI countries, the percentage of which varies. This varied among species however; kingfish, for example, is almost entirely consumed domestically in all RECOFI countries (except for Iran IR), and is also imported to meet the large demand, while the green tiger prawn (*Penaeus semisulcatus*) and cuttlefish (*Sepia pharaonis*) had a higher level of export. Countries such as UAE consumed almost of the production of key species locally, and imported as well to meet the demand, where Oman had some level of export for almost all species and was importing only a few species. Further information that could be collected to better understand these trends is understanding more specific destination markets, both domestically and internationally, as well to gauge trade patterns within the RECOFI region and outside. Additionally, information on the temporal nature of imports and exports would be useful.
- **Question 3 – Attitudes of fishers towards management tools:** This question was used to gauge the acceptance level of management tools by fishers, to determine whether there were management tools that were commonly accepted and others that were commonly not accepted. For example, the measure ‘closed season’ was either considered generally or fully accepted by fishers, while the measure ‘providing statistics regularly’ had varying responses from not at all accepted to fully accepted, while there appeared to also be opposition to minimum mesh sizes, by-catch reduction devices and minimum size limits. Most countries used a combination of at least four management tools of the seven listed. At the eighth meeting of the WGFM, there was some criticism on the phrasing of the answers choices, that these terms are not clear and may mean different things to different people. Further information that could be gathered to follow-up on this question would be: what compensation measures are used, if any, to work with fishers to deal with these measures, why are some measures more accepted than others, does there appear to be a relationship between the acceptance of the measure and the successful and effective implementation of the measure?
- **Question 4 – Conflicts/problems:** The answer options for problems or challenges affecting the fisheries included: tourism development, oil industry, transportation, urbanization, other fishing fleets, IUU fishing, habitat loss, pollution, and biomass/catch reduction, as well as an other option. All of the above mentioned problems were indicated as an issue for at least some of the countries; the problems that were most common included the oil industry, urbanization, habitat loss and biomass/catch reduction. Further information that could be gathered on this topic would be understanding how these affect the fisheries, and more detailed into the nature of the problems themselves. The second part to this question was to understand if there were

any attempted solutions to address the problems; which were listed. Follow-up could include the effectiveness of these solutions, as well as the costs involved.

- **Question 5 – Fleet composition and fisher income share:** The composition of the crew varied by both size of the crew and the composition in terms of nationals or expatriates. In Saudi Arabia, the crew of all three vessel categories (less than 12m, 12-24m, greater than 24m) were almost entirely comprised of expatriates, with the exception of the smallest size of vessels, where 20 percent of the crew were nationals. Conversely, in Iraq and Iran (I.R.), the crew were almost entirely nationals, with the exception of vessels above 24m in Iran, I.R. where 20 percent of crew were expatriates. In Oman, the proportion of expatriates increased with vessel size. It was discussed in the eighth meeting of the WGFM that the portion of the question on income share was not clear. Follow-up to this question could include further exploration into the assets and relationships of fishers and vessel owners, as well as longevity of expatriates as crew members.
- **Question 6 – How do fishers address the problems they face:** The means for addressing problems and the answers to choose from where: community leaders, fisheries associations, local ministry office, central ministry and other. The central ministry was the most commonly selected means throughout RECOFI countries, followed by local ministry office and fisheries associations. Follow-up information on this topic could include how fishers are able to address each, and how effective fishers view each means for addressing problems.
- **Question 7 – Process of designing, implementing or communicating management policy to fishers:** The answers to this question varied greatly; some countries, such as Oman, Iran I.R. and Qatar, involved a variety of stakeholders and policy makers at all levels, including at the community and regional level, where by others had a more centralized, top-down decision making process.
- **Question 8 – Contribution of the artisanal/small-scale fishery sector to total fish production, employment and local food supply:** This was question was discussed at the eighth meeting of the WGFM, and it was determined there was some confusion answering this question, as it was not phrased in a clear manner. The answers therefore cannot be considered accurate. It is however an important question, for which more careful planning in the phrasing can be used to determine the best and clearest manner to elicit the correct and accurate answers.

## WAY FORWARD

10. The preliminary information gathered shows that there is comparability in the data collected, although it is still incomplete for some countries. Full pricing data would be useful.
11. Some of the information gathered does not need to be collected regularly, but rather provides standalone information. Other information should be collected regularly to examine changes in trends that can affect socioeconomic dynamics in the fisheries. Additional socioeconomic information can be gathered, to build up the socioeconomic profile of the RECOFI region, and in order to take next steps in identifying problems relevant at the regional level, as well as developing a means to address them.
12. The information gathered marks a good start, but information can be collected to enhance the data that was collected and also determine what additional information would be useful and then how it can be used, in complement with other data that is collected, to enhance the work of RECOFI.
13. A suite of social and economic fishery and aquaculture indicators could be jointly identified and applied throughout the RECOFI region.
14. The Commission at this point is requested to:
  - Review and comment on the activities of the task group over the intersessional period and recommend a way forward in terms of new information that can be collected as well as enhancing the existing information that has been initially collected, and recommend future actions for the Task Group.
  - Update the Task Group members, as needed.

## Appendix 1

## Socioeconomic Task Group Members

(as of November 2013)

