



REGIONAL COMMISSION FOR FISHERIES

Tenth meeting of the Working Group on Fisheries Management
Doha, State of Qatar, 6 - 8 December 2016
Current work on RECOFI Priority Species
Executive Summary
This working document provides a brief background of the establishment of the list of RECOFI priority species as well as acts as a template for which member countries can complete, adding the requested information as available. This completed template will be used to inform the discussion on what scientific work is being undertaken at the national level, and possibly highlight research activities that countries are doing which is complementary to each other.
The WGFM is invited to:
<ul style="list-style-type: none"> • review national presentations with particular attention to information of common regional relevance; • identify areas for scientific cooperation to improve the knowledge base of RECOFI priority species whose stocks support fisheries of common interest in the region .

Background

1. At the second meeting of the WGFM held in Cairo, Egypt, 27-30 October 2008, the Working Group proceeded with an identification and listing of priority species whose stock(s) supported fisheries of common interest to ensure coherency and to facilitate future work. The meeting agreed that the stocks of the key species, supported a main reference fisheries in the RECOFI area and should be given priority consideration at regional level. The Working Group proposed that the list of priority species be kept under review.

2. At the WGFM Workshop on fishery stock indicators and stock status, held in Tehran, Islamic Republic of Iran, 26-29 July 2009, some of the recommendations of this workshop included:

- members to report stock assessment results and estimates of biological parameters for stocks of interest to the Secretariat and the Commission;
- member countries to provide information on survey plans and protocols prior to the survey and their results of survey on its conclusion to the Secretariat/WGFM who should distribute information to relevant institutes; and
- consider the development of joint studies on evaluation of impacts of stock enhancement including artificial reefs, and guidance regarding areas suitable for the deployment of artificial reefs.

3. The list of priority species was modified a number of times since it was originally proposed and the most recent changes were endorsed at the eighth session of RECOFI held in Muscat, Oman 12-14 May 2015. This table is included below as Table 1. This table was completed for the ninth meeting of the WGFM (Kuwait City, Kuwait, 26-28 November 2015) and should be updated based on any recent work not included in the previous version. The previously submitted information is available in Appendix 1.

Table 1: List of RECOFI Priority Species

FAO name	ASFIS code	Common name	Scientific name
Green Tiger Prawn	TIP	Green Tiger Prawn	<i>Penaeus semisulcatus</i>
Blue swimming crabs	SCD	Blue swimming crab	<i>Portunus pelagicus</i>
Pharaoh cuttlefish	IAH	Cuttlefish	<i>Sepia pharaonis</i>
Stolephorus anchovies	STO	Anchovies	<i>Stolephorus</i> spp.
Indian oil sardine	IOS	Indian oil sardine	<i>Sardinella longiceps</i>
Bludger	NGY	Jacks	<i>Carangoide gymnostethus</i>
Golden trevally	GLT	Golden trevally	<i>Gnathanodon speciosus</i>
Indian mackerel	RAG	Indian mackerel	<i>Rastrelliger Kanagurta</i>
Snubnose emperor	LBW	Orange finned emperor	<i>Lethrinus borbonicus</i>
Pink ear emperor	LTS	Redspot emperor	<i>Lethrinus lentjan</i>
Spangled emperor	LHN	Spangled emperor	<i>Lethrinus nebulosus</i>
Coral hind	CFI	Coral grouper/Bluespotted grouper	<i>Cephalopholis miniata</i>
Orange-spotted grouper	ENI	Orange-spotted grouper	<i>Epinephelus coioides</i>
White-spotted spinefoot	SCN	Rabbitfish	<i>Siganus canaliculatus</i>
Narrow-barred Spanish mackerel	COM	King mackerel/Narrow-barred Spanish mackerel	<i>Scomberomorus commerson</i>
Longtail tuna	LOT	Longtail tuna	<i>Thunnus tonggol</i>
Kawakawa	KAW	Kawakawa	<i>Euthynnus affinis</i>
Requiem sharks nei	RSK	Sharks	Carcharhinidae
Silver pomfret	SIP	Silver pomfret	<i>Pampus argenteus</i>
Hilsa shad	HIL	Indian shad	<i>Tenuialosa ilisha</i>
King soldier bream	KBR	King soldier bream	<i>Argyrops spinifer</i>
Painted sweetlips	DGP	Painted sweetlips	<i>Diagramma pictum</i>
Smalltooth emperor	LEN	Smalltooth emperor	<i>Lethrinus microdon</i>
Indian white prawn	PNI	Indian white prawn	<i>Penaeus indicus</i>

Current work on RECOFI priority species: a template

4. In order to facilitate the sharing of knowledge on these priority species, including research work related to these species and their stocks in the region, a template is provided below, which countries can complete to update the WGFM on ongoing work on the priority species. An example is provided for the sake of ease in filling out the template with the relevant information.

