SUMMARY

Fish sector is considered one of the most promising sectors in the near future. This is due to fact that Yemen possesses a huge reservoir of fish wealth tanks to her excellent maritime location, and long shores. Yemen's regional waters extend on the Red Sea, Aden Bay, in addition to many islands scattered in her waters.

Therefore, the study aims at examining the economic importance of the Yemenis fish production, its contribution to the Gross National Production, exploring the horizons for developing fish plantations in Yemen and its future outlook. Moreover, the study aim at studying institutional, organizational, and managerial policies related to the fish production sector in Yemen. In addition to identifying internal marketing and foreign trade of fish in Yemen, and their impact on the Republic of Yemen trade balance sheet.

The study includes six chapters for fulfill its stated objectives. Chapter I deals with the economic importance of fish production, while chapter II includes fish production in Yemen. Chapter III display fish plantation in Yemen, and chapter IV focuses on fish consumption, and foreign trade. Chapter V examinus organizational and institutional policies affect the fish

sector in Yemen, while chapter VI includes Yemenis fish production and its impact on the Yemenis balance sheet.

The main findings of the study are as follows.

1. The study revealed that the agricultural sector's contribution to the gross national production reached 13.3% in 1997, while it was 17.4% in 1990, then decreased in 2000 to 15.1% with a decrease percentage of 15.2% compared to its contribution in 1990.

2. The total world fish production, either from maritime fisheries or internal ones, reached about 87.3 million tons in 1998, achieving a significant decrease from the production of 1996-1997 that reached 93.5 million tons. Such decrease is due to a decrease in the production of southern Pacific Ocean countries due to bad weather conditions (for example, Korean production decreased by 96% in 1998 compared to its production in 1996, followed by Panama by a decrease of 94%, then the United States of America by 70%).

3. Maritime fishery production represents more than 91% of the total world fish production, and the rest comes from internal fisheries.

4. China occupied the first rank in terms of fish production worldwide, Chinese comes from maritime and internal

fisheries. Its production reached 17.1% and 25.4% of world ones respectively during the year of 2000.

5. Egypt occupied the eighth rank of fish production worldwide (18 countries) and from internal fisheries only. Its production reached 253,5 tons in the year 2000, with a percentage of 2.9% of the total world production from internal waters.
6. Arab production of fish during the year 2000 had recorded an increase estimated at 12% compared to the production of the year 1999. However, annual growth rate of fish production in the Arab World during the study period (1990-2000) was about 4.5%.
7. Morocco, Egypt, Oman, and Yemen are considered to be the first four countries in terms of fish production, their production percentage were 37%, 29%, 5.1%, and 4.7% respectively of the total Arab fish production. These four countries contribute with about 75.8% of the total Arab fish production in the year 2000.
8. With regards to maritime fisheries Morocco occupied the first rank in the Arab World, while Egypt occupied the first with regards to internal fisheries.
9. Fish quantities in Yemen had increased during the study period from 77,090 tons in 1999 to 114,750 tons in 2000,

with an increase percentage of 48.9%, with an annual increase of 5,224 tons that represent 5.2% of the production average of the same period, and reached its peak production in 1998 that reached 127,000 tons.

10. Persian Gulf and Aden Bay fish production had deteriorated in the mid nineties. After reaching a percentage of 67.4% of fish production in 1990, it represented 48.9% in 1995. However, such deterioration went unnoticed because an increase in Red Sea production.

11. Yemenis regional water accommodated more than 600 different species of fish and other maritime organisms. Fish represent about 120 different species that includes two types of fish surface and bottom fish.

12. Surface fish production had increased from 67.7000 tons in 1990 to 96,400 tons in 2000, with an increase percentage of 42%. representing on average more than 88.6% of the total production of fish during the study period.

13. Furthermore, surface fish production had an annual growth rate estimated at 3,817 tons or about 54.3% of the production average.

14. Bottom fish production comes in the second rank during the study period, and ranged between 126,000 tons and a maximum of 17,060 tons in 1998. It has been noticed that

the total production of bottom fish had increased during the study period from 4,898 tons in 1990 to 8,684 tons in 2000, with a percentage increase of 77.2%, This type of fish is concentrated in Mahra governrate.

15. Shamrock is considered one of the main crustaceans commercially. Its production during the study period reached about ranged between a low of 178 tons in 2000, and a maximum of 1,204 tons in 1992, with a decrease rate of 74.3% in the period of 1990 to 2000. This reflected the policy used in its fishing. Squid is considered one of the main octopi, its production had increased during the study period from 3,300 tons in 1990 to 8,900 tons in 2000 with a percentage increase of 170%.

