



**Petro Imen Sharif**  
Company



**Islamic republic of  
Iran**



**Iran – Germany**  
Waste Management  
Initiative

# *Potential in waste sector in **Iran***

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**I.G.W.M.I**

Iran-Germany waste Management Initiative

## A summery of the country profile

**Location :** Islamic republic of Iran is located between the Caspian Sea in north and the Persian Gulf and the Gulf of Oman in south. The country was formerly known as Persia.

**Area of Iran :** 1,648,195 km<sup>2</sup>

**Climate:** Semiarid; subtropical along the Caspian coast.

**Population :** 79 million people (in 2017)

**Largest city and capital** is Tehran. Other major cities are Mashhad, Isfahan, Karaj, Tabriz, Shiraz, Ahvaz, and Qom.



**Natural resources:** Petroleum, natural gas, coal, chromium, copper, iron ore, lead, manganese, zinc, sulfur.

**Agriculture products:** Wheat, rice, other grains, sugar beets, fruits, nuts, cotton; dairy products, wool; caviar.

**Industries:** Petroleum, petrochemicals, textiles, cement and other construction materials, food processing (particularly sugar refining and vegetable oil production), metal fabrication, armaments.

**Exports - commodities:** petroleum 80%, chemical and petrochemical products, fruits and nuts, carpets, cement, ore

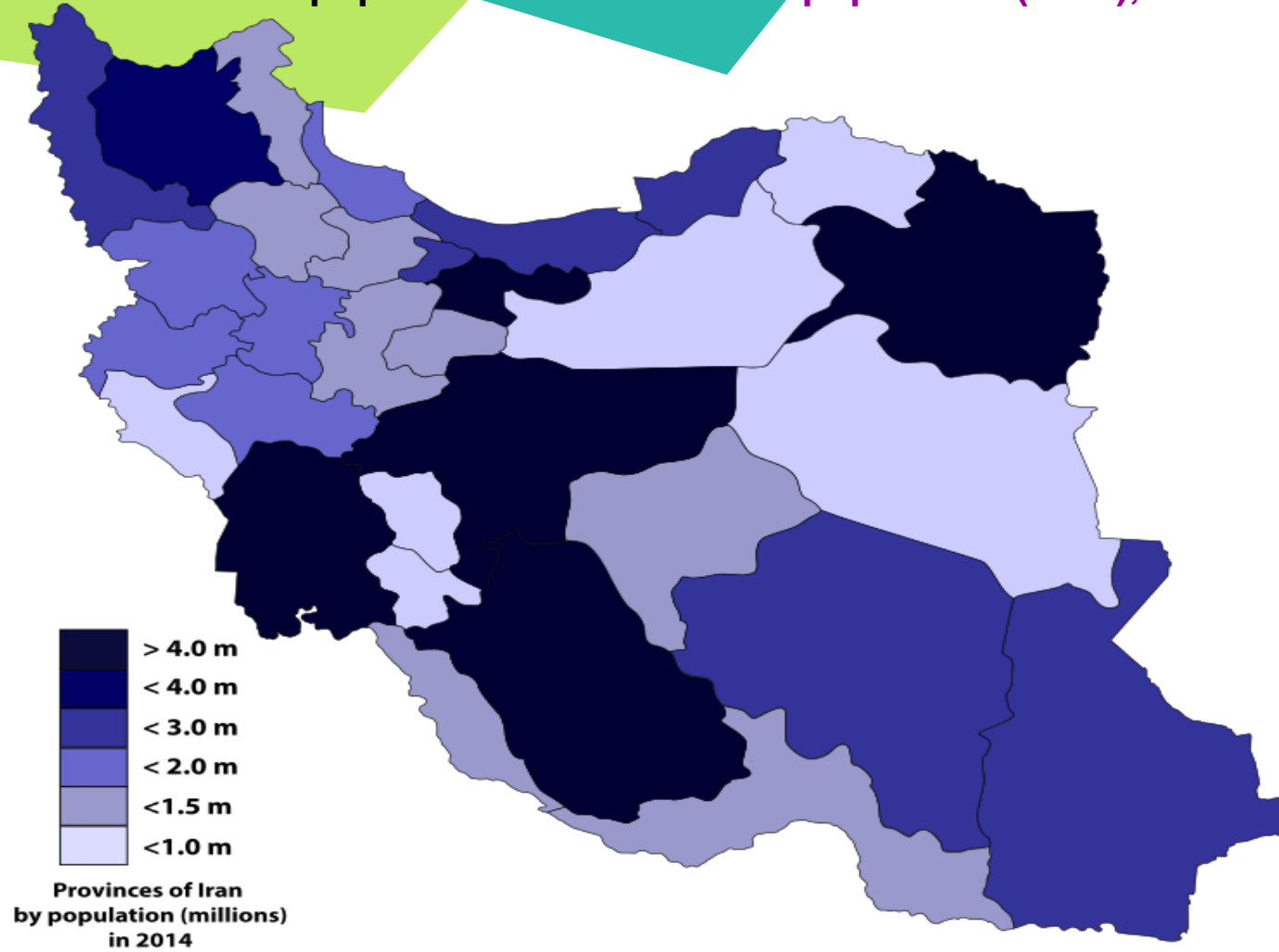
**Imports - commodities:** industrial supplies, capital goods, foodstuffs and other consumer goods, technical services

