

## Urban Sustainability and Malaysian Laws on Environmental Management of Chemical Substances

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**Abstract:** Agenda 21 based on parts 19.1 and 19.11 highlighted that there are thousands of chemical substances in the world market, a lot of which emerge as poison and toxin in business goods, food and the variety of environmental medium especially in urban area. This has shown that chemical substances bestow awful impact to the environment which includes urban area. Therefore, this study will classify the relevant Malaysian laws on environmental management that managed chemical substances particularly in urban area in order to achieve urban sustainability. This study also has become aware of that there is no specific law in Malaysia that governed the environmental management on chemical substances. However, there are several laws that regulate the environmental management of chemical substances in different area such as the Environmental Quality Act 1974. The Environmental Quality Act, 1974 is related to the control of chemical substances in air and hazardous wastes whilst the Food Act, 1983 controlling chemical substances in the products and goods in the food industry. As for the Occupational Safety and Health Act, 1994 is on regards chemical substances in the occupational environment and meanwhile the Pesticides Act, 1974 to control chemical substances in pesticides. Meanwhile the management of these laws is not the responsible of a single government ministry. Different government ministries may enforce the laws relevant to the operation of that ministry. Hence, the Environmental Quality Act, 1974 is the responsible of the Ministry of Natural Resources and Environment, the Occupational Safety and Health Act, 1994 is by the Ministry of Human Resources whilst the Food Act, 1983 is by the Ministry of Health and as for the Pesticides Act, 1974 under the supervision and administration of the Ministry of Agriculture and Agro-based Industry. Finally this study has concluded that Malaysia has a sufficient laws in which may adequately control chemical substances in various life cycles as to comply with international law particularly in urban area in order to achieve urban sustainability.

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**Key words:** Laws, environmental management, chemical substances, pesticides, relevant, sustainability

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### INTRODUCTION

Urban sustainability as illustrated by number of researchers is a mixture of assortment features of life including culture, social, economic and environment (Hadi *et al.*, 2007) further defined urban sustainability as a capacity to sustain the quality of life we value or to which we desire. In operational words it is usually analyses as patterned the environment, social, cultural and economic well-being of current and future

inhabitants (Hadi *et al.*, 2007). Urban sustainability has been also submitted as related to the concept of sustainable development. The concept of sustainable development has been defined by the World Commission on Environment and Development as development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs. The above-said concept covers two essential scopes, i.e., environment and social aspects. This concept of sustainable development has been

highlighted in the 1992 United Nations Conference on Sustainable Development in Rio de Janeiro, as the results, Agenda 21 and Rio Declaration has been established (Razman *et al.*, 2010). According to Sands (1995), Agenda 21 emphasises the following matters which include sustainable human settlement, population, consumption pattern, poverty and human health. On the other hand, Mensah (1996) stated that the Rio Declaration addresses on mankind entitlements and rights which include health and productive life.

Basically this concept of sustainable development has been an element in the international legal framework since early as 1893. According to the case of United States of America v Great Britain (1893) 1 Moore's Int. Arb. Awards 755, well known as Pacific Fur Seals Arbitration where in this case the United States of America has stated that a right to make sure the appropriate and lawful use of seals and to protect them for the benefit of human beings from meaningless destruction (Razman *et al.*, 2010).

Sands (1995) indicated that this concept of sustainable development is perhaps the greatest contemporary expression of environmental policy, commanding support and presented as a fundamental at the Rio Summit, Rio Declaration on Environment and Development in year (1992) (Razman *et al.*, 2009a-c; Razman and Azlan, 2009).

According to Article 33 of the Lome' Convention (1989) states that 'in the framework of this Convention, the protection and the enhancement of the environment and natural resources, the halting of deterioration of land and forests, the restoration of ecological balances, the preservation of natural resources and their rational exploitation are basic objectives that the African-Caribbean-Pacific (ACP) states concerned shall strive to achieve with Community support with a view to bring an immediate improvement in the living conditions of their populations and to safeguarding those of future generations (Birnie and Boyle, 1994; Razman *et al.*, 2009a, b).

