FISHERY STATISTICS IN THE PHHLIPPINES<br>by<br>Romeo S. Recide<br>Director<br>Celestino C. Olalo<br>Chief<br>Crop, Livestock, Poultry \& Fisheries Statistics Division<br>and<br>Urbana Besinga-Cadiz<br>Statistician I<br>Bureau of Agricultural Statistics<br>Quezon City<br>Philippines

## I. INTRODUCTION

Mother nature has blessed the Philippines with rich fishery resources. Being an archipelago of 7,107 islands, the country has vast marine territorial waters spanning 220 million hectares and a coastline stretching to 17,460 kilometers. It is no wonder then that fish, along with rice, has been a staple food for the Filipinos. At present, however. the threat of depleted fishery resources especially in municipal waters, has become imminent due to the abuses committed by some irresponsible fishermen who wantonly practice illegal and unsustainable methods of fishing.

Cognizant of the problem facing the industry, the government has taken concrete steps to conserve, protect and rehabilitate the country's marine resources. With the declining fish catch production in commercial and municipal fishing, inland fishing has been tapped to fill-up the vacuum, in marine fishing.

For the government planners and decision makers to come up with well-planned strategies and policies for effective fishery resource management, the need for accurate, reliable and timely fishery statistics cannot be discounted. As input to this regional workshop on fishery statistics, this paper briefly presents the status of fishery statistics in the Philippines with emphasis on the following:

- General Trends in the Fishery Sector
- Status of National Fishery Statistical Systems
- Fishery Policy Towards AD 2010


## 2. GENERAL TRENDS IN THE FISHERY SECTOR

In 1996, agriculture and fishery combined accounted for $20.93 \%$ of the GDP at constant (1985) prices (Table 1). The fishery sector alone contributed 3.89 to $4.50 \%$ to the GDP from 1990 to 1996. In the same period, growth in the fishery sector was attributed mainly to the production growth of the aquaculture sub-sector.

While commercial fish catch has increased slightly, municipal fish catch continued to decline due to the depletion in municipal fishery resources during the same period. From 1990 to 1996, the Gross Value Added (GVA) of the fishery sector at constant prices has grown by 7.01\% from P30.78 to P32.94 billion.

As of April 1997, the total labor force of the Philippines was reported at $\mathbf{2 8 . 1}$ million. Of this, about 1.2 million Filipinos derived their livelihood mainly from fisheries. In order to protect the interests of the fisherfolk, the government through the Philippine Senate enacted on 5 August 1997, the Fisheries Code which seeks to achieve food security for all Filipinos by rationalizing the utilization, management, development, conservation and protection of fishery resources through the application of environment friendly technology. The code also granted exclusive rights to small-scale fishermen and fishery cooperatives to fish in municipal waters within seven kilometers from the shoreline while small and medium-sized commercial fishing vessels may operate from the seven-kilometer to fifteen-kilometer range from the shoreline.

The total fish production of the country increased slightly from 1990 to 1995, then took a slight dip in 1996 (Table 2 \& Figure 1). The decrease was mainly attributed to the depletion of fishery resources particularly in municipal waters. On the other hand, the total value of production from commercial, municipal and aquaculture fishing showed an increasing trend from P52.17 billion in 1990 to P83.13 billion in 1996 at current prices.

Commercial fish production has been increasing from 1991 to 1995 at an average growth rate of $5 \%$. In 1996, however, it dropped by $1.59 \%$. The biggest production was recorded in 1995 at 893.23 thousand mt. Over the years, the purse seine continued to capture about $50 \%$ of the total commercial production, followed by ringnet at about $17 \%$ (Table 3).

In contrast to the performance of commercial fishing, municipal fish production has been on the decline from 1992 up to 1996 at an average rate of decrease of $4.51 \%$. The biggest drop in production was recorded in 1993 at $6.49 \%$. Of the total marine municipal production, about $30 \%$ was captured using gillnet and about $20 \%$ by hook and line. Aquaculture on the other hand, continued to enjoy positive growth rate at an average of $6.55 \%$. The biggest production was noted in 1996 at 980.86 thousand mt.