Species	Type of Research	Implementing institution	Methodology	Activities	Results
Example Indian oil sardine <i>Sardinella longiceps</i>	Biomass estimate; Stock spatial distribution	Marine Reseach Institute	Acoustic survey; Mid-water trawling; Commercial catch sampling	Quarterly survey at sea; Monthly commercial catch sampling	Biomass estimate; Biomass size composition; Stock spatial occurrent; Commercial catch age/size composition
Green Tiger Prawn <i>Penaeus semisulcatus</i>					
Blue swimming crabs <i>Portunus pelagicus</i>					
Pharaoh cuttlefish <i>Sepia</i> <i>pharaonis</i>					
Stolephorus anchovies <i>Stolephorus</i> spp.					
Indian oil sardine <i>Sardinella longiceps</i>					
Bludger <i>Carangoide</i> <i>gymnostethus</i>					
Golden trevally <i>Gnathanodon speciosus</i>					
Indian mackerel <i>Rastrelliger Kanagurta</i>					
Snubnose emperor <i>Lethrinus borbonicus</i>					
Pink ear emperor <i>Lethrinus lentjan</i>					
Spangled emperor <i>Lethrinus nebulosus</i>					

Species	Type of Research	Implementing institution	Methodology	Activities	Results
Coral hind <i>Cephalopholis miniata</i>					
Orange-spotted grouper <i>Epinephelus coioides</i>					
White-spotted spinefoot <i>Siganus canaliculatus</i>					
Narrow-barred Spanish mackerel <i>Scomberomorus commerson</i>					
Longtail tuna <i>Thunnus tonggol</i>					
Kawakawa <i>Euthynnus affinis</i>					
Requiem sharks nei Carcharhinidae					
Silver pomfret <i>Pampus argenteus</i>					
Hilsa shad <i>Tenualosa ilisha</i>					
King soldier bream <i>Argyrops spinifer</i>					
Painted sweetlips <i>Diagramma pictum</i>					
Smalltooth emperor <i>Lethrinus microdon</i>					
Indian white prawn <i>Penaeus indicus</i>					

CURRENT WORK ON RECOFI PRIORITY SPECIES (as submitted to the ninth meeting of the WGFM in Kuwait City, Kuwait, 26 to 28 November 2015)