The above-mentioned Article 33 introduces into international legal framework the concept of sustainable development with one of the initiatives was on reduce and/or eliminate the emissions and discharges of an initial set of 12 chemicals which being considered as Persistent Organic Pollutants especially on urban area in order to achieve sustainability (Birnie and Boyle, 1994; Razman and Azlan, 2009).

Based on Stockholm Convention (2001) international community has taken actions to protect human health and the environment through measures which will reduce and/or eliminate the emissions and discharges of an initial

set of twelve chemicals which being considered as Persistent Organic Pollutants (POPs) i.e. aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene, polychlorinated biphenyls, polychlorinated dibenzo-p-dioxins and polychlorinated dipenzofurans. Subsequently, the Stockholm Convention on Persistent Organic Pollutants (POPs) was opened for signature on 23rd May 2001 with the objective of to protect the environment and human health from hazardous chemicals. Its function is to be of global relevant and of multimedia coverage. Under the Convention, various parties involved are obligated to take, whatever measures to reduce or eliminate releases of the POPs, particularly the 12 chemicals involved (Razman and Azlan, 2009; UNEP Chemicals, 2002).

Therefore, this study will identify the relevant legislations and subsidiary legislations in Malaysia that governed the environmental management of chemicals. Even though, there is no specific legislation in Malaysia that governed the environmental management of chemicals, however there are several legislations regulate the environmental management of chemicals in different areas, e.g., the Environmental Quality Act, 1974 is related to the control of chemicals in air and hazardous wastes whilst the Food Act, 1983 controlling chemicals in the products and goods in the food industry. As for the Occupational Safety and Health Act, 1994 is on regards chemicals in the occupational environment and meanwhile the Pesticides Act to control chemicals in pesticides.

The enforcement of these legislations is not the responsible of a single government agency. Different government departments may enforce the legislation relevant to the operation of that department. Hence, the Environmental Quality Act, 1974 is the responsible of the Ministry of Natural Resources and Environment, the Occupational Safety and Health Act, 1994 is by the Ministry of Human Resources whilst the Food Act, 1983 is by the Ministry of Health and as for the Pesticides Act, 1974 under the supervision and administration of the Ministry of Agriculture and Agro-based Industry.

**Description on malaysian laws concerning with the chemical substances:** The main sources of the Malaysian laws on environmental management of chemical substances consist of both legislations and subsidiary Legislations. Legislations refer to laws enacted by a body constituted for this purpose. In Malaysia, Parliament at federal level and various State Legislative Assemblies for their respective states enacted legislations (Razman and Shukor, 2001). Laws passed and enacted by Parliament are called Acts but those after the Malayan Union (1946) till

independence (1957) are referred Ordinances and those laws made by State Legislative Assemblies are known Enactment. However, laws passed by Sarawak Legislative Assembly are called Ordinances (Razman and Shukor, 2001).

Subsidiary legislations are also known as subordinate legislations or delegated legislations. Subsidiary legislations are rules and regulations enacted by an authority under the powers conferred on it by the parent legislations. In addition, according to the section 2 of the Interpretation Act (1967) provides the definition of the terms subsidiary legislation as any proclamation, rule, regulation, order, notification, by-law or other instrument made under any Ordinance, Enactment, Act or other lawful authority and having legislative effect (Aun, 1997).

**Environmental quality Act, 1974:** The Environmental Quality Act, 1974 is a common Act that relates to activities affecting the surroundings. The purpose of the Act is to regulate and set up standards on areas needing an overall control such as water, waste, soil and air.

Subsidiary legislations under the Act prescribe the responsibilities to carry out environmental impact assessments of any new project development which considered as prescribed activities and exceeding certain size limits that may affect the environment. Besides that subsidiary legislations under this Act also concern about environmental quality matters with include scheduled waste, emissions from diesel engines as well as prohibitions on the use of certain substances in soaps and detergents are available. These subsidiary legislations also regulate the management of the hazardous chemicals such as furan, dioxin and PCB.