From 1990 to 1995, municipal fishing has accounted for the biggest, but declining share of 45.2 to $32.8 \%$ of total fishery production among the three major sectors. In 1996, however, aquaculture production surpassed municipal production by 71 thousand mt. The dramatic increase in aquaculture production from 1990 to 1996 indicate the subsector's potential as a significant contributor of the foodfish supply and as a major source of dollar export earnings.

Aside from catering to local fish demand, the fishery sector has contributed to the national economy through the export of processed fishery products to different countries in the world, with Japan and the USA as the major destinations. The top fish exports are tuna, shrimps, mackerel and milkfish. During lean production months, however, the country in turn imports some fish species such as tuna and mackerel to meet the needs of local fish canners. Since 1990, the balance of trade and fishery products has always been favorable to the country (Table 4), with an average net earnings of about 11.3 billion pesos (34.40 Philippine Pesos = 1 US\$, 3 October 1997).

The combined average production of fresh fish, crustaceans and mollusks from 1990 to 1996 amounted to about 2.27 million mt (Table 5) while that of import reached only to 131.32 thousand mt . Of the total gross supply of 2.40 million $\mathrm{mt}, 71.62 \%$ went to net food disposable, $23.59 \%$ to processing, $2.59 \%$ to feeds and wastes and $2.20 \%$ to exports. Fer fresh fish, crustacean and mollusks, a sizeable portion of their gross supply was credited to net food disposable. For exports, the crustacean group had the biggest \% share to gross supply at $17.09 \%$.

## 3. STATUS OF NATIONAL FISHERY STATISTICAL SYSTEM

The National Fishery Statistical System, is a sub-system, of the Agricultural Statistical System (AGSTATs) which, in turn, is a part of the different statistical agencies in the country whose primary functions are the generation, processing, analysis, and dissemination of official statistics. The various statistical activities are being coordinated by the National Statistical Coordination Board (NSCB). The NSCB is the highest policymaking and coordinating body on statistical matters. It is empowered to review all budgetary proposals involving statistical operations of all government agencies belonging to the system.

The government agencies directly involved in the generation of fishery statistics are the National Statistics Office (NSO) and the Bureau of Agricultural Statistics (BAS) of the Department of Agriculture (DA). The NSO is responsible for conducting the Census of Fisheries every ten years, the latest of which was done in 1991. On the other hand, the BAS is mandated to conduct regular intercensal production surveys, and to compile, analyze and officially disseminate fishery statistics.

The BAS, through its Provincial Operation Center (POCs), updates the list and area frames, and conducts regular production surveys and monitoring activities. In 1991 and 1992, commercial and municipal landing centers in 65 provinces and cities were listed, while in 1992, aquafarms in 77 provinces and cities were also listed. In 1996, the list frame of commercial and municipal landing centers in selected provinces were updated. For 1997, the frame updating for aquaculture farms in 23 top-producing provinces is targeted to be completed by September.

The regular fishery surveys of BAS include the every-other-day collection of data on commercial and municipal fish catch unloaded at sample landing centers in 65 provinces. Data collected include volume and price of fish catch and price by fishing ground by fishing gear and by species. Starting in 1997, the data on fishing effort will be compiled.

In the case of aquaculture, semestral surveys are conducted in 23 top-producing provinces. For the rest of the aquaculture provinces a survey of key informants is done. This involves the collection of data on production, prices, harvest area, farm practices and major inputs from a few key informants carefully selected based on their knowledgeability of the local aquaculture situation.

For the regular objective surveys, data collectors interview sample operators of fishing boats and aquafarms using structured questionnaires. Accomplished questionnaires are edited and computer processed at the Provincial Operation Centers (POCs). The generated provincial estimates are sent to the regional offices (ROCs) of BAS for review, and then to the Central Office for further review, consolidation and estimation of the national level data.

