



Urban Management

Elixir Urban Mgmt. 65B (2013) 19756-19762

Elixir
ISSN: 2229-712X

A Study on urbanization and waste management in Iran

Mahdi Vatan Prast

Quchan Branch, Islamic Azad University, Quchan, Iran.

ARTICLE INFO

Article history:

Received: 20 November 2013;

Received in revised form:

27 November 2013;

Accepted: 15 December 2013;

Keywords

Waste,
Urban management,
Recycling,
Composting,
Waste management regulations.

ABSTRACT

Urbanization Growth in the world and our country has been reached to the extent that in most of countries amongst our country nearly 70 percent of people live in cities and this matter make urban managers determined to study the urban issues with planning and providence. Attention to environmental and human health, and all creatures on earth is one of fundamental principles in survival and life of God given gifts that are widely available to us, environment, pollution control including solid waste forms an important part of this task that according to the principles and norms of economic health is allocated special place in new Science and Technology. Attention to community health and preventive aspects of health compliance. Garbage management is concerned with managing garbage separately that is not mixing up the dry waste with the wet, not collecting the recyclable and non-recyclable together this could lead to many problems. A very simple example is plastic bags if present in the waste used for composting would cause a lot of problems as it would not turn into soil but would remain there for years. This study is intended to have Look at Waste Management in Iran.

© 2013 Elixir All rights reserved

Introduction

Urbanization is one of the most important phenomena of modern times. Where in the world is to talk of the urban revolution. Urbanization developments have been very rapid and quick in Iran. The average growth rate of urbanization in the studying period has been 4.4% While GDP growth in the same period has been 4.1%. In other side a simple sociological rule says that any change and transformation out of the organizational and rules leads to many unintended consequences.

Pattern of urban development has been an urban single dominant pattern in Iran and also has been focused on realistic. Iran in recent three or four decades has been passed several various habitats including the Oil habitat, urbanization habitat and high calving (population).

In such circumstances urbanization is faced to many consequences and issues such as of injustice expansion, the social damage development and increasing social heterogeneity and helping to expand the kinds of social, economic and cultural crises. The most issue of urbanization is environment pollution and Lack of sanitation and solid waste by citizens that needs a mass mobilization and proper waste management by municipalities to the neighborhood of the city.(Sanai Gholam ,1988)

The Population growth and diversity of needs in human communities follows the issue of production increase and finally Residual waste. Some of these residual wastes are very dangerous and in Small amounts can be emerge damaging affect to health and the environment.

Hazardous toxic waste that are the result of human activities in different sectors of industry, agriculture, services and trade and daily using of citizens in urban regions over the years, without regard to principles of environmental and engineering and having a correct waste management have been disposed in land or discharged waters acceptor. And in this way cause for

the soil, water and air pollution and human health and other living things to have threatened.

1. Over time and determine the effects of disposal of non-principal of these garbage and wastes in the environment and specification of their adverse effects on organisms. The main countries of producing such wastes determine to regulate the regulations and rules concerning the transport, control and disposal of these wastes materials in order to control and have prefect management on them Thus, dealing with these wastes have found international dimension and global strategies is proposed for solving their problems .Since management and dealing with hazardous waste, requires their more recognition . So it is necessary to be familiar with their characteristics, classification circumstance through different definitions so as to compliance with the principles and technical aspects of these substances reduced their harmful effects .But before explaining the management and deferent methods of wasted disposal we shall discuss the situation of urbanization with issues and challenges.(Omrani, Qasim Ali 1988).

Growth of urban population

Nowadays along with the population increase in cities we are witness of many problems that such problems can pointed to sanitary, noise pollution, air and water, transport problems in urban slum and most important of these issues is urban garbage accumulation and lack of sanitation due to much usage of people and if the basic remedy and solution is not considered major problems in urban life seem to be pressing issues. Also Population variability of cities with their economic and social problems and issues has created a completely new form of city, urbanism and Urbanization that has many different with what was seen in cities in the first half of the twentieth century. Considering that the bulk of the population at present are living in cities the effective application of necessary measures and contrivances is felt that have to be taken by the organizations and institutions that have a defined role in urban management . One of the institutions that plays central role in order to enhance

the quality of life in urban environments, providing facilities, services and Keeping the city clean and sanitary is municipality. As is clear from the definition of municipality (is a non-governmental institution that runs from the people ' taxes and rates or municipality is public agency independent of local institute that has been established as favorable habitat for administrating the affairs of civil and villages such as , city health, welfare and comfort of residents and , .

