

# Factors affecting the development of the tuna industry economics essay



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One third of production is exported as fresh, chilled or frozen fish. The EU, USA and Japan markets alone accounted for more than half of the total import value. The main final market for tuna in general is the USA, Japan and the EU. But, the market for canned tuna is in Europe and the main exporting countries are Thailand, Philippines, Ivory Coast and Spain. The species of tuna marketed are albacore, bigeye tuna, atlantic bluefin tuna, pacific bluefin tuna, southern bluefin tuna, yellowfin tuna and skipjack tuna. The tuna industry contributes significantly to the economy of various countries including Mauritius. Seafood products represent the leading export commodity for Mauritius with tuna being the most dominant. Mauritius has consistently being ranked among the leading exporters of canned tuna to the EU. The government has taken advantage of the thriving world market for tuna in the bid to raise employment, increase standard of living and contribute to economic growth through revenues from export.

About 60% of fish consumed or processed in the EU comes from outside EU waters to meet the demands of its market both in terms of processing and consumption. In addition, it contributes towards investment and employment. This has been possible due to the fisheries relations between the EU and third countries, notably the ACP countries signatory to the Cotonou Agreement (Lomé Convention). Two kinds of fisheries access agreements have been signed between the EU and ACP countries, the tuna agreement for tuna and tuna like species and the mixed agreement. Thus, ACP countries benefit from preferential market access compared to others and are not affected by tariff barriers.

Mauritius is a developing country and has experienced significant development over the last decades. It moved from being a mono crop producer and exporter of sugar to one with a relatively diversified economic base, including the processing of sugar, the export of textile and clothing, tourism, financial services and fisheries sector. Mauritius is endowed with a large EEZ of 1.9 million km<sup>2</sup> and as such it can invest in the development of the tuna industry which will reinforce the economic diversification strategy and help in absorbing possible eventual instabilities arising in the sugar and textile export earnings.

The first theory of specialisation and gains from trade was introduced by Adam Smith to explain the underpinnings of international trade. He called it the theory of absolute advantage. According to this theory, a country should specialize in the good in which it has an absolute advantage. Then, it will gain by exporting that good and importing others. His theory was extended by David Ricardo (1817) who brought the theory of comparative advantage. Here, a country can have an absolute advantage in more than one good, but still gain if it specialises in the good in which it has a comparative advantage. This arises when it produces at the least opportunity cost.

Heckscher (1919) and Ohlin (1933) took the theory of comparative advantage a step further by bringing the factor endowment theory and differences in factor prices across countries (Leamer 1995; Ruffin 1988; Leishman et al, 1999). Here, a country will gain if it specialises in the good for which it has an endowment of resources. Further, Samuelson, Stolper, Vernon and other trade theories have come to explain the internationalization of capital and production. However, Specialisation carries a big risk of instabilities. Such <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>

instabilities could seriously affect the growth and development of an economy. So, it is important for an economy to have a diversified economic base in order to resist any possible shock arising from any one or two sectors.

Mauritius has a vast sea area and also has comparative advantage in the production of tuna. So, it has the potential to tap such resources and develop a sustainable tuna industry for the long term.

## **Diversification**

A high degree of specialisation is often a result of small economic size and is accompanied by a high degree of dependence on foreign trade, so that fluctuations in export proceeds have a devastating effect on the domestic economy. One of the rationales of diversification of markets and products is that it helps an economy to achieve growth targets and reduce the level of fluctuations in export earnings.

In theory, diversification can be of three forms which are agricultural, economic and export diversification. Instability in commodity prices has adversely affected the performance of developing countries which rely heavily on primary products. Markowitz (1952), Tobin (1958) and Samuelson (1972) have all argued that a diversified investment portfolio minimises variance and an optimum level of diversification could lead to a more efficient use of resources. Samuelson's view that diversification pays, originally applied to the macro economy. Hirschman (1958) pointed out the advantages gained from linkage effects of diversified economic base.

In Mauritius, agricultural and economic diversification has been the government policy since the 1980's. Though agricultural diversification has failed, economic diversification has been very impressive. Mauritius has been successful in transforming itself from a low income to a middle income country in less than a decade. However, the economy still faces a number of constraints and vulnerabilities that leave its success fragile. (World Bank, 1989).

