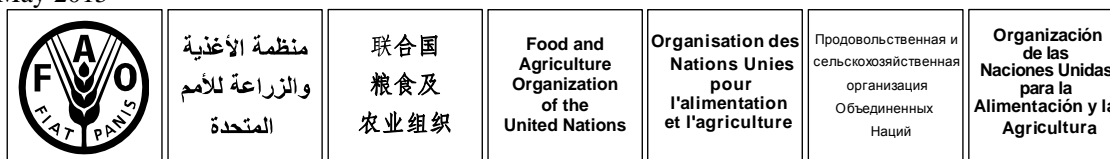


May 2015



REGIONAL COMMISSION FOR FISHERIES

Eighth Session

Muscat, Sultanate of Oman, 12-14 May 2015

**Implementation of RECOFI Recommendation RECOFI/6/2011/1 on
minimum data reporting in the RECOFI area**

Executive Summary

The purpose of this paper is to provide information in progress made in implementation of the RECOFI Recommendation on minimum data reporting.

After three rounds of data submission, Bahrain, Iran, Oman, Qatar, and Saudi Arabia have well established the format and procedure of catch and effort data submission. While Iraq has made its efforts to provide operational information as much as possible, Kuwait and United Arab Emirates have not yet submitted data at all. The data reported under the Recommendation now covers 64% of the whole catch in the Region and would provide adequate basis for monitoring status of fishing operations and resources and taking management decision. In order to make the information usable, it is necessary to establish a common database and an access policy. In addition, a protocol for data collection for size frequency of the narrow-barred Spanish mackerel is needed to develop to support its stock assessment.

The Commission is invited to:

- agree on the logistics, functionalities and responsibility of the Regional database and information network to support the fishery and aquaculture management of the RECOFI Region,
- adopt a set of standard terminology proposed and confirm its linkage with terminologies utilized by individual Members;

BACKGROUND

1. The 2nd meeting of the RECOFI Working Group on Fisheries Management (WGFM) (Cairo, Egypt, 27-30 October 2008) reviewed the major fisheries in the RECOFI region and identified a set of species of primary concern. The meeting further recommended a pragmatic management scheme based on an Ecosystem Approach to Fisheries Management with adaptive management procedures. The fifth Session of the RECOFI (Dubai, United Arab Emirates, 12-14 May 2009) adopted this recommendation and decided to hold a workshop specifically focusing on a review of data and statistics available in the region and stock status reporting.
2. Facing the lack of information commonly accessible through the Region, the FAO/RECOFI Regional Workshop on Stock Indicators and Stock Status Reporting (Tehran, Islamic Republic of Iran, 26–29 July 2009) focused its attention on identifying key issues in the region and determining the minimum data requirement to address those key issues from the perspective of monitoring stocks and fisheries status. The concept of minimum data requirement was further developed through the 3rd meeting of WGFM (Doha, Qatar, 20-22 October 2009) and the 4th meeting of WGFM (Muscat, Sultanate of Oman, 3-5 October 2010) and the 6th session of RECOFI (Rome, Italy, 10-12 May 2011) endorsed the Recommendation RECOFI/6/2011/1, entitled “Recommendation on minimum data reporting in the RECOFI area” together with its commitment to implement on January 2012 (Appendix 1).
3. In order to ensure that all Members would be capable to cope with minimum data requirement, a series of consultations and survey on national data collection system were held, utilizing the opportunity of other meetings, including ad-hoc discussion with the 6th session of RECOFI, the 5th session of WGFM, the Workshop on Minimum Data Collection and Reporting (Cairo, Egypt, 10-11 July 2011) and the Workshop on Social and Economic Aspects of Fisheries in the RECOFI Region (Manama, Bahrain 22-24 April 2012). Through this process, the individual Member agreed its own format of reporting according to the Recommendation and work plans to improve the national data collection system to completely fulfil the requirement defined by the Recommendation in near future.