Municipal garbage collection is considered as one of the necessities of urban management that municipality is undertake this importance and its appropriate enforcement action could play an important role in cleanliness and beauty of cities. One of the main priorities for the garbage collection is the subject of public participation. People should used to with a culture to put their waste or home garbage in outdoor on time that causes the municipal employees do their job properly and not impose added costs on the system .(Arcadio P.Sincero Sr.,1999).

Despite the development of urbanization and urban population growth, People still have not learn the culture of urbanization, They do not yet know what the characteristics of urban life and how he should behave in the city?

One important characteristic of urban management and is problem of waste collection and disposal of garbage which is very important and expensive.

Solid waste management

- Attention to environmental and human health, and all creatures on earth is one of fundamental principles in survival and life of God given gifts that are widely available to us, environment, pollution control including solid waste forms an important part of this task that according to the principles and norms of economic health is allocated special place in new Science and Technology. Attention to community health and preventive aspects of health compliance

- Garbage management is concerned with managing garbage separately that is not mixing up the dry waste with the wet, not collecting the recyclable and non-recyclable together this could lead to many problems. A very simple example is plastic bags if present in the waste used for composting would cause a lot of problems as it would not turn into soil but would remain there for years.(Khani Mohammad Reza& Mehadi Khosro pur 2012).

Solid-waste management is a major challenge in urban areas throughout the world. Without an effective and efficient solid-waste management program, the waste generated from various

Human activities, both industrial and domestic, can result in health hazards and have a negative impact on the environment. Understanding the waste generated, the availability of resources, and the environmental conditions of a particular society are important to developing an appropriate waste-management system.

Solid-waste management may be defined as the discipline associated with controlling the

Generation, storage, collection, transfer and transport, processing, and disposal of solid waste

In a manner that is in accordance with the best principles of health, economics, engineering,

Conservation, aesthetics, and other environmental considerations, and that is also responsive to public attitudes. In its scope, solid-waste management includes all administrative, financial, legal, planning, and engineering functions involved in the solutions to all problems of solid waste. The solutions may involve complex interdisciplinary fields such as political science, city and regional planning, geography, economics,

public health, sociology, demography, communications, and conservation, as well engineering and materials science.

For instance, if waste is wet or has a low heating value, it would not be possible to Incinerate it without adding supplemental fuel. If a portion of the waste stream consists of Organics and can be easily separated from other waste materials, bioconversion of the waste May become a viable strategy. On the other hand, the waste generated by industrialized countries may be different from those generated by non industrialized countries. Non industrialized societies may have more organic waste than those generated by industrialized countries. If this is the case, composting or anaerobic digestion may be more suitable for organic waste management.

The activities associated with managing solid waste from the generation point to final Disposal normally include generation, reduction, reuse, recycling, handling, collection, transfer and transport, transformation (e.g., recovery and treatment), and disposal. Depending on site specific conditions, a sound waste-management program can be established by combining some of the necessary activities into integrated solid-waste management. On the other hand, legislative efforts and effective implementation are vital for the safe management and disposal of solid waste. Incentives may be provided for the development and practice of safe treatments, harmless manufacturing processes, and methods for converting solid waste into valuable resources by recycling and reuse. On the part of industry, industrial waste-management is also indispensable from the viewpoint of both the social responsibility of business corporations and ISO 14000, which will influence their survival in global markets.

Operational Definitions

I. waste

The waste is a massive artifact of human hands. Daily over 3.5 million tons of waste are generated in worldwide that In developed countries 80% of waste is recycled and returns to the consumption cycle, and rest is disposed in Sanitary form of or burned.

II. Wet Waste: perishable waste, including residues in food, vegetables, fruits, garden waste, and green space requirements. Are easily decomposed in nature corrupt and analyzed constitute about 70 percent of wastes, these are all high volume and occupy valuable space of waste disposal sites speedy

III. Household hazardous waste: These wastes are divided into two categories;

1st Bach is materials such as, the band wound materials, diapers, syringes, blood, needles and razor.

2nd Bach material such as car batteries, other types of batteries, fluorescent lamps, toxicant dishes, toxins, pesticides, oil, grease and.....

IV. Municipal solid waste: municipal solid waste includes all waste is resulted from residential, commercial, office and industrial sources.

V. Various Types of recyclable materials in municipal solid waste:

Plastic: Are the main pollutants of the environment. The main problem of plastic containers is that they analyzed very late and very soon filled and occupied waste sanitary landfill sites.