Export diversification is defined as the change in a country's export product mix (Ali, Alwang and Siegel, 1991) or the spread of production over many sectors (Bethelmy and Chauvin, 2000). According to Feder(1982), export help to boost up capacity utilisation, improvement in technology and economies which in turn will contribute to the economic growth of a country. Tuna is one of the major traded products in the world. It constitutes about 4% to 5% of the world fish and fishery products for human consumption. Most of the tuna supply comes from the Pacific Ocean and stood at a whopping of 2. 3 million tonnes or about 66% of the total world catch. The Indian Ocean represents 23%, the Atlantic Ocean 12. 5% and the Mediterranean and Black Seas 0. 8% (Food Exchange Market, 2000).

According to a study by Campbell (2004), Papua New Guinea will benefit from its tuna fisheries if they achieve a balance between foreign and domestic exploitation. The theory of comparative advantage shows that Papua New Guinea can use its fishery to provide market access to other distant water fishing nations. McCoy and Gillett (2007) states that domestication of the tuna fishery will bring along economic benefits in terms of greater employment, technology transfer which will contribute to <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>

economic development. The Kiribati government having a large EEZ has a comparative advantage in the production and export of fisheries products. Also, Pacific island countries have a readily available and cheap labour force to work in their fisheries sector.

Thailand is the largest tuna exporter and its tuna industry forms an important part in the economy. A study by Kuldilok (2009) has been done to forecast Thai tuna exports for the five years period 2007-2011 with data from 1996-2006. Univariate time series methods were used and the two methods are exponential smoothing and autoregressive integrated moving average (ARIMA) methods. She identifies factors affecting demand such as population growth and income growth. The results showed that the best fitting exponential smoothing model is the linear trend and multiplicative seasonal method and the best fitting ARIMA model is ARIMA (0, 1, 1) (0, 1, 1)<sup>12</sup>. The ARIMA model has an upward trend with the highest growth rate in 2008 with 5.5%, decreases slightly during 2009 for 5.2% and to 4.7% by 2011. From the forecasts, the pessimistic average annual growth rate for 2007-2011 is -7.4% and most optimistic at 14.1%.

The major exporting countries of seafood products have long benefitted from duty-free access to the EU market through a number of schemes, most importantly through the Africa, Caribbean and Pacific (ACP) and the Generalized System of Preferences (GSP)+ regime. This free access was made possible due to the substantial investments in tuna canning by some EU countries in the ACP countries (<http://ec.europa.eu/trade>, visited on 23/08/2010).

Bilateral Fisheries Agreements between the EU and third countries existed since long as the Common Fisheries Policy. These agreements show the intention of the EU to support the development of its partner countries. There are 16 Fisheries Partnership Agreements at the moment. This enables EU fleet to access resources which its partners cannot or do not want to exploit. The Economic Partnership Agreement (EPA) between the ACP and EU- the ACP-EU Partnership Agreement dates back to the year 2000 with the signing of the Cotonou Agreement.

Tuna, being a highly migratory specie necessitate management throughout their migratory range in areas under national jurisdiction as well as areas of high seas. Thus, the tuna fishing agreements gives European the ability to obtain license fee under each agreement. Each ocean is subject to international management such RFMOs which are regulated under the Indian Ocean Tuna Commission (IOTC) for the Indian Ocean, International Commission for the Conservation of Atlantic Tunas (ICCAT) for the Atlantic Ocean and Inter-American Tropical Tuna Commision (IATTC) for East Pacific. The agreements provide a legal framework for accessing these resources and the tonnage of tuna that may be caught in the water of the country concerned, is specified together with the number of vessels that will receive a licence.

The fisheries sector is an important source of employment, export revenues and food security for coastal African, Caribbean and Pacific (ACP) countries. The European Union (EU) constitutes for around 60% of ACP fishery exports by value, thus making the European market an important player for ACP exports of fish and fish products. Fisheries relations between ACP and EU are <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>

governed by various instruments like ACP National Fisheries Policies, EU Common Fisheries Policy, Development Cooperation Instruments and Bilateral Fisheries Agreements between the EU and ACP states. The Bilateral Agreements facilitate access to fisheries resources through payment of access fees which generate income for ACP states together with joint venture activities.

