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The Safety of Packaged Food: Focus on Environmental Management and the Food Regulation 1985

Keselamatan Makanan Berbungkus: Fokus kepada Pengurusan Alam Sekitar dan Peraturan Makanan 1985

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ABSTRACT

Issue of food safety is an important issue that related to public safety to prevent the toxicity threats of the food. If consumers eat contaminated food with dirt and germs, they will involve with Food Water Borne Disease otherwise known as (FWBD). Food packaging is look as an approach to overcome and reduce the toxicity of food in dealing with environmental management. Sometimes the packaging can considered as a source of risk to the food and rarely considered as a technology that can used to improve the safety of the food. Therefore, the Food Regulation 1985 is one mechanism of environmental management through legal approach in controlling the safety of packaged food. This article tends to analyse and to explain the implementation of the Food Regulation 1985 in controlling the safety of packaged food. Meanwhile, the methods of this study are based on qualitative set up, which is based on primary document, the Food Regulation 1985 and the result, there are 2 main themes, general and specific, while their 7 sub themes are included harmful packages, safety packages, reuse packages, polyvinyl chloride (PVC), alcoholic bottle, toys, money and others and iron powder. The effectiveness and the implementation of the Food Regulation 1985 in controlling the safety of packaged food did not depend and focused only to the Food Regulation 1985. But due to overcome the food poisoning and other disease that related to Food Water Borne Disease (FWBD), it must involve the usage and acceptance a few legislation which related to the safety of packaged food with enforcement from local government and other mechanisms of environmental management.

Keywords: Environmental management; food regulation; packaged food

ABSTRAK

Isu keselamatan makanan merupakan satu isu penting yang berkaitan dengan keselamatan awam untuk mencegah ancaman keracunan makanan. Jika pengguna makan makanan yang telah tercemar dengan kotoran dan kuman, mereka akan terdedah dengan Penyakit Bawaan Makanan dan Air (FWBD). Pembungkusan makanan dilihat sebagai satu pendekatan untuk mengatasi dan mengurangkan ketoksikan makanan dengan guna pakai pengurusan alam sekitar. Kadangkala bungkusan boleh dianggap sebagai sumber risiko kepada makanan dan jarang dilihat sebagai satu teknologi yang boleh digunakan untuk meningkatkan keselamatan terhadap makanan. Oleh itu, Peraturan-Peraturan Makanan 1985 merupakan satu mekanisme pengurusan alam sekitar melalui pendekatan undang-undang yang mengawal keselamatan makanan yang dibungkus. Artikel adalah untuk menganalisis dan menjelaskan pelaksanaan Peraturan Makanan 1985 dalam mengawal keselamatan makanan berbungkus. Sementara itu, kaedah kajian ini adalah berdasarkan kepada set kualitatif, yang berasaskan kepada dokumen utama iaitu Peraturan-Peraturan Makanan 1985 dan hasilnya, terdapat 2 tema utama, umum dan khusus, manakala 7 sub tema iaitu bungkusan berbahaya, bungkusan yang selamat, bungkusan guna semula, Polivinil Klorida (PVC), botol alkohol, mainan, wang dan lain-lain serta serbuk besi. Keberkesanan dan pelaksanaan Peraturan Makanan 1985 dalam mengawal keselamatan bungkusan makanan tidak bergantung dan memberi tumpuan hanya kepada Peraturan-Peraturan Makanan 1985. Tetapi bagi mengatasi keracunan makanan dan penyakit lain yang berkaitan dengan Penyakit Bawaan Makanan dan Air (FWBD), ia seharusnya melibatkan penggunaan dan penerimaan beberapa undang-undang yang berkaitan dengan keselamatan bungkusan makanan seiring dengan penguatkuasa kerajaan tempatan serta lain-lain mekanisma pengurusan persekitaran.

Kata kunci: Pengurusan alam sekitar; peraturan-peraturan makanan; makanan berbungkus

INTRODUCTION

Issue of food safety is an important public safety issue to prevent the toxic threats of the food. According to World Health Organization (WHO 2003), safe food is defined as the food confidence degree where it does not cause disease or harmful to the consumer when it prepared, served or eaten according to their usefulness. If consumers eat food that is been contaminated with dirt and germs, they

will be involved with Food Water Borne Disease otherwise known as (FWBD). The FWBD include Food Poisoning, Cholera, Typhoid, Dysentery and Viral Hepatitis A.