| Country      | Task Group Member  | Alternate  |
|--------------|--|--|
| Bahrain      | Nasser Al-Saffar ( <b>Task Group Coordinator</b> )<br>Senior Specialist, Catch & Licensing<br>Directorate of Fisheries Resources<br>Public Commission for the Protection of<br>Marine Resources, Environment & Wildlife<br>P.O. Box 20071<br>Manama, Kingdom of Bahrain<br>Tel.: +973 17815872<br>Mob.: +973 36177221<br>Fax: +973 17728459<br>E-mail: nalsaffar@pmew.gov.bh |  |
| Iran IR      | Ghazanfar Azadi ( Focal Point )<br>Deputy Director General for Fisheries and<br>Fisheries Affairs<br>Iran Fisheries Organization Ministry of Jihad<br>-e-Agriculture<br>No 236, West Fatemi Avenue.<br>P.O. Box 14155-6353<br>PC 1418636331<br>Tehran, Iran<br>Tel.: +9821-66941373<br>Mob.:+989123054502<br>E-mail: Azadi2222@gmail.com                                     | Behrooz Geranpayeh<br>( Alternate F.P )<br>Expert of Fishing Economy<br>Iran Fisheries Organization<br>Ministry of Jihad -e-Agriculture<br>No 236, West Fatemi Avenue. PO<br>Box 14155-6353<br>PC 1418636331<br>Tehran, Iran<br>Tel: +9821-66941373<br>Mob:+989123220625<br>E-mail: Geranpayeh@gmail.com |
| Iraq         | Wartan Azzad SERKESS<br>Senior Fish Biologist<br>National Project Coordinator FAO Iraq<br>Ministry of Agriculture/General Board of<br>Fish Resource Development<br>Baghdad<br>Mob.: +9647901497521<br>E-mail: vart_fish@yahoo.com  |  |
| Kuwait       |  |  |
| Oman         | Ruqaiya Al-Bulushi<br>Head of Fisheries Management Section<br>Ministry of Agriculture and Fisheries<br>Sultanate of Oman<br>P.O. Box 467<br>PC 100, Muscat, Oman<br>Tel.: +968 24953288<br>E-mail: albulushiruq085@gmail.com   |  |
| Qatar        | Mehsen Nasser saleh<br>Specialist Geologist first<br>Department of Fisheries<br>Ministry of Environment<br>P.O. Box 8703<br>Doha, Qatar<br>Tel.: +974 4420 7633<br>E-mail: mnmohd@moe.gov.qa   |  |
| UAE          |  |  |
| Saudi Arabia |  |  |

**Appendix 2****Terms of Reference (as defined and agreed in April 2012)****Socioeconomic Task Group**

The need to formulate a plan of work focused on the comprehension and assessment of the social and economic aspects in the RECOFI region relating to and in support of the sustainable management of marine fisheries in the region was agreed at the Workshop on Social and Economic Aspects of Fisheries in the RECOFI region (Bahrain, 22–24 April 2012), and also agreed on the establishment of a Task Group to address the socio-economic dimension of fisheries in the region. The Task Group is established to support and facilitate the work of the Working Group on Fisheries Management (WGFM) focused on the social and economic aspects of RECOFI fisheries.

The Task Group carries out advisory and liaison functions with respect to the WGFM's programme of work in the field of fishery socioeconomics. In addition, the Task Group, through its Coordinator maintains contact with the Commission's Secretariat on issues related to the socioeconomic work plan and related activities.

The meeting agreed on the following terms of reference for the Task Group:

- 1) Keep informed the relevant national authorities and counterparts on the RECOFI socio-economic work plan and related activities;
- 2) Identify and liaise with the existing social and economic expertise in each country;
- 3) Promote and coordinate the implementation of the fishery socio-economic activities in the member countries including basic information gathering, collation and compilation;
- 4) Contribute to the implementation of the RECOFI socio-economic work including the revision and pilot execution a survey questionnaire;
- 5) To ensure the effective flow of communications regarding the RECOFI activities to and from national scientific and institutional counterparts, and from relevant stakeholders; and
- 6) Assist the Task Group Coordinator to formulate a regional work plan for consideration by the WGFM at its sixth meeting (Qatar, October 2012).

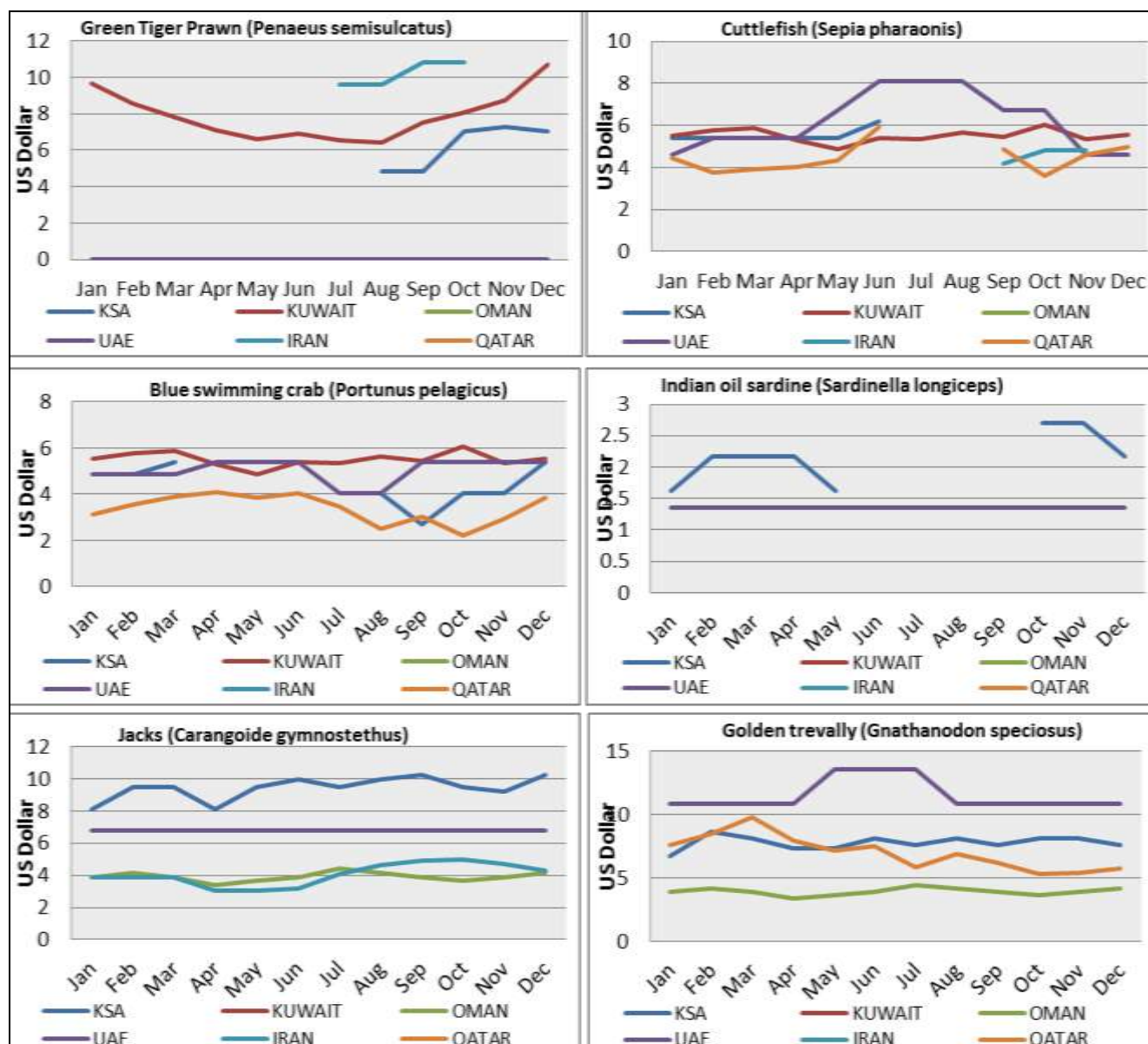
Appendix 3

Detailed survey results

**Question 1 - Price:** Indicate price (in local currency) per kg for 2013 of species. Specify lowest and highest price for the species in the year, and indicate where this price is obtained.

