

Current Status of Solid Waste Management in Mongolia and Business Opportunities



***BADAM
DELGERBAYAR***

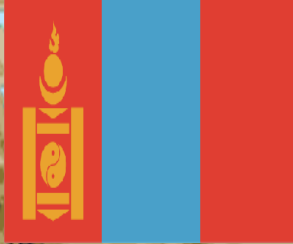
UNIDO NPM



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RUSSIA

Mongolia lies in the Eastern Asia & the Pacific region, between Siberia on the north and China on the south . The total surface is of the country is about 1,564,116 km² , population is 3 million.



MONGOLIA

CHINA

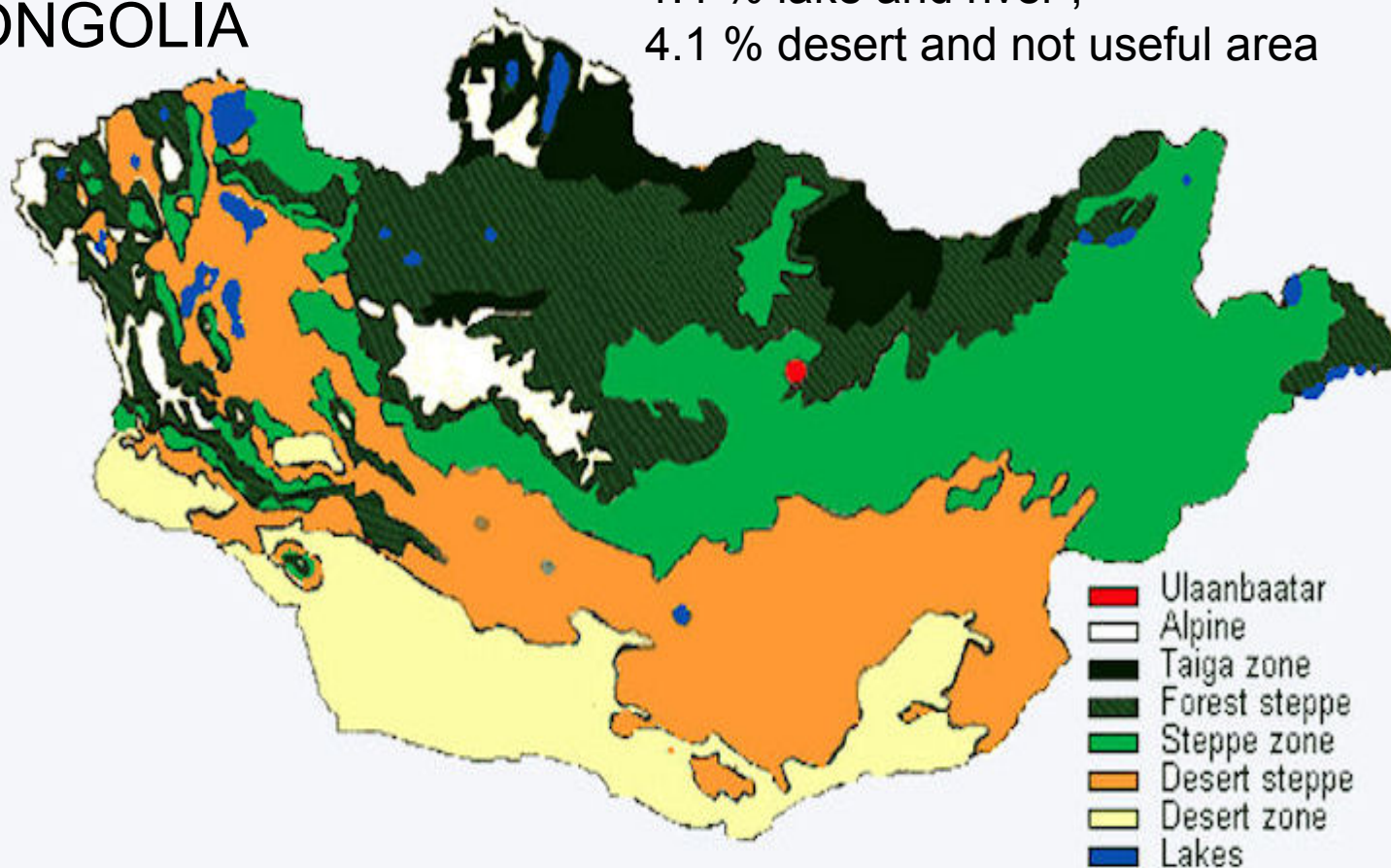
NORTH KOREA

SOUTH KOREA

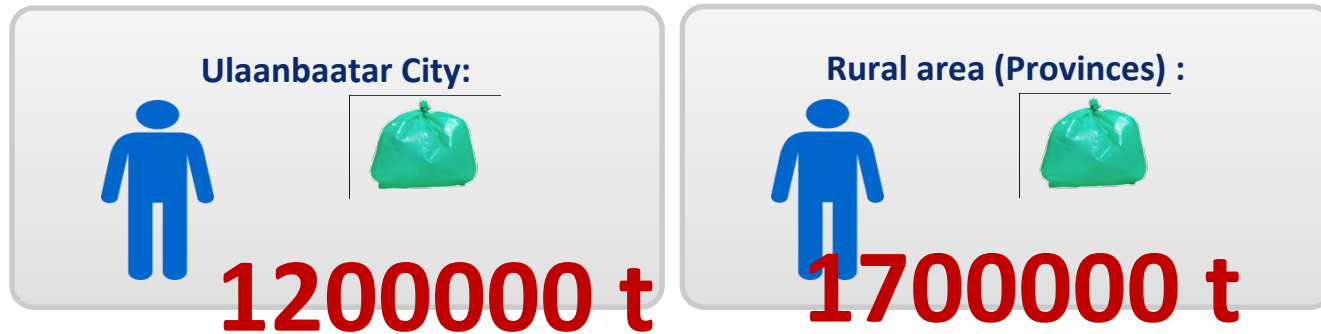
The average summer temperature is +20°C, average winter temperature -26°C, and average rainfall 200-220 mm.

LAND TYPE OF MONGOLIA

83.2 % is agriculture and pasture area