The provisions on the management of the hazardous chemicals such as furan, dioxin and PCB have been laid down under Environmental Quality (Schedule Wastes) Regulations (1989) and Environmental Quality (Dioxin and Furan) Regulations (2004) (Legal Research Board, 2005a).

**Pesticide Act, 1974:** The Pesticide Act (1974) is designed in sequence to guarantee a registration of the pesticides before these are marketed in Malaysia. The active substance in the pesticides has to be assessed according to an environmental evaluation, a health evaluation and arrangement according to the effectiveness. An alternative assessment to guarantee that only less pesticide are approved seems not to be a part of the registration system. A pesticide registration has to be renewed within every three years and new scientific data and/or reinforced elements and features can outcome in a

rejection. Under the relevant sections of the Act, seven sets of rules and regulations have been gazetted as below:

- Pesticides (Pest Control Operator) Rules, 2004
- Pesticides (Advertisement) Regulations, 1996
- Pesticides (Highly Toxic Pesticides) Regulations, 1996
- Pesticides (Licensing for Sale and Storage for Sale) Rules, 1988
- Pesticides (Importation for Educational and Research Purposes) Rules, 1981
- Pesticides (Labelling) Regulations, 1984
- Pesticides (Registration) Rules 1976 (Legal Research Board, 2005b)

**Poisons Act, 1952:** The Poisons Act (1952) is an instrument formed in line to control importation, manufacture, storage, possession, compounding, transport, sale and use of poisonous substances or preparations (Legal Research Board, 2005c).

**Food Act, 1983:** The Food Act, 1983 is to protect the public against health hazards and fraud preparation, sale and use of food and for matters incidental there to or connected there with. With regards to chemicals, this Act is to limit the amount of certain chemicals in products meant for human consumption by setting specific maximum residue level for various groups of food. Examples of chemicals are food additives, antibiotic residue and pesticide residue which have been clearly tabulated 6th to 10th Schedule, 15 Schedule and 16 Schedule of the Food Regulation, 1985 (Legal Research Board, 2005f).

**Dangerous drugs Act, 1952 (Revised, 1980):** The Dangerous Drugs Act (1952) controls of the importation, exportation, manufacturing sale and use of opium and certain other dangerous drugs and substances to prevent and control that the substances do not go through into the illegal and prohibited market (Legal Research Board, 2005e).

**Sale of drugs Act, 1952 (Revised 1989):** The Sale of Drugs Act (1952) is formed to guarantee the efficacy, safety and quality of drugs and the safety of cosmetics. This is being done through registrations of the drugs either imported to-or manufactured in Malaysia. Responsible for the registrations are the Drug Control Authorities (DCA) (Legal Research Board, 2005c).

**Occupational safety and health Act, 1994:** The coverage of the Occupational Safety and Health Act 1994 is to

protect the safety, health and welfare of employees at place of work. This Act to give safety and protection other persons than those at work from risks to safety arising from the work activities, to encourage an occupational surrounding that is tailored to the physiological and psychological needs of the employees and to attain this through a sequence of subsidiary legislations. The Act has authority over all occupational matters except for work in the armed forces and work on board of ships.

The Act highlights general responsibilities based on employers and self-employed designers, manufacturers and suppliers and employees. It set of subsidiary legislations for written safety and health policy, safety and health organisation and arrangements. There is also a subsidiary legislation on the duty of the employer to establish safety and health organisations and safety and health arrangements.

#### **ENVIRONMENTAL MANAGEMENT OF CHEMICAL SUBSTANCES FOR URBAN SUSTAINABILITY**

**Import and export:** The Pesticides Act, 1974 forbids the importation of prohibited and unregistered pesticides. Importation of pesticides obliges a registration and obtaining consent for each import from the Pesticides Board (Legal Research Board, 2005b).