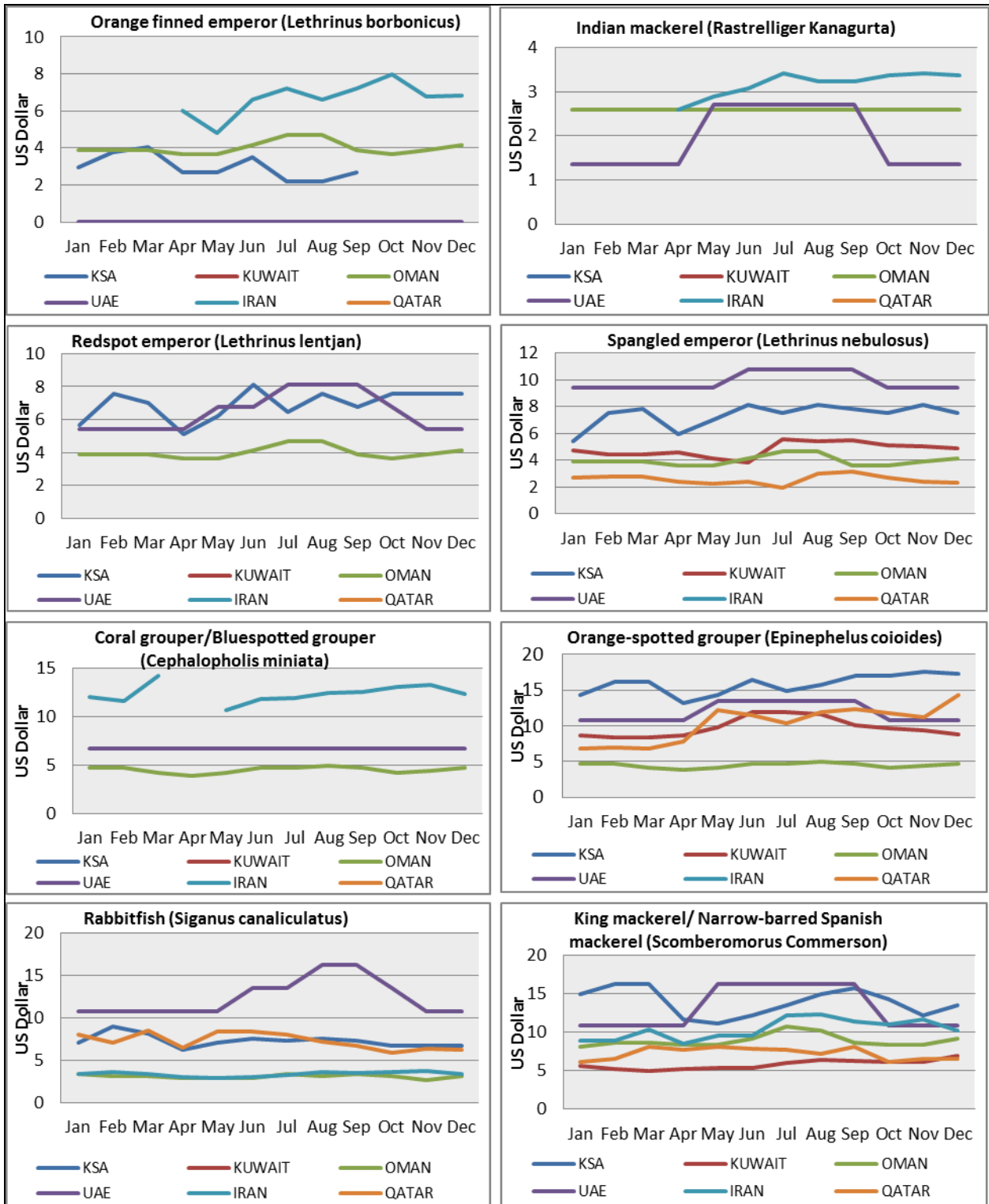
Local currencies were used, and converted to US dollars, using the rate as at July 2013.<sup>1</sup> The details are below in FIGURE 1. The majority of countries were able to provide a majority of the information, however price information was not complete for some countries; Iraq was unable to provide any pricing information. Countries provided as detailed information for each species as possible, however sometimes it was not possible to disaggregate the data to the level requested.<sup>2</sup>

