❑ A LOOK AT RECENT GLOBAL DATA ON THE STATE OF FISH STOCKS

In his opening address at the 2001 Reykjavik Conference on Responsible Fisheries in the Marine Ecosystem, Jacques Diouf, Director-General of the U.N. Food and Agriculture Organization of the United Nations (FAO), summarized as follows the state of world fisheries:

"The great oceans are exhaustible. Despite the fact that the majority of all resources are now fully exploited, access to these resources remains open in far too many fisheries around the world. Over-investment in the fishing industry exacerbates the problem .... Today there are too many vessels chasing too few fish .... The task at hand is to examine how to manage fisheries with a view to ensuring sustainable utilization of the food available in the oceans for the benefit of present and future generations without harming the ecosystem's capacity to support human life."

For more than three decades the international community has grappled with achieving sustainable fisheries. Indeed, the 1947 London Conference on Overfishing, although not reaching agreement on how to deal with overfishing, aimed to address a problem that had already progressively worsened over years. Had pre-emptive action been taken following the London Conference, the 1990s collapse of one of the world's oldest and best-known commercial fisheries, the North Atlantic cod fishery, might have been averted. A decade after the collapse, scientific evidence indicates that cod stocks of North Atlantic have still not recovered to a level to permit resumption of even limited commercial fishing.

In 1982, following lengthy and complicated negotiations, the U.N. Convention on the Law of the Sea (1982 Convention) was concluded. It was widely believed that the convention would lead to the rational and optimum use of fish stocks. However, current assessments of the state of world fisheries indicate that the convention has not achieved its intended results in fisheries. This situation can be attributed to several factors, including:

- a lack of national implementation of the 1982 Convention, and
- little or no change in the behavior and attitude of fishers towards achieving responsible and sustainable outcomes in fisheries.

In the late 1980s, concern over environmental degradation led to a number of regional and global initiatives, most importantly the convening of the 1992 United Nations

Table 1: Marine capture fishery production (in millions of metric tons) as a proportion of total world fishery production in 1995, 1999 and 2001

Production category	1995	1999	2000	2001p
Total world fishery production	116.4	126.7	130.4	128.8
Total marine capture fisheries production	84.7	84.7	86.0	82.5
Total marine capture fisheries production as a percentage of total world fishery production	73	67	66	64

Source: FAO. Data for 2001 are provisional.

Table 2: World marine capture fisheries production (in millions of metric tons) by Ocean in 1995, 1999 and 2000

Ocean	1995	1999	2000	
	Tons	Tons	Tons	Percent
Pacific Ocean	53.3	52.9	53.8	63
Atlantic Ocean	23.5	23.2	23.5	27
Indian Ocean	7.8	8.5	8.6	10
Southern Ocean	0.1	0.1	0.1	..
Total marine capture fisheries production	84.7	84.7	86.0	100

Source: FAO.

Conference on Environment and Development (UNCED), or "Earth Summit," and the adoption of the Rio Declaration and Agenda 21. One outcome was agreement that utilization of all natural resources should be based on long-term sustainability.

WHAT DO RECENT FISHERIES DATA SHOW?

Total world fisheries production (which includes both capture fisheries and aquaculture production) has fluctuated upwardly over the 1990s and into the new millennium.

Table 1 reveals that the level of marine capture fisheries as a proportion of total production has declined since 1995. With harvest in the capture fisheries stagnating, more and more total fisheries production increases come from aquaculture. There is little reason for now to anticipate a change in this trend.

Table 2 shows that:

• The Pacific Ocean ranks clearly as the most important area of production, followed by the Atlantic and Indian oceans. The Southern Ocean, in global production terms, is insignificant.

• FAO assessments indicate no likely dramatic change in the ranking of capture fishery production by ocean over the next decade.

The top 10 world marine capture fisheries producers have largely maintained their rankings since 1995.

From table 3, it is clear that:

• China is ranked first, followed by Peru. Peru's catches, much of them Peruvian anchovy, are subject to wide annual fluctuations, however.

• Production by the eight other leading world producers has generally remained static or trended downwards.

• The 10 major producers account for about 65 percent of total marine fisheries production.

• In the foreseeable future radical change in the ranking of the top world capture fisheries producers is unlikely.