Dissemination of fishery statistics to the policy makers, researchers and other data users is being done mainly through the publication of quarterly performance reports, occasional situation reports of important species, and fishery statistical handbooks. Among the recent publications released by the Fishery Section of BAS are the following:

- Fishery Statistics 1986-1995
- Fishery Statistics, 1995
- Commercial Fishery Production Statistics, 1995
- Marine Municipal Fishery Statistics on the 12 FSP Priority Bays, 1995
- 1995 Roundscad Situation Report
- 1995 Tuna Production Performance Report
- Fishery Statistics Bulletin - 1996 Production

While BAS generates primarily fish production and price data, other agencies in the government and private sectors likewise generate other fishery data through their researches or as products of their regulatory functions. Among the agencies involved in the generation of fishery data are the following:
a) Bureau of Fisheries and Aquatic Resources (BFAR) - under the Department of Agriculture (DA), BFAR is tasked to formulate plans for the proper management and utilization of the country's fishery and aquatic resources. It also renders technical assistance in the implementation of fishery programs and provides advisory services in the proper procurement, construction and operation of commercial fishing vessels.
b) Bureau of Agricultural Research (BAR) - also under the DA, BAR coordinates all agricultural researches and ensures that they are undertaken for maximum utility to agriculture.
c) Philippine Fisheries Development Authority (PFDA) - an agency attached to the DA, PFDA is mandated to promote the growth of the fishery industry and to improve the efficiency in the handling, processing, marketing and distribution of fish and fishery products through the establishment and administration of fish ports, fish markets and other infrastructure.
d) National Agricultural and Fishery Council (NAFC) - a policy-making body attached to the DA NAFC is responsible for the coordination of food production programs of the country. NAFC supervises, coordinates and evaluates the implementation of food self-sufficiency program of the government and gathers data on the progress of the various programs and field operations of the DA.
e) Chamber of Fisheries and Aquatic Resources (CFAR) - a non-stock, nonprofit organization, CFAR intends to unite the various sectors of the fishing industry such as the fishing operators, aquaculturists, fish processors, tropical fish producers, fish traders, fish workers and their families into one solid, cohesive organization for the enhancement of the industry's economic growth and development.

Users of fishery statistics generated by the aforementioned agencies have complained on the lack of a centralized source of baseline fishery information. Recognizing that a faster and more efficient way of disseminating fishery statistics to the users is through the development of an efficient computerized network, BAS as the government's principal agricultural information service center is strengthening the capability of its POCs.

This move is aimed at servicing the agricultural and fishery statistics needs of users in the provinces. Computer units are already installed in most of the POCs. Its vision, in this aspect, is the development of field-oriented computer systems designs which will be integrated into a central unit computer system. The upgrading of the BAS computer system will include direct linkage with computer systems installed at the Department of Agriculture (DA), to allow DA analysts to have an access system to the BAS information network.

In addition, the government, through the Fisheries Sector Program (FSP) established the Philippine Fisheries Information System (PHILFIS) at BFAR. The BAS together with BFAR, PFDA and the DA, is part of the inter-agency task force responsible for the development and maintenance of PHILFIS. As a repository of fishery data, PHILFIS is composed of data subsystems which includes information on habitat such as fish sanctuaries, environment, biological socio-economic data, fishery resources on production and stock assessment, research and technology, policies, plans and programs, marketing information, and infrastructure and support services. In 1998, PHILFIS will be fully operational and it is expected to be the center of a well-distributed fishery network information system in the country which will facilitate information exchange among fishery related agencies and data users.

The fishery statistics compiled by BAS are also being disseminated through the Electronic Agribusiness Statistical Information Bulletin Board (EASIBOARD) of the Philippine Statistical Association (PSA). This was developed through the Agribusiness System Assistance Program (ASAP) which was a joint undertaking of the DA and the United States Agency for International Development (USAID). The EASIBOARD caters to the data needs of agribusiness entrepreneurs who do not have so much time to go to the different statistics generating agencies. The system includes information on the different business establishments, employment and compensation, export and import statistics, and production and prices of all agricultural commodities provided by BAS. With their computers linked to EASIBOARD, users have easy online access to a data bank and other information network systems. Starting in September 1997, EASIBOARD can be accessed through the INTERNET.