Pat: bottles of mineral water and soft drinks, HDPI, milk bottles, motor oil gallons.

LDPI: Propylene Packaging containers of bread and vegetables: yogurt containers, syrup bottles, the bottles, bottle caps veneer chips and cake.

Polystyrene: disposable cups, packaging containers of nuts and meat.

Paper: Most materials producing paper is from trees such as pine and cypress. Million tons of papers are consumed annually in Iran that much of it is imported to country with high cost. To produce one ton of paper the 17 trees should be cut .Paper is the world's fifth largest Industry consumer and to produce per tons of paper 400 thousand kilowatt of electricity is consumed.

Aluminum: Some cans are made of aluminum. Aluminum cannot be decomposed up to 500 years.

Computers and other electronics waste:

2. Most of the consumers are unknown to of toxic substances in furniture and equipment that are rely to them for word processing and information management and assessing to internet and also electronic games. More than 1,000 kinds of materials are used in computer equipment totally. Computers have a short life. Because the hardware and software companies continuously produce new programs that are required more speed and memory. Studies show that many of the within a warehouse of offices houses computers are keeping used computers and if one day these computers be discarded, huge volume of toxic materials is released in nature that to recycle them will be a complex task. Many computer producing companies in European countries exercising the plan of recollecting the worn computers of their own production from customers but since in our country, most purchased products are imported in informal forms so there is no possibility to communicate effectively with producers, and this adds to the problems.(Rodbari Ali,Shasvar Hajar, Hosini Seyd Ali Asghar&Zahedi Mrim 2008).

Optimal management of waste necessity

In the present time daily, over 48,000 tons of waste is generated in cities and, villages of which around 37,360 tons are urban and the rest rural. The annual the considerable amount of recyclable materials like, paper and plastic are buried in heart of the earth annually whereas if normal wastes be processed about 71 % of them is recyclable, and about 25 percent is usable in RDF and REJECT Burner systems and small amount little will be transported to landfills. (The municipalities' organizations).

Waste is capital

There are a Few years that the efficiency matter of urban garbage has been considered and urban management also have plans for converting of wet and dry garbage into investment .

One of the common benefit of municipal waste and garbage considering contribution of 70% wet garbage is to produce compost from these waste that urban management has done a planning to convert wet garbage into compost in recent years. But the lack of a market competitive of this fertilizer causes for unimportant created capital of garbage.

Many people reminisce the garbage as dirty gold that need support and base making all part that all parts amongst government should be involved in this sector. In recent years a growing effort has been done to produce compost and reduce environmental hazards of urban garbage. Due to the physical and chemical analysis of the residue in Tehran city determined that nearly 70 percent of the waste in Tehran is organics' fins. The best way to make safe and bring it back into the natural cycle is compost.

Garbage composting is one of the oldest methods of optimization, but with advances in science and technology, its production methods has been changed.

The compost is a combination of food waste and garbage that has changed through aerobic decomposition into a rich black and white soil.

The manure that produced from household and food waste is one of the best fertilizers for agricultural purposes, it is also possible for manufacturers' plants and flower to use of this fertilizer.

Spending over 220 billion to man (equivalent to 74 million\$ dollars) annually for waste management is an issue of increasing the utilization of waste can be less and less and to be followed desirable profitability for the citizens.

Create new employment opportunities and raising the level of income generated from the exploitation of the is other benefits of urban waste.(Esmi Nemat Ala,Mehrabi Tavana Ali& Karimi Ali Akbar" 2004).

Waste management

Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and the process is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management is a distinct practice from resource recovery which focuses on delaying the rate of consumption of natural resources. The management of wastes treats all materials as a single class, whether solid, liquid, gaseous or radioactive substances, and tried to reduce the harmful environmental impacts of each through different methods. (Miner JOHN B,2006)

Waste management practices differ for developed and developing nations, for urban and rural areas, and for residential and industrial producers. Management for non-hazardous waste residential and institutional waste in metropolitan areas is usually the responsibility of local government authorities, while management for non-hazardous commercial and industrial waste is usually the responsibility of the generator.