In 1975, the EU and ACP signed their first co-operation agreement in Lomé, Togo. After four such Lomé Conventions, a broader partnership agreement was signed in Cotonou Benin, in June 2000 known as the Cotonou Agreement. The objectives behind this agreement is mainly to achieve sustainable development and poverty reduction. Under the Lomé Convention, ACP countries such as Ghana, Cote d'Ivoire, Madagascar, Mauritius, Papua New Guinea and Seychelles which are among the main exporters of tuna to the EU market benefit from zero and unreciprocated tariff on their canned tuna since 1982. This preferential tariff has helped ACP countries to compete with Asian tuna producing nations such as Thailand, Philippines, Indonesia and Vietnam which face 24% of duty tariff. This agreement is indeed very important for ACP countries to promote and boost up their trade. Without this, tuna industries in Seychelles, Mauritius, Papua New Guinea and Ivory Coast would have been less competitive in the European market. The export performance of these countries hinges on, a lot on the preferential access enjoyed under the Agreement.

In 2008, the Cotonou Agreement was replaced by EPA which is at the main economic and trade cooperation pillar of the Cotonou Agreement. The

Economic Partnership Agreement (EPA) will slowly remove barriers to trade <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>



between the EU and the ACP countries. EPAs are based on World Trade Organisation (WTO) regulations and put EU and ACP trade on a secure and sustainable basis. The ACP countries are divided into 6 regions which are Caribbean, the Pacific, East and Southern Africa (ESA), the SADC, West Africa (ECOWAS) and Central Africa (CEMAC) which are negotiating their own EPA. EPA aim at integrating ACP countries in the global economy through reciprocal access to the two markets and regional integration with the emphasis on promoting sustainable development and contributing towards poverty eradication.

EPAs make it easier for trade and investment to develop. With the Agreement, the ACP countries benefit from no quotas and duties on export of tuna to the EU. This helps them to get access over a larger market, that is, European Free Trade Association (EFTA) including Switzerland and Norway. EU consumers will benefit from lower prices. The removal of trade barriers enable ACP counties to compete with bigger Asian suppliers on the EU market.

By accessing the EU market, ACP countries are able to expand their industry. This help in boosting and strengthening trade and contributes positively in the diversification of their economies. As far as EU consumers are concerned, they benefit from a variety of tuna products and have greater choice.

EPA agreement creates regional market. This contributes to the development of trade in ACP countries. With better techniques for tuna production, production capacity will increase. In the long run, trade will help ACP countries prosper and generate more income. The increase in demand for EU

expertise will not only benefit ACP countries but will also generate jobs for the EU population. So, both will benefit.

## **Factors affecting the development of the tuna industry**

### **Cost of inputs**

The major factors contributing to the operating costs are raw material, labour and fuel costs. The most important input of the industry is the tuna fish itself. It is usually sold fresh, frozen and canned. The situation of the price of tuna is dynamic and therefore change rapidly due to many factors. Seasonality – of both fishing (low production in the Indian Ocean occurs during the European summer) and markets (better prices occur in the EU because of increased demand during the European summer). Rising labour and fuel cost lead to a rise in operating costs thereby affecting the price of tuna. A rise in the price of tuna will increase cost of production of the processing industry and eventually reduce profit and future investment. Conversely, if tuna is cheap, cost of production will fall and the industry can increase production and supply at a lower price in the local and foreign markets to increase its competitiveness.

### **Technology**

The development of new technology in the tuna industry is identified by Miyake (2005b). Through more effective fishing techniques and more sophisticated vessels, there is an increase in the productivity and hence supply. However, it is important that fishing entrepreneurs have access to the necessary financial resources to acquire these new techniques in order to carry out innovation in their activities. Also, improvements in terms of the

use of many mitigation device and procedures such as circle hooks instead of J-hooks may affect the fishing efficiency. Apart from the traditional fishing gears such as long line and purse seine, today it is possible to locate schools of tuna at sea by using echo sounders and the support of satellite system. Further, innovation in canning techniques contributes to improve productivity and efficiency.

### **Natural Influences**

The weather, cyclones and tsunamis affect the catch and supply of tuna. According to Schon (2000), Roberts and Sauer (1994), catch variability seems to be associated with wind direction, turbidity, sea surface temperatures and oceanographic phenomena such as upwelling and climatic conditions. But, more important is global warming which changes the temperature of the sea and hence alter the current pattern and distribution of tuna. Generally, tuna schools are highly migratory species and they move in the Indian Ocean during summer season.