## 4. FISHERY POLICY TOWARDS AD 2010

Recognizing the importance of the fishing industry to the national economy, the Philippines launched a fishery production program to enhance the productivity of the country's fishery resources within ecological limits. The "Gintong-Ani Program" (literally translated as Golden Harvest) for fisheries focuses on aquaculture because of its vast potential for increasing the country's total foodfish supply. Specifically, the program seeks to increase productivity of priority species like milkfish, tilapia, carp, shrimps, seaweeds and crabs.

In support to the Gintong-Ani Program, the following projects have been started:
a) Milkfish Broodstock Development Program, to address the milkish fry shortage;
b) Seaweed Development Program, to arrest the deterioration of and improve the genetic quality of Eucheuma seedlings;
c) Tilapia/Carp Fingerling Production and Dispersal, to insure a continuous supply of fish in inland waters;
d) "Operasyon Sagip Sugpo" (literally translated as Operation: Save the Prawn), to rehabilitate the prawn industry which suffered huge losses due to the deleterious effects of luminous bacteria; and
e) Nationwide Assessment, Management and Seed Production of Crab Resources, to provide alternative livelihoods to fisherfolk by developing the technology for crab culture and fattening.

Also in the pipeline is the Philippine Fisheries Management Project (PFMP) which will be funded by ADB-OECF. The PFMP was conceived to carry out the following:
a) Promotion of fishery conservation and management in the Philippines especially for the coastal resources in identified bays through the sustained implementation of a fishery management program;
b) Pursuing initiatives intended to alleviate poverty among coastal fisherfolk in selected bays; and
c) Strengthening capabilities of regional and local government units (LGUs) in their implementation of community-based coastal resource management (CRM) program.

The success of these programs will greatly depend on the cooperation of all government agencies, including the local government units (LGUs), and private institutions involved in the planning coordination and project implementation. On the part of BAS, efforts have been made to improve the accuracy and reliability of fishery statistics so that development projects such as those cited above, can be properly planned and evaluated.

## 5. CONCLUSION

Fishery statistics in the Philippines is important because of the sector's sizable contribution to the national economy. Over a million Filipinos depend mainly on the industry for their livelihood. In support to the fishery industry, the government launched two major fishery projects, namely:

- "Gintong Ani" for Fisheries through the DA, a project which is geared towards increasing production in aquaculture within sustainable limits; and
- Philippine Fisheries Management Project through the DA's Fisheries Sector Program (FSP) which aims to conserve the marine fishery resources through sound management.

The FSP and the "Gintong Ani" for Fisheries Programs have provided substantial funding support to the BAS to improve the methods of data generation, sampling designs and estimation procedures. In response, BAS sees to it that frame updating is conducted; sampling designs reviewed; survey instruments improved; and data validation techniques initiated.

Dissemination of fishery statistics has been enhanced with the creation of the Philippine Fisheries Information System (PHILFIS) at BFAR and the EASIBOARD of the PSA. These systems will hopefully improve and accelerate data retrieval and information exchange among various fishery institutions and agencies.

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Table 1. Gross National Product (GNP), Gross Domestic Product (GDP) and Gross Value Added (GVA) in Agriculture and Fisheries Philippines, 1990-1996

| ITEM | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| In Billion Pesos at 1985 Constant Prices |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| GNP | 720.95 | 724.75 | 737.14 | 746.92 | 786.14 | 825.16 | 881.59 |
| GDP | 720.69 | 716.52 | 718.94 | 734.16 | 766.37 | 802.87 | 846.90 |
| GDP/Head ('000 Pesos) | 11.83 | 11.50 | 11.27 | 11.25 | 11.47 | 11.75 | 12.11 |
| Gross Value Added |  |  |  |  |  |  |  |
| Agriculture \& Fishery | 153.41 | 158.22 | 159.38 | 163.56 | 168.42 | 171.32 | 177.27 |
| Fisheries | 30.78 | 32.00 | 32.38 | 32.82 | 33.20 | 33.85 | 32.94 |
| Growth Rate (\%) | 3.90 | 3.96 | 1.17 | 1.37 | 1.14 | 1.98 | -2.71 |
| Percent Share of Fisheries on: |  |  |  |  |  |  |  |
| GNP | 4.27 | 4.42 | 4.39 | 4.39 | 4.22 | 4.10 | 3.74 |
| GDP | 4.27 | 4.47 | 4.50 | 4.47 | 4.33 | 4.22 | 3.89 |
| GVA in Agriculture \& Fishery | 20.07 | 20.22 | 20.31 | 20.07 | 19.71 | 19.76 | 18.58 |