The number of food poisoning cases is the highest against a number of other disease cases for Food Water Borne Disease (FWBD) according to Table 1. Food poisoning is a situation where taking a contaminated food or ingestion of contaminated food which can cause diarrhoea, vomiting, nausea, discomfort, headache, dizziness and abdominal pain (Norhayati 2000; Crosby 1981). According to Fatan (2005), food poisoning usually caused food contamination affected by bacteria or toxin bacteria that is frequently happen. Due to this, food packaging is looking as an approach to overcome and reduce the toxicity of food that led to food poisoning. Food packaging is wrappers or containers used to protect food or other products from dirt, germs and damaged. Packaging is under certification schemes related to food safety assurance under Ministry of Health Malaysia, namely Good Manufacturing Practice (GMP) Certification Scheme. According to interpretation Section 2 in the Food Act 1983, packages can include anything in which or any means by which food is wholly or partly cased, covered, enclosed, contained, placed or otherwise packed in any way whatsoever and includes any basket, pail, tray or receptacle of any kind whether opened or closed. In 1950, the use of various plastics as a packaging has only developed, when there was a rapid rise in the number of food poisoning cases that reported to the authorities in the United Kingdom (Crosby 1981).

Nowadays, packaging manufacturing uses a variety of materials and labelling methods to protect and promote a product but some of the materials and chemicals may affect the health. Sometimes the packaging can considered as a source of risk to the food and rarely considered as a technology that can used to improve the safety of the food. Therefore, it is important to identify environmental management approaches in dealing with the safety control of food packaging to overcome food poisoning and other diseases that related with FWBD.

TABLE 1. Number of Cases and Incident Rate Every 100,000 Population (KI) for PBMA from 2002 To 2010

Year	Food Poisoning		Typhoid		Cholera		Dysentery		Viral Hepatitis A	
	Case	(K)	Case	(K)	Case	(K)	Case	(K)	Case	(KI)
2002	7,023	28.6	853	3.5	365	1.5	292	1.2	295	11.0
2003	6,624	25.4	785	3.0	135	0.5	310	1.2	-	-
2004	5,957	23.3	484	1.9	89	0.4	356	1.4	107	0.4
2005	4,641	17.8	1,072	4.1	386	1.5	141	0.5	44	0.2
2006	6,938	26.0	204	0.8	237	0.9	105	0.4	64	0.2
2007	14,455	53.2	325	1.2	133	0.5	146	0.5	94	0.4
2008	17,322	62.5	201	0.7	93	0.3	92	0.3	36	0.1
2009	10,238	36.2	303	1.1	276	1.0	154	0.5	40	0.1
2010	12,519	44.2	210	0.7	443	1.6	104	0.4	39	0.1

Source: Annual Report of Jabatan Perangkaan Malaysia 2011

This article tends to analyse and to explain the implementation of the Food Regulation 1985 in controlling the safety of packaged food. Each individual in this world active to some extent environmental management, but the refer scope here is through a conscious and systematic measure by individual or groups of people acting together to produce a useful physical environment in terms of the economy, which have aesthetic values, ensures the health, comfort and safety (Jamaluddin 2010). Hence, good environmental management and effective human health can ensure the perfect human health.

ENVIRONMENTAL MANAGEMENT

The environment divided into two, namely the physical environment and human environment. The physical environment is the "site" to all forms of human activity that also known as a natural process of large systems. Actually environment not only made up from physical components, but also the social, economic and culture that shaped and carved by humans (Jamaluddin et al. 2010). Our involvement at the international fore has influenced the environmental management in this country. Malaysia is responsive and takes in from

her experience at the international level to accept that knowledge into the strategy and policy on the environment (Jamaluddin 2001).

Furthermore, the environment consists of various components, environmental problems that wide, and range. For effective management, an understanding of the components and the relationship between them is very important and cooperation required for all fields, science, engineering and social sciences. A complete environment information systems acts as main point of cooperation between stakeholders and mechanisms of environmental management (Fauza & Khairulmaini 2004).

