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Fisheries in Malaysia: Can resources match demand?

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Fisheries have been a long practiced means of food acquisition by mankind. It has maintained its importance as the top natural protein provider in the diet of many nations in the world, with 75% of the global fish production meant for direct human consumption. The highest fish consuming nations are from developing countries. According to the Food and Agriculture Organisation (FAO), Malaysia is one of the top fish-consuming countries in Asia (above 40kg/capita/year), almost double the average in Thailand and China, although it is still below the levels in Japan and South Korea. Figure 1 for instance shows that the trend in fish consumption among Malaysians is increasing, which is mainly based on Malaysian population data from the national consensus and data on national fish consumption. This essentially means that in 2010 an average Malaysian consumed more fish (54kg/year) compared to 20kg in 1970; a dramatic increase in demand for fish over four decades that is compounded by rapid population growth.

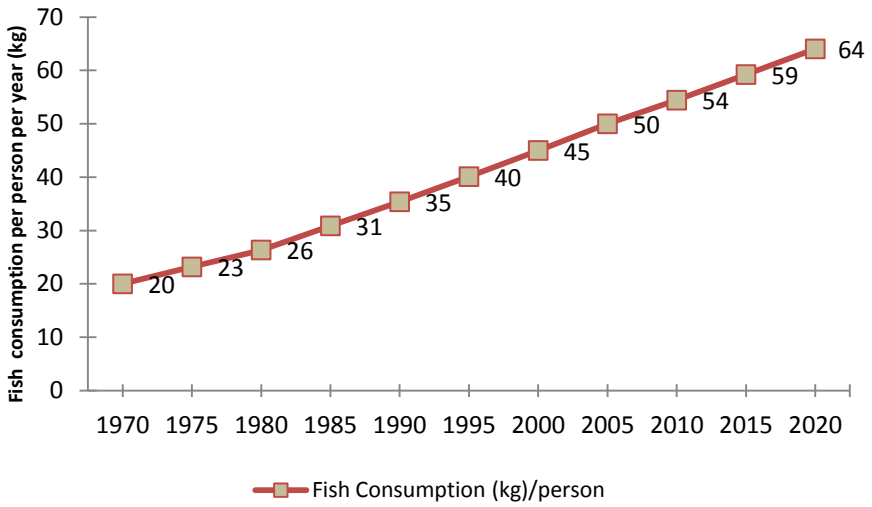

Figure 1 . Fish consumption of an average Malaysian from 1970 (20kg) to 2010 (54kg) has increased by about 170%[1].

Global human population is on a rapid upward spike, with an estimated 3.7 billion population in 1970 reaching the seven billion mark in 2011. In addition, the 2006 revision by the UN estimated that the world population will likely increase by another two billion over the next 39 years to a staggering nine billion by 2050. It raises serious concerns of whether the available natural resources needed to sustain the human population are able to catch up with demand.

Fisheries have been of the main sources of protein, accounting for about one fifth of all animal protein consumed in the human diet. Put into perspective, the demand for fishery resources in Malaysia throughout the years has been on a steady increase. However, actual annual fishery landings in Malaysia do not observe a similar growth trend with fluctuations recorded in recent years (2005-2010) indicating that annual fish landings do not meet the population demand projections (Figure 2).

[1] Inference is based on the accumulated data of the known & published population demand for fishery for year 2000 (45kg/person/annum) and 2005 (50kg/person/annum) (New Straits Times. Study: Each Malaysian to consume 55kg fish per year by 2020. Published on 11th January 2012), with the population data from Department of Statistics in Malaysia throughout 1970 to 2010. Forecasted data for year 2015 and 2020 was based on the trend from the 1970-2010 range.