DATA SUBMISSION IN 2013 AND 2014 ACCORDING TO THE RECOFI RECOMMENDATION ON MINIMUM DATA REPORTING

4. The Recommendation on the Minimum Data Reporting was formally taken effect on 1 January 2012 and the document summarizes the status of data submission in 2013 and 2014. The data submission has remained focusing on catch and effort data separated by fishing gears, specifically for shrimp trawls, wire-traps, gillnets and hook-and-lines and no data was requested on those identified for stock assessment of narrow-barred Spanish mackerel, including monthly catch and effort data and size frequency data of Spanish mackerel.
5. The 2013 and 2014 were the second and third rounds of data submission after the Recommendation entered into force. The situation was quite similar for both years. At the point of 8 May 2015, Bahrain, Iran, Oman, Qatar and Saudi Arabia submitted the 2012 and 2013 catch and effort data disaggregated by fishing gears and vessel categories. Iraq made its efforts in providing fleet and operational and operational information that could be utilized to estimate efforts for 2004-2013, while catch data was aggregated for all vessel classes and gears. Kuwait and the United Arab Emirates have not submitted any data yet despite the repeated urge from the WGFM.
6. Qatar made a substantial improvement in implementing the new sample-based survey system at four landing sites starting from April 2012. Catch and effort data by fleet/gear segments based on this system was submitted in 2013 for the period between September 2012 and August 2013, and then resubmitted the whole 2013 year data in 2014 following the advice of WGFM. At the time of the 7th meeting of the WGFM (Kuwait City, Kuwait, 5–7 November 2013) Qatar indicated that, from its experience, complete enumeration methods (such as market surveys) might not always achieve

satisfactory results for all basic variables needed and that well-defined sampling techniques would prove to be a more effective and much less costly alternative.

7. The data submitted contains broader information than those defined in the Recommendation. In fact, all the Members who submitted data provided catch and efforts data for whole national fisheries, not limited to those three gears defined in the Recommendation. Total amount of catch reported under the Recommendation indicated a good correspondence with the total catch reported for the RECOFI Capture Database. Oman and Saudi Arabia submitted monthly data that also covers the requirement of monthly catch data for Spanish mackerels (4-a.i). Bahrain provided average size of Spanish mackerel for the period from 2004 to 2014 as a part of 4-a-ii.

8. As a result of five of eight members providing a catch and effort data of whole national fisheries, the catch and effort data submitted under the Recommendation currently covers 64 % of whole catch taken under the RECOFI area and 59 % of catch in the Gulf. The apparent coverage for key species groups for monitoring, i.e. shrimps, kingfishes (*Scomberomorus* spp.), groupers (*Epinephelus* spp.), and emperors (*Lethrinus* spp.) for 2013, is shown in the table below. It should be noted that those ratios were calculated based on the scientific names reported and did not take into account the amount of catch reported under higher species aggregations. Further information on coverage of data submitted under the Recommendation is in Appendix 3.

Table: Catch and effort data reported under the Minimum Data Recommendation, in comparison with the catch amount reported for the RECOFI catch data.

	Whole RECOFI Area	Gulf
Total Catch	64%	59%
Shrimp	82%	85%
Kingfishes	81%	77%
Groupers	56%	48%
Emperors	59%	36%

9. Comparable data is generally available for the year 2009 and after. In addition, historical data is available for Bahrain (1986 onward) and Saudi Arabia (2006 onward). Oman informed the 7th meeting of the WGFM its intention to make the historical data since 1984 available to the Commission after reprocessing data in accordance with the current fishing gears and boats classifications.

10. This level of coverage would be in general adequate for further analysis and to utilize as a basis of fisheries management decisions in ecosystem approach, total lack of information on the catch of the second largest fishing country in the Region (the United Arab Emirates), accounting for 20 % of finfish catch in the Gulf, raises a serious concern. On the other side, Kuwait repeatedly informed the existence of relevant data that are not yet made available to the Commission. While the 7th meeting of the WGFM urged once again Kuwait to finalize the internal process to make the data compiled by the KISR available to the RECOFI fishery management process, the situation has not yet changed.