5.1 % is city and village area
8.2 % is forest ,
1.4 % lake and river ,
4.1 % desert and not useful area



Waste generation



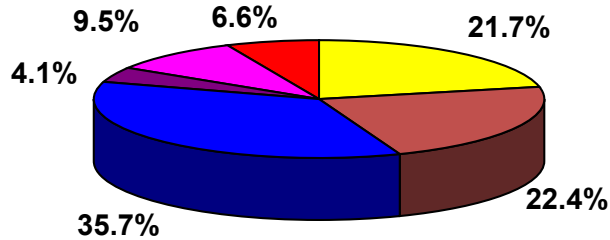
Annually waste is generating in Mongolia

2 900 000 ton

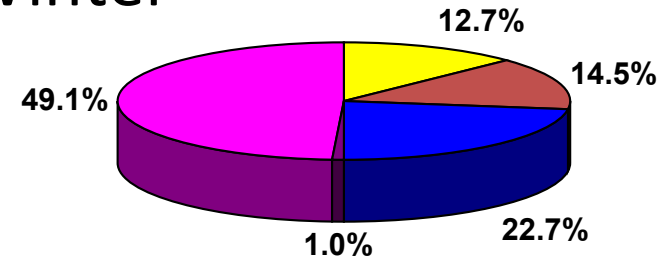
Mongolia practices commingled waste collection. The collection vehicle includes motorized trucks as well as hand carts. Majority of the waste collected in the country is sent to disposal. 93.5% of waste was disposed of using burial method. Mongolia has a total of 396 central waste disposal sites covering around 125,000 hectares of total land . The overall waste Collection coverage is 70% in Urban areas and only 40% in rural .