Source: National Statistical Coordinating Board (NSCB)

Table 2. Fish production and value by fishery sector, Philippines, 1990-1996

| SECTOR | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PRODUCTION ('000 MT) | 2,503.55 | 2,598.97 | 2,625.61 | 2,631.94 | 2,720.99 | 2,784.31 | 2,769.18 |
| Commercial | 700.56 | 759.81 | 804.87 | 824.36 | 859.33 | 893.23 | 879.07 |
| Municipal | 1,131.87 | 1,146.76 | 1,084.36 | 1,013.96 | 992.58 | 972.04 | 909.25 |
| Marine | 895.04 | 913.52 | 854.69 | 803.19 | 786.85 | 785.37 | 731.31 |
| Inland | 236.83 | 233.24 | 229.67 | 210.77 | 205.73 | 186.67 | 177.94 |
| Aquaculture | 671.12 | 692.40 | 736.38 | 793.62 | 869.08 | 919.04 | 980.86 |
| Growth Rate (\%) |  |  |  |  |  |  |  |
| Commercial |  | 8.46 | 5.93 | 2.42 | 4.24 | 3.94 | -1.59 |
| Municipal |  | 1.32 | -5.44 | -6.49 | -2.11 | -2.07 | -6.46 |
| Aquaculture |  | 3.17 | 6.35 | 7.77 | 9.51 | 5.75 | 6.73 |
| VALUE (Billion P) | 52.17 | 60.03 | 65.44 | 70.21 | 80.19 | 83.05 | 83.13 |
| Commercial | 12.41 | 15.24 | 16.80 | 18.02 | 20.71 | 23.06 | 24.55 |
| Municipal | 19.29 | 22.13 | 22.65 | 22.03 | 24.48 | 26.46 | 25.37 |
| Marine | 16.73 | 19.61 | 19.44 | 20.12 | 22.33 | 24.33 | 23.33 |
| Inland | 2.56 | 2.52 | 3.21 | 1.91 | 2.15 | 2.13 | 2.04 |
| Aquaculture | 20.47 | 22.66 | 25.99 | 30.16 | 35.00 | 33.53 | 33.21 |

## Source: Bureau of Agricultural Statistics (BAS)

Table 3. Fishery production by gear, Philippines, 1992-1995

| ITEM | 1992 | 1993 | 1994 | 1995 |
| :---: | :---: | :---: | :---: | :---: |
| COMMERCIAL |  |  |  |  |
| Production | 804,866 | 824,356 | 859,330 | 893,230 |
| GEAR USED |  |  |  |  |
| Purse Seine | 467,438 | 425,261 | 400,246 | 459,229 |
| Ringnet | 109,418 | 138,195 | 182,614 | 145,676 |
| Trawl | 90,547 | 86,965 | 88,423 | 66,089 |
| Bagnet | 53,396 | 53,889 | 76,499 | 77,891 |
| Danish Seine | 45,342 | 78,061 | 74,509 | 93,325 |
| Others | 38,725 | 41,985 | 37,039 | 51,020 |
| PERCENT SHARE |  |  |  |  |
| Purse Seine | 58.08 | 51.59 | 46.58 | 51.41 |
| Ringnet | 13.59 | 16.76 | 21.25 | 16.31 |
| Trawl | 11.25 | 10.55 | 10.29 | 7.40 |
| Bagnet | 6.63 | 6.54 | 8.90 | 8.72 |
| Danish Seine | 5.63 | 9.47 | 8.67 | 10.45 |
| Others | 4.81 | 5.09 | 4.31 | 5.71 |
| MARINE MUNICIPAL |  |  |  |  |
| Production | 854,687 | 803,194 | 786,847 | 785,369 |
| GEAR USED |  |  |  |  |
| Gillnet | 283,854 | 249,860 | 249,710 | 258,021 |
| Hook \& Line | 153,157 | 166,792 | 183,902 | 187,502 |
| Fish Corral | 66,829 | 48,943 | 38,155 | 31,056 |
| Beach Seine | 55,673 | 44,850 | 57,216 | 40,101 |
| Ringnet | 34,294 | 34,955 | 32,308 | 40,516 |
| Others | 260,880 | 257,794 | 225,556 | 228,173 |
| PERCENT SHARE |  |  |  |  |
| Gillnet | 33.21 | 31.11 | 31.74 | 32.85 |
| Hook \& Line | 17.92 | 20.77 | 23.37 | 23.87 |
| Fish Corral | 7.82 | 6.09 | 4.85 | 3.95 |
| Beach Seine | 6.51 | 5.58 | 7.27 | 5.11 |
| Ringnet | 4.01 | 4.35 | 4.11 | 5.16 |
| Others | 30.52 | 32.10 | 28.67 | 29.05 |