Table 4 shows how total world fish production is consumed. In 1995, 72 percent of total production was directed to food consumption. In 1999 and 2000 the proportion directed to food consumption strengthened, but provisional data for 2001 indicate the proportion weakened slightly.

The table indicates that:

• People, on average, are eating more fish. More sophisticated analysis is required to determine who is eating more fish: people with higher disposable incomes or poorer people out of necessity because fish may be the only protein source available to them or within their financial reach.

• Generally, fish consumption in higher-income countries is strengthening, partly for health reasons. There are real fears that, if management of fish stocks overall is not improved, the poorer and economically weaker segments

of the world's population will find themselves facing an ever-decreasing supply of fish and protein.

STATUS OF WORLD FISH STOCKS

FAO evaluates periodically the status of world fish stocks. In its most recent assessment, undertaken in 2000, FAO said that:

• 25 to 27 percent of world marine fish stocks are under-exploited or moderately exploited and thus are the main potential source for expansion of total capture fisheries production.

• 47 to 50 percent of stocks are fully exploited and are therefore producing catches that have either reached, or are very close to, their maximum limits with no room expected for further expansion.

• 15 to 18 percent of stocks are overexploited and have no potential for further increase. Moreover it is likely that catches from these stocks will decrease if remedial action is not taken to reduce or reverse overfishing.

• 9 to 10 percent have been depleted or are recovering from depletion.

With 71 to 78 percent of fish stocks fully exploited, overexploited, depleted or recovering from depletion, responsible management of fish stocks has become ever more urgent.

FAO said in its 2000 global assessment that over the past decade there has been little change in the status of stocks despite strong international efforts after UNCED to promote more responsible behavior in fisheries.

Lack of improvement during the 1990s might be attributed to many factors, including insufficient time to realize substantive improvements. The apparent halt in deterioration suggests, at least, that implementation of conservation measures are not entirely ineffective but require more time than expected to demonstrate measurable progress towards stock recovery. A contrary view is that conservation measures have achieved no effect but that stocks are more resilient to heavy fishing pressure than had been realized.

An estimated 90 percent of the world's capture fisheries fall under national jurisdiction, and a significant proportion of these fisheries are found within 50 kilometers of the coast. Many of these fisheries operate on a small scale. They are responsible for producing

Table 3: World marine capture fisheries production (in millions of metric tons) by major producing country in 1995, 1999 and 2000

Country	1995	1999	2000	
	Tons	Tons	Tons	Ranking
China	11.0	15.0	14.8	1
Peru	8.9	8.4	10.6	2
Japan	5.9	5.1	4.9	3
United States of America	5.2	4.7	4.7	4
Chile	7.4	5.0	4.3	5
Indonesia	2.7	3.7	3.8	6
Russian Federation	4.1	3.8	3.7	7
India	2.7	2.8	2.8	8
Thailand	2.8	2.7	2.7	9
Norway	2.5	2.6	2.7	10
Sub-total	53.2	53.8	55.0	
Other countries	31.5	30.9	31.0	
Total	84.7	84.7	86.0	
Major ten producers as a percentage of total marine capture fisheries production	63	64	64	

Source: FAO.

Table 4: Utilization of total world fishery production (in millions of metric tons) and per capita consumption (in kilograms) in 1995 and from 1999 to 2001

Use/production	1995	1999	2000	2001p
Direct food consumption	84.3	94.4	96.7	99.4
Non-food uses	32.1	32.2	33.7	29.4
Total world fishery production	116.4	126.7	130.4	128.8
Direct food consumption as a proportion of total world fishery production	72	75	74	77
Per capita supply (Kg)	14.9	15.8	16.0	16.2

Source: FAO. Data for 2001 are provisional. Some totals may not add due to rounding.

about 50 percent of global capture production for consumption, supplying nearly all the fish consumed in developing countries. These fisheries are critical in the world food security equation. More than 400 million people in developing countries are employed directly or indirectly in these small-scale fisheries.

As a consequence of the concentration of capture fisheries in 200-mile exclusive economic zones (EEZs), most fisheries management problems are found in areas under national jurisdiction and a large proportion of them in developing countries. A focus on improving EEZ fisheries management continues to have high priority. ❑

Source: David J. Doulman, Senior Fishery Liaison Officer, Fisheries Department, U.N. Food and Agriculture Organization. The views expressed by the author do not necessarily represent the views of FAO or any of its members.