Sanitary Burial

Disposal of waste is solid wastes transfer them to a special place of burial in the soil in such a way that the environment is not harmless. Sanitary landfill, an effective and proven method for permanent disposal of waste. In any area where there is adequate land, disposal method can be used as well. The most common method of waste disposal in the world. Waste disposal operations include the following four steps:

- dumping waste in a controlled situation
- Spread a thin layer of compacted waste material volume (thickness about 2 m)
- Material covered with a thick layer of soil about 20 cm
- Cover the final layer of garbage about 60 cm thick soil

Waste disposal is a perfectly acceptable and safe method for the disposal of municipal waste has been proposed as an alternative to the piled up garbage. Cover material at landfill waste effectively calling insects, rodents, birds and other animals and prevents waste. Layer of soil cover Waste disposal is a perfectly acceptable and safe method for the disposal of municipal waste that has been proposed as an alternative to the piled up garbage. To cover material at landfill waste effectively calling insects, rodents, birds and other animals and prevents waste. The soil cover layer of air exchange and prevent waste and surface water that may penetrate into the landfill minimizes. The soil layer thickness for daily cover material used for the cover should be at least 15 cm and 60 cm of soil in the fissures of waste in the depths to obtain required control in the creation or production of gas leakage in deep or surface.

Landfill selection

To Select the required land suitable for the disposal of municipal waste, landfill is the most important action that must be carefully and partnership agencies and institutions such as environmental protection, Environmental health, Water

Regional Srjngldary Agriculture and Natural Resources and also the municipal corporation is doing . Sanitary landfill waste should be accounted for at least 25 years and not for the development of the city. This is both in terms of commuter traffic from cache garbage trucks and landfill operations both in terms of the issues that is of interest, it is very important. Select Type of land for landfill design and operation of waste as well as the tools needed to have a direct impact on this case. Briefly, the important factors that should be considered in selecting a landfill are considering public health, land requirements, local topography, hydrology and geology of the place, the availability of suitable soil cover, the availability of landfills, city landfill space, observing the direction of prevailing winds, drainage, landfill costs and future use of the land and pay particular attention to any comprehensive plan for urban development.

Methods of disposal Landfill

Disposing of waste in a landfill involves burying the waste, and this remains a common practice in most countries. Landfills were often established in abandoned or unused quarries, mining voids or borrow pits. A properly designed and well-managed landfill can be a hygienic and relatively inexpensive method of disposing of waste materials. Older, poorly designed or poorly managed landfills can create a number of adverse environmental impacts such as wind-blown litter, attraction of vermin, and generation of liquid leach ate. Another common byproduct of landfills is gas (mostly composed of methane and carbon dioxide), which is produced as organic waste breaks down an aerobically. This gas can create odour problems, kill surface vegetation, and is a greenhouse gas.(Mohammad Khan, Rohala, 2004).

Design characteristics of a modern landfill include methods to contain leach ate such as clay or plastic lining material. Deposited waste is normally compacted to increase its density and stability, and covered to prevent attracting vermin (such as mice or rats). Many landfills also have landfill gas extraction systems installed to extract the landfill gas. Gas is pumped out of the landfill using perforated pipes and flared off or burnt in a gas engine to generate electricity.

Incineration

Incineration is a disposal method in which solid organic wastes are subjected to combustion so as to convert them into residue and gaseous products. This method is useful for disposal of residue of both solid waste management and solid residue from waste water management. This process reduces the volumes of solid waste to 20 to 30 percent of the original volume. Incineration and other high temperature waste treatment systems are sometimes described as "thermal treatment". Incinerators convert waste materials into heat, gas, steam and ash.

Incineration is carried out both on a small scale by individuals and on a large scale by industry. It is used to dispose of solid, liquid and gaseous waste. It is recognized as a practical method of disposing of certain hazardous waste materials (such as biological medical waste). Incineration is a controversial method of waste disposal, due to issues such as emission of gaseous pollutants.

Incineration is common in countries such as Japan where land is scarcer, as these facilities generally do not require as much area as landfills. Waste-to-energy (Wte) or energy-from-waste (EfW) is broad terms for facilities that burn waste in a furnace or boiler to generate heat, steam or electricity. Combustion in an incinerator is not always perfect and there have been concerns about pollutants in gaseous emissions from incinerator stacks. Particular concern has focused on some very

persistent organics such as dioxins, furans, PAHs which may be created which may have serious environmental consequences.

Recycling

Recycling is a resource recovery practice that refers to the collection and reuse of waste materials such as empty beverage containers. The materials from which the items are made can be reprocessed into new products. Material for recycling may be collected separately from general waste using dedicated bins and collection vehicles, or sorted directly from mixed waste streams. Known as kerb-side recycling, it requires the owner of the waste to separate it into various different bins (typically wheelie bins) prior to its collection.