## SOURCE: Bureau of Agricultural Statistics (BAS)

Table 4. Export and import statistics of major species, Philippines, 1990-1996

| ITEM | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EXPORT |  |  |  |  |  |  |  |
| Quantity (MT) |  |  |  |  |  |  |  |
| Mackerel | 313 | 1,450 | 771 | 2,155 | 2,240 | 1,106 | 695 |
| Milkfish | 867 | 415 | 637 | 717 | 288 | 254 | 173 |
| Seaweeds | 35,346 | 28,541 | 22,756 | 23,574 | 24,826 | 38,246 | 36,780 |
| Shrimps and Prawns | 25,205 | 30,462 | 23,623 | 2,273,404 | 22,418 | 18,258 | 13,514 |
| Tuna | 54,320 | 51,233 | 50,285 | 71,975 | 78,410 | 68,297 | 28,737 |
| Sub-total | 116,051 | 112,101 | 98,072 | 2,371,825 | 128,182 | 126,161 | 79,899 |
| Others | 26,988 | 32,838 | 33,843 | 2,208,080 | 43,898 | 43,585 | 84,774 |
| Grand Total | 143,039 | 144,939 | 131,915 | 163,745 | 172,080 | 169,746 | 164,673 |
| Value ('000 Pesos) |  |  |  |  |  |  |  |
| Mackerel | 12,803 | 79,737 | 43,244 | 108,211 | 111,401 | 59,441 | 36,032 |
| Milkfish | 61,435 | 29,500 | 45,552 | 54,836 | 23,224 | 22,954 | 13,739 |
| Seaweeds | 1,192,331 | 590,342 | 480,361 | 498,380 | 581,945 | 2,136,659 | 2,438,598 |
| Shrimps and Prawns | 5,435,952 | 7,458,757 | 5,347,417 | 6,102,766 | 6,411,535 | 5,653,057 | 3,988,915 |
| Tuna | 2,763,036 | 3,154,086 | 2,589,163 | 4,090,953 | 4,400,164 | 3,987,948 | 1,888,391 |
| Sub-total | 9,465,557 | 11,312,422 | 8,505,737 | 10,855,146 | 11,528,269 | 11,860,059 | 8,365,675 |
| Others | 2,063,170 | 2,736,493 | 2,584,569 | 3,218,875 | 3,499,065 | 3,796,744 | 6,744,873 |
| Grand Total | 11,528,727 | 14,048,915 | 11,090,306 | 14,074,021 | 15,027,334 | 15,656,803 | 15,110,548 |
| IMPORT |  |  |  |  |  |  |  |
| Quantity (MT) |  |  |  |  |  |  |  |
| Mackerel | 375 | 12,639 | 31,279 | 50,541 | 56,808 | 59,955 | 101,257 |
| Millfish |  |  | 9 | 65 | 19 | 79 | 72 |
| Seawceds |  |  |  |  |  |  | 1,119 |
| Shrimps and Prawns |  |  | 9 | 65 | 19 | 79 | 72 |
| Tuna | 21,695 | 42,373 | 53,481 | 37,450 | 32,801 | 54,389 | 52,379 |
| Sub-total | 22,070 | 55,012 | 84,778 | 88,121 | 89,647 | 114,502 | 154,899 |
| Others | 174,045 | 138,623 | 136,767 | 120,774 | 151,547 | 155,711 | 107,688 |
| Grand Total | 196,115 | 193,635 | 221,545 | 208,895 | 241,194 | 270,213 | 262,587 |
| Value ('000 Pesos) |  |  |  |  |  |  |  |
| Mackerel | 2,712 | 434,143 | 270,359 | 417,986 | 434,143 | 390,877 | 735,807 |
| Milkfish |  |  | 1,103 | 6,456 | 2,560 | 7,965 | 2,729 |
| Seaweeds |  |  |  |  |  |  | 25,764 |
| Shrimps and Prawns |  |  | 1,103 | 6,456 | 2,560 | 7,965 | 2,729 |
| Tuna | 417,907 | 923,091 | 883,058 | 639,248 | 569,956 | 881,408 | 842,616 |
| Sub-total | 420,619 | 1,357,234 | 1,155,623 | 1,070,146 | 1,009,219 | 1,288,215 | 1,609,645 |
| Others | 1,433,124 | 966,155 | 1,340,756 | 1,179,043 | 1,496,248 | 1,635,375 | 1,568,485 |
| Grand Total | 1,853,743 | 2,323,389 | 2,496,379 | 2,249,189 | 2,505,467 | 2,923,590 | 3,178,130 |
| $\begin{aligned} & \text { BALANCE OF TRADE } \\ & \text { ('000 Pesos) } \end{aligned}$ | 9,674,984 | 11,725,526 | 8,593,927 | 11,824,832 | 12,521,867 | 12,733,213 | 11,932,418 |

