

National Food Control Systems: a case-study of Mauritius

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Abstract

A study was carried out to analyse a national food control system (NFCS) from Sub-Saharan Africa (SSA), namely that of Mauritius. The different elements of the system were then compared to that of a developed country, England. The methodology used was qualitative, comprising a literature review and a survey of key players of the FCS. A wide difference existed between the two systems. Mauritius was facing some difficulties with respect to food control partly due to a lack of funds, inadequate legislation, poor coordination of food control activities and dearth of information on the system. These could have serious implications for Mauritius. To prevent this, certain suggestions were put forward, including:

- Adoption of a national food control strategy
- Amendment of the food law
- Cooperation and coordination among different bodies in the system
- Transparency and information flow on the food control system
- Intelligent participation in regional trade agreements

Introduction

“China, 1990: 2700 million children dying of diarrhoea due to poor quality and unsafe food and water supplies”, “USA, 1999: 76 million cases of foodborne illnesses” (WHO, 1999)

These headlines show that food of poor quality can have fatal and financial repercussions in both developing and developed countries. Food control is essentially a mandatory activity to ensure the quality of food for the protection of consumer health and for the prevention of fraud. A national food control system (NFCS) is a group of elements, human and non-human (ideas, methods) used by countries, that are organised and arranged in such a way that the elements can act as a whole towards some common objective. Here, the objectives to be met are:

- To protect consumers' health and to fight for their economic rights, in particular to protect them from fraud.
 - To ensure the fair trade of food products nationally and internationally
- (Boutriff and Bessy, 1999; Bruno, 1996; Kenny, 1996).

The level of control in a NFCS depends on the resources available. As Jukes and Anyanwu (1990) rightly pointed out, safety and quality issues concern countries with adequate food supply. Many developing countries are still fighting for food security; so having food control systems is not among their priorities. As a result, food legislation, its administration and enforcement receive little or no attention. Yet, to afford consumers with a minimum protection and to prevent fraud, effective NFCS are a must. To be effective, NFCS generally require:

- Certain key elements (legislation, administration, enforcement and supporting bodies)
- Good management
- Input from international organisations
- Adequate flow of information

Evaluation of NFCS is a routine exercise, which governments must indulge in, which, unfortunately, they rarely do. This paper provides an opportunity for participants at the internet-based forum to ponder over requirements for effective food control systems and to find strategies to make them priorities in their respective country.

Objectives

This study has been carried out to:

- Investigate background information on NFCS
- Analyse two NFCS with a different level of development, namely UK and Mauritius

- Suggest recommendations for the improvement of food control

Approach

To achieve these objectives, the methodology used consisted of the following:

- A literature review covering certain books, Codex manuals, journal articles and electronic data
- Case studies based on personal communications with key informants of the Mauritian FCS
- A questionnaire-based interview of the administrative authorities in Mauritius

Mauritius was chosen to represent a middle-income economy from SSA with a developing economy² (World Bank, 1999), while UK was selected because it is a high-income country with a developed economy and much of Mauritian legislation is of British origin.

Discussion

1. Overview of the British food control system

UK is considered to be a high-income country (World Bank, 1999). Anyanwu (1989) has described the UK food system as a high-income urban food system. But because of a change in eating habits, large-scale production and centralised processing, it suffers from problems common to developed nations.

Development of food legislation in the England as well as the main components of the food control system has been described by Jukes (1993; 2000). The main primary legal control is provided by the Food Safety Act 1990. The administration of the food law is under the responsibility of the Food Standards Agency (FSA). Advisory committees advise Ministers to ensure that they use scientific and technical expertise in their regulatory work. Enforcement of food law has always been in the hands of the local authorities (Jukes, 1993), which have Environmental Health and Trading Standards Officers, Public Analysts and Food Examiners. Local authorities also perform surveillance. There is the PHLS (Public Health Laboratory Service) that includes among its activities, the microbiological testing of specimen, surveillance, research, evaluation, training and education (PHLS, 2000). England also has professional organisations like the Institute of Food Science and Technology (IFST) and consumer organisations with a particular interest for food, the most important one being the National Consumer Council (NCC), which is an independent body, partly supported by the Government.