FIGURE 1. Price information for priority species 2013

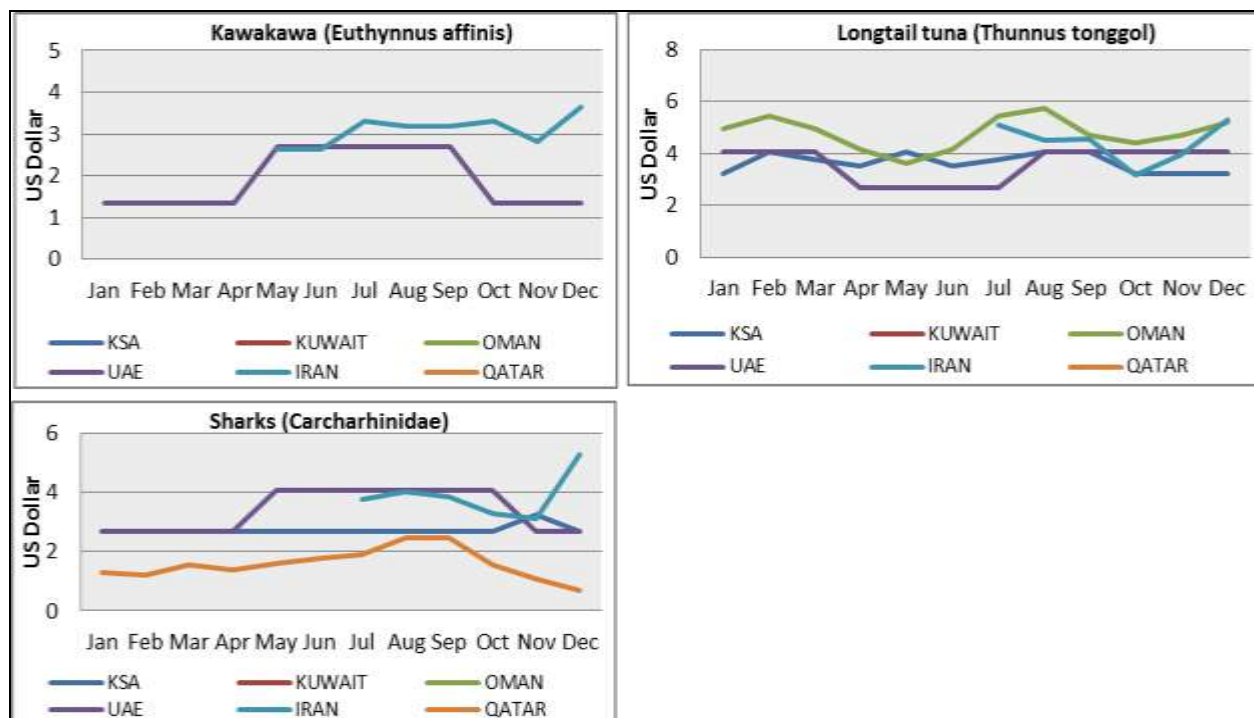


<sup>1</sup> 1 USD=3.75 SAR; .285 KWD, .384 OMR, .367 AED, .000067 IRR, .27 QAR

<sup>2</sup> In Oman, the price listed for Jacks (*Carangoides gymnostethus*) is for Small Jacks, and the price listed for Golden trevally (*Gnathanodon speciosus*) is for Large Jacks. Also, in the case of both emperors and groupers, prices are not further disaggregated in Omani data, so the same prices are listed for all emperor species as well as all groupers.







Most countries indicated that price information was obtained at markets.

**Question 2 - Destination markets:** for each species check all that apply in terms of the destination market, and also indicate if this species is also imported.

Information is detailed below in

FIGURE 2 on the destination markets by species for each country. Respondents were requested to provide information on the proportion of the production which was for domestic consumption versus export, and to also indicate whether or not the species was imported. While certain countries, such as Kuwait and UAE, the trend for all species was almost entirely for domestic consumption with some additional imports, there were some regional trends which emerged for particular species, in terms of having higher demand domestically, or for export. For example, the King Mackerel and the Long Tail Tuna are commonly consumed domestically in all RECOFI Member countries, species such as the rabbitfish and orange grouper have a relatively higher rate of export.

**FIGURE 2. Destination markets of priority species.**

| Green Tiger Prawns ( <i>Penaeus semisulcatus</i> ) |                    |            |                |            |                         |
|--|--------------------|------------|----------------|------------|-------------------------|
|  | Destination market |            |                |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>   | Yes                | 76-100%    | Yes            | 1-25%      | No                      |
| <b>KUWAIT</b>                                      | Yes                | 76-100%    | Yes            | 1-25%      |                         |
| <b>IRAN</b>  | Yes                | 26-50%     | Yes            | 51-75%     | No                      |
| <b>QATAR</b>                                       | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>   |                    |            |                |            |                         |
| <b>OMAN</b>  | Yes                | 26-50%     | Yes            | 51-75%     | Unsure                  |
| <b>IRAQ</b>  | Yes                | 26-50%     | Yes            | 51-75%     | Unsure                  |

| Blue swimming crab ( <i>Portunus pelagicus</i> ) |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                                       | Yes                | 51-75%     | Yes           | 26-50%     | No                      |
| <b>KUWAIT</b>                                    | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>                                      | Not Applicable     |            |               |            |                         |
| <b>QATAR</b>                                     | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>                                       | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                                      |                    |            |               |            | Unsure                  |
| <b>IRAQ</b>                                      |                    |            |               |            | Unsure                  |

| Cuttlefish ( <i>Sepia pharaonis</i> ) |                    |            |               |            |                         |
|---------------------------------------|--------------------|------------|---------------|------------|-------------------------|
|                                       | Destination market |            |               |            | Also imported?<br>(Y/N) |
|                                       | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                            | Yes                | 76-100%    | Yes           | 1-25%      | No                      |
| <b>KUWAIT</b>                         | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>                           | No                 | 0          | Yes           | 76-100%    | No                      |
| <b>QATAR</b>                          | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>                            | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                           | Yes                | 51-75%     | Yes           | 26-50%     | Yes                     |
| <b>IRAQ</b>                           | Yes                | 51-75%     | Yes           | 26-50%     | Yes                     |

| Anchovies ( <i>Stolephorus spp.</i> ) |                    |            |                |            |                         |
|---------------------------------------|--------------------|------------|----------------|------------|-------------------------|
|                                       | Destination market |            |                |            | Also imported?<br>(Y/N) |
|                                       | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>                            | Not Applicable     | 0          | No             | 0          | No                      |
| <b>KUWAIT</b>                         | No                 |            |                |            |                         |
| <b>IRAN</b>                           | Yes                | 76-100%    | No             | 0          | No                      |
| <b>QATAR</b>                          | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>                            | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>                           | Yes                | 51-75%     | Yes            | 26-50%     | No                      |
| <b>IRAQ</b>                           | Yes                | 51-75%     | Yes            | 26-50%     | No                      |

| Indian oil sardine ( <i>Sardinella longiceps</i> ) |                    |            |                |            |                         |
|--|--------------------|------------|----------------|------------|-------------------------|
|  | Destination market |            |                |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>   | Yes                | 76-100%    | No             | 0          | Yes                     |
| <b>KUWAIT</b>                                      | No                 |            |                |            |                         |
| <b>IRAN</b>  | Yes                | 76-100%    | No             | 0          | No                      |
| <b>QATAR</b>                                       | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>   | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>  | Yes                | 26-50%     | Yes            | 51-75%     | No                      |
| <b>IRAQ</b>  | Yes                | 26-50%     | Yes            | 51-75%     | No                      |