The most common consumer products recycled include aluminum such as beverage cans, copper such as wire, steel food and aerosol cans, old steel furnishings or equipment, polyethylene and PET bottles, glass bottles and jars, paperboard cartons, newspapers, magazines and light paper, and corrugated fiberboard boxes.

PVC, LDPE, PP, and PS (see resin identification code) are also recyclable. These items are usually composed of a single type of material, making them relatively easy to recycle into new products. The recycling of complex products (such as computers and electronic equipment) is more difficult, due to the additional dismantling and separation required.

The type of material accepted for recycling varies by city and country. Each city and country has different recycling programs in place that can handle the various types of recyclable materials. However, variation in acceptance is reflected in the resale value of the material once it is reprocessed.

Sustainability

The management of waste is a key component in a business' ability to maintaining ISO14001 accreditation. Companies are encouraged to improve their environmental efficiencies each year. One way to do this is by improving a company's waste management with a new recycling service. (Such as recycling: glass, food waste, paper and cardboard, plastic bottles etc.) (Merzai Elaeh, , 2007).

Biological reprocessing

Waste materials that are organic in nature, such as plant material, food scraps, and paper products, can be recycled using biological composting and digestion processes to decompose the organic matter. The resulting organic material is then recycled as mulch or compost for agricultural or landscaping purposes. In addition, waste gas from the process (such as methane) can be captured and used for generating electricity and heat (CHP/cogeneration) maximizing efficiencies. The intention of biological processing in waste management is to control and accelerate the natural process of decomposition of organic matter.

There is a large variety of composting and digestion methods and technologies varying in complexity from simple home compost heaps, to small town scale batch digesters, industrial-scale enclosed-vessel digestion of mixed domestic waste (see Mechanical biological treatment). Methods of biological decomposition are differentiated as being aerobic or anaerobic methods, though hybrids of the two methods also exist.

Anaerobic digestion of the organic fraction of municipal solid waste (MSW) has been found to be in a number of LCA analysis studies to be more environmentally effective, than landfill, incineration or pyrolysis. The resulting biogas (methane) though must be used for cogeneration (electricity and heat preferably on or close to the site of production) and can be used with a little upgrading in gas combustion engines or turbines.

With further upgrading to synthetic natural gas it can be injected into the natural gas network or further refined to hydrogen for use in stationary cogeneration fuel cells. Its use in fuel cells eliminates the pollution from products of combustion.

An example of waste management through composting is the Green Bin Program in Toronto, Canada, where Source Separated Organics (such as kitchen scraps and plant cuttings) are collected in a dedicated container and then composted.

Energy recovery

The energy content of waste products can be harnessed directly by using them as a direct combustion fuel, or indirectly by processing them into another type of fuel. Thermal treatment ranges from using waste as a fuel source for cooking or heating and the use of the gas fuel (see above), to fuel for boilers to generate steam and electricity in a turbine. Paralysis and gasification are two related forms of thermal treatment where waste materials are heated to high temperatures with limited oxygen availability. The process usually occurs in a sealed vessel under high pressure. Paralysis of solid waste converts the material into solid, liquid and gas products. The liquid and gas can be burnt to produce energy or refined into other chemical products (chemical refinery). The solid residue (char) can be further refined into products such as activated carbon. Gasification and advanced Plasma arc gasification are used to convert organic materials directly into a synthetic gas (syngas) composed of carbon monoxide and hydrogen. The gas is then burnt to produce electricity and steam. An alternative to paralysis is high temperature and pressure supercritical water decomposition (hydrothermal monophonic oxidation).

Resource Recovery

Resource recovery (as opposed to waste management) uses LCA (life cycle analysis) attempts to offer alternatives to waste management. For mixed MSW (Municipal Solid Waste) a number of broad studies have indicated that administration, source separation and collection followed by reuse and recycling of the non-organic fraction and energy and compost/fertilizer production of the organic waste fraction via anaerobic digestion to be the favored path.

Avoidance and reduction methods

An important method of waste management is the prevention of waste material being created, also known as waste reduction. Methods of avoidance include reuse of second-hand products, repairing broken items instead of buying new, designing products to be refillable or reusable (such as cotton instead of plastic shopping bags), encouraging consumers to avoid using disposable products (such as disposable cutlery), removing any food/liquid remains from cans, packaging, ...^[3] and designing products that use less material to achieve the same purpose (for example, light weighting of beverage cans)

Waste handling and transport

Waste collection methods vary widely among different countries and regions. Domestic waste collection services are often provided by local government authorities, or by private companies in the industry. Some areas, especially those in less developed countries, do not have a formal waste-collection system. Examples of waste handling systems include:

- In Europe and a few other places around the world, a few communities use a proprietary collection system known as Envac, which conveys refuse via underground conduits using a vacuum system. Other vacuum-based solutions include the MetroTaifun single-line and ring-line systems.