2. Overview of the Mauritian food control system

Situated the between the south-eastern coast of Africa and India, is the small island of Mauritius. Mauritius is a net importer of food (Figure 1), importing mainly from France, South Africa, Australia and India. However, some food industries do export. The Mauritian consumer has become more quality-conscious with the increase in the standard of living that has occurred over the last 2 decades.

Food legislation

The FCS in Mauritius has been described in the Food Law Internet Project 2000 (Vytelingum, 2000a). In 1940, the first food legislation *per se* was made under the British rule³ and was known as the Food and Drugs Act (1940). The 1940 Act had become obsolete. Another problem was the monetary value (Charles, Goburdhun and Rughoo, 1998). Penalties given for any offence committed under it was between Rs⁴ 500-1000, and imprisonment not exceeding 3 months, which is absurdly low for a matter of public health concern. Assented in 1998, the Food Act strengthens the power of entry of authorised officers to food premises, increases penalties and also allows for seizure of food for analysis and more detailed enforcement procedures ranging from improvement notices to emergency prohibition orders. Regulations are mostly based on international Codex

² World bank's classification of economies, which is based on the Gross National Product (GNP) per capita, has been used. Countries are arranged into 3 groups according to the income. The GNP per capita cut-off levels are as follows:

- Low-income: \$ 785 or less
- Middle-income: \$786- 9655
- High-income: \$ 9656 and above. A further classification can be made between lower-middle-income and upper-middle-income economies (World Bank, 1999).

³ It was probably based on the British food law of that time: the 1938 Food Act.

⁴ £1 is approximately equal to Rs 43.

norms and include horizontal regulations like food labelling and food hygiene regulations as well as vertical regulations.

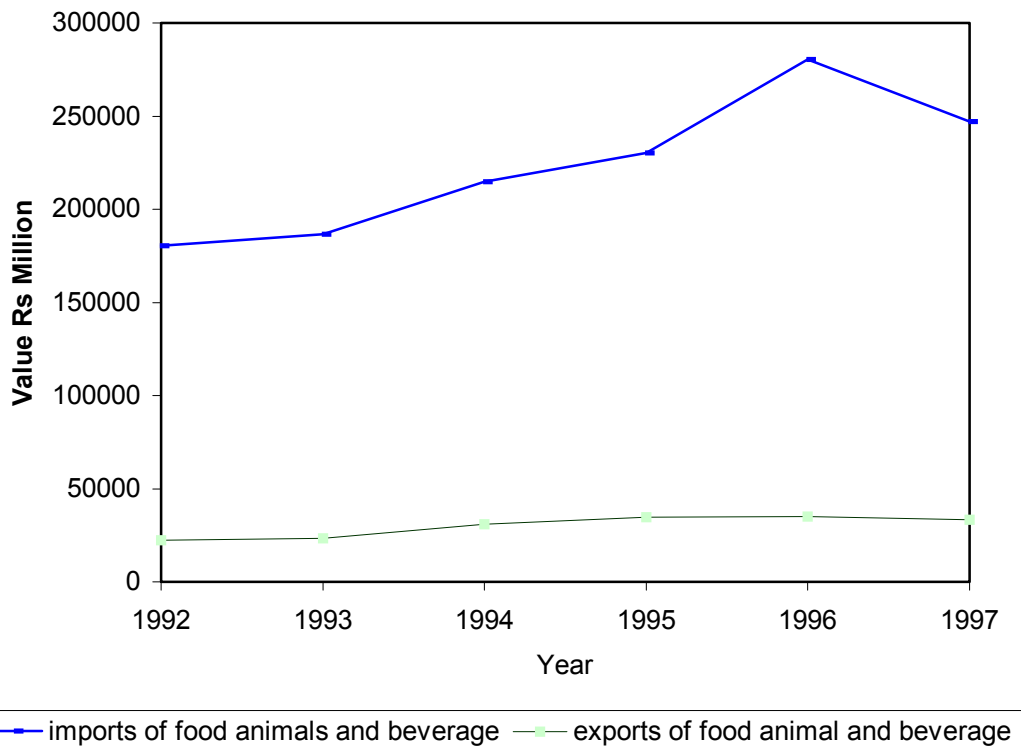


Figure 1: Food exports⁵ and imports of Mauritius in value terms (Adapted from CSO, (2000)).