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Green Tiger Prawn <i>Penaeus semisulcatus</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data
	Kuwait	Research projects	KISR	Length-frequency analysis Experimental fishing survey Catch-Effort Statistics	Determined Biological parameters & fisheries management strategy	Finished last year with some recommendation about rational management of shrimp fisheries
Blue swimming crab <i>Portunus pelagicus</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data
Pharaoh cuttlefish <i>Sepia pharaonis</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Stolephorus anchovies <i>Stolephorus spp.</i>	KSA	Essential Fish Habitat	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Acoustic survey; Mid-water trawling; Ichthyoplankton survey	Spring and summer survey	Spatial and temporal distribution; Biomass estimate; Stock spatial distribution
Indian oil sardine <i>Sardinella longiceps</i>	KSA	Essential Fish Habitat	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Acoustic survey; Mid-water trawling	Survey at Sea	Spatial and temporal distribution; Biomass estimate; Stock spatial distribution
Bludger Jacks <i>Carangoide gymnostethus</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: October, March, April & May; Lc50: 32.49 cm (Combined sexes); Exploitation rate of the stock is being estimated.
Golden trevally <i>Gnathanodon speciosus</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: May; Lc50: 36.10 cm (Combined sexes); Maximally exploited as EMax= 0.465 & Ecurrent= 0.45
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	Spawning season extended from March to May. The length at first sexual maturity was greater than the length at capture. The biological reference points F_{opt} and F_{limit} are greater than the current fishing effort and stocks are over-exploited
Indian mackerel <i>Rastrelliger Kanagurta</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
Snubnose emperor/ Orange finned emperor <i>Lethrinus borbonicus</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against the exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Being studied
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	A single spawning season occurred between March and June, males achieved sexual maturity at a larger size and older age than females Juvenile retention value was 36.3 %. The results of the yield per recruit indicated that the existing fishing mortality rate was higher than the biological reference points, indicating that this species was overexploited
Pink ear emperor/ Redspot emperor <i>Lethrinus lentjan</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: February, March, April, May and June with the peak during May; Lc50: 26.42 cm (Combined sexes); Under exploited as $E_{10} = 0.758$ & $E_{current} = 0.45$
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data collected from specimens purchased from commercial catches	The results concluded that the spawning season extended from April to June. The length at first sexual maturity was greater than the length at capture. The fishing mortality was considerably less than the biological reference points, indicating species was exploited sustainably.
Spangled emperor <i>Lethrinus nebulosus</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Lab analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: January, February, March, April and May with the peak during February; Lc50: 32.64 cm (Combined sexes); Maximally exploited as Emax= 0.65 & Ecurrent= 0.68
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	A single spawning season occurred between February and April and the peak in March, the females achieved sexual maturity at a larger size than males The results of the yield per recruit indicated that the existing fishing mortality rate was higher than the biological reference points, indicating that this species was overexploited
Coral hind Coral grouper Bluespotted grouper <i>Cephalopholis miniata</i>	UAE	Report	MOCCA	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	Spawning season extended from May to August The length at first maturity is smaller than the length at first capture Juvenile retention value was more than 90% of the sampling.

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Orange-spotted grouper <i>Epinephelus coioides</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data
	Qatar	<i>Reproductive Biology; Current stock status evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: March, April, May and June with the peak during April; Lc50: 47.73 cm (Females) & 50.12 cm(Males); Maximally exploited as Emax= 0.55 & Ecurrent= 0.54
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	The spawning season was well defined, occurring once a year in April and early May. The mean size at first capture was considerably smaller than both the mean size at sexual maturity and the size at which yield per recruit would be maximized Fishing mortality rate higher than precautionary target biological reference points. The stock status is over-exploited
White-spotted spinefoot Rabbitfish	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Lab analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
<i>Siganus canaliculatus</i>	Qatar	<i>Reproductive Biology; Current stock status evaluated against exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: March, April with the peak during April; Lc50: 19.04 cm (Combined sexes); Sustainably exploited as Emax= 0.75; E10= 0.65 & Ecurrent= 0.68
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	Fish in spawning condition were only observed between February and May. The mean sizes at first sexual maturity for males and females were higher than the length at fully recruited. The annual instantaneous rate of fishing mortality was considerably greater than the target and limit biological reference points, indicating stock is overexploited.
Narrow-barred Spanish mackerel King mackerel <i>Scomberomorus</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Lab analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	1. Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
<i>commerson</i>	Qatar	<i>Current status of fish stock evaluated against the exploitation rate.</i>	Fisheries Department	Length Frequency Distribution Analysis; Commercial catch sampling.	Length frequency recording in a daily manner.	Over-exploited as $E_{max} = 0.49$ & $E_{current} = 0.57$ Current relative spawning stock biomass equals 13.8% compared to the corresponding virgin un-exploited stock. Closed season for three months a year will increase the spawning stock biomass to be 20% of the corresponding virgin stock.
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catch Biological data were collected from specimens purchased from commercial catch	Spawning occurred between April and August, the mean sizes and ages at first sexual maturity were 72.8 cm LF (1.9 years) for males and 86.3 cm LF (2.1 years) for females. The size at which fish were fully recruited to the fishery (62.6 cm LF) was considerably smaller than both the mean size at first sexual maturity for females and the size at which yield per recruit would be maximized The annual instantaneous fishing mortality rate of was by far in excess of the precautionary target and limit biological reference points, indicating that the resource is heavily over-exploited.