ITEMS TO BE CONSIDERED TOWARD THE NEXT PHASE

11. The need to establish the Regional Database and Information Network as early as practical was stressed repeatedly, though its progress was quite limited without clear guidance on the location and logistics for its establishment. It was also stressed repeatedly as critical importance to establish a reinforced RECOFI Secretariat with dedicated and sufficient resources. In addition, the 7th meeting of WGFM identified the issues that would be needed to be established rather urgently in order to make the Recommendation itself and the utilization of data collected by the Recommendation to be fully useful and operational, that include:

- a protocol for data collection for size frequency of the narrow-barred Spanish mackerel, in particular to support the joint assessment planned
- an access policy and protocol to those data and information collected through the Recommendation
- a direct data exchange process between national authorities and the Secretariat

12. Noting divergence in terminologies used by individual Members, the 7th meeting of WGFM reviewed basic classifications and confirmed the existing area and gear classification to be adequately robust. With regards to fleet segmentation, it was agreed to maintain three categories, i.e. “Steel boats”, “Dhow”, and “Speedboat”. Appendix 2 indicated a proposal of standard terminology based on this review process and those utilized in the RECOFI Regional Catch Database. While the WGFM agreed to maintain the current practice of data submission, an accurate mapping between standard terminology and terminology utilized by individual members is essential to develop a common database. This would also help to ensure adequate consistency and comparability of data collected by all Member countries to implement fishery management at the regional level. The Commission is urged to adopt the set of standard terminology. In addition each Member is requested to confirm linkage between the standard terminology proposed and the national terminologies currently in use as well as to provide brief description on national terminology, in particular on vessels and fishing gears.

13. There are two general ways in reporting size frequency data, i) to report individual size measurement taken, and ii) to report size frequency after raising sample measurement data into catch size frequency. Due to technical difficulty and uncertainty relating through raising process, the experts in stock assessment usually prefer the former option, that could be more suitable for the Region where the sampling methodologies may differ widely according to the Members. Qatar informed that it routinely collects the average weight of Spanish mackerel as part of the on-going catch/effort survey, based on eye-estimated fish weight, separated by boat/gear category. Bahrain provided average length of annual Spanish mackerel catch. The information could be used to monitor general trend as well as for identifying differences across fishing gears, fishing grounds, seasons, etc. In the case of difficulty in providing size frequency data, average size could be useful supplementary information.

14. Regarding the data access policies, the Secretariat has maintained all data submitted in its original format. The 7th meeting of WGFM agreed to maintain all detailed information submitted in this framework, including disaggregation of catches taken by recreational fishing, considering that the Recommendation should serve as a minimum standard and should not constrain efforts to collect information beyond those defined (Article 1-b).

SUGGESTED ACTION BY THE WORKING GROUP

The WGFM is invited to review the current status of the implementation of the RECOFI Recommendation on minimum data reporting in the RECOFI area and to comment on it, as appropriate. In particular, the WGFM is requested to provide feedbacks / guidance to the Secretariat on:

- Logistics, functionalities and responsibility of the Regional database and information network to support the fishery and aquaculture management of the RECOFI Region, especially through the implementation of RECOFI Recommendation on minimum data reporting;
- Set of standard terminology proposed and confirmation on its linkage with terminologies utilized by individual Members;

Appendix 1

Status of data submission by countries

i) Kingdom of Bahrain

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004>
Shrimp Trawl										
2-a-i	Opening/closing dates									
2-a-ii	Y	Y	Y	Y*	Y*	Y*	Y*	Y*	Y*	~1990
2-a-iii	Average tow duration by vessel type/ category				Y**	Y**	Y**	Y**	Y**	
	Average number of tows per day by vessel type/ category									
	Total number of days at sea by vessel type/ category									
2-a-iv	Y	Y	Y	Y						
	Catch of shrimp									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	~1990
	Catch of narrow-barred Spanish mackerel									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of swimming crab, cuttlefish, emperors, groupers, sharks, and rays									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of other finfishes									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
5-a	<i>Shrimp species composition</i>									
2-a-v	Amount of discards									
2-a-vi	Species composition of bycatch and discard									
2-b	BRD related information									
Gillnets										
3-a	Y	Y	Y	Y						
	Alternative annual efforts									
					Y	Y	Y	Y	Y	
3-b	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Total catch									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of narrow-barred Spanish mackerel									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of emperors, groupers, sharks, and rays									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Amount of discards									
5-b	<i>Species composition of discards</i>									
Wire-traps										
3-a	Y	Y	Y	Y						
	Number of days at sea									
	Alternative annual efforts									
					Y	Y	Y	Y	Y	
3-b	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Total catch									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of narrow-barred Spanish mackerel									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of emperors, groupers, sharks, and rays									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Amount of discards									
5-b	<i>Species composition of discards</i>									
Hook-and-line										
3-a	Y	Y	Y	Y						
	Number of days at sea									
	Alternative annual efforts									
					Y	Y	Y	Y	Y	
3-b	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Total catch									
	Y	Y	Y	Y	Y	Y	Y	Y	Y	
	Catch of narrow-barred Spanish mackerel									

