

**FISHERY COUNTRY PROFILE**

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RESUMEN INFORMATIVO  
SOBRE  
LA PESCA POR PAISES

Organización de las Naciones  
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la Alimentación

**UNITED ARAB EMIRATES****GENERAL ECONOMIC DATA**

Area:	82 880 km <sup>2</sup>
Shelf Area:	Approx. 31 600 km <sup>2</sup>
Length of Continental Coastline:	1 318 km
Population (2002):	Approx. 2.446 million
GDP at purchaser's value (2001-02):	\$US 51 billion
PCE per head (2001-02):	\$US 21 100
Agricultural GDP (2001-02):	\$US 1 530 million

Indicative exchange rate: \$US 1 = AED3.68

**FISHERIES DATA**

Commodity Balance (2001):

	Production	Imports	Exports	Total Supply	<i>Per Caput Supply</i>
	'000 tons liveweight				Kg/year
Fish for direct human consumption	110.0 <sup>(1)</sup>	80.259	24.846	76.595	26.6

Fish for animal feed and other purposes	88.817				
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**Notes:** (1) = Recent landings surveys suggests that production is significantly over-estimated.

<b>Estimated Employment (2001):</b>	
(i) Primary sector (including aquaculture)	Est. 18 000
(ii) Secondary sector:	Est. 14 000
Gross Value of Fisheries Output (2001):	Est. \$US 32.5 million
Trade Value of Fisheries Imports (2002):	\$US 105.398 million
Value of Fisheries Exports (2002):	\$US 61.019 million

## **STRUCTURE AND CHARACTERISTICS OF THE INDUSTRY**

### **Marine fisheries**

The fisheries of the UAE are entirely artisanal in nature, with the minor exception of 4 small purse seine vessels that operate seasonally from Sharjah and take sardines and anchovy at night using light attraction.

Two types of vessels are used in the artisanal fishery: wooden, local dhows up to approximately 15 m in length that primarily operate fish traps ('gargoor') and fiberglass, outboard powered vessels up to 8-10 m in length (locally known as tarads) that use a variety of gear including fixed and floating gill nets, hand trolling and drop lines and gargoor. Vessels that are operating gargoor generally undertake 4-5 day fishing trips during while the smaller launches usually operate on a daily basis.

In addition to vessel catches, there are a number of fixed stake nets (locally known as 'hadra' that are located along the coast and its inlets. Rapid coastal development has apparently reduced the number of such stake nets in areas near to major cities such as Dubai. However, they are still numerous in areas where little coastal development has taken place, particularly in the area west of Abu Dhabi where 73 such stake nets were recorded in 2003.

The majority of the catch from all sectors is taken from Abu Dhabi Emirate, since this Emirate comprises over 65% of the sea area of the United Arab Emirates. However, the most productive areas are inshore areas near to the Straits of Hormuz, around Ras al-Khaimah. Landings probably also consist of fish taken in other, neighboring, countries' waters, although the quantity of such landings is not known.

Fish are landed at approximately 30+ landing sites along the coast of the UAE and are generally auctioned at the market in which they are landed.

No trawling takes place in the UAE since this has been banned since the 1970s in an effort to protect marine habitat. Although the use of drift nets is also prohibited, their illegal use

is common, particularly during the season for large pelagics such as Spanish mackerel. The number of vessels registered is decreasing and, in 2002, was 5,191, down from 7,700 in 1998. An estimated 17,264 fishermen operated these vessels. However, of these registered vessels, only a small number (perhaps as low as 20%) actually undertake fishing operations. Recent laws requiring a UAE national to be physically present on vessels during fishing operations has also reduced the number of active vessels.

Seemingly as a result of this discrepancy between active and registered vessels, there appear to be some major issues of over-reporting of landings, which have traditionally been based on limited sampling at landing sites. Recent, improved, landings surveys undertaken in Abu Dhabi Emirate (which comprises the majority of the landings in the UAE) have shown that an estimated total of 8,184 tonnes of fish was landed in the Emirate during 2002, 88% of which consisted of demersal species. This compares with reported landings for the whole UAE of around 110,000t. This total catch from Abu Dhabi represented an increase of 41% from the previous year. The most important species categories by weight were: Emperors (25%), Groupers (24.7%), Jacks (16.5%), Sweetlips (10.5%) and Scads (5.2%). The majority of the catch (6,438 tonnes) was landed in Eastern Abu Dhabi, where the Abu Dhabi Free Port accounted for 78.6% of the total. Traditional wooden dhows landed 6,109 tonnes, equivalent to 74.6% of the total catch. Total fishing effort during 2002 was estimated at 12,740 tarad trips and 7,752 dhow trips. The increase in catch by 41% was associated with an increase in the number of landings by tarads (12.3%) and dhows (23.9%) compared to 2001.