# Iran profile at a glance

parameter	Quantity	Year/unit
area	1.648	Million sq km
coastline	2700	Km
climate	Warm Mediterranean	
Highest temperature	48.8	Degree c
Minus temperature	-24.4	Degree c
Annual precipitation	21 - 1685	Mm
population	79300000	(2014)
P growth rate	Less than 1 % (0.76)	% (2010)
Life expectancy	69.1	year
GDP	368.9 billion \$	2013

Reference: Economic Ministry and Organization of Municipalities -2017, IGWMI Conference

Urban population: 73.4% of total population (2015),



Provinces of Iran by population in 2014,

## The most important national laws and regulations

- Act of the sixth Economic, Social and Cultural Program of Islamic Republic of Iran (Paragraphs (c) and (p), Article 38) - waste management by municipalities , at least 20% of excising waste /aannually
- The Environmental Protection and Enhancement Act
- The Executive By-Law on the Prevention of Water pollution.
- The different national Technical Guidance and Standards.
- Soil comprehensive act which is being under ratification by the I.R. Iran s' parliament.

## The specific laws and regulations as to waste management

- The waste management law and its executive by-law,
- The national principles on environmentally sound management of E-waste,
- The national principles on environmentally sound management of medical waste,
- The national principles on environmentally sound management of agricultural waste,
- The national principles on environmentally sound management of PCBs.
- The criteria for the definition between non- hazardous and hazardous waste,
- The environmental criteria for the waste disposal,
- The technical requirements and necessities for construction of the waste disposal sites
- The criteria for use of biodegradable plastics in products,
- The qualitative and quantitative criteria for the executive management of industrial wastes for food, textile, and leather products,
- BAT & BEP , Technical guidance provided by Conventions.
- The Basel ,Rotterdam and the Stockholm Conventions.
- The Minamata Convention (on Mercury)

## The specific laws and regulations as to waste management

- The qualitative and quantitative criteria for the executive management of industrial wastes for (chemical ,medicinal ,cellulosic ,oil and petrochemical industries),
- The instructions for overseeing on trans-boundary movement and shipment of hazardous waste in accordance with the Basel Convention,
- The criteria to reduce the consumption of plastic bags is being approving,
- Soil quality standards and its guidance,
- Comprehensive National Plan on Waste Management at the national level the provinces.

## The National waste management strategies



**Avoid , Reducing ,Reuse ,Recycle , Recover , Treat , Dispose**

**The Best strategy.**

For example :extending life time , re-use , re-manufacturing and recycling before considering the waste-to-energy option in its circular economy plans