Administration and enforcement

Food control is centrally administered and enforced by the Ministry of Health (MOH), though there is some local control in the enforcement activities. The qualifications required for local Health Inspectors is a Diploma in Sanitary Science of the University of Mauritius, or a Public Health Inspectors’ Diploma. Local authorities, although they have a fleet of 175 Health Inspectors (Vytelingum, 2000b), participate in enforcement to a limited extent only. The Ministry of Agriculture, Food Technology and Natural Resources shares a few administrative tasks with the MOH in special areas like animal products.

Supporting bodies

Supporting bodies in Mauritius include the Mauritius Standards Bureau which sets specifications that should be satisfied by a particular food. The Government Analyst Division and the Central Laboratory deal with food analysis. Two consumer organisations are known locally:

- Institute for Consumers’ Protection
- Association des Consommateurs de l’Ile Maurice

The local university (UOM) does carry out research in the field of food control, but much of its work is not publicised.

3. Mauritius and England: a comparison

Level of development

England and Mauritius focus on different aspects of food control. The British system favours food safety problems and leaves other parameters of control to a responsible food industry. In Mauritius, because of the limited resources available, mostly important aspects of food safety are considered. However, the government also intervenes on food quality matters because not all the stakeholders of the food industry are fully responsible. Cases of gross adulteration still exist, for instance milk adulteration with water (MOA, 2001). One

⁵ This excludes sugar.

explanation is the amount of resources each government can spend on establishing and maintaining a FCS. This is usually derived from the Gross National Product⁶. The UK has a GNP per capita almost 6 times higher than that of Mauritius (Table 1). Thus, it has more funds available for development and can invest more on food control activities.

Table 1: Comparison between the GNP per capita and the PHE% of UK and Mauritius (Source: author's calculations based on World bank data)

Country	UK	Mauritius
GNP per capita (US \$)	20710	3800
PHE%	5.8	2.2

The health status of a nation is an indicator of the impact of a FCS, particularly of its food safety policies. The percentage of the development budget allocated to implementation of a FCS is an indicator commonly used to assess this (WHO, 1989). Thus, the Public Health Expenditure as a % of the Gross Domestic Product (GDP) or PHE% could be used as an indicator of the budget allocated to food control activities. Generally, the higher the income of a country, the higher PHE% (Figure 2). This could partly explain the difference existing between food control systems of countries with differing levels of development. However, some countries that do not follow this trend, for example Country A. Possibly it faces many public health problems and spends more on public health. Other countries may choose not to spend so much of public health, because they have other priorities or the situation of public health in their country is not so critical.

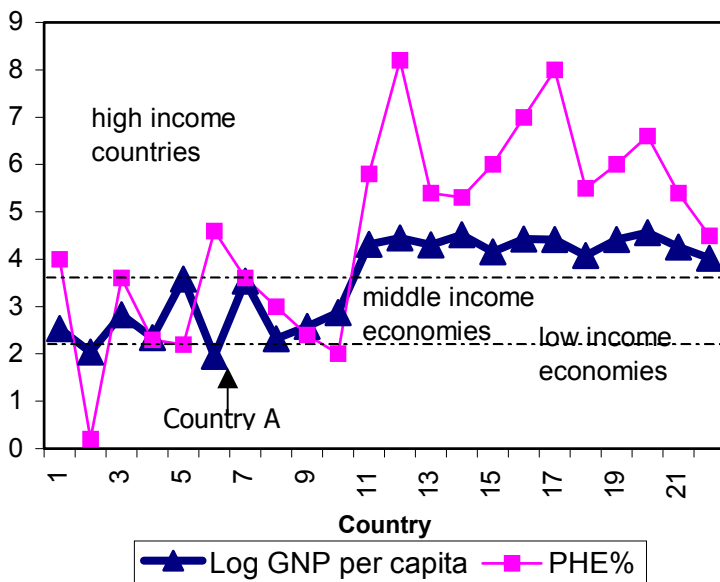


Figure 2: An association between the level of development of a country and its public health expenditure as a % of GDP (Source: based on author's calculations).