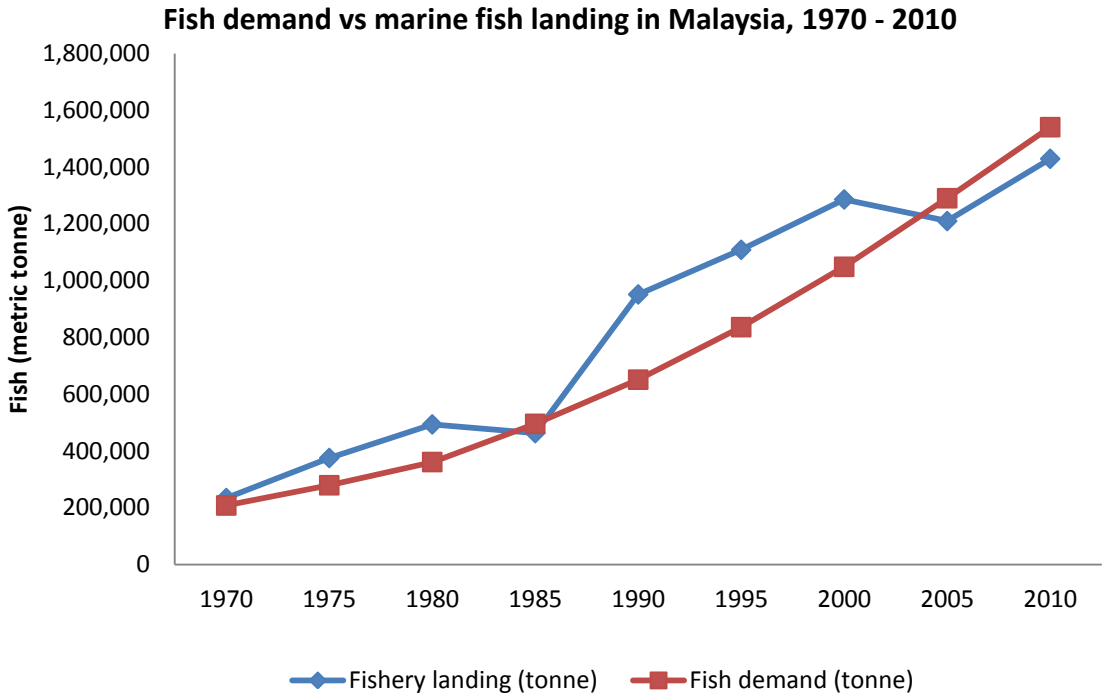

Figure 2. The estimated demand for fish per person may not be met by the annual fish landings

Also to be taken into account is that 30% of the fish consumed in Malaysia are imported from places such as Pakistan and Acheh, while high value fishes from Malaysia are exported to countries such as those in the European Union. While detailed statistics may not be readily available for a comprehensive net analysis, there is a concern as to whether the marine catch fishery import-export transaction in Malaysia is able to sustain the increasing per capita fish consumption trend in the country. The analysis above has not yet considered the fishery demand from registered foreign workers present in Malaysia, which is a significant amount of 2.1 million people[2]. Even if the foreign workers are assumed to consume half the amount of fishes (27kg/person) in their diet compared to an average Malaysian (54kg/person), the addition amount of fish demand will be another 56,700 tonnes. The data of fish landings in Malaysia therefore requires other supporting data to provide an accurate representation on the ability of the nation to meet its demand for fish.

Since aquaculture was first developed in the 1920s, there have been ongoing plans towards promoting this sector as well as deep sea fishing to meet the nation's fishery demand. For instance, government projections in the Ninth Malaysia Plan (RMK9) showed a growth of food production of 33.4% or 1.8 million metric tonnes for fisheries; and to accomplish 103% in self

[2] Source: Ministry of Home Affairs , Table 1.4.1: Number of Foreign Workers in Malaysia by Country of Origin, 1999 – 2008 (Available online: http://www.epu.gov.my/html/themes/epu/images/common/pdf/eco_stat/pdf/1.4.1.pdf)

sufficiency levels by 2010. The projected production and demand for fish in Malaysia (2000-2010) by the National Agriculture Policy, Ministry of Agriculture Malaysia in 1999 seems to suggest that the level of self sufficiency will reach 94.3% by the year 2010. However, currently Malaysia produces about 1.5 million metric tonnes of fishery products on annual average, consisting of 85% marine capture fishes (1.27 million tonnes), and only 15% from aquaculture production (225,000 metric tonnes)[3].

For a critical issue like this, there is an urgent need to take stock of the current and future status of the fishery sector. The much anticipated Rio+20 United Nations on Sustainable Development Conference in Brazil will hopefully provide a platform for world leaders, governments, private sectors, non-governmental organizations, and other groups to come together and shape the approach towards poverty reduction, advancing social equity, and ensuring environmental protection in the face of the ever increasing global population.

Among the main themes that will be discussed in this conference are those related to the marine resources, mainly with regard to food resources and the oceans. While these two components play a crucial role in supporting the growth of world population, it is time to rethink how the world is producing, sharing, consuming and exploiting its natural marine resources. The marine and coastal ecosystems that support global fisheries are rapidly degrading they succumb to threats such as overfishing and destructive fishing, loss of biodiversity, including the serious decline and/or depletion of certain fish stocks, ocean acidification, ocean warming, coral reef destruction, watershed-based, and marine-based pollution.

Aside from environmental destruction which affects the ability of fish stocks to maintain its maximum sustainable yield (MSY), major considerations also lie in the regulatory and monitoring framework in ensuring the sustainability of fish stocks. It is common for the fishing industry to be given access to fish stocks before the impact of their acivities are assessed. A classic case is the cod fishery off Newfoundland, Canada which boomed in the 1950s. In 1992, the industry collapsed from the many years of strain due to over-exploitation and mismanagement, which led to 40,000 people losing their jobs.

It is therefore pertinent for Malaysia to conduct an in-depth review of the status of its fishery resources and the demands placed on the sector with a view to proper fishery management in the country. While the new inventions of efficient fishing devices continue to promise and deliver increasing amount of fishes in each haul from the sea, it will take carefully calculated precautionary measures to avoid what happened in the case of Newfoundland cod fishery from repeating itself in Malaysia.

[3] Data of annual fishery landing published by Department of Fisheries Malaysia were consolidated and calculated, to produce the total sum and average of 19 years data (1992-2010).