Municipal SW composition

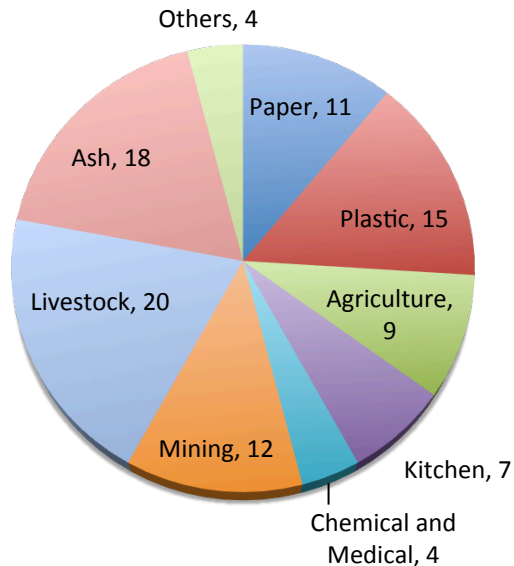
Summer



Winter

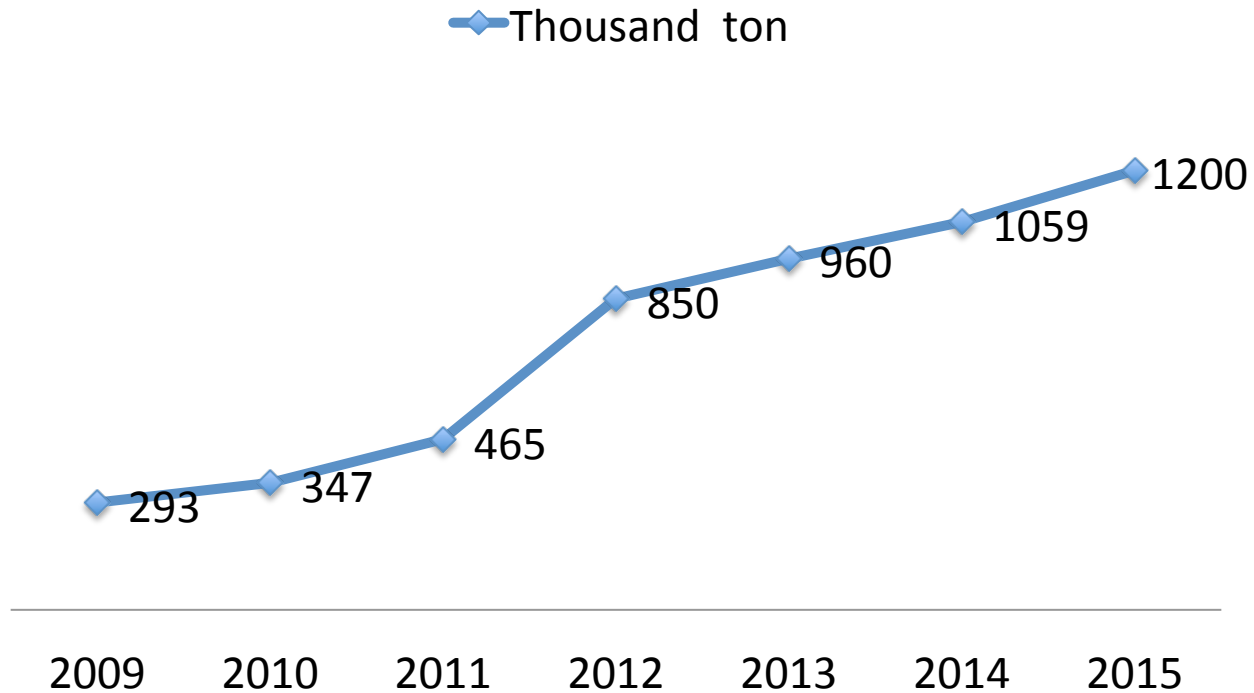


Rural(Provinces)