### **Illegal, Unreported & Unregulated fishing (IUU) and Piracy**

IUU fishing is a major threat to the long-term sustainability of the world's oceans. They occur when fishing is performed without permission to relevant state, unreported to them and unregulated that is by changing their flags to non-contracting parties. IUU fishing depletes fish stocks, destroys marine habitats and distorts competition particularly in developing countries. The EU and the US are the world largest importers of seafood. On the 26th September 2011, they signed the joint agreement in Washington to increase cooperation against IUU. Piracy is another threat to the tuna fisheries (Joel

Morgan, Seychelles Minister of Environment, Natural resources and  
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transport). Seychelles revenue has suffered a drop of 30% over the past year due to pirate attacks originated in Somalia. The Government of Seychelles is working together with the EU, the US, India and other partners to patrol its waters and establish a regional VMS with the support of satellite system.

### **Increased Investment**

The availability of sufficient funds to efficiently manage processing facilities are key factors in the fishing industry. SSA countries have been able to sustain the operations due to foreign direct investment from countries to which they supply their fish. These investments were obtained by foreign plants which operate in the SSA countries namely StarKist in Ghana and Seychelles and Princes' in Mauritius. These plants produce for the EU market, under labels owned by their parent firms.

### **Government Policy and Agreements**

The government can influence activities of the tuna industry by using taxation and subsidies or grants. A rise in tax on the profits of tuna fishing companies will increase their costs and reduce profits. Then, some companies may decide to contract their activities while others can stop completely. Conversely, if a subsidy or grant for the innovation in fishing fleets is given, companies will be encouraged to invest more in tuna fishing. Also, new companies can venture into the industry. In Mauritius, the Ministry of Fisheries provides the necessary support services to such companies and ensures enforcement to prevent illegal fishing. Many countries issue licenses to distant water fleets which come to harvest in their territories. The EU is the most active foreign player. Issue of licences impact a lot on exports. The

distant water fleets usually land their catches in the SSA country's ports, which lead to a rise in the supply of fish to local canneries.

Licences are provided to fishing companies from Taiwan, Japan, Korea, China and EU countries to fish in our EEZ under specific conditions. An agreement exists with Seychelles over the license fee which is preferential in return for cheaper tuna exported to Mauritius to be used as raw material for canning. According to Guidetti (2006), the number of Marine Protected Areas established has increased significantly in recent years. These areas are not only seen as nature conservation instrument but as a useful tool against declining coastal fish resources as well as attracting tourists (Badalamenti et al., 2000; Claudet et al., 2006). Moreover, since the majority of tuna stocks have been overfished, regulatory measures are being enforced so as to protect the remaining stock. These measures include catch quota and effort limitations but also other measures such as time-area

## **Contribution of the tuna industry**

Fish makes a vital contribution to the survival and health of a significant portion of the world's population and is one of the most valuable sources of protein food. It accounts for nearly one quarter of the world's supply of animal protein, and in many countries it is the ideal and traditional supplement to a basic diet of starches (James, 1986).

As stated by the FAO (1995b):

Fish and Fishing are tremendously important to the people of the Pacific Island. Much of the nutrition, welfare, culture, recreation, government revenue and employment are based on the region's living marine resources.  
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The Pacific islands is the most important tuna fishing area in the world and supplies about a third of all tuna. The tuna catch accounts for 11% of the combined GDP and constitutes around 50% of the total export value from the region. The labour intensive nature of tuna fishing and tuna processing operations, together with scarcity of formal jobs in the region, heightens the relative importance of tuna related employment. Employment is generated in direct employment on fishing vessels and in processing operations which amount to nearly 15, 000 jobs connected to the tuna industry and indirect spinoff employment resulting from links to other sectors of the economy. Various studies outside the pacific islands (Weber 1994, Swerdloff and Pooley 1979, and Meyer 1987, among them) have been made to estimate the direct and indirect employment opportunities associated with fisheries. Some of these reports have indicated a multiplier effect for employment in fishing and processing and the number of jobs created indirectly. Arama (2000) pointed out that the cannery in Levuka has become very important and provide employment and income. In the pacific islands, governments wish to provide more employment opportunities for women. The canneries in Pago Pago, Levuka, Noro and Madang help to achieve this target by employing over 6500 Pacific islands women.