Food safety scares

Another reason behind the difference between Mauritius and England is the existence of 'food safety scares'. Associated with these is the rise of consumer phobia that forces a government to implement and maintain an effective food control system. This is probably what has led to the evolution of FCS in UK: highly publicised food scares and the rising number of food poisoning cases. For ease of comparison, the number of cases of formally notified food poisoning cases in both countries has been taken as a percentage of the population of each country. Even after this, the number of cases is much higher in the UK than in Mauritius. This might relate more to the difference in the reporting system of the 2 countries than to anything else. The poor quality and availability of statistics in Mauritius could prevent any consumer concern from surfacing.

⁶ This is usually the main indicator used to classify economies (World Bank, 1999).

However, it could be that Mauritius has not witnessed any major increase in mortality due to food-borne diseases, as seen in Europe (thus UK) over the last 2 decades⁷ (Figure 3).

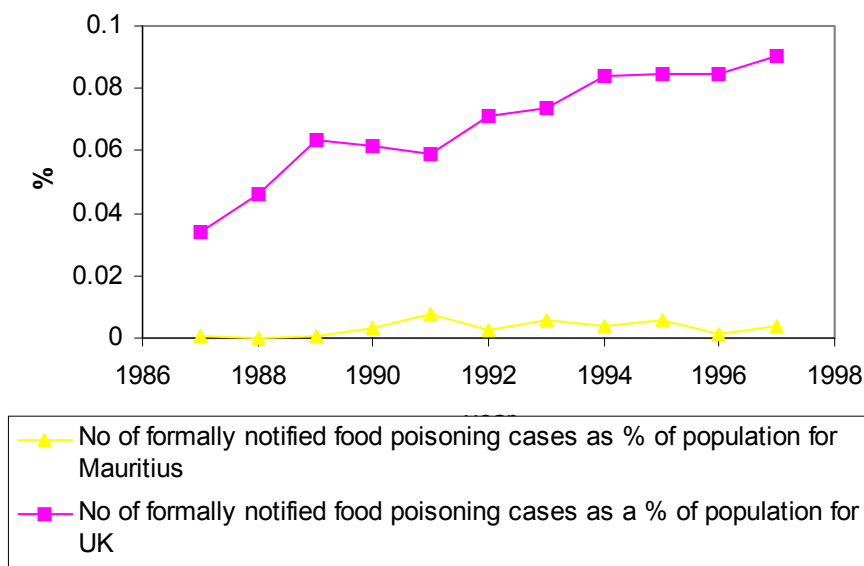


Figure 3: A comparison between the number of food poisoning cases in UK and Mauritius (Source: Author's calculations based on FSA, 2000 and CSO, 2000).

Components of the FCS

The British Food Safety Act (1990) has been made, based on the level of development of England, its food safety problems and its belonging to the EU. In Mauritius, the Food and Drugs Act 1940 has been used for nearly 60 years and has not been constantly evolving, but has been rather drastically modernised in 1998. The other problem arises from the fact that it has been inherited from UK. Indeed, the Mauritian Food Act is in essence similar to the British one (Vytelingum, 2000b) and has been barely adapted to the local context. Mauritius has limited resources compared to England to invest on its FCS. Codex standards have been used as guide, and to some extent, this has allowed alignment of national controls with international ones, thereby enabling Mauritius to meet its obligations under the Sanitary and Phytosanitary Agreement of the World Trade Organisation.

The latest trend in food legislation is deregulation (Gorny, 1996), nevertheless, in Mauritius, food regulations consist of 31 parts, 428 provisions, many of which are vertical regulations. Such a large number of regulations accompanied by many mandatory limits and standards will require many resources to be enforced, that is, the economics as well as the enforcement practicalities have not been considered. Already problems are cropping up at the level of implementation of the new food law and have been reported by local press articles (Ramasawmy, 2001). Large-scale manufacturers even disapprove of their non-participation at the drafting stage (Saib, 2002). In the informal sector, it is unfortunate to note that there is poor compliance with, albeit, knowledge of the new law, the Food Act 1998. (Vytelingum *et al.*, 1999; Duffaydar, 2001; Rumjaun, 2001).