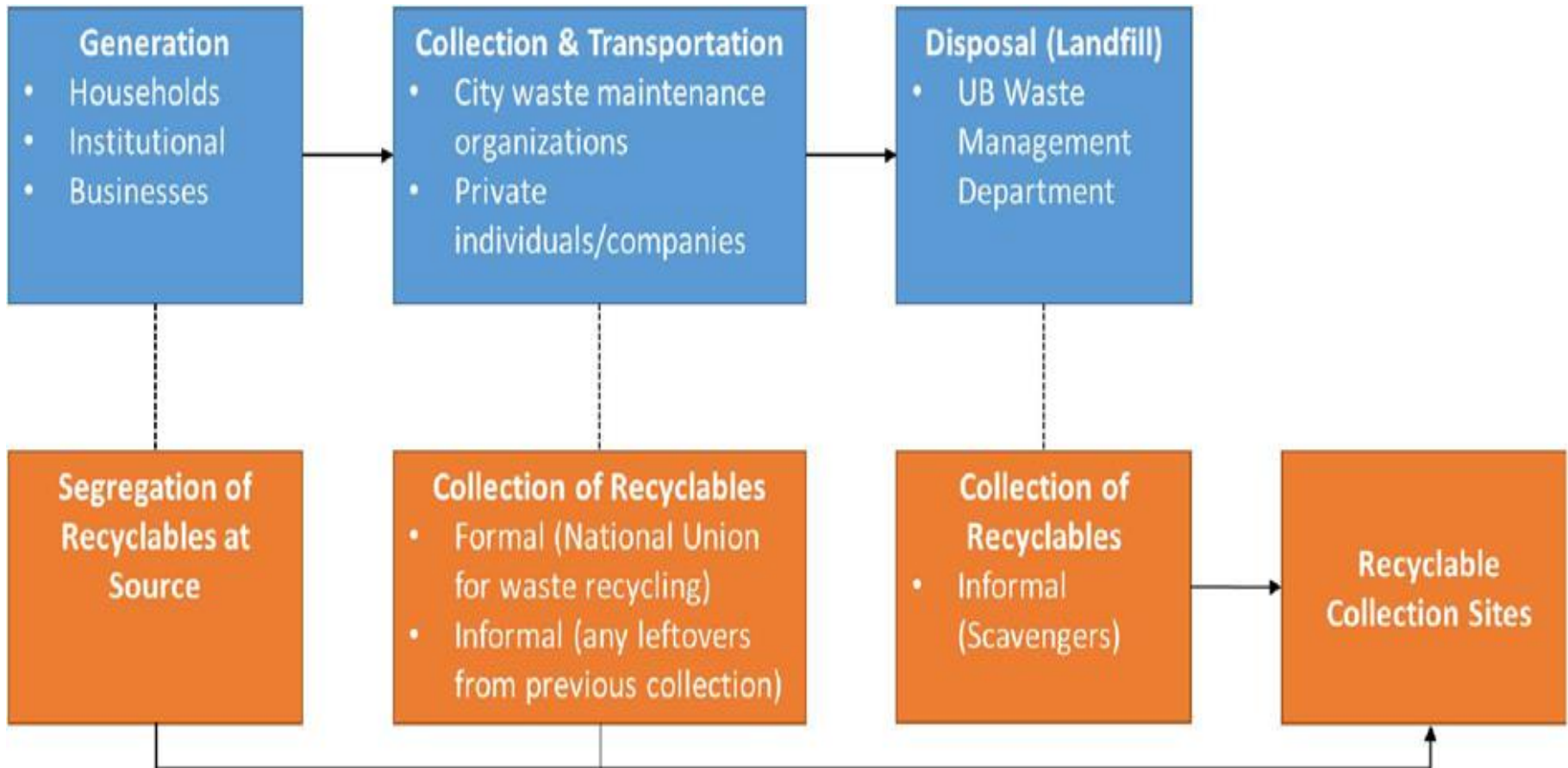
The noteworthy aspect here is that, a very significant proportion of recyclable items Plastic (22%), Paper/cardboard (21%), Glass (9%), and Metal (6%) still lands up in the disposal site. These valuable recyclables could otherwise have been segregated, collected and sent for recycling rather than disposal.