16. The number of traditional fishermen had increased from 24,758 in early 1990 to 49,014 by the end of the year 2000, with an increase rate of 98%. Fishing boats had also increased from 4,500 in 1990 to 13,801 in 2000, with an increased percentage of 2.7%.

17. Cooperative sector contribution in fish production had increased by 71% in 1990 to 88.7% in 2000, with an average contribution during the study period of 85%. The mixed sector contribution to total fish production reached 3.14%, while private sector contribution reached in average

7.14%, which is much better than both the public and mixed (quasi-public) sectors.

18. Contribution of fish the gross national production ranged from 0.73% in 1990 to 2.06% in 1998 . However, fish sector contribution growth percentage from 1990 to 2000 reached about137%, with an annual growth average of 1.6% during the study period.

19. The relative importance of the fish sector within the agricultural sector reached in average 10.9%.

20. The study indicated that the growth in the contribution of fish sector production to gross national production is enduring contrary to the agricultural sector in general that suffers continuous deterioration in its contribution to the gross national production. Fish sector achieved a growth rate of 41.8% in average versus 22.9% for the whole agricultural sector.

21. Total consumption had risen from 74,400 tons in 1990 to 107,700 tons in 2000, with a percentage increase of 44.8%, with an annual average of 93,000 tons.

22. Fish self-sufficiency ranged between 99,4% in 1994 as the lowest, and a maximum of 120.6% in 1996. It had risen also from 104% in 1990 to about106.6% in 2000, with a percentage increase of 2.5%, with an average annual

increase of 107% during the study period. These findings indicate that there is no fish food gap .

23. Fish per capita consumption in Yemen ranged from 5.4 kg as the lowest in 1996, and a maximum of 6.8 kg in 1995, it reached also 5.8 kg in 1990, then it started to increase gradually after that to reach 5.9 kg in 2000, with a percentage increase of 1.7%, with an annual increase of 6 kg; While fish per capita consumption in the States reached about 21.1 kg in 1998, and 69.3 kg in Japan .

24. The study revealed also that red meat national consumption in Yemen during the study period of 1990-2000 is estimated to be 48,100 tons, compared to 80,000 tons white meat. While per capita consumption of red meat and white meat in Yemen reached, during the same period, about 3.1 and 4.9 kg .

25. The study unveiled that per capita consumption of fish represented about 72.5% of the per capita consumption of red and white meat. This indicates that any increase in per capita consumption of fish could affect meat demand, especially white meat, where there is a transactional relationship between meat and its alternatives .

26. The increase in red meat consumption reached about 17% in 2000 of the total national consumption of red meat in 1999,

while the increase in white meat consumption reached about 86% in 2000 of the total consumption of white meat in 1990;

27. Fish demand function analysis revealed that individual incomes play a major role in any demand increases. An increase of 10% in real individual income leads to an increase fish demand estimated to be 13%. Per capita variable indicator indicated that there is demand elasticity (positive), and more than one integer (1.3), which indicated that fish don't represent a bad food commodity. An increase of 10% in fish prices would lead to a decrease in demand by 1.1%;

28. White meat prices were insignificant (negative) despite its statistical significance. That means fish are not good alternative for red meat (due different preferences people have). While white meat (poultry) prices were significant, an increase of 10% in white meat prices would lead to an increase in fish demand by 6%. Therefore, fish is considered a good alternative for poultry;

29. Yemens imported canned fish ranged between 863 tons in 1990 as the lowest, and a maximum of 9,812 tons in 1997, and increased from 863 tons in 1990 to 3,857 tons in 2000, with percentage increase estimated to be 347%, with an annual increase of 2,869 tons;

30. The most important countries with regards to fish imports were Thailand, Japan, Oman, Saudi Arabia, Holland, and England. The main imported fish were mainly canned and salted .

31. Fish exports were increasing during the study period, with an average annual of about 12,000 tons, with a lowest level of 1,304 tons in 1992, and maximum level of about 29,659 tons in 1997. It reached about 21,963 tons in 2000, with an increase rate of 465.6% from the year 1990 exports that reached 3,883 tons. China occupied the first rank among Yemenis fish imported countries with a quantity of 10,579 tons during the study period, that represented about 49.8% of the total Yemenis exports, followed by Thailand;

Shamrock and squid contributed with about 6.2% of the total non-oil exports in the year 2000. Fish exports represented about 43% of agricultural exports; the value of fish exports $40 millions of the total agricultural exports that estimated to be $93 millions in the year 2000. The percentage of increase fish exports value reached about 186% in 2000 compared to fish exports of the year 1990, while the percentage increase fish imports value reached about 200% compared to the year 1990 fish imported value. This is due to an increase on cheap imported canned fish demand compared to high quality and price indigenous processed and canned fish.