Food law administration in England invokes transparency and independence. The formidable work of the FSA since its inception can only be acclaimed. Enforcement in England has been criticised because of a lack of uniformity in the enforcement activities of local authorities and internal conflicts. However, concepts such as the 'Home Authority' principle have certainly improved the situation. On the other hand, administration and

⁷ This is due to the:

- rise in mass rearing of food animals and their centralised processing leading to an increase in trade in food and animal feed and greater spread of enteric pathogens in raw and processed products
- mass migration of people and change in food habits
- environmental pollution (WHO, 1989)

enforcement, still subject to excessive secrecy in Mauritius, have been put to much pressure since the introduction of the Food Act 1998 (Saib, 2001). Constraints include:

- The small number of inspectors specialised in food control
- The lack of resources, that is funding, equipment for inspection and transport,
- The inadequate level of training of inspectors on certain aspects of food control such as novel foods, HACCP

To be fully effective, NFCS require the support of certain organisations. Both UK and Mauritius have these supporting bodies, but their efficiency as well as their contribution to the food control activities greatly varies from one country to the other. In UK, food analysis is performed in recognised well-equipped laboratories. There is also food borne disease surveillance at the local level, but there is a network to ensure efficient reporting. In Mauritius, it can be noted that scattered, non-accredited analytical services exist. This can result in a duplication of activities and a waste of already scarce resources. Also, a rather poor food-borne disease surveillance system exists. This may probably arise from the fact that there are no proper structures for reporting and recording diseases though it is mandatory to do so. Moreover, local authorities do not have the necessary infrastructure to ensure disease recording and private practitioners rarely report diseases to sanitary authority. There is also limited involvement of consumers and a lack of co-ordination between the two consumer organisations, leading to a waste in resources.

Management of the FCS

Mauritius does not make much use of management techniques compared to England. No programme monitoring and evaluation, no risk analysis procedures or application of performance history are currently in use. In comparison, Advisory Committees in UK use risk analysis in making legislation and in determining enforcement priorities (Anon., 2000).

Conclusions and Recommendations

The Mauritian FCS faces a number of constraints. The basic element, its food law, had been unsupportive for a long time. The sudden shift towards modernity is not occurring as smoothly as expected. Administration and enforcement suffer from a lack of co-ordination and hence this can lead to interdepartmental conflicts and to the duplication of work and to a waste of already scarce resources. There is also a lack of participation from supporting bodies. The malfunctioning of the local FCS is due to a lack of resources, causing in turn, understaffing, and ill-equipped laboratory facilities (Peersia, 2001). Other problems such as a lack of consultation and coordination with industry and consumers also exist. The constraints met by Mauritius are similar to that of developing countries. This has been earlier discussed by Vytelingum (2000b). The situation in Mauritius is characteristic of the state of food control in SSA, if not a better version. There is a certain dualism in the food system: on the one hand, there are small and medium scale food operators (including street food vendors) and on the other, there are large-scale operators that apply the latest food control techniques and have a good knowledge of legislation.

Some recommendations have been put forward for the improvement of the Mauritian FCS.

A national food control strategy that sets out:

- The order of priorities for these activities using techniques such as risk analysis,
 - Infrastructure needs,
 - Formal interaction to exist between the different players of the NFCS,
 - Provide guidelines for policy development and resource utilisation
- is required.

Ideally the administration of food control should be given to an independent agency for more transparency. Moreover, additional financial resources must be provided to enforcement bodies and analytical services to enable them to upgrade their services through training and purchase of equipment. Locally, there is limited consumer awareness of food safety problems in Mauritius and in Africa. Therefore, consumer demands for food control must be organised through the local consumers' associations. There should be a greater use of management techniques especially risk analysis. There should be increased emphasis on programme monitoring to check if the food control system is achieving its objectives.

Similar studies could be extended to other countries in SSA in view of any future harmonisation of regulations in the SADC region. It is a fact that Mauritius does not have many common points with all the countries in its region. However, Mauritius has been urged to form part of certain regional trading blocs with the establishment of the WTO, the most influencing one being the Southern African Development Community (SADC). The adherence to such blocs and to their ensuing agreements must be negotiated with caution. As one of the key elements of the SADC regional development package is regional trade in food and agricultural commodities. The organisation has started its activities by focussing on 2 aspects of food security: food availability and effective access to food supplies. Food safety and quality do not form part of its agenda at this point in time, though these are 2 issues now considered to be part of the food security concept (Codex, 1987). This is to be deplored, because countries in SSA are at different levels of development. Any food trade must be effectuated with care to avoid transference of food safety problems across borders.

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