The pelagic catches are dominated by Spanish mackerel (*Scomberomorus* spp.) and other large pelagics while small pelagic species such as sardinella and anchovies are captured in inshore waters (by beach seines and set nets) near Ras al-Khaimah and also on the East Coast near al-Fujairah. Apart from the 4 small purse seine vessels that operate seasonally from Sharjah, there is no industrial fishery for small pelagic species although there have been several attempts to start such an industry in the past. Recent research and surveys have indicated that, while small pelagic stocks in UAE waters exceed 100,000 t, their small school size makes large-scale commercial exploitation difficult.

A small quantity of high value tropical rock lobster (*Panulirus ornatus* and *P. versicolor*) is taken on the East Coast of the country and sold locally. However, the dominant lobster in the market is *P. homarus* which is imported in significant quantities (often illegally) from the Sultanate of Oman.

### **Inland Fisheries**

Because of the arid nature of most of the country, there are no inland fisheries in the UAE.

### **Aquaculture**

There is no major aquaculture industry in the country. One small commercial and experimental facility near the Emirate of Umm Al Quwain produces around 1 t of an imported Sparus species annually and any further developments of this facility will most likely be orientated towards supplying fish to the European market.

Aquaculture research and development activities have been carried out for a number of years in the facilities of the Marine Resources Research center (MRRC) at Umm Al Quwain and techniques have been developed for producing fingerlings of a number of local species, in addition to imported Indian white shrimp. Fingerlings of the rabbit fish (*Siganus*

*caniculatus*) are released each year from the MRRC into the sea with the objective of enhancing local wild stocks of this species. However, no evaluation of the effectiveness of such enhancement has been carried out.

### **Utilization of the Catch**

The vast majority of the catch is landed and sold as whole fresh product at approximately 30+ landing sites with these landing sites being administered by local Fishermen's Co-operatives. The dominant landing sites are those near the major cities of Dubai, Abu Dhabi, Sharjah, al-Fujairah, Umm al Quwain, Ajman and Ras al-Khaimah. The markets at the landing sites utilize both a wholesale auction process and also incorporate retail stalls. Some imported and trans-shipped product is also sold in the markets, although locally captured fish pre-dominate.

There is no major processing facility for locally produced fish although a small quantity of small pelagic species is dried (particularly in the East Coast Emirates) for animal feed and fertilizer.

Exports of whole fresh fish take place, particularly to Saudi Arabia in addition to re-exports of fish imported primarily from the Sultanate of Oman.

### **State of the Industry**

In 2002, the UAE completed the first comprehensive survey and assessment of its demersal and small pelagic resources. The results of the survey were compared with a similar survey undertaken in 1978 and showed that while small pelagic stocks were at about the same level as in 1978, demersal stocks had declined significantly, in some areas to around 5% of 1978 levels.

Of the demersal stocks, both commercial and non-commercial species had declined significantly and the study concluded that fishing was probably not the only factor in the cause of this decline. Extensive coastal development and rapid urbanization since 1978 may also have played a role since the study showed these UAE Gulf coastal waters were a significant spawning area for many demersal fish species.

The results of that survey also showed that the majority of commercial demersal fish species were being taken at a size that was well below the optimum size. The lack of regulation of numbers of fishing vessels or fishing gear also had resulted in fishing effort levels being higher than optimum levels.

Although reliable catch and fishing statistics are not available, commercial catch rates have apparently fallen significantly over the past decade, particularly in the important fish trap (gargoor) fishery. Without restrictions on the number of gargoor that can be used, the commercial response to this has been to increase the number of gargoor used. In the light of the findings of the recent survey, restrictions are now being introduced to control fishing effort (through limiting the numbers of fishermen and quantity of fishing gear) and to regulate the size of capture (through mesh size restrictions).