UB City waste generation

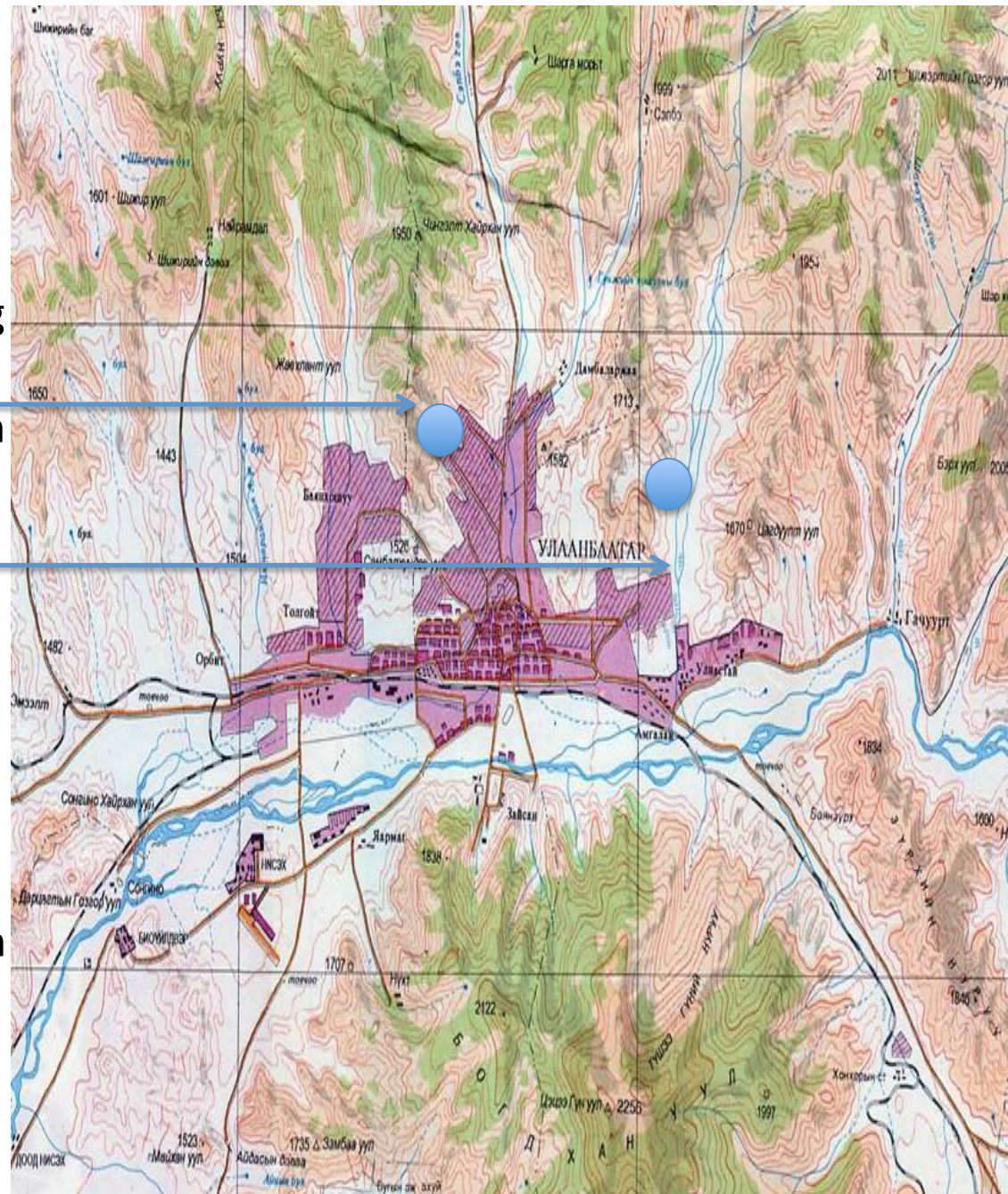


With intensive development in mining and construction sectors, increased urban consumption patterns and lifestyle, increasing waste generation volume

The overall stages of MSW management in Ulanbaatar city.



Ulaanbaatar City is working towards formalizing the waste recycling activities in future. The “Eco park” project (Mayor’s Resolution No. A/695 is expecting to develop a recycling park in the Narangiin Enger” waste collection site (52 – 174.6 hectares), and “Tsagaandavaa” waste collection site (29.4 – 92.6 hectares). Ulaanbaatar City Authority would provide land and infrastructure (electricity, water and heat) to the “Eco park”. Also Government would provide incentives (tax exemption..) to enterprises which is registered in Eco-park.



Healthcare Waste (HCW)

A total of about 2.65 tonnes of healthcare waste was generated each day in Ulaanbaatar (about 0.78 tonnes of medical wastes and 1.87 tonnes of general wastes). 0.36 tonnes of anatomic waste is need to be incinerate but city does not have Medical waste incineration plant so all waste is disposed at disposal site.

Rural and provinces that almost 90% of medical facilities burnt their waste in some primitive low temperature incinerators, without any air filter or even practicing open burning.

A public-private partnership model was developed and tri-patriate agreement was reached with “Element LLC”. The central treatment facility for health care waste was functioned since January 2010, and has been collecting and treating health care wastes from 1,000 public and private healthcare facilities in the capital city.



Where and How disposing HW ?