| <b>Jacks (<i>Carangoides gymnotethus</i>)</b> |                    |            |                |            |                         |
|---|--------------------|------------|----------------|------------|-------------------------|
|   | Destination market |            |                |            | Also imported?<br>(Y/N) |
|   | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>                                    | Yes                | 51-75%     | No             | 0          | Yes                     |
| <b>KUWAIT</b>                                 |                    |            |                |            |                         |
| <b>IRAN</b>                                   | Yes                | 76-100%    | No             | 0          | No                      |
| <b>QATAR</b>                                  | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>                                    | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>                                   | Yes                | 1-25%      | Yes            | 76-100%    | Unsure                  |
| <b>IRAQ</b>                                   | Yes                | 1-25%      | Yes            | 76-100%    | Unsure                  |

| <b>Golden trevally (<i>Gnathanodon speciosus</i>)</b> |                    |            |               |            |                         |
|---|--------------------|------------|---------------|------------|-------------------------|
|   | Destination market |            |               |            | Also imported?<br>(Y/N) |
|   | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>  | Yes                | 51-75%     | No            | 0          | Yes                     |
| <b>KUWAIT</b>   |                    |            |               |            |                         |
| <b>IRAN</b>   | Yes                | 76-100%    | No            | 0          | No                      |
| <b>QATAR</b>  | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>  | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>   | Yes                | 76-100%    | Yes           | 1-25%      | No                      |
| <b>IRAQ</b>   | Yes                | 76-100%    | Yes           | 1-25%      | No                      |

| <b>Indian mackerel (<i>Rastrelliger Kanagurta</i>)</b> |                    |            |                |            |                         |
|--|--------------------|------------|----------------|------------|-------------------------|
|  | Destination market |            |                |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>   | Yes                | 76-100%    | No             | 0          | No                      |
| <b>KUWAIT</b>  |                    |            |                |            |                         |
| <b>IRAN</b>  | Yes                | 76-100%    | No             | 0          | No                      |
| <b>QATAR</b>   | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>   | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>  | Yes                | 51-75%     | Yes            | 26-50%     | No                      |
| <b>IRAQ</b>  | Yes                | 51-75%     | Yes            | 26-50%     | No                      |

| <b>Orange finned emperor (<i>Lethrinus borbonicus</i>)</b> |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>   | Yes                | 76-100%    | Yes           | 1-25%      | Yes                     |
| <b>KUWAIT</b>  | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>  | Yes                | 76-100%    | No            | 0          | No                      |
| <b>QATAR</b>   | Yes                | 1-25%      | Yes           | 1-25%      | Yes                     |
| <b>UAE</b>   | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>  | Yes                | 51-75%     | Yes           | 26-50%     | No                      |
| <b>IRAQ</b>  | Yes                | 51-75%     | Yes           | 26-50%     | No                      |

| <b>Redspot emperor (Lethrinus lentjan)</b> |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                                 | Yes                | 76-100%    | Yes           | 1-25%      | Yes                     |
| <b>KUWAIT</b>                              | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>                                | Not Applicable     |            |               |            |                         |
| <b>QATAR</b>                               | Yes                | 1-25%      | Yes           | 1-25%      | Yes                     |
| <b>UAE</b>                                 | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                                | Yes                | 51-75%     | Yes           | 26-50%     | Unsure                  |
| <b>IRAQ</b>                                | Yes                | 51-75%     | Yes           | 26-50%     | Unsure                  |

| <b>Spangled emperor (Lethrinus nebulosus)</b> |                    |            |               |            |                         |
|---|--------------------|------------|---------------|------------|-------------------------|
|   | Destination market |            |               |            | Also imported?<br>(Y/N) |
|   | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                                    | Yes                | 76-100%    | Yes           | 1-25%      | Yes                     |
| <b>KUWAIT</b>                                 | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>                                   | Not Applicable     |            |               |            |                         |
| <b>QATAR</b>                                  | Yes                | 26-50%     | Yes           | 26-50%     | Yes                     |
| <b>UAE</b>                                    | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                                   | Yes                | 51-75%     | Yes           | 26-50%     | Unsure                  |
| <b>IRAQ</b>                                   | Yes                | 51-75%     | Yes           | 26-50%     | Unsure                  |

| <b>Coral grouper/Bluespotted grouper (Cephalopholis miniata)</b> |                    |            |                |            |                         |
|--|--------------------|------------|----------------|------------|-------------------------|
|  | Destination market |            |                |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>   | No                 | 0          | No             | 0          | Yes                     |
| <b>KUWAIT</b>  |                    |            |                |            |                         |
| <b>IRAN</b>  | Not Applicable     |            |                |            |                         |
| <b>QATAR</b>   | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>   | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>  | Yes                | 51-75%     | Yes            | 26-50%     | Unsure                  |
| <b>IRAQ</b>  | Yes                | 51-75%     | Yes            | 26-50%     | Unsure                  |

| <b>Orange-spotted grouper (Epinephelus coioides)</b> |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>   | Yes                | 76-100%    | No            | 0          | Yes                     |
| <b>KUWAIT</b>  | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>  | Yes                | 76-100%    | No            | 0          | No                      |
| <b>QATAR</b>   | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>   | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>  | Yes                | 51-75%     | Yes           | 51-75%     | Unsure                  |
| <b>IRAQ</b>  | Yes                | 51-75%     | Yes           | 51-75%     | Unsure                  |

| <b>Rabbitfish (<i>Siganus canaliculatus</i>)</b> |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                                       | Yes                | 76-100%    | No            | 0          | Yes                     |
| <b>KUWAIT</b>                                    |                    |            |               |            |                         |
| <b>IRAN</b>                                      | Not Applicable     |            |               |            |                         |
| <b>QATAR</b>                                     | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>                                       | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                                      | Yes                | 76-100%    | Yes           | 1-25%      | Unsure                  |
| <b>IRAQ</b>                                      | Yes                | 76-100%    | Yes           | 1-25%      | Unsure                  |

| <b>King mackerel/ Narrow-barred Spanish mackerel (<i>Scomberomorus Commerson</i>)</b> |                    |            |               |            |                         |
|---|--------------------|------------|---------------|------------|-------------------------|
|   | Destination market |            |               |            | Also imported?<br>(Y/N) |
|   | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>  | Yes                | 76-100%    | No            | 0          | Yes                     |
| <b>KUWAIT</b>   | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>   | Not Applicable     |            |               |            |                         |
| <b>QATAR</b>  | Yes                | 1-25%      | Yes           | 1-25%      | Yes                     |
| <b>UAE</b>  | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>   | Yes                | 76-100%    | No            | 0          | Yes                     |
| <b>IRAQ</b>   | Yes                | 76-100%    | No            | 0          | Yes                     |