Essentially, the fishing industry remains artisanal in nature and is dependent on imported labour to operate fishing vessels and to provide other services to the industry. There is little Government or private sector investment in the development of the industry although market facilities in a number of areas have been upgraded. There have been previously unsuccessful attempts at developing an industry based on small pelagic species and, at the present time, no industrial-scale fishery on these species exists.

Recent attention to better management of local fish stocks may address the issue of

declining demersal fish stocks.

### **Economic Role of the Fishing Industry**

As the United Arab Emirates has developed rapidly with significant contributions from its major oil industry and increasingly-important tourist industry, the commercial fishing industry has declined rapidly in economic importance. In 2001, the industry represented less than 0.1% of GDP, down from more than 40% during the pre-oil era of the 1960s. Declining fish stocks have exacerbated this decline in economic importance.

However, the industry still retains a significant heritage value and is an important part of the social fabric of many coastal villages.

### **Development Prospects**

Apart from small pelagic resources, the fish stocks of the UAE are apparently fully or over-exploited. As a result, there seems little prospect for further major development of the current industry. Further, the declines in abundance of demersal fish stocks, perhaps contributed to by coastal development and urbanization, do not provide a sound basis for further development of the industry.

Although presently lightly exploited, the development of an industry for small pelagic species in UAE waters may be difficult because of both the small school size and also the market competition from low-cost neighboring producers such as the Sultanate of Oman.

Individual Government and private-sector initiatives within some Emirates have moved significantly towards the development of a series of artificial reefs within their area of jurisdiction. Such developments are designed to increase fish abundance in the area.

### **Fisheries Management**

Management of fisheries in the UAE is the responsibility of the Ministry of Agriculture and Fisheries (MAF). However, the MAF operates in a co-operative way with authorities in each of the seven Emirates of the UAE to develop policies and legislation, enforce regulations and undertake research. However, each Emirate also has some legislative responsibility for regulating fishing activities in its area of jurisdiction and therefore regulations (including licensing requirements) are sometimes not entirely consistent between the various Emirates. Enforcement of fisheries regulations is usually the responsibility of the Coast Guard located in each Emirate.

Fishing vessels and fishermen need to be licensed and, in some Emirates, recreational fishing licenses are also required. A number of areas closed to commercial fishing have been declared, often as marine parks.

There are currently no restrictions on the number of vessels, fishermen or gear although some Emirates are moving rapidly towards imposing such limits. A recent (1999) regulation requiring the physical presence of a UAE national on board vessels undertaking fishing activities resulted in a sharp down-turn in fishing effort, although that is now recovering.

### **Research**

The Ministry of Agriculture and Fisheries undertakes research at its facilities at the Marine Resources Research Center (MRRC) at Umm Al Quwain. The research undertaken there is orientated towards aquaculture, including producing fingerlings of local species for release into the sea. However, some fish aging and biological studies are also undertaken.

Additional research is undertaken by the Marine Environmental Research Center (MERC) of the Environmental Research and Wildlife Development Agency (ERWDA) in Abu Dhabi. This is a major facility and includes programs related to fish stock assessment, fish landings surveys and fish aging. The facility includes a modern fish-aging laboratory. MERC also is responsible for administering fisheries management and licensing in Abu Dhabi Emirate. Other Emirates maintain small research interests usually through the Government Municipality offices of each Emirate. Both the Sheikh Zayed University in Dubai and Al-Ain University have ongoing research interests in fisheries and marine mammals.

Apart from the research centers that are located within the relevant management agencies, there is no formal mechanism for linking research priorities and activities to fisheries management.

### **Policy Aims**

Policy aims are only contained in the relevant laws related to fisheries management and administration, since no specific fisheries management plans have been developed for any fisheries. The Fisheries Law 23 of 1999 does not explicitly state what the policy aims are, although the flavor of the Law is very much concerned with fisheries administration. The law that establishes the Environmental research and Wildlife development Agency (ERWDA) in Abu Dhabi not only recognizes ERWDA as the competent authority for managing fisheries in that Emirate but also emphasizes the protection and conservation aspects of ERWDA's role.