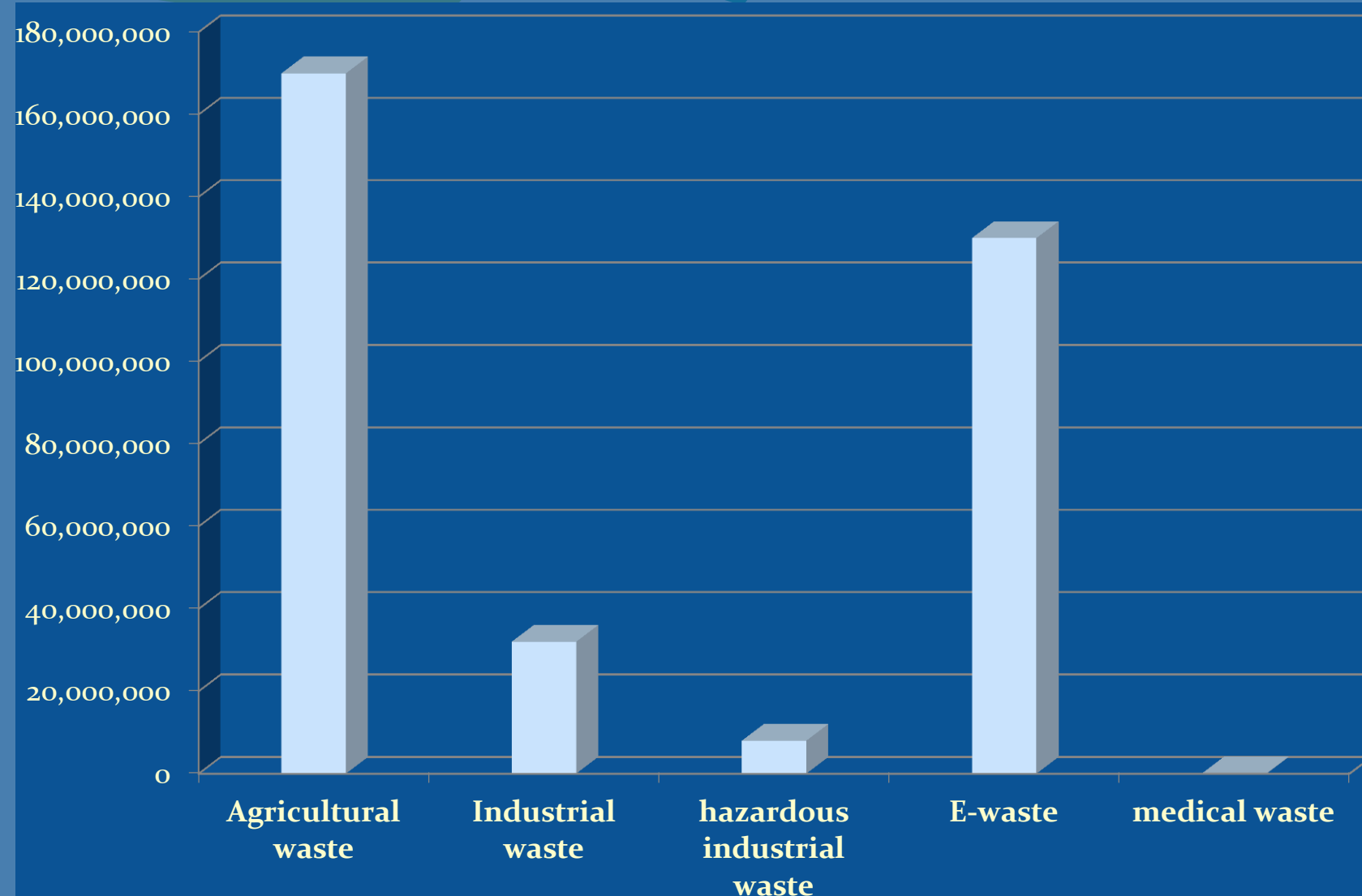


## Waste generation statuses in Iran

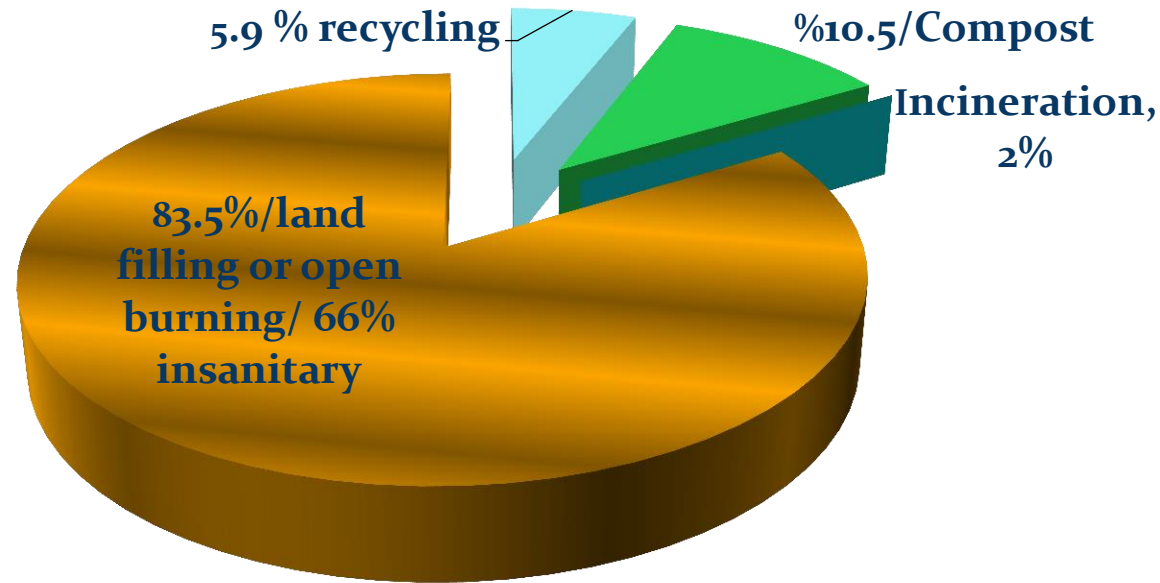
**Table(1) : Average amount of municipal solid waste**

<b>Waste management</b>	<b>population</b> (person)	<b>Total waste</b> (ton/day)	<b>Person</b> (g/day)	<b>percentage</b> %	<b>Segregation</b> %
<b>Cities</b>	54,000,000	38630	710	55	13
<b>Villages</b>	23,000,000	11000	470	16	4
<b>Major cities</b>	19415887	15442	800	22	6.8
<b>The north coastal provinces</b>	7386310	5391	729	8	3.5