| <b>Longtail tuna (<i>Thunnus tonggol</i>)</b> |                    |            |                |            |                         |
|---|--------------------|------------|----------------|------------|-------------------------|
|   | Destination market |            |                |            | Also imported?<br>(Y/N) |
|   | Local /Domestic    | Percentage | International  | Percentage |                         |
| <b>KSA</b>                                    | Yes                | 76-100%    | No             | 0          | No                      |
| <b>KUWAIT</b>                                 |                    |            |                |            |                         |
| <b>IRAN</b>                                   | Yes                | 76-100%    | No             | 0          | Unsure                  |
| <b>QATAR</b>                                  | Not Applicable     |            | Not Applicable |            | No                      |
| <b>UAE</b>                                    | Yes                | 76-100%    |                |            | Yes                     |
| <b>OMAN</b>                                   | Yes                | 76-100%    | No             | 0          | No                      |
| <b>IRAQ</b>                                   | Yes                | 76-100%    | No             | 0          | No                      |

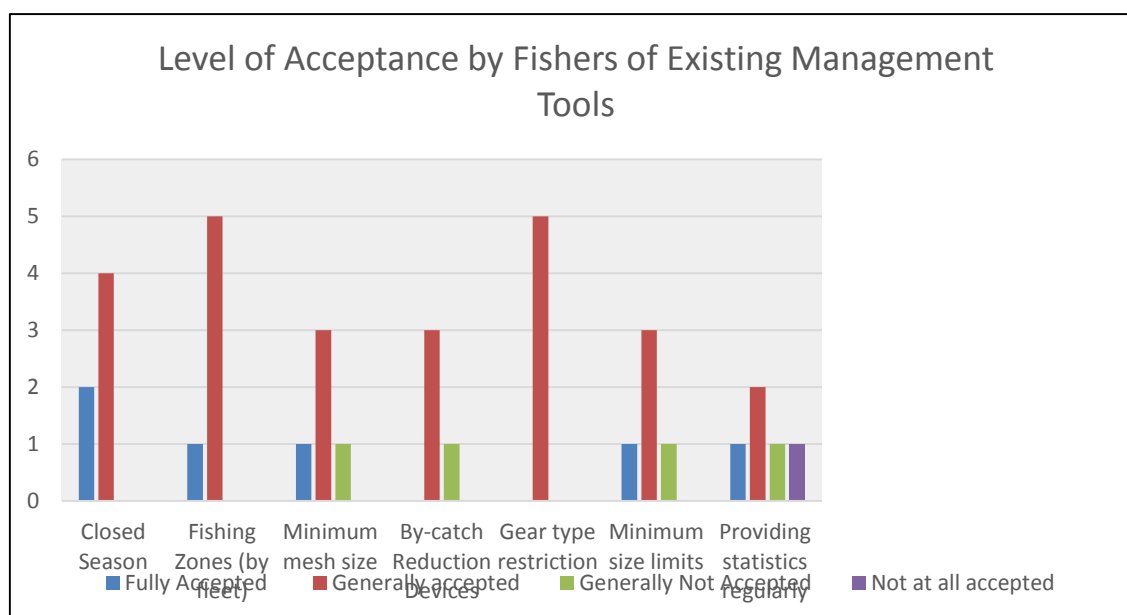
| <b>Kawakawa (<i>Euthynnus affinis</i>)</b> |                    |            |               |            |                         |
|--|--------------------|------------|---------------|------------|-------------------------|
|  | Destination market |            |               |            | Also imported?<br>(Y/N) |
|  | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>                                 | No                 | 0          | No            | 0          | No                      |
| <b>KUWAIT</b>                              |                    |            |               |            |                         |
| <b>IRAN</b>                                | Yes                | 76-100%    | Unsure        | 0          | Unsure                  |
| <b>QATAR</b>                               | Yes                | 1-25%      | Yes           | 1-25%      | Yes                     |
| <b>UAE</b>                                 | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>                                | Yes                | 76-100%    | Yes           | 1-25%      | No                      |
| <b>IRAQ</b>                                | Yes                | 76-100%    | Yes           | 1-25%      | No                      |

| Sharks (Carcharhinidae) |                    |            |               |            |                         |
|-------------------------|--------------------|------------|---------------|------------|-------------------------|
|                         | Destination market |            |               |            | Also imported?<br>(Y/N) |
|                         | Local /Domestic    | Percentage | International | Percentage |                         |
| <b>KSA</b>              | Yes                | 76-100%    | No            | 0          | No                      |
| <b>KUWAIT</b>           | Yes                | 76-100%    |               |            |                         |
| <b>IRAN</b>             | Yes                | 76-100%    | No            | 0          | Yes                     |
| <b>QATAR</b>            | Yes                | 1-25%      | No            | 0          | Yes                     |
| <b>UAE</b>              | Yes                | 76-100%    |               |            | Yes                     |
| <b>OMAN</b>             | Yes                | 76-100%    | Yes           | 1-25%      | No                      |
| <b>IRAQ</b>             | Yes                | 76-100%    | Yes           | 1-25%      | No                      |

**Question 3 - Attitude of fishers:** What is the view of fishers on existing management tools?

For each management measure, it was requested to choose from four options to indicate the perceived level of acceptance by fishers on each. With the exception of Iraq, all responding countries indicated a minimum of five management tools employed. As can be noted from the below graph (FIGURE 3), in most cases there was a high response of general acceptance for all management tools. The management tool with most mixed level of acceptance was ‘providing statistics regularly’.