The import and export of hazardous waste is controlled and supervised by the Royal Custom and Excise Department. The prohibited and strictly controlled chemicals are listed in the Custom Import and Export Orders of 1988 (Legal Research Board, 2005d). Department of Environment is responsible for the Prior Informed Consent (PIC) procedures concerning prohibited or strictly controlled chemicals and other global notification systems (Legal Research Board, 2005a, d).

Industrial and laboratory chemicals are not regulated, except for those chemicals which covered by the above-mentioned list of prohibited or strictly controlled chemicals. The import of strictly controlled chemicals needs a special endorsement at the Royal Custom and Excise Department (Legal Research Board, 2005d).

The occupational safety and health subsidiary legislations, highlights safety data sheets and caution labels on materials having hazardous substances used in workplace.

**Production:** The release of chemicals to the external surroundings and the emission of chemicals to water and waste are regulated by the Environmental Quality Act, 1974. The Occupational Safety and Health Act, 1994 and its subsidiary legislations regulate the exposure of chemicals at the place of work. The objective is to reduce

the exposure to chemicals by risk assessments, classification of suitable control measures and supervising their efficiency. There are special subsidiary legislations control mineral dusts, lead and asbestos.

The Occupational Safety and Health Act, 1994 stipulate the responsibility of the employers to certify the safety of the usage of chemical substances. It also highlights the responsibilities of the formulators, suppliers and manufacturers to make available information on the safety of the usage and management of the chemical substances.

**Storage:** Storage of chemicals is commonly synchronized by Department of Safety and Health in the Occupational Safety and Health Act 1994 and subsidiary legislations, which cover up the employers' common responsibilities regarding storage and safety features. The requirements for storage in the factories is synchronized by the Factories and Machinery Act (1967) and relevant subsidiary legislations enacted in the act which illustrated the manner of the storage such as container, explosion and risk of fire and the compatibility of stored materials.

The storage of pesticides is synchronized by the Pesticides Act, 1974 and the vendor of pesticides is required to obtain a licence from the Pesticides Board. On the other hand the Environmental Quality Act, 1974 stipulated the provisions on the storage of hazardous waste (Legal Research Board, 2005a, b).

**Transport:** The chemical transportation is enforced from by different authorities and legislation. In general, the legislation concerning transport of certain dangerous goods and petroleum products by sea and land is become established by the Ministry of Domestic Trade and Consumer Affair and the Ministry of International Trade and Industry. These subsidiary legislations are also partly controlled by other agencies (Legal Research Board, 2005g).

The Environmental Quality Act, 1974 laid down on the provisions on the transportation of scheduled waste (Legal Research Board, 2005a).

**Marketing/sale:** The Occupational Safety and Health Act, 1994 highlights the rules for packaging and labelling of products used in the working surroundings. As for the Pesticides Act, 1974 enforced the provisions on the marketing pesticides in Malaysia (Legal Research Board 2005a).

**Disposal:** The Environmental Quality Act, 1974 also taking care of the pollution on regards of the disposal and the disposal of waste. Its subsidiary legislations cover both overall control and measure for disposal of waste

and specific subsidiary legislations on acknowledged pollutants in the produced waste. Scheduled waste, effluents and sewage are covered by specific subsidiary legislations that inter alia highlighted scheduled waste, labelling requirements of containers and information that to go together with the waste for transportation of premises. Scheduled waste covers pharmaceuticals as a separate group (Legal Research Board, 2005a).

### CONCLUSION

Based on the above discussion it is obvious that Malaysia has an adequate regulatory framework that can control chemicals in various life cycles. Many governmental agencies are required to enforce the relevant legislations together through integrated environmental management. In doing so it is recommended that the Minister of Natural Resources and Environment may implement such authorities and powers to integrate the environmental management on chemicals which have been highlighted under the section 21 and 51 of the Environmental Quality Act, 1974 to reinforce the matter.

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