SOURCE: National Statistics Office (NSO)

Table 5. Supply and utilization accounts, Philippines, 1990-1995
(In Metric Tons)

| YEAR | SUPPLY |  |  | UTILIVATION |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Production | Imperts | Grosa Supply | Exports | Feeds a Watten | Processing | Net Food Diepoeable |  |  |
|  |  |  |  |  |  |  | Total | Per Copita |  |
|  |  |  |  |  |  |  |  | $\mathrm{Kg} / \mathrm{Yr}$. | Grams/Dy |
| FRESH FISH |  |  |  |  |  |  |  |  |  |
| 1990 | 1,869,960.00 | 130,995.34 | 2,000,955.34 | 19,124.61 | 56,098.80 | 567,211.52 | 1,358,520.41 | 2.10 | 60,54 |
| 1991 | 1,970,295.00 | 146,835.45 | 2,117,130.45 | 17,033.12 | 59,108.85 | 599,668.80 | 1,441,319.68 | 22.92 | 62,80 |
| 1992 | 1,851,652.00 | 142,731.38 | 1,994,383.38 | 15,408.06 | 55,549.56 | 557,126.72 | 1,366,299.04 | 21.26 | 58,25 |
| 1993 | 1,831,102.00 | 115,450.71 | 1.946,552.71 | 34,664.22 | 54,933.06 | 547,457.60 | 1,309,497.83 | 20,01 | 54,83 |
| 1994 | 1,861,759.00 | 118,624.25 | 1,980,383.25 | 32,916.74 | 55,852.77 | 558,686.72 | 1,332,927.02 | 19.42 | 53,22 |
| 1995 | 1.875,576.00 | 132,875.03 | 2,008,451.03 | 35,096.20 | 56,267.28 | 566,077.44 | 1,351,010.11 | 19.69 | 53,95 |
| Average | 1,876,724.00 | 131,252.03 | 2,007,976.03 | 25,707.16 | 56,301.72 | 566,038.13 | 1,359,929.02 |  |  |
| \% Share to Gross Supply |  |  |  | 1.28 | 2.80 | 28.19 | 67.73 |  |  |
| CRUSTACEAN |  |  |  |  |  |  |  |  |  |
| 1990 | 112,047.00 | 9.04 | 112,056.04 | 29,868.16 | 1,680.71 | - | 80,507.17 | 1.31 | 3.59 |
| 1991 | 112,874.00 | 1.31 | 112,875.31 | 31,953.35 | 1,693.11 | - | 79,228.85 | 1.26 | 3.45 |
| 1992 | 180,568.00 | 10.73 | 180,578.73 | 25,178.19 | 2,708.52 | - | 152,692.02 | 2.38 | 6.51 |
| 1993 | 179,597.00 | 92.77 | 179,689.77 | 24,535.98 | 2,693.96 | - | 152,459.84 | 2.33 | 6.38 |
| 1994 | 173,050.00 | 69.40 | 173,119.40 | 27,052.60 | 2,595.75 | - | 143,471.05 | 2.09 | 5.73 |
| 1995 | 173,890.00 | 56.81 | 173,946.81 | 20,728.36 | 2,608.35 | - | 150,610.10 | 2.20 | 6.01 |