Environmental management can be divided into two approaches namely environmental management through legal approach and environmental management through non-legal approach (Muhammad Rizal & Jamaluddin 2010). Management through legal approach used in Malaysia as one of the mechanism to manage the environment. Due to this study, the Food Regulation 1985 is one of mechanism of environmental management through legal approach in controlling the safety of packaged food.

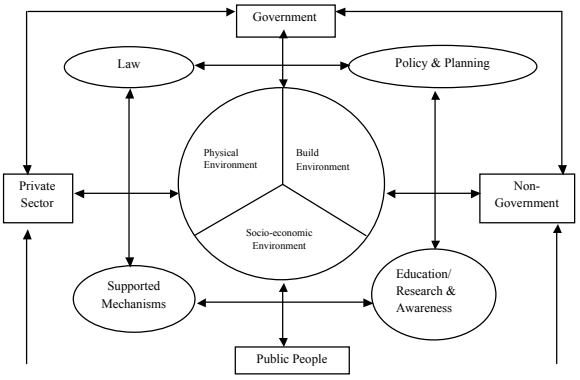

FIGURE 1. Environmental Management Process

Source: Fauza & Khairulmaini 2004

OBJECTIVES

This paper discussed the following objectives:-

a) Identifying and analysing the themes and sub-themes that relate to the implementation of the Food Regulation 1985 in controlling the safety of packaged food.
b) Explaining the implementation of the Food Regulation 1985 in controlling the safety of packaged food.

RESEARCH METHODS

This study used qualitative orientation approach method namely data gathering method, information, and analysis of data method and information for document data. Method for document fall into two, selection and document collection and analysis of data and document. For selection and document collection, information used and then will be analysed in this study achieved from the Food Regulation 1985 in controlling the safety of packaged food. This also identified through major keyword (Maxwell 2005) which encompasses context related in controlling the safety of packaged food. Then, all data and information achieved from selection result and document collection, will be used for analyses by using computer software namely Nvivo. Software Nvivo used to help researcher arrange data achieved through perusal on document with more systematic and orderly (Muhammad Rizal 2009; Muhammad Rizal et al. 2010). Due to this, analysis of data document study based on themes from document of the Food Regulations 1985 in controlling the safety of packaged food by reading paragraphs by paragraphs achieved and identified.

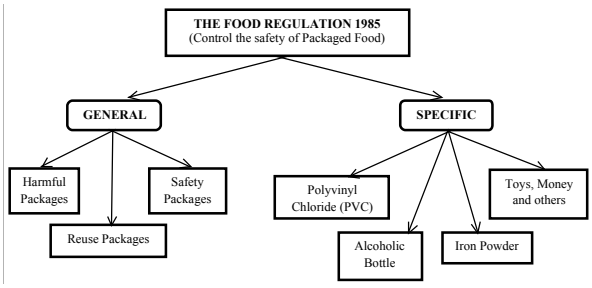

FIGURE 2. Model of Themes and Sub-Themes for the Food Regulation 1985 in Controlling the Safety of Packaged Food

RESULTS AND DISCUSSION

Based on the document analysis of the Food Regulation 1985, document used sections sixth; there were 10 Sections and Regulation, which include under it. The Food Regulations 1985 created and aims to protect consumers from harmful food poisoning beside to ensure the safety of food sold in Malaysia.

DATA FROM ANALYSIS OF DOCUMENT

Based on the document analysis of the Food Regulation 1985 focus in controlling the safety of packaged food, there are two main themes and seven sub themes as shown in Figure 2. The themes are general and specific, while their sub themes are included harmful packages, safety packages, reuse packages, polyvinyl chloride (PVC), alcoholic bottle, toys, money and others and iron powder.

GENERAL

Food packaging that are unsaid name, type and detail on package categorised as general. This includes harmful packages, package security and usage packages again. Regulation 27 is about dangerous usage prohibition. A person could not import, manufacture, advertise like sentence allocation in a document used namely Regulation 27.

"Except as to how stated others in this Regulation, no one else could import, manufacture, advertise for sales or sell, or use or causes or allow use in preparation, packaging, storage, past dispatcher or food exposure for sales, any package, tool, former or vessel which produces or can put out in the content any material that is poisonous, damage or deform, or which helps in the food attenuation" [Regulation 27]

Packaging purpose is to protect food products from source of pollution, which caused the food product's perishable, it also to facilitate operation and manufacturer, distributor, seller and consumer (Faridah 2003). Danger intended here is as something which could cause loss, damages and could threaten the safety and altogether can cause diseases whether in man or environment because it has poison content or toxic poison content or toxic. Sometimes harmful which occur is due to chemical action, which include in packer when it recycled or utilized for different uses.

