

<b>FISHERY COUNTRY PROFILE</b>	<b>Food and Agriculture Organization of the United Nations</b>	<b>FID/CP/JOR</b>
<b>PROFIL DE LA PÊCHE PAR PAYS</b>	<b>Organisation des Nations Unies pour l'alimentation et l'agriculture</b>	 <b>October 2003</b>
<b>RESUMEN INFORMATIVO SOBRE LA PESCA POR PAISES</b>	<b>Organización de las Naciones Unidas para la Agricultura y la Alimentación</b>	

## HASHEMITE KINGDOM OF JORDAN

### GENERAL ECONOMIC DATA

Area:	92 300 km <sup>2</sup>
Shelf area :	Approx. 120 km <sup>2</sup>
Length of Continental Coastline:	Approx. 26 km
Population (2003):	approx. 5 307 million
GDP at purchaser's value (2001-02):	\$US 22 800 million
PCE per head (2001-02):	\$US 4 300
Agricultural GDP (2001-02):	Est. \$US 912 million
Indicative exchange rate:	\$US 1 = JOD 0.709

### FISHERIES DATA

Commodity balance for fish, crustaceans and molluscs in 2001:

	<b>Production</b>	<b>Imports</b>	<b>Exports</b>	<b>Total supply</b>	<b>Per caput supply</b>
	'000 tons live weight				kg/year

Fish for direct human consumption	0.52 plus 0.54 from aquaculture	23.24	0.10	24.20	4.56
Fish for animal feed and other purposes	-	-	-	-	-

<b>Estimated employment (2001):</b>	
(i) Primary sector (including aquaculture):	723
(ii) Secondary sector:	est. 800
Gross value of fisheries output (at ex-vessel prices 2001):	US\$ 0.53 million
Trade (2001):	
(i) Value of imports:	\$US 27.57 million
ii) Value of exports:	\$US 0.22 million

## STRUCTURE AND CHARACTERISTICS OF THE INDUSTRY

### Marine fisheries

The marine fishing industry in Jordan is small and is based at Aqaba on the Red Sea coast. The fishery is entirely artisanal consisting of approximately 85 fishermen and 40 boats. Total catch in 2001 was 170t compared with catches from 1995 of 150 mt, and 103 mt recorded for 1993. Of the catch in 2001, about 65% were tuna. There are no cold storage facilities and catches are sold upon landing. Recreational SCUBA divers are reported to collect a small number of aquarium fish, but no indications of volume are available.

In addition to significant coral reefs, extensive seagrass beds occur along the Jordanian coast, particularly in the north and at Big Bay in the south. These areas appear to be important nursery areas for commercial fish species such as rabbitfishes, goatfishes, and parrotfish and may have regional, as well as local, significance in this regard.

### Aquaculture

Semi-intensive, salt-water aquaculture production of Tilapia species is carried out, with the largest producer being Jordan Valley Fisheries (JVF). The company operates a modern, salt water Tilapia farm located in the Jordan Valley near the Dead Sea. The Farm can produce up to 700 ton per year and incorporates an intensive system based on solar technology and a 'green water' system for algal production and heating.

The development of coastal aquaculture is limited by the availability of suitable sites and environmental concerns, particularly the impacts of nutrient enrichment by aquaculture on Jordan's extensive and important coral reefs.

Total aquaculture production in 2001 was estimated at 540t of which around 80t (or 15%)

was freshwater species such as carp and the remainder salt-water tilapia production. Freshwater aquaculture production has been in decline for some years as water resources come under pressure from alternate uses and environmental degradation.

### **Catch utilization**

Fish are landed daily into Aqaba and sold whole, fresh. There are no significant processing or holding facilities. Most production is consumed locally. Aquaculture production is sold both fresh and processed.

### **State of the industry**

Total landings and the number of fishermen have remained static in recent years. The artisanal marine fisheries in the Red Sea have limited development prospects and are threatened by increasing environmental concerns, particularly relating to the fishing activities in coral reef and seagrass nursery areas.

Increasing recreational fishing and environmental issues such as increased shipping into Aqaba are also emerging as significant issues in Jordan's fisheries.

Intensive Tilapia aquaculture has expanded in recent years and appears a viable industry although the capital-intensive nature of its development may hinder further significant expansion.

### **Economic role of the fishery industry**

The commercial fisheries sector is small and contributes less than 0.01% of GDP. Aquaculture production from intensive farms is increasingly important from a socio-economic point of view in rural areas, particularly in those areas of the Jordan valley.

### **DEVELOPMENT PROSPECTS**

With its limited coastline and increased recreational fishing in the Red Sea, Jordan's fisheries have very limited scope for development. Any future development will be dependent on increased aquaculture production, although the limited availability of suitable sites (and the consequent reliance on intensive and semi-intensive production methods) will make such development capital-intensive. Despite these obstacles, aquaculture production (mainly based on salt-water production of Tilapia) has been expanding, with total aquaculture production increasing from an estimated 200t in 1997 (all fresh water production) to 540t in 2001 (85% salt-water Tilapia production).

### **Fisheries management**

There are few fisheries measures in place in Jordan. Restrictions on the use of destructive fishing practices are in place, primarily to protect coral reef areas. However, illegal fishing methods are commonly being used.

Because of the regional distribution of many of the key species targetted by the commercial fishery in Jordan, independent management of the stocks of fish in Jordanian waters is difficult.

Some regional co-operation in fisheries and marine environmental management is achieved through various multi-lateral programs such as the Comprehensive Fisheries-Ecosystem (CoFE) Management Program of the Red Sea Marine Peace Park Co-operative Research, Monitoring and Management Program (RSMMP Program).

There is a growing and presently uncontrolled recreational fishing sector that is in direct competition with commercial fishermen.

## **Demand**

Jordan's fish demand is satisfied almost entirely by imports, which, in 2001, contributed over 98% of fish supply to Jordan. The limited development prospects for the industry will result in little change to this situation in the foreseeable future. Imports have risen strongly to supply local demand, more than doubling in the period 1994-2001 from 11,400t to 23,200t. Exports are negligible. Although there has been a small increase in total local supply from around 640t in 1996 to 1060t in 2001 (51% from aquaculture), this has not been sufficient to satisfy increasing local demand.

## **RESEARCH**

The Marine Science Station of Jordan University carries out marine and fisheries research. Research programs are focused on the biology of commercial species, marine ecosystem studies (particularly coral reef and seagrass bed studies) and aquaculture. A pilot plant for research into giant clam (*Tridacna* spp) culture has been established by the Marine Science Station at Aqaba with the aim of not only developing culture techniques for the species but also exploring the feasibility of integrated farming with other marine ornamentals in closed systems.

## **AID**

There is no direct foreign assistance for Jordan's fisheries. However, a number of regional programs, such as the USAID funded Red Sea Marine Peace Park Co-operative Research, Monitoring and Management Program (RSMMP Program) impact on research, development and management of Jordan's fisheries. Development of aquaculture of Tilapia species has been undertaken with financial assistance from external donors and corporations.

## **INTERNET LINKS**

<http://www.moa.gov.jo> (Ministry of Agriculture)

<http://www.mwi.gov.jo/> Jva (Jordan Valley Authority)

<http://www.mra.gov.jo> (Ministry of Rural Affairs and the Environment)

<http://www.nis.gov.jo> (National Information System)