	Catch of emperors, groupers, sharks, and rays	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Amount of discards									
5-b	<i>Species composition of discards</i>									

Narrow-barred Spanish mackerel										
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4-a-i	<i>Annual catch</i>	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Monthly catch									
4-a-ii	Fork length composition	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*	Y*
4-a-iii	<i>Catch, effort and fork length composition of targeted gears</i>									
4-b	Relevant information on narrow-barred Spanish mackerel									

* average fork length

Coloured cells and letter 'Y' indicated the type of data that the Member committed to submit and actual submission, respectively. Yellow indicating those expected submission of data in 2014.

Narrow-barred Spanish mackerel

- 4-a-i *Annual catch*
Monthly catch
- 4-a-ii Fork length composition
- 4-a-iii *Catch, effort and fork length composition of targeted gears*
- 4-b Relevant information on narrow-barred Spanish mackerel

Coloured cells and letter 'Y' indicated the type of data that the Member committed to submit and actual submission, respectively. Yellow indicating those expected submission of data in 2014.

iii) State of Kuwait

	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004->	
Shrimp Trawl											
2-a-i	Opening/closing dates										
2-a-ii							Y	Y	Y	~2001	
2-a-iii	Average tow duration by vessel type/ category										
	Average number of tows per day by vessel type/ category										
							Y*	Y*	Y*	~2001	
2-a-iv	Total number of days at sea by vessel type/ category										
							Y*	Y*	Y*	~2001	
	Catch of shrimp										
	Catch of narrow-barred Spanish mackerel										
	Catch of swimming crab, cuttlefish, emperors, groupers, sharks, and rays										
	Catch of other finfishes										
5-a	<i>Shrimp species composition</i>										
2-a-v	Amount of discards										
2-a-vi	Species composition of bycatch and discard										
2-b	BRD related information										

* No separation in vessel type/ category

Gillnets											
3-a	Number of days at sea										
							Y*	Y*	Y*	~2001	
	Alternative annual efforts										
3-b	Total catch										
	Catch of narrow-barred Spanish mackerel										
	Catch of emperors, groupers, sharks, and rays										
	Amount of discards										
5-b	<i>Species composition of discards</i>										

Wire-traps											
3-a	Number of days at sea										
							Y*	Y*	Y*	Y*	~2001
	Alternative annual efforts										
3-b	Total catch										
	Catch of narrow-barred Spanish mackerel										
	Catch of emperors, groupers, sharks, and rays										
	Amount of discards										
5-b	<i>Species composition of discards</i>										

Hook-and-line										
3-a	Number of days at sea									
	Alternative annual efforts									
3-b	Total catch									
	Catch of narrow-barred Spanish mackerel									
	Catch of emperors, groupers, sharks, and rays									

Amount of discards

5-b *Species composition of discards*

Narrow-barred Spanish mackerel

4-a-i *Annual catch*

Monthly catch

4-a-ii Fork length composition

4-a-iii *Catch, effort and fork length composition of targeted gears*

4-b Relevant information on narrow-barred Spanish mackerel

Coloured cells and letter 'Y' indicated the type of data that the Member committed to submit and actual submission, respectively. Yellow indicating those expected submission of data in 2014.