Safety of food packaging is a way to avoid the package to be dangerous and hazardous materials, mostly cause unsafe package.

"No person shall import, manufacture, advertise for sale or sell any package, appliance, container or vessel made of enamel or glis porcelain intended to be used in the preparation, packaging, storage, submit and post or exposure of food for sale whether it can transfer lead, antimony, arsenic, cadmium, or any other poisonous substances to the food prepared, packed, stored, delivered or exposed in it, or do not have resistance to acid unless the package, appliance, container or vessel satisfies test described in the Thirteenth Schedule" [Regulation 28]

There are many categories of distribution and reuse package. Among the reuse of packaging is prohibited expressed in Regulation 32(1).

"Subject to subregulation (2), no person shall use, or cause or permit to be used, in the preparation, packaging, storage, or exposure for sale, submit and post" [Regulation 32(1)]

SPECIFIC

Packages, which states a name or information that related to the specific packaged food, that include within a specific theme. There are packages from polyvinyl chloride (PVC), alcoholic bottle, toys, money and others and iron powder. Package usage polyvinyl chloride, which contains excess Vinyl Chloride Monomer or known as VCM is prohibit to use, import, manufactured and etcetera.

"There is no even one could import, manufacture or advertise for sales or sell or are using in provision, packaging, storage, or past dispatcher to food exposure for sales, any package, tool, former or rigid vessel or not solid made from polyvinyl chloride which contains more than 1 mg / kg vinyl chloride monomer" [Regulation 29]

Polyvinyl chloride (PVC) is one of major thermoplastic substance. A polymer is relatively cheap and versatile. In year 1976 more eight million tan PVC was invoke throughout world (Whelan & Craft 1977). The use of polyvinyl chloride package containing excess Vinyl Chloride Monomer (VCM) is prohibit to use, imported, manufactured, and etcetera.

"No person shall import, manufacture or advertise for sale or sell or use in the preparation, packaging, storage, submit and post or exposure of food for sale, any package, appliance, container or receptacle rigid or semi-rigid made of polyvinyl chloride containing more than 1 mg / kg of vinyl chloride monomer" [Regulation 29]

As mentioned in the sub themes reuse packaging for General themes. Related to alcohol bottle, has stated in Regulation 32 (1c) which mentioned before in General theme, also stated in Regulation 33, and in Regulation 33A (1).

Toys, money and others are strictly prohibited place in food packaging mainly for sale.

"Nothing toys, money or other things can be put in food for sale, or in the food packaging" [Regulation 36(1)]

It can be put into the food packaging if as stated.

"Nothing in sub regulation (1) may prohibit placed in food or in food packaging,"

a) A body to measure the quantity of food that is recommended for consumption provided that the thing was sterile;

b) The label referred in sub regulation (6) of Regulation 12, or
c) Any reduced iron powder packets for the purpose of absorbing oxygen" [Regulation36 (2a), (2b), (2c)]

Iron powder can put into food packaging, but if it is pack in oxygen-absorbing packets that are not contaminate, damage or to enter the food. Labels on iron powder itself must not be contaminating.

"The reduced iron powder specified in paragraph (c) of sub regulation (2) Regulation 36 must be packed in packets in a manner that does not contaminate the oxygen absorber, spoil or get into the food" [Regulation 36A (1)]

CONCLUSION

Based on the document analysis of the Food Regulation 1985 in controlling the safety of packaged food, this study has identified two main themes, which are general and specific. While their sub themes include harmful packages, package security, usage packages again, polyvinyl chloride (PVC), alcoholic bottle, toys, money and others and iron powder.

The effectiveness and the implementation of the Food Regulation 1985 in controlling the safety of packaged food does not depend and focused only to the Food Regulation 1985. But due to overcome the food poisoning and other disease that related to Food Water Borne Disease (FWBD), it must involve the usage and acceptance a few legislation which related to the safety of packaged food with enforcement from local government and other mechanisms of environmental management.

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