

GREEN AND SUSTAINABILITY PROTOCOL DEVELOPMENT IN HALALFOOD INDUSTRIES

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ABSTRACT: This paper explores green and sustainability protocol in advancing food standard in Malaysia.

In concern of climate change, populations are expected to increase to 3 billion in the next 40 years, rapidly developed nations and resources are depleting, environmental degradation and loss of biodiversity, green food has been debuted internationally as a survival platform. Innovation of the significant green food production will need to be undertaken. This paper will discuss the implementation of green and sustainable practices in food stock management and food production in order to be applied in halal standard.

KEYWORDS: Halal food, green and sustainable, food sustainability, green and sustainability protocol

1.0 INTRODUCTION

Malaysia has its comparative advantage to be one of the world's significant players in *halal* food producers and exporters. Malaysia's participation in campaigning *halal* food in global, has opened opportunity to all Muslims countries in supporting this industry.

In 2011, the food and beverage took up 34% of the entire national *halal* product export, and has generated USD3.7 billion from the international trade [1]. Newest data has shown that the increment is up to USD 1,088 billion global Muslims expenditure on food and drinks market in 2012 and this shown 16.6% of global expenditure [2]

With the increase in global *halal* trade, many countries are taking several initiatives to capitalize on its growth. Malaysia has all the agricultural resources and it is well positioned to be the centre for the promotion, distribution and production of *halal* food. As the Malaysian Government is focusing on increasing food production in the country as well as making Malaysia an international *halal* hub, food-processing companies can tap on Malaysia's strength in *halal* food certification and Government's promotional efforts to capture the *halal* market internationally.

By implementing green and sustainable practices in *halal* standard, it will be a good flavor in grooming Malaysia's *halal* standard and shows consistency of Malaysia in supporting green and sustainable food in global market.

2.0 LITERATURE REVIEW

Halal food is very significant in Muslim's dietary food consumption. Consuming *halal* food is an obligation to Muslims. Not only it should be free from pork, but free from any component or ingredients that Muslims are prohibited to. In Al-Quran, Surah Al-Baqarah¹, verse 172-173 stated that Muslims should only eat good things, which is *halal* and avoid any forbidden food, which is *haram*.

Since Malaysia has introduced and practiced *halal* standard, Malaysia has managed to secure billions of market share

worldwide in 2004 [3]. The *halal* industry has grown and competition in the industry is becoming fiercer by the day. Great growth potential is the evident as *halal* products and services were not only limited to Muslim consumers, but has gained acceptance among non-Muslims who perceived such products as having undergone stringent inspection and quality controls. Hence, there is huge potential for *halal* foods due to increased acceptance and demand in the developed non-Muslim countries. In the speech of former Prime Minister, Abdullah Haji Ahmad Badawi in his first launched of Malaysia International *Halal* Showcase (MIHAS) 2004, it is stated that non-Muslims recognized *halal* food as clean and safe to be purchased.

In enhancing technological green developments, Malaysia will encourage industry to achieve a higher level of innovation in product and process developments in food industries to improve export performance in a longer term. This will embark on research, collaboration with research institutes; includes product development, changing in consumer tastes and preferences; work with public research institutes to commercialise findings in R&D and leverage upon emerging technologies, such as biotechnology and nanotechnology, and enhance local capabilities to develop new products and improve the technology in food processing. Technologies will emphasize on *halal*-compliant food preservation and packaging technologies, incorporating food safety and sanitation practices.

Due to the *halal* food standard and enhancement of green technologies, food sustainability is the area that will require full consideration. Increase in population and consumption growth for the next 40 years will contribute to global food demand [4]. In order balance the food system with the environment, further action in climate change, production food ability from the competition of land, water and energy usage and also overexploitation of fisheries need to be considered [4].

Agriculture and food production have been identified as among the leading causes of environmental pressure [5].

2.1 The Challenge of Food Sustainability

At the first stage of introducing sustainability to capture world's attention, reference [6] from his book 'Global Sustainability' has described sustainability as the reconciliation of society's development goals with its

¹In Al-Quran stated that "O you who believe! Eat of the good things that we have provided to you, and be grateful to God, if it is He ye worship. He hath only forbidden you dead meat and blood and the flesh of swine and that on which any other name hath been invoked besides that of God" (Surah Al-Baqarah: Chapter 2, verse 172 – 173)

environmental limits in a longer tem.Reference [6] defines sustainable as development that meets the needs of the present without compromising the ability of future
SUSTAINABILITY

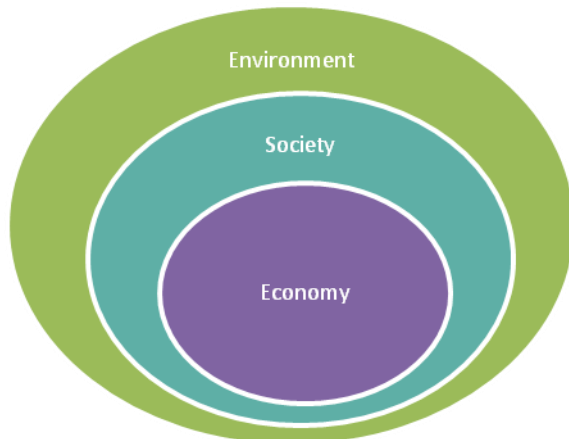


Figure 2.1: Concept of Sustainable Development Economy as only Instrument for the Society, Society as only Part of the Environment – A Bio-Centric View of Sustainability. (Source from Global Sustainability, 2005)

generations to meet their own needs. The identification of sustainable however, does not stop. In 2002, German Council of Environmental Advisors has ratified Sustainable Development as an ecologically-focused concept, in which social and economic cross sectional relationships play important roles because natural capital may be substituted by material or human and knowledge capital only in a low degree [6]. **Figure 2.1** describes the concept of sustainable development, where society and economy exist as a subset of the environment.