iv) Sultanate of Oman

		2013	2012	2011	2010	2009	2008	2007	2006	2005	2004>
Shrimp Trawl											
2-a-i	Opening/closing dates	Y*	Y*	Y*							
2-a-ii	Number of vessels by types and size categories	Y	Y	Y							
2-a-iii	Average tow duration by vessel type/ category										
	Average number of tows per day by vessel type/ category										
	Total number of days at sea by vessel type/ category	Y	Y	Y							
2-a-iv	Catch of shrimp	Y	Y	Y							
	Catch of narrow-barred Spanish mackerel										
	Catch of swimming crab, cuttlefish, emperors, groupers, sharks, and rays	Y**	Y**	Y**							
	Catch of other finfishes	Y**	Y**	Y**							
5-a	<i>Shrimp species composition</i>										
2-a-v	Amount of discards										
2-a-vi	Species composition of bycatch and discard										
2-b	BRD related information										
* No date available; ** partially											
Gillnets											
3-a	Number of days at sea	Y	Y	Y	Y	Y					~1984
	Alternative annual efforts										
3-b	Total catch	Y	Y	Y	Y	Y					~1984
	Catch of narrow-barred Spanish mackerel	Y	Y	Y	Y	Y					~1984
	Catch of emperors, groupers, sharks, and rays	Y	Y	Y	Y	Y					~1984
	Amount of discards										
5-b	<i>Species composition of discards</i>										
Wire-traps											
3-a	Number of days at sea	Y	Y	Y	Y	Y					~1984
	Alternative annual efforts										
3-b	Total catch	Y	Y	Y	Y	Y					~1984
	Catch of narrow-barred Spanish mackerel	Y	Y	Y	Y	Y					~1984
	Catch of emperors, groupers, sharks, and rays	Y	Y	Y	Y	Y					~1984
	Amount of discards										
5-b	<i>Species composition of discards</i>										
Hook-and-line											
3-a	Number of days at sea	Y	Y	Y	Y	Y					~1984
	Alternative annual efforts										
3-b	Total catch	Y	Y	Y	Y	Y					~1984
	Catch of narrow-barred Spanish mackerel	Y	Y	Y	Y	Y					~1984

v) State of Qatar

		2013	2012	2011	2010	2009	2008	2007	2006	2005	2004>
Gillnets		**	**								
3-a	Number of days at sea	Y	Y	Y*	Y*	Y*					
	Alternative annual efforts	Y	Y	Y*	Y*	Y*					
3-b	Total catch	Y	Y	Y*	Y*	Y*					
	Catch of narrow-barred Spanish mackerel	Y	Y	Y*	Y*	Y*					
	Catch of emperors, groupers, sharks, and rays	Y	Y	Y*	Y*	Y*					
	Amount of discards										
5-b	<i>Species composition of discards</i>										
		* Sample at Khor and Shumal									
		** separated kingfish targeted for Dhow, gillnet for others combined with handline, all gears combined for Skiffs									
Wire-traps		***									
3-a	Number of days at sea	Y	Y	Y*	Y*	Y*					
	Alternative annual efforts	Y	Y	Y*	Y*	Y*					
3-b	Total catch	Y	Y	Y*	Y*	Y*					
	Catch of narrow-barred Spanish mackerel	Y	Y	Y*	Y*	Y*					
	Catch of emperors, groupers, sharks, and rays	Y	Y	Y*	Y*	Y*					
	Amount of discards										
5-b	<i>Species composition of discards</i>										
		* Sample at Khor and Shumal									
		*** combined with all gears for skiffs									
Hook-and-line											
3-a	Number of days at sea	Y	Y								
	Alternative annual efforts	Y	Y								
3-b	Total catch	Y	Y								
	Catch of narrow-barred Spanish mackerel	Y	Y								
	Catch of emperors, groupers, sharks, and rays	Y	Y								
	Amount of discards										
5-b	<i>Species composition of discards</i>										
		Dhows - combined with gillnet; Skiffs - all gears combined									
Narrow-barred Spanish mackerel											
4-a-i	<i>Annual catch</i>										
	Monthly catch										
4-a-ii	Fork length composition										
4-a-iii	<i>Catch, effort and fork length composition of targeted gears</i>										
4-b	Relevant information on narrow-barred Spanish mackerel										

Coloured cells and letter 'Y' indicated the type of data that the Member committed to submit and actual submission, respectively. Yellow indicating those expected submission of data in 2014.

Data for 2012 cover the period from September to December 2012.