| Average | 155.337.67 | 40.01 | 155,377.68 | 26,552.77 | 2,330.07 | - | 126,494.84 |  |  |
| \% Share to Gross Supply |  |  |  | 17.09 | 1.50 |  | 81.41 |  |  |
| MOLLUSK |  |  |  |  |  |  |  |  |  |
| 1990 | 227,906.00 | - | 227,906.00 | 2,992.65 | 3,418.59 | - | 221,494.76 | 3.60 | 9.87 |
| 1991 | 229,378.00 | 20.12 | 229,398,12 | 228.51 | 3,440.67 | - | 225,728.94 | 3.59 | 9.81 |
| 1992 | 241,444.00 | 148.20 | 241,592.20 | 332.71 | 3,621.66 | - | 237,637.83 | 3.70 | 10.13 |
| 1993 | 254,368.00 | 0.03 | 254,368.03 | 94.26 | 3,815.52 | - | 250,458.25 | 3.83 | 10.49 |
| 1994 | 244,930.00 | 1.81 | 244,931.81 | - | 3,673.95 | - | 241,257.86 | 3.52 | 9.63 |
| 1995 | 220,866.00 | 0.87 | 220,866.87 | 189.10 | 3,312.99 | - | 217,364.78 | 3.17 | 8.68 |
| Aycrage | 236,482.00 | 28.51 | 236,510.51 | 639.54 | 3,547.23 | - | 232,323.74 |  |  |
| Share ta Gross Supply |  |  |  | 0.27 | 1.50 |  | 98.23 |  |  |
| FRESH FISH, CRLSTACEANS \& MOLLUSK |  |  |  |  |  |  |  |  |  |
| 1990 | 2,209,913.00 | 131,004.38 | 2,340,917.38 | 51,985.42 | 61,198.10 | 567,211.52 | 1,660,522.34 | 27.01 | 74.00 |
| 1991 | 2,312,547.00 | 146,856.88 | 2,459,403.88 | 49,214.98 | 64,242.63 | 599,668.80 | 1,746,277.47 | 27.77 | 76.09 |
| 1992 | 2,273,664.00 | 142,890.31 | 2,416,554.31 | 40,918.96 | 61,879.74 | 557,126.72 | 1,756,628.89 | 27.34 | 74.89 |
| 1993 | 2,265,067:00 | 115,543.51 | 2,380,610.51 | 59,294.46 | 61,442.54 | 547,457.60 | 1,712,415.92 | 26.17 | 71.0 |
| 1994 | 2.279,739.00 | 118,695.46 | 2,398,434.46 | 59,969.34 | 62,122.47 | 558,686.72 | 1,717,655.93 | 25.03 | 68.58 |
| 1995 | 2,270,332.00 | 132,932.71 | 2,403,264.71 | 56,013.66 | 62,188.62 | 566,077.44 | 1,718,984.99 | 25.06 | 68.64 |
| Average | 2,268,543.67 | 131,320.54 | 2,399,864.21 | 52,899.47 | 62,179.02 | 566,038.13 | 1,718,747.59 |  |  |
| \% Share to Gross Supply |  |  |  | 2.20 | 2.59 | 23.59 | 1,71.62 |  |  |

Figure 1. Fish Production by Sector, Philippines,
(' 000 MT )
1990-1996