Composition	Volume of hazardous waste, ton/year	Volume of hazardous waste, %
Burnable	7,994	74
Recyclable	1,354	12.5
Landfill	998	9.2
Physical-chemical treatment	455	4.2
Total hazardous waste	10,801	

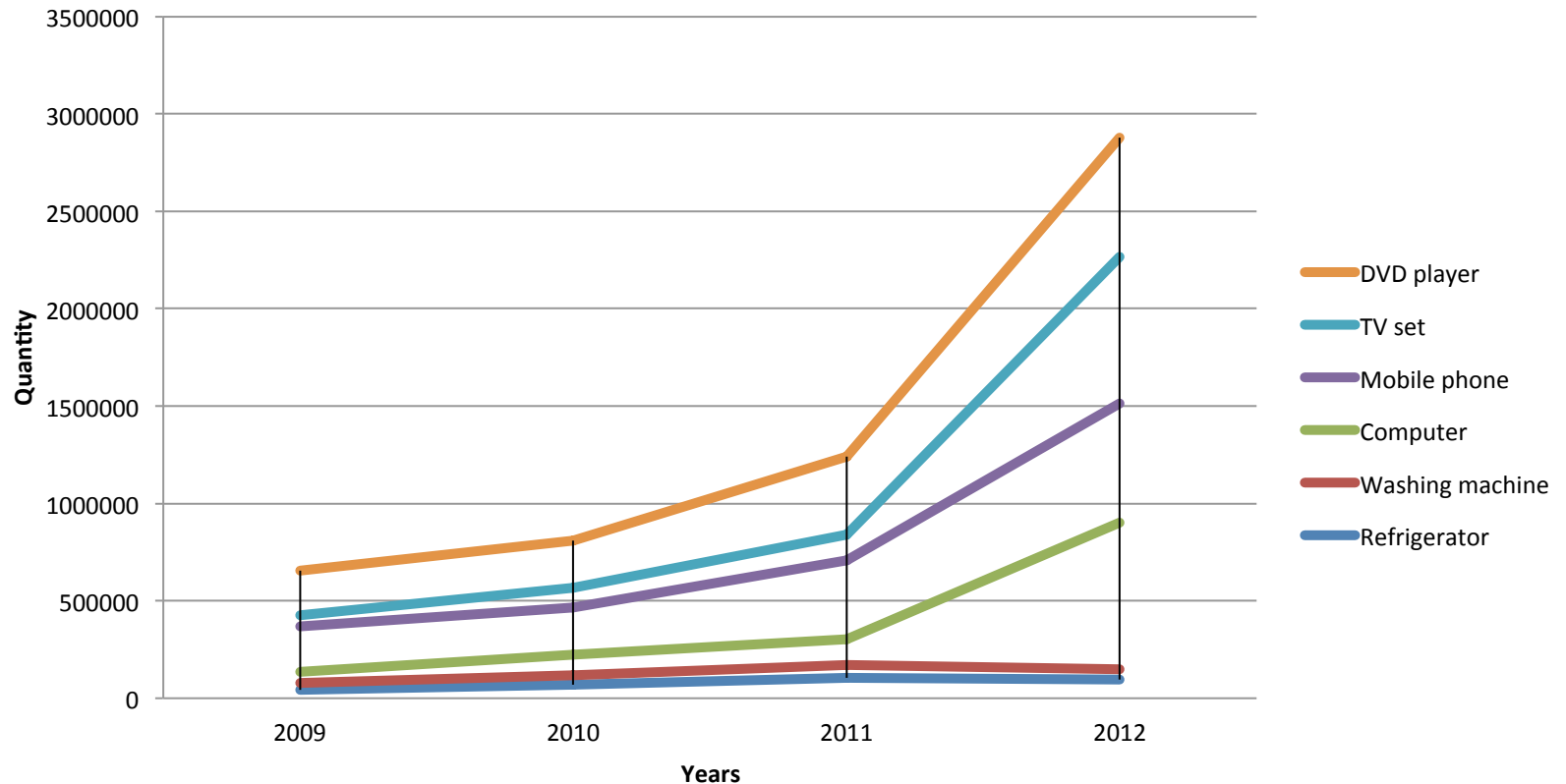
In the near future, we need to have a centralized hazardous waste treatment facility and environmentally sound hazardous waste management system. The main challenges we are facing are financial constraints, technology transfer and lack of engineering personnel to work in this sector.