To enlighten the concept, human society is understood to be part of the environment and therefore the environment must be preserved as the life basis for human beings. In addition, the economy is not a category that has existed for itself, but only as tool to regulate the activities of society [6].

As environment is affected with the increasing pressure on ecosystems and natural resources such as land, water and biodiversity, the world are seeing groundwater supplies depleted, agricultural soils degraded, oceans are overfished and forests are being cut faster than they can re-grow. Report from the Reference [7], has addressed these trends as it examined the status of the five major ecosystems which deliver the goods and services that support human life and the economy: coastal/marine systems, freshwater systems, agricultural lands, grasslands and forests [5] According to the reference [7], human activities are now beginning to significantly affect the natural chemical cycles, such as water, carbon, nitrogen, phosphorus, on which all ecosystems depend.

In the social aspect, one of the greatest challenges for humanity in the next decades is to maintain natural reserves in a world with a constant increase in number of people. From the estimated 6 billion inhabitants in 1995, it is believed that there could be an increase of up to 8 billion around 2020, of which 40% will live in urban zones with a

tendency of an increased consumption of products of animal origin, especially meat. Global meat production tripled from 47 to 139 million tonnes per year, between 1980 and 2002. As livestock production shifts into a more high input system, it will place more pressure on arable land for the production of feed [5]. This pressure includes social change of youth migration, as well as increased marketing opportunities for livestock products because of growing urban population [8]. In addition, growing population is expected to come from underdeveloped countries [9].

In economy, food trade has become a major dilemma. According to reference [4], the last three decades have seen tremendous growth in sales of processed food – sales. But contrary to initial expectations, this phenomenon has not led to significant growth in global trade- only 6% of processed food sales are traded compared with 16% of major bulk agricultural commodities. Although consumer demand processed foods to continue growing globally, growth in trades has generally slowing down since the mid 1990s. Global trade in processed food grew rapidly during the 1970s and 1980s, as consumers in high- income countries demanded more foreign food products.

Another concern on the economic issue is fair trade. Fair trade is a social movement to encourage sustainability and empower the producers of goods from developing nations [10]. Fair trade or this social movement promotes fair wages, workers conditions, raising awareness of marginalized producers of goods and changing the rules of conventional international trade. Issues of fair trade arise when food distribution between developed and developing countries are imbalance. Reference [10] confirmed that this issue are still in negotiations until now between both countries involved.

2.2 The importance of producing 'green' food

In order to understand green, reference [11] has discussed and agreed that greenness and sustainability is related each other to practice and allow a good quality of life now and in the future.

As green is part of environmental concern, producing healthy food is essential in order to ensure food is enough to feed increment of population. Encouragement and awareness need to be developed among food industrial in producing healthy food, by giving priority in nutritious food. Reference [12] considers this situations as a production challenge, whereby there is a need to change how food is produced in which improving the unit efficiency of food production. Reference [12] also agreed that more food must therefore be produced to feed urban consumers in ways that will not incur excessive environmental costs. Technological innovations and managerial changes are seen as key to reducing environmental impacts and increasing supply [12]. Part of technology advancement that can be done is energy recovery from agricultural 'waste', examples of anaerobic digestion and farming practices that sequester carbon in soils [12], as post harvest can be managed through the development of refrigeration and manufacturing in order to renew energy sources. Innovative new production methods, such as System of Rice Intensification (SRI) are the techniques that is being used to cover crops and green manure to improve soil fertility [13]

In a wide context, producing 'green' food is not limited to industrial, but involvement of society. As society is part of consumer, customer, farmers or even retailers, contribution towards farming own land, can speed up the economical countries, particularly in developing countries, and at the same time, supporting green environment.

3.0 CONCLUSION

Halal food is not only aimed at fulfil religious obligations but *halal* food itself is at the highest standards of safety guarantee, hygiene and quality assurance. By introducing green and sustainable food practices, it will enhance requirement to the industrial food performance in global market. Formalization and standardization of the *halal* standard will provide identity and credibility for the whole *halal* industry, as well as gaining international recognition.

In global market, green and sustainable food development has been discussed intensely, especially in Europe as much research has shown the impact to the environment. Reference [14] claimed that European Union has ever since been the leader of the environmental policy, which partly involved the development of climate change and the promotion themes such as sustainable developments in international fields. The involvement of Europe country in this issues, has invited many non-governments organizations (NGOs), especially in developed and developing countries to participate in order to preserve this matter.

Although green and sustainability protocol is a new approach of standard in *halal* food production, this will benefit Malaysia whereby other countries will recognize *halal* Malaysia logo as a good practice.

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