## Estimated amount of waste - ton /year

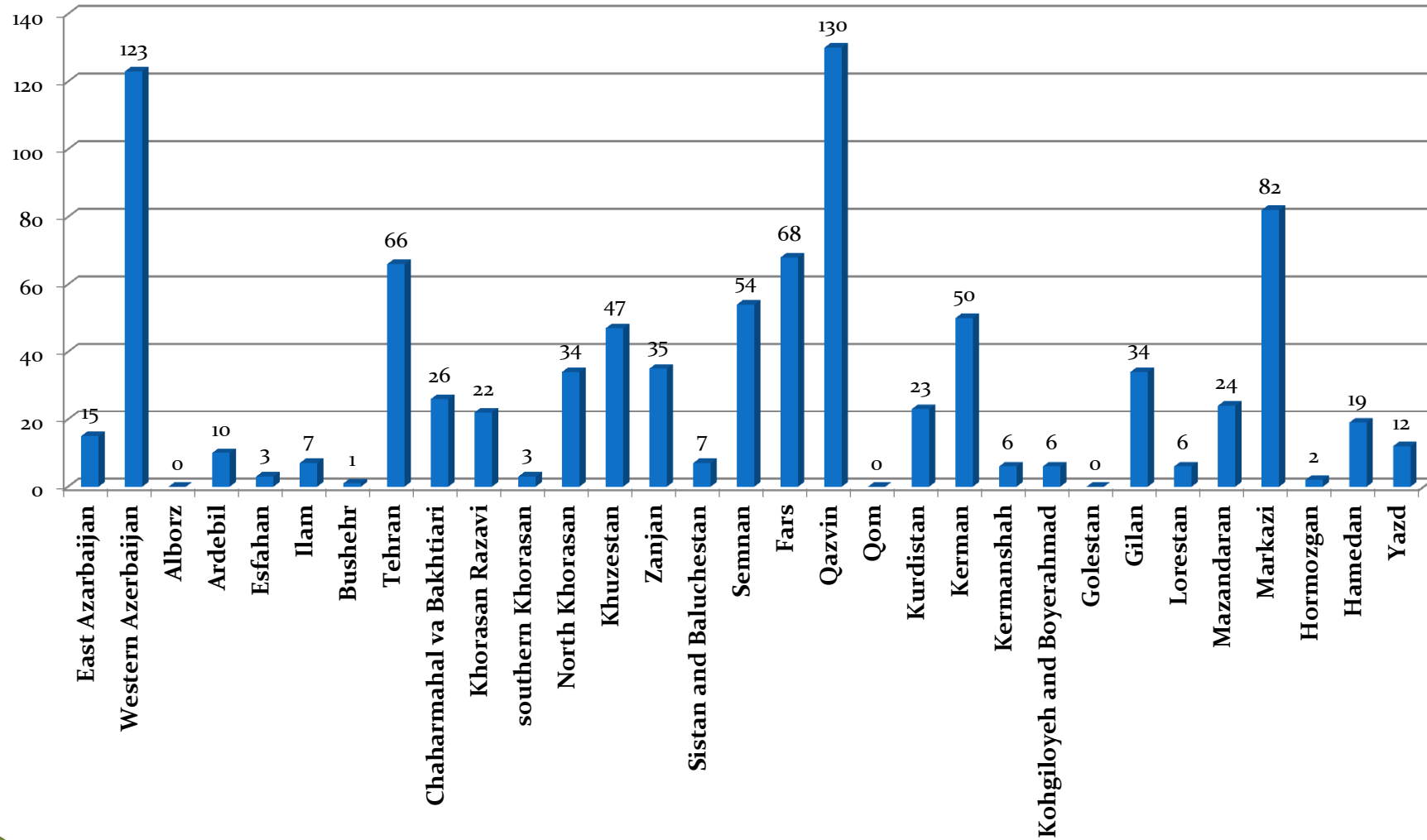


# Waste disposal in Iran



Waste management facilities	Number
Recycling centers	926 (68% are working)
Municipal solid waste disposal (landfill)	600
Compost & Bio-compost	31
Incinerator (waste to Energy)	1
Hazardous waste management site	3

## Number of recycling centers in provinces- 2016



## Significant progress

- ratification of waste law , executive by-law and related regulations,
- creating the necessary structures,
- establishing the organization responsible for solid waste management in provinces inside municipality,
- inter-agency collaboration through the creation of committees
- increasing private sector role in service provision
- coordination and cooperation among the relevant institutions has been progressed through the establishment of participatory platforms
- Being a party of the Basel, Stockholm, Rotterdam and Minamata conventions
- Establishing different committees and working group both in national and provincial levels.

## challenges, barriers and opportunities

- inadequate knowledge and low information of the authorities and investors to contribute to the economic activities related to the environmentally waste management services , project and so on..,
- lack of financial incentive tools and instruments to promote the recycling condition in the country,
- the financial and economic instability ,
- lack of the comprehensive national databases on wastes.
- lack of the Intelligent monitoring and control of waste management system,
- low knowledge and information about the new technologies on waste disposal facilities, especially on incinerators ,their maintenance and monitoring .

## Major environmental issues and challenges

- Lack of adequate municipal solid waste management system according the national waste management strategies.
- Producing a huge amount of the different types of wastes
- Inadequate situation of the waste recycling in the country ,
- The lack of proper and systematic waste segregation and collection,