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Longtail tuna <i>Thunnus tonggol</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
	UAE	Report	MOCCAE	Size frequency data Biological data	Size frequency data were collected from commercial Catch Biological data were collected from specimens purchased from commercial catch	Spawning season extended from May to July The length at first maturity is smaller than the length at first capture Juvenile retention value was more than 82% of the sampling.
Kawakawa <i>Euthynnus affinis</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
	Qatar	<i>Reproductive Biology;</i> <i>Current stock status evaluated against the exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recorded daily	Being analysed

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Requiem sharks nei Carcharhinidae	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
	Qatar	Statistical data on CPUE of <i>Carcharhinus dussumieri</i> , being recorded.	Fisheries Department	Statistical Data on Catch, effort & CPUE	Statistical data recording & reporting	Statistical reports submitted.
Silver pomfret <i>Pampus argenteus</i>						
Hilsa shad Indian shad <i>Tenualosa ilisha</i>						
King soldier bream <i>Argyrops spinifer</i>	KSA	Stock assessment; Population Dynamics; Age and Growth; Reproduction	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Trawling Survey; Commercial Catch Sampling; Laboratory analysis	Surveys at Sea; Beach seining surveys; Monthly Commercial Catch Sampling; Age and maturity analyses	Biomass estimate; Biomass size composition; Stock spatial distribution; Commercial catch age/size composition; Age/Growth and Maturity data

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against the exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: November, December, January, February and March with the peak during December; Lc50: 24.61 cm (Combined sexes); Under exploited as EMax= 0.602; E10= 0.509 & Ecurrent= 0.369
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial catch Biological data were collected from specimens purchased from commercial catches	The spawning occurred from January to April. The mean size at maturity is higher than both the length at fully recruited and the length at which yield per recruit would be maximized Juvenile retention value was more than 66% of the sampling. The annual instantaneous fishing mortality rate is lower than the precautionary target and limit biological reference points, indicating that the resource is exploited sustainable.

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Painted sweetlips <i>Diagramma pictum</i>	KSA	Landing Sites Monitoring (LSM)	Marine Studies Section - Research Institute - King Fahd University of Petroleum and Minerals	Landing Sites Monitoring (LSM)	weekly landing site visit	Catch Per Unit Effort (CPUE)
	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against the exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: February, March, April and May with the peak during April; Lc50: 34.32 cm (Combined sexes); Over-exploited as $E_{max}=0.636$ & $E_{current}=0.72$

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	<p>The spawning season is extended from April to May.</p> <p>The mean size and age at sexual maturity were 35.7 cm 2.9 years for females and 26.7 cm and 0.5 years for males.</p> <p>The maximum recorded age (11 years) and small mean size and young age at sexual maturity for males may be a direct result of intensive demersal fishing in the southern Arabian Gulf.</p> <p>The mean length at which became vulnerable to capture was 33.3 cm, which corresponded to only 3 and 7% of the cumulative reproductive potential of males and females, respectively.</p> <p>The mean size at first capture smaller than the size for both at first sexual maturity and the length at which yield per recruit would be maximized.</p> <p>The fishing mortality rate was substantially greater than the target and limit reference points, indicating stock is over-exploited.</p>

Species	Country	Type of Research	Implementing institution	Methodology	Activities	Results
Smalltooth emperor <i>Lethrinus microdon</i>	Qatar	<i>Reproductive Biology;</i> <i>Current status of fish stock evaluated against the exploitation rate.</i>	Fisheries Department	Commercial catch sampling; Length Frequency Distribution Analysis	Monthly commercial catch sampling. Length frequency recording in a daily manner.	Spawning season: April, May, June, July, August, September and October with the peak during Jun; Lc50: 29.20 cm (Combined sexes); Sustainably exploited as Emax= 0.833; E10= 0.717 & Ecurrent= 0.720
	UAE	Report Scientific paper	MOCCA EAD	Size frequency data Biological data	Size frequency data were collected from commercial Catches Biological data were collected from specimens purchased from commercial catches	<i>L. Microdon</i> had a single spawning season later in the year, between June and November Juvenile retention was highest (60.6%). The existing fishing mortality rate for <i>L. microdon</i> was approximated the target biological reference point and was within the limit biological reference point, indicating that this species was exploited sustainably
Indian white prawn <i>Penaeus indicus</i>						