- In Canadian urban centres curbside collection is the most common method of disposal, whereby the city collects waste and/or recyclables and/or organics on a scheduled basis. In rural

areas people often dispose of their waste by hauling it to a transfer station. Waste collected is then transported to a regional landfill.

- In Taipei, the city government charges its households and industries for the volume of rubbish they produce. Waste will only be collected by the city council if waste is disposed in government issued rubbish bags. This policy has successfully reduced the amount of waste the city produces and increased the recycling rate.

- In Israel, the Arrow Ecology company has developed the ArrowBio system, which takes trash directly from collection trucks and separates organic and inorganic materials through gravitational settling, screening, and hydro-mechanical shredding. The system is capable of sorting huge volumes of solid waste, salvaging recyclables, and turning the rest into biogas and rich agricultural compost. The system is used in California, Australia, Greece, Mexico, and the United Kingdom and in Israel. For example, an ArrowBio plant that has been operational at the Hiriya landfill site since December 2003 serves the Tel Aviv area, and processes up to 150 tons of garbage a day.^[5]

While waste transport within a given country falls under national regulations, trans-boundary movement of waste is often subject to international treaties. A major concern too many countries in the world has been hazardous waste. The Basel Convention, ratified by 172 countries, deprecates movement of hazardous waste from developed to less developed countries. The provisions of the Basel convention have been integrated into the EU waste shipment regulation. Nuclear waste, although considered hazardous, does not fall under the jurisdiction of the Basel Convention. (Esmi Nemat Ala, Mehrabi Tavana Ali & Karimi Ali Akbar, 2004).

Technologies

Traditionally the waste management industry has been slow to adopt new technologies such as RFID (Radio Frequency Identification) tags, GPS and integrated software packages which enable better quality data to be collected without the use of estimation or manual data entry.

- Technologies like RFID tags are now being used to collect data on presentation rates for curb-side pick-ups.

- Benefits of GPS tracking is particularly evident when considering the efficiency of ad hoc pick-ups (like skip bins or dumpsters) where the collection is done on a consumer request basis.

- Integrated software packages are useful in aggregating this data for use in optimization of operations for waste collection operations.

- Rear vision cameras are commonly used for OH&S reasons and video recording devices are becoming more widely used, particularly concerning residential services.

Waste management concepts



Diagram of the waste hierarchy

There are a number of concepts about waste management which vary in their usage between countries or regions. Some of the most general, widely used concepts include:

- Waste hierarchy - The waste hierarchy refers to the "3 Rs" reduce, reuse and recycle, which classify waste management strategies according to their desirability in terms of waste minimization. The waste hierarchy remains the cornerstone of most waste minimization strategies. The aim of the waste hierarchy is to extract the maximum practical benefits from products and to generate the minimum amount of waste see: resource recovery.

- Polluter pays principle - the Polluter Pays Principle is a principle where the polluting party pays for the impact caused to the environment. With respect to waste management, this generally refers to the requirement for a waste generator to pay for appropriate disposal of the waste.

Challenges and opportunities in urban garbage management

3. Tendency and attention to the environment and human health safety and all living creatures on earth is one of the fundamental principles in survival and the use of God-given gifts that are given to us in abundance. Environment pollution control, including, urban garbage, which constitutes an important part of this task according to the principles and criteria of economic health has allocated special place to itself in new Science and technology. Therefore, significant points such as the importance of the challenges and opportunities, identify and classify materials, shipment and collection systems and disposal methods must clearly regarded and considered at the termination,, in attempting to provide fundamental solutions to improve Terms and optimization technology in urban garbage and solid waste management that in case of its practice reflected a substantial impact on community and environmental health.(Nair Abadi, Hadi& Hajji Mir Rhami Seyed Mahmud ,2008).