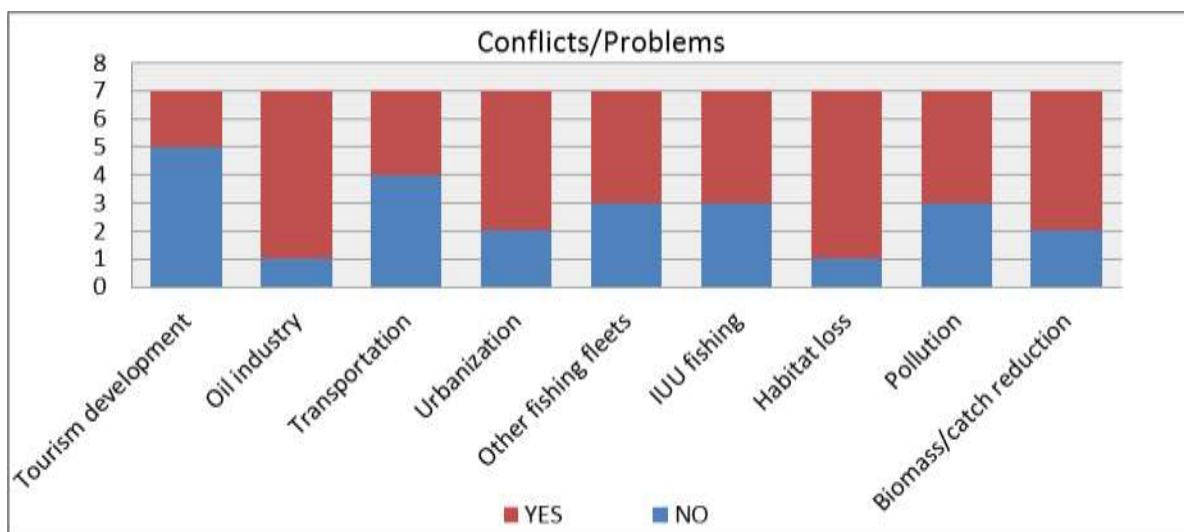
**FIGURE 3. Attitude of fisher on management tools.**



**Question 4 - Conflicts/problems:** What are the most common conflicts that have appeared in the fisheries sector from 2010-2013 (check all that apply, and indicate any solutions or measures taken to address problem).

Respondents were requested to indicate which of the indicated challenges were applicable and if they were a problem, then which fisheries did they impact (small-scale, commercial/industrial, recreational). Common problems throughout the RECOFI area included the oil industry, urbanization, habitat loss and biomass/catch reduction (FIGURE 4).

**FIGURE 4. Conflicts and challenges affecting fisheries.**



Additionally, respondents were requested to indicate whether any solution was attempted to mitigate the challenge faced. As highlighted below in TABLE 1, a variety of solutions were proposed by Oman, Qatar and Iran (I.R.) to address specific problems.

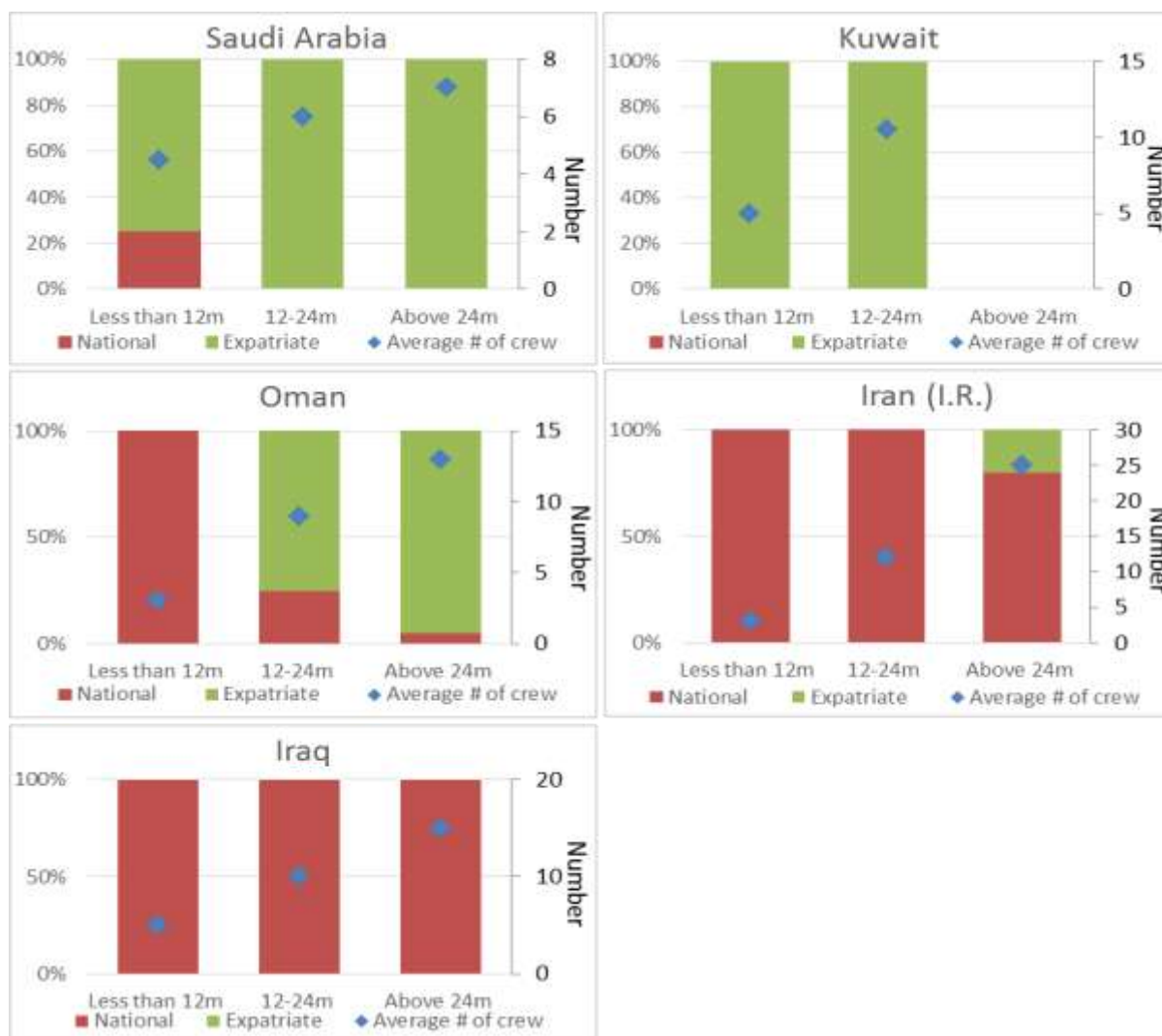
**TABLE 1. Attempted solutions to address challenges.**

| Problem                 | Attempted solutions  |
|-------------------------|--|
| Tourism development     | --   |
| Oil industry            | Supporting socio-economic activities (Oman)  |
| Transportation          | --   |
| Urbanization            | Rehabilitation of coastal areas, ICZM (Qatar)  |
| Other fishing fleets    | Setting fishing zones (Oman)   |
| IUU fishing             | Providing conservation and exploitation Act of Aquatic Resources and establishment of marine protected unit (Iran, I.R.) |
| Habitat loss            | Artificial reefs projects (Oman), Rehabilitation of coastal areas, ICZM, Compensation (Qatar)                            |
| Pollution               | --   |
| Biomass/catch reduction | --   |

**Question 5 - Fleet composition and fisher income share:** Indicate composition of fishers on vessel and method of income, by vessel size.