In Philippines, fishing contributes about 4% of the country's GNP. Over one million people are employed and gain their livelihood in this sector. The Philippines is ranked 7th in terms of production of fresh, canned and fresh tuna compared to the top tuna producing countries. It is ranked 2nd after Thailand.

In West African countries, the fishing industry is important for the socio-economic development. Even if fishing does not represent a large portion of GDP, artisanal fishing sector creates satisfactory employment. Also, fish is considered as an important domestic food security and fish consumption is above global averages.

In Ghana, the fisheries sector contributes significantly to the national economy in terms of food security, employment, poverty reduction, GDP and foreign exchange earnings. It is the fourth largest tuna producing country in the world. According to the Western Regional Director of Fisheries Commission, Mr. Alex Sabah, the fishing sector in Ghana contributes about 4.5 % of the GDP. For a long time, Ghana has been dependent on fish as being the cheapest source of animal protein. Export of fish and fish products generates high inflow of foreign currencies for the government. The government has proposed various policies to help to further boost this sector and position it as a sustainable foreign exchange earner. It is estimated that a total of 500, 000 fishermen, fish processors, traders and boat builders are employed. Many poor and vulnerable people rely on the fisheries sector either directly or indirectly for their livelihood.

Senegal has one of the largest and most developed fishing industries in West Africa. Between 1997 and 2002, the fisheries sector contributed 2.3% of total GDP (World Bank). It has a highly developed tuna fishery. Skipjack and yellowfin tuna are the most important species caught by Senegalese fishermen. Almost all the tuna landed and processed are exported mainly to France. The fishing sector in Senegal is important to the economy and the

continuous increase in employment will lead to economic stability. Also, seafood provides a large part of dietary protein and continued production is necessary for food security of the country.

The Indian Ocean contributes about 23% of the world's tuna production. 70% to 80% of tuna is caught in the Western Indian Ocean sub region. The biggest fishing industry in this region is Seychelles. There, the fisheries sector accounts for more than 2% towards GDP. The economy's growth in 2000 was due to the tourist industry and the strength of the fishing sector mainly tuna fishing. Employment creation in the fishing industry is significant in Seychelles and they are accounted as formal employment. A number of indirect employment is created through the multiplier effect in downstream sectors such as boat building, mechanical repairs, fishing suppliers, transport activities, distribution and export logistic. Fish consumption in Seychelles is widely believed to be one of the highest per capita in the world. Also, the continuous development in the fisheries sector has caused the amount of foreign exchange to increase especially at the start of canned tuna export.

Thailand is presently the world's largest producer of canned tuna (Josupeit, 2008). Over 80 countries import tuna products from Thailand with the biggest market being the US (27%), followed by the European Union (15%), the Middle East (14%), Japan (9%), Australia (8%) and Canada (7%). Fish is an important animal protein source for Thai people. The Fisheries sector provides significant occupations for the Thai people and fisheries accounts for 2.5% of the total GDP. The Thai fishing industry is one of the ten largest in the world. In 2006, the value of tuna exports was 24% of the seafood product export earnings. The largest quantity of tuna exports is canned tuna, <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>



which comprise 47% of total canned tuna exports of world trade in 2006 (FAO/Globefish, 2006).

## **State of Tuna in the world and sustainability**

Since the dawn of civilisation, fishing makes a vital contribution to the survival and health of a significant portion of the world's population and is one of the most valuable sources of protein food. It provides employment to many people and it is the economic foundation of many countries. Some of the persistent issues affecting the environment concern the situation of fisheries around the world, stock which are under severe pressure. This has resulted mainly due to an improvement in technology which makes fishing boats more efficient. According to Pauly (2009) the "technology creep" makes fishing vessels more efficient by 2-3% each year thereby increasing fishing efforts. Others factors contributing to the decrease in stock include use of destructive fishing gears, increase in fishing effort amongst others. An insatiable desire for tuna has sprouted growth in the number and capacity of tuna fishing vessels. According to Couper and Smith (1997), the problem of overcapacity accrued mainly due to an increase in the number of distant water fleets and flag of convenience registrations driven by globalisation. The marine environment is at a critical juncture due to an emerging 'race for fish' which has exacerbated the overexploitation of fish stocks across the world. Overcapacity in fishing poses threats to the health of marine ecosystems when it pollutes and degrades critical coastal habitats. Ultimately, such alterations can reduce fish stocks (Kimball, 2003). It was argued by Arbo and Hersoug (1997) that the surge for fish has affected

employment in Norway as well as making fishing capital owners less responsible towards their environment.