One of the environmental issues in urban living is garbage production .Solid waste; liquid and gas are threat to our environment each in different aspects of health. Out of these three components the solid waste is in a crisis situation is. Unfortunately in developing countries such as solid waste and garbage management is still rudimentary and unscientific here the weaknesses, strengths, threats, challenges and opportunities in the field of garbage and solid waste management have been studied in the context.

a) Challenges in the field of garbage and waste management

To identify and recognize the challenges ultras assists the management of solid waste and garbage management system can be reduced or eliminated at the challenges and increasing opportunities. The major challenges of garbage and waste management that the developing countries face with them include negative attitudes, lack of compiled programs, lack of research, lack of funds, poor education and practical knowledge, poor motivation NGOs.that can be point out to these issues in brief as follows:

4.The major challenges in garbage and waste management in developing countries can consider a negative attitude to this area, unfortunately, the root of many problems and turmoil in the area of garbage and waste management may be negative attitude to this area.(Ayyazi Syed Mohammed Hadi, 2013).

1. This negative attitude is in different layers of society with varying degrees of intensity and infirmity. There is a negative view towards solid waste and also urban garbage in general level of society which these negative attitudes are more because of a negative mental background and aesthetic to this issue. The perception has caused due to lack of proper management of

waste and urban garbage piled up in cities in result of creating sanitary problems and aesthetic (odor, bad shots, latex, etc.).

While the nature of municipal garbage and waste produced in the beginning it is not unfavorable. But by the passage of time and lack of systematic approach of authorities to health and environmental are causing problems.

2. Research Weaknesses: Unfortunately, this is a disorder of the developing country and even in studies and research in ways out of this problem; the research approach is not adopted. The dominant approach to the problem of research in developing country such as, Iran, india,,, is a is a descriptive approach i.e. instead of providing the reasons of disorder of research and study in this filed as a problem and with the study of various aspects of collecting evidence and valid data, effective and scientifically solutions be provided for improving its situation It is always the problem itself is explained in various ways.

3. Motivation weakness of NGO: Unfortunately developing countries NGO activities are very poor and the temporary is due to the fact that one of the main motivating factors of this organizations is economical outlook (income) so because of Information producing about poor and low knowledge of organization despite the high economical potential in garbage and waste management area ,in

View point of many NGOs, this field is not reliable.

4. Educational and executive Poverty awareness: generally concern manager's officials 'average knowledge and in these centers of garbage and waste management factor are low.

5. **Lack of funding:** Research and operational plans Codification and ultimately solve problems and optimizing processes in the field of garbage management is costly.

Due to poor management of waste and garbage produced concerns by environmental and public health; therefore, attention is to be taken seriously to the funding shortfall. Most of municipalities complain for lack of funds that shows the issue of budget is general affair and careful planning in relation to the ways of funding (state, recycling, NGO, etc.) should be developed.

6. Programs developed weakness: The reason that many of the programs which have been developed in the field of garbage and management faced with challenges during the implementation processes can be counted in disproportionate and

Inconvenience to the actual conditions prevailing on the waste management in the developing countries. The lack of consistency and coordination with the real conditions is also because of reasons which have not been developed based on research processes.

B) Challenges and perspectives in the field of garbage and waste management

1. The basic step after the priorities of challenges with waste and garbage management system in the developing countries, is the analyze of these challenges and provide appropriate solutions. Parameters in the perspective of waste management include: changing attitudes, strengthening research, recycling optimization and enhanced credits. Challenges, opportunities and perspectives in the field of urban garbage and waste management show that although there is a profound gap between current and desired situation, yet this system has a powerful potentials that in case of organizing and cohesion, can fill this gap gradually.(Mohammad Mirjalili, Amin Asgari Negad& Hosini Mohammad Mirza ,2006).

The field of garbage management is a multifaceted process and the various agencies and entities in different ways dealing with it, and in many cases their functions are overlapping in this field. That this caused much confusion and inconsistency in the

formulation and implementation of management plans in this arena. To develop a long-term perspective can provide an opportunity to the reform, transparency and clear rules that may speed up tasks and functions in the areas of access to efficient and the acceleration management of this arena.

In this respect, it seems the best way to achieve the desired outcome is staircase planning in several 5-yearly period for urban garbage and waste managing in developing countries and evaluating the efficiency and recognize the weaknesses and strengths and it is assess opportunities and threats at these intervals that can be considered as an important step in developing and promoting waste management infrastructure.

Conclusion

Urban growth in the world and our country is so much that in many countries, including our country Iran, nearly 70 per cent of people live in cities and it further intended the city managers consider and study the issues by urban planning and foresight. The purpose of this study was to provide a definition of the types of urban waste. Have a look at the situation of waste management in other countries; provide the various methods of data collection of municipal waste, and the look at waste management in developing countries, including Iran.