E-Waste

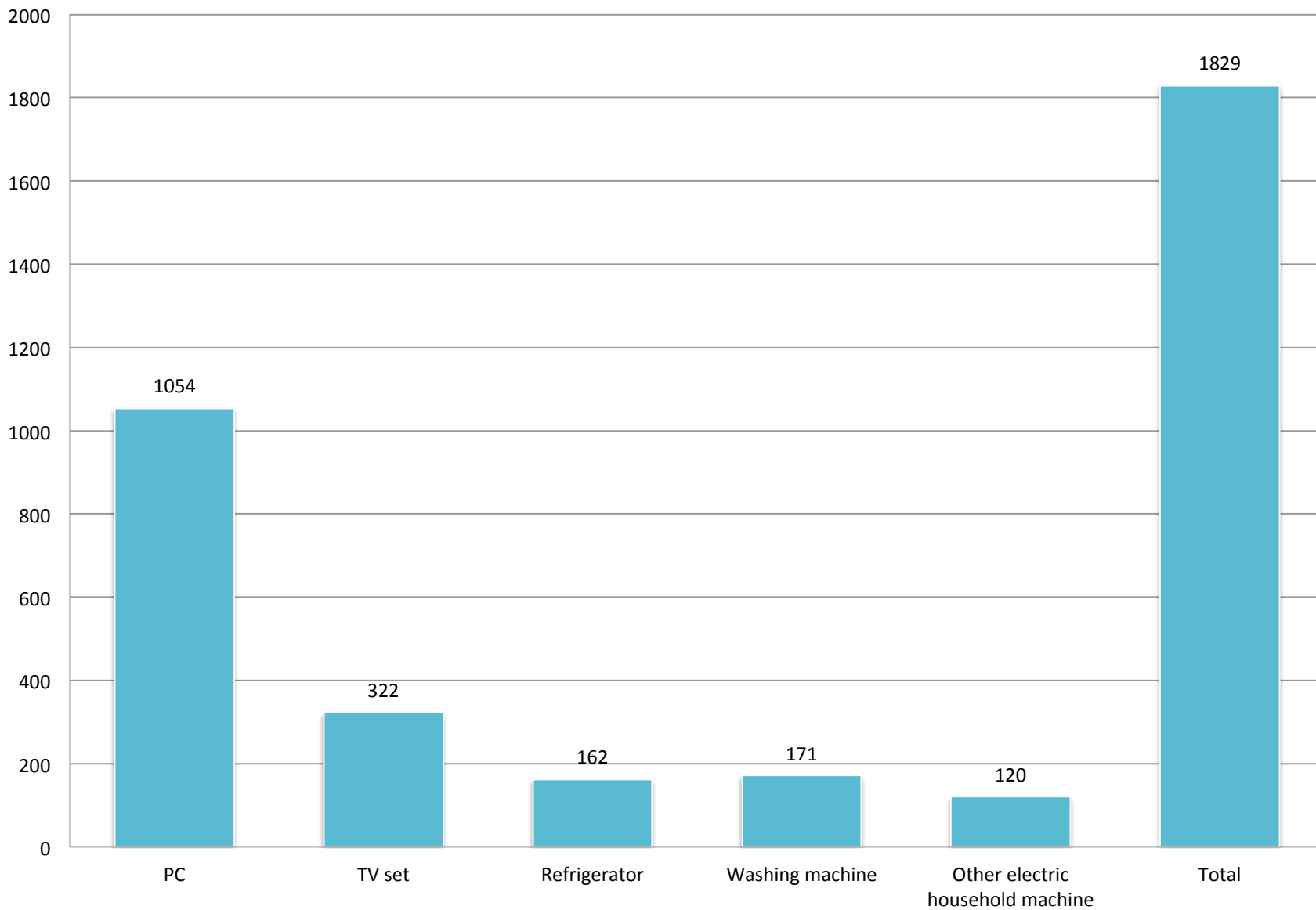
E-waste is one of the fastest growing waste streams in Mongolia. The amount of generated e-waste per year grows rapidly. Life span of computers has dropped from seven years in 1990s to just two years or less today. Mobile phones have a lifespan of even less than two years. Mongolian population is 3 million but mobile phone users number is 3.5 million and since 2007 mobile phone users growth is 120 percent but there is no data and inventory for mobile phone waste generation in Mongolia. Also from 31 July 2014 Mongolia transferred digital broadcast system and generation of CRT waste is extremely growing last few years. There is a pressing need to address e-waste management challenge. E waste is collected with municipal waste and e-waste ends up in unreported and largely unknown destinations.

Electrical and Electronic Equipment import in Mongolia