Developing countries are faced with a highly vulnerable fisheries sector (Iheduru 1995; Thorpe, Ibarra, and Reid 2000). The cause of this retreat as put forward by Strange (1996); Streeten (2000) or demise Ohmae (1990) was globalisation. The emergence of 'footloose' DWFs further affected the stock of fish which were already at a stake. It was highlighted by the FAO (2000) that the proliferation in fishing activities put the sustainability issue into consideration. Due to a persistent rise in industrial fishing capacity, resource sustainability and economic development have emerged as major impediment to the long term sustainability in the Pacific countries. The yellowfin and bigeye tuna are already overexploited. In addition, though a large proportion of tuna are caught within their EEZ, Pacific islands have not been able to manage their fishing industries profitably. Overfishing is considered to be the main barrier that prevent the fishing industry from achieving long term sustainability. Almost all fishing grounds in the world and fishery resources are adversely affected by overfishing (FAO, 2004a; Pauly et al., 2002; Stone, 1997). As noted by the FAO (2004), 75% of fisheries have already been exhausted or been overfished. FAO (1995) highlighted that there should be effective utilisation of resources or appropriate measures should be enforced. Government has thus started paying scant attention to the future availability of fish as many people in the coastal region depend on fishing for their livelihood.

In order to make the fishery maintain its nutritional, economic and social value in the long run, this sector needs to be managed efficiently (FAO <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>)

1997a). It is widely acknowledged by many fisheries' scientists that in order to benefit from a sustainable fishery there is need to be a reduction in fishing capacity and exploitation rates, abundance in fish stocks, use of less destructive fishing gears and appropriate monitoring and surveillance system to protect the marine environment. The World Commission on Environment and Development (WCED) was the first to tackle the issue of sustainable development in 1987. According to Ogunji et al. (2003), the commission was engaged to observe the problems faced by the environment and hamper development and provide necessary actions to solve them. According to Clifton (2009), the term sustainability has acquired different connotations and is a highly contested issue in new political discourse. It is defined by Brundtland as the ability to satisfy present needs without foregoing the needs of the future generations (Sneddon et al, 2005 p4). It is acknowledged by many scholars that sustainable development ensures the environmental, economic, and social security of both the present and future generations. Sustainable development has been defined by the FAO as the effective control and protection of the marine environment through progressive technological innovation in order satisfy the needs of both the present and future generations. A sustainable fishery is one where the fisheries management regime allows the resource (fish) to renew itself at a predetermined level.

According to some workshops organized by the FAO (30, 31), some elements are essential to achieve sustainability in fisheries:

Good governance is a prerequisite to achieve sustainability in fisheries. The absence of a proper governance system has led to many fisheries of the <https://assignbuster.com/factors-affecting-the-development-of-the-tuna-industry-economics-essay/>

world to be managed in a non-sustainable manner. Thus, in order to benefit from successful fisheries management system, transparency and the involvement of the different stakeholders of the fisheries sector is important.

Reducing demand for limited resources- The demand, fishing capacity and productive capacity of resource are often negatively related. The removal of subsidies and providing incentives can therefore be used to achieve stability. However, this reduction in demand involves costs such as a rise in unemployment.

Improving Knowledge of Complex Ecosystems – poorly managed ecosystems usually results in non-sustainable ecosystems while a properly managed ecosystem with availability of appropriate data ensures the sustainability of the ecosystem.

Sustainability is a contentious issue that has gained much impetus since recent year. Almost every country wants to promote sustainable development, with the MSC being the benchmark for sustainability certification whilst the Greenpeace and WWF encouraging healthy practices and sustainable consumption in the world. According to Ansell and Vogel (2006), the EU are very much concerned about the quality of food they import. This has led to the setup of GlobalGAP and the Global Food Safety Initiative (GFSI) which regulate the safety of food in the EU. According to Marsden (2004b), the ‘battlefield of quality’ has urged many retailers to consider their use of standards necessary to maintain quality