Narrow-barred Spanish mackerel

4-a-i	<i>Annual catch</i>	Y	Y	Y	Y
	Monthly catch	Y	Y	Y	Y
4-a-ii	Fork length composition				
4-a-iii	<i>Catch, effort and fork length composition of targeted gears</i>				
4-b	Relevant information on narrow-barred Spanish mackerel				

Coloured cells and letter 'Y' indicated the type of data that the Member committed to submit and actual submission, respectively. Yellow indicating those expected submission of data in 2014.

Appendix 2

Proposed set of standard terms and mapping against national terminologies

Year: Calendar year (01 January to 31 December)**Area:**

RECOFI	Gulf	Oman Sea
Bahrain	Gulf	
Iran	Gulf	Oman Sea
Iraq	Gulf	
Kuwait	Gulf	
Oman	Gulf	Sea of Oman Arabian Sea
Qatar	Gulf	
Saudi Arabia	Northern Area Southern Area	
UAE		

Vessels:

RECOFI	Steel boat	Dhow	Speedboat
Bahrain		Dhow	speedboat
Iran	Vessel	Dhow	Boat
Iraq	Steel	Fiber	Wooden
Kuwait	Steel boats	Wooden Dhow	Speed boats
Oman		Launch	Fiberglass
Qatar		Large boats/ Dhow	Speed boats/ skiffs
Saudi Arabia		Large	Small
UAE			

Gears:

RECOFI	Shrimp trawl	Gillnet	Wire trap	Hook-and-Line
Bahrain	Shrimp trawl	Gillnet	Large wire trap	Hooks & line
			Small wire trap	Longline
			Crab wire trap	
Iran	Shrimp trawl	Gillnet	Wire-traps	Hooks and Lines
Iraq	Trawler	Gillnet	Gillnet/traps	
Kuwait	Trawler	Gill netters	Trap setters	
Oman	Shrimp/ shrimp trawler	NET	Trap	Troll/hand line
Qatar		King fish (driftnet pelagic/ driftnet Spanish mackerel)	Trap	
Saudi Arabia	Trawl	Gill net	Trap	Hand line

		Small gill net		Long line
				Troll line
UAE				

Species:

RECOFI	ASFIS 3A code	Scientific name	English name	
Bahrain		Scientific name		Arabic name
Iran			X	
Iraq			X	
Kuwait				
Oman		SP_SCN	SP_ENG	
Qatar		Scientific name	Common name	Local name
Saudi Arabia			X	name in Arabic
UAE				

Because of large amount of categories in this classification, here only indicates the principle information to be provided. Detailed mapping tables will be provided separately to individual countries' focal point.

Slightly different English names are often utilized to indicate the same species. An accurate mapping among names utilized by individual members is essential to develop a common database. For this purpose, it is strongly recommend to add unique identification corresponding to the species, either ASFIS code or scientific name, in addition to the name normally utilized.

Appendix 3

Summary of data submitted under the Recommendation

	Bahrain	Iran	Oman	Qatar	Saudi Arabia
Coverage in catch amount [Min Data reporting]/[Catch DB]					
Total catch	100%	54%	99%	132%	92%
Shrimp	100%	89%	97%	n.a.	85%
Kingfishes	100%	93%	105%	126%	67%
Groupers	100%	82%	84%	121%	119%
Emperors	100%	76%	327%	366%	122%
Catch composition reported by fleet segments					
Steel boat		0.05%			
Dhow	35%	41%	10%	82%	65%
Speedboat	62%	34%	83%	18%	35%
Catch composition reported by gears					
Shrimp trawl	29%	6%	0%		27%
Gillnet	14%	62%	46%	22%	22%
Wire trap	40%	3%	6%	59%	36%
Hook-and-Line	4%	4%	24%		15%
Others	13%		23%	19%	
Species breakdown: Number of species reported (catch report at species level)					
Groupers	2 (19%)*	0%	4 (100%)	4 (100%)	10 (86%)
Emperors	4(100%)	0%	4 (32%)	3 (100 %)	4 (78%)

Kingfishes, Groupers, and Emperors were defined as *Scomberomorus* spp., *Epinephelus* spp., and *Lethrinus* spp., respectively.

* Bahrain informed that 98 % of catch reported under *Epinephelus* spp. is Orange-spotted grouper (*Epinephelus coioides*).