- informal market about the buying and selling of wastes,
- lack of the hazardous waste management system on the liquid and solid laboratory waste, food oil and motor oil waste and E-waste segregation, storage and collection and final disposal.
- Lack of online tracking & control system on wastes from the place of production to the place of disposal ( collection , transportation, discharge, accidents, open burning , land filling or incinerating) .

## Some considerable points for the future

- Updating the current national rules and regulations according the current country economic, social and environmental condition,
- Practices or mechanisms to prevent waste from being created in the first place, and develop the main mechanisms of zero waste,
- Practices or mechanisms to changes our methods of both production and consumption,
- Economic estimation methods of environmental damage caused by waste,
- Promotion the status of waste collection, segregation and transportation in the cities by using innovative practices and appropriate techniques,



- At least 20% annual progress of the waste management condition in the coastal provinces ( with emphasis on the north provinces) and major cities,
- Technical and economical waste treatment solutions,
- Developing the environmental services and job creation instruments to help waste management,
- Identifying the production, storage and disposal condition of E-wastes (In terms of quantity and quality)
- Construction of the waste disposal site in the provinces according the geographical ,social and environmental considerations (Waste to energy after 3Rs) and equip them with the advanced and intelligent monitoring and control system,
- To promote the status of waste recycling in the country (technology transfer and information exchange to properly recycle different materials (plastics, paper ,metals))
- Capacity building of the human resources and the organizations,
- Public awareness and partnership.

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**Thanks!**

**Any questions?**

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