Proper management of waste including attention to less garbage production in the recycling line from origin of the production, Collection and proper disposal of such material, which is in fact comprise the main elements of this management to optimize is necessary this matter. Waste management, is the management practices on human activities. In fact is aimed at stopping or reducing the adverse effects of garbage on human health. If our products are manufactured in the industry, are produced from raw materials to produce the least garbage or perfect recycle in environment, if any, Also on production processes in the factory, the factory can produce as little waste as much as the targets of "industrial ecology" can be achieved.

In order to avoid short prorogation, where some of the basic strategies that will definitely optimize management of our municipal waste are effective to have the following summary, it is hoped the special programs of health and environment should be considered:

1. To do needed studies in order to evaluate the situation of collection and disposal of waste in different cities with special emphasis on less garbage producing principles.
2. Formulation of preparations, submission and approval of rules and standards in this area, with special emphasis on toxic and dangerous waste, especially the garbage of health centers.
3. Conducting seminars and training for staff of municipal utilities in the country.
4. Funding to improve urban environmental health, by home Ministry particularly bio compost Industry development.
5. He basic steps for securing machinery required to mechanize the new methods of collection and disposal of waste.
6. Necessary Coordination for funding to build bio compost factories and recycled from origin through the banking system of the country.

7. Prepare guidelines and directives for improvement of solid waste management and the prevention and prohibition of unhealthy waste recycling in cities.

References

1. Arcadio P. Sincero Sr. Environmental Engineering a Design Approach. Prentice Hall of India. ISBN- 81-303- 14, 03-74, New Delhi - 110001, 1999.
 2. Ayyazi Syed Mohammed Hadi" Urban Management- Foundations and areas" 1st volume, Teysa pub., 2013, Tehran, Iran.
 3. Esmi Nemat Ala, Mehrabi Tavana Ali & Karimi Ali Akbar" "A Study on Situation of Collection and Disposal Sanitary in units of Ascending to top of Sablan Mountain", Military Journal, Volume 6, Number 3, Fall 2004, Tehran, Iran.
 4. Khani Mohammad Reza & Mehadi Khosro purr "Practical Guide to Waste Management" Volumes I and II, Khanyran Pub, Municipalities and Rural agencies, Tehran, Iran, 2012.
 5. Merzai Elaeh, Health education, health promotion Handbook of Public Health Vol.1, 2007, Tehran, Iran.
 6. Mohammad Khan, Rohala," Successful strategies for collecting and transporting Waste" quarterly Journal of Education – Research, 2004, Tehran, Iran.
 7. Mohammad Mirjalili, Amin Asgari Negad & Hosini Mohammad Mirza "Environmental effects of waste management: a case study Metropolis "Guadalajara" in Mexico, 12th Conference of Civil Engineering Student, 2006
 8. Nair Abadi, Hadi & Hajji Mirr Rhami Seyed Mahmud "urban waste management through avan" Presented at the 1st Conference on Urban GIS – 2008, Tabriz, Iran.
 9. Omrani, Qasim Al Solid waste materials. Volume 1, Scientific Center Pub. Islamic Azad University Tehran 1988.
 10. Rodbari Ali, Shasvar Hajar, Hosini Seyd Ali Asghar & Zahedi Mrim" Collection of source segregated waste produced by NGOs and public participation; waste Management Journal, No.8, 2008, Tehran, Iran.
 11. Sanai Gholam Housing Industrial Toxicology, No. 1730, Volume I, 2nd edition Tehran University Publications, Tehran, Iran 1988.
 12. Sabiri Hussain & Fadakar Davarani Mohammad Mehadi" Optimization of collection, transport and disposal of hospital waste hospital Quarterly Hussain, no.7-8, Tehran Medical science, university 2009, Tehran, Iran
 13. zarabi Asghar, Jamal Mohammad & Ahangari Shoesh "solid waste Management with an emphasis on garbage recycling (case study, the city of Bukan- Iran)", Geography and Environmental Planning Annually Journal , Number 4 , 23rd year Winter , 2013
- <http://www.shahrsazionline.com/category/training-center>
 - <http://www.aftabir.com/articles/view/social/environment/c4c1199615214p1.php>
 - <http://shealth.sums.ac.ir/department/environmenta/environmента/karshanshi/dafehzobale.html>
 - <http://kamal19.blogfa.com/post-164.aspx>