The composition of the crew of fishing vessels, in terms of whether they were nationals or expatriates was identified, as well as the total number of crew on board. Where a range was provided, the median number was used. The proportion of expatriates versus national crew varies from country to country. The highest proportion of expatriates were in Kuwait and Saudi Arabia with the lowest being in Iraq.

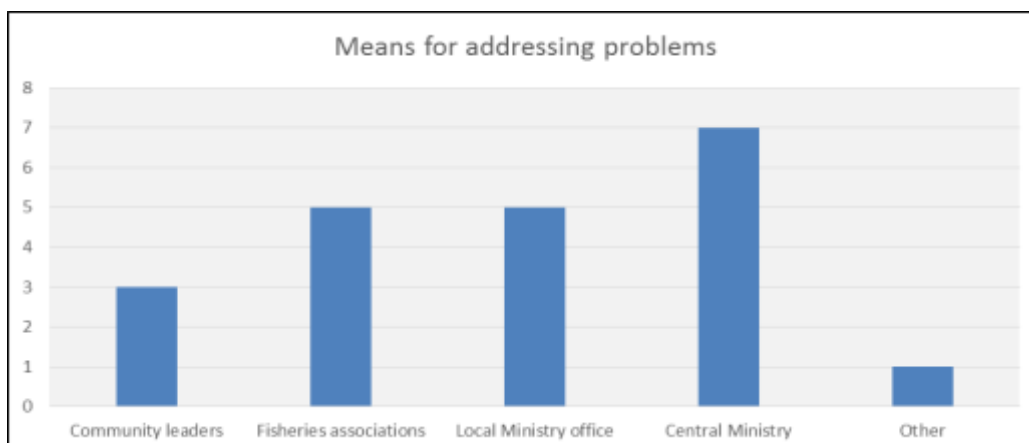
FIGURE 5. Composition of crew by vessel size.



Additionally, in Oman the small-scale fishery crews are comprised entirely of national fishers, while the number of expatriates increases with the vessel size.

**Question 6:** How do fishers address the problems they face?

The means for addressing problems varied, as in some Member countries up to four means were employed, while some only one or two. The Central Ministry was the most commonly cited means for addressing problems, followed by the Local Ministry Office and Fisheries Associations.





**Question 7** - Describe the process of designing, implementing or communicating any management policy to fishers.

This question was asked in order to try to get a picture of the means and level of influence at different levels of management. This varied greatly, whereby some Member countries employed an approach that focused on the central ministries and laws as the means for fisheries management, to other countries which used a method that was consultative and participatory at the different levels of management and governance.

| Country | Method   |
|---------|--|
| KSA     | Legislation and regulations from specialists and researchers of fisheries with cooperation of the legal department of ministry and formulated in an operational systems of fisheries.  |
| KUWAIT  | The management of fisheries is the fisheries sector in PAAF and the implementation is by coast guard, Ministry of commerce, Ministry of Interior and Kuwait Fishermen Union.   |
| OMAN    | Design (preparing): Managers, Research and consultation of Sunat Al-Bahar.<br>Communication: Request of feedback from Sunata Al bahar on the draft proposal.<br>Implementation: Ministry establishing decision/policy which is implemented through the local (Regional) representatives of the Ministry.   |
| UAE     | --   |
| IRAN IR | Getting the fishing community comments<br>Organizing Commission and committees of fishery management with the participation of representatives of the fishing community<br>Determining annual Policies and programs<br>Notification of Annual policies and programs to the fishing cooperatives and fisheries management bodies in coastal Provinces<br>Monitor the implementation of projects in cooperation with fisheries cooperatives  |
| IRAQ    | In Iraq, fisheries and aquaculture are currently dealt with under the General Fisheries Law no. 48 of 1976 (1976 Fisheries Law). The 1976 Fisheries Law comprises seven chapters and 36 articles. The 1976 Fisheries Law establishes the Company, a state enterprise that is responsible for the regulation of the sector and that has an executive role in carrying out fisheries and aquaculture activities. The 1976 Fisheries Law largely ignores sea fisheries, and only mentions fishing in the territorial sea, for which a license should be obtained in conformity with the relevant regulation (of which no English translation exists), and, in very broad terms, high seas fishing. Article 9 provides that the Company has the right to carry out fishing activities on the high seas, but does not provide any detail on how to regulate such fishing activities. The 1976 Fisheries Law thus leaves sea-fisheries unregulated, except for fishing activities in the territorial sea.<br>A new draft policy and law was done with cooperation with FAO, first reading of this draft was finished with The Ministry of Justice, waiting to be issued. |
| Qatar   | Development precautionary measures, in the absence of scientific study;<br>Conduct stock assessment study and develop management strategy including monitoring, control & surveillance as well as monitoring and evaluation indicators;<br>Develop and implement awareness programme for all the relevant stakeholders;<br>Issuance and application of ministerial decisions including fisheries management regulations.   |

**Question 8:** The contribution of the artisanal/small-scale fishery sector to total fish production, employment and local food supply

This question was phrased in manner which was not completely clear, and thus the responses cannot be considered accurate. The question was intended to elicit responses on the contribution of the small-scale artisanal sector as a proportion of the total fisheries sector. However, as it is known that the small-scale fisheries sector has a generally higher contribution than larger scale fisheries; it seems that some of the responses are not completely reflective of the situation, particularly in the case of employment and local food supply.

| Country        | Total production |       | Employment | Local food supply |
|----------------|------------------|-------|------------|-------------------|
|                | Quantity         | Value |            |                   |
| KSA            | 99.80            |       | 100        |                   |
| KUWAIT         | 93               | 95    |            |                   |
| OMAN           | 98.8             | 96.9  | 54.3       | 52.4              |
| UAE            | 100              | 100   | 100        |                   |
| IRAN IR        | 85               | 80    | 90         | 92                |
| IRAQ           | 10               | 12    | 40         | 10                |
| QATAR          | 100              | 100   |            |                   |
| RECOFI Average | 83.80            | 80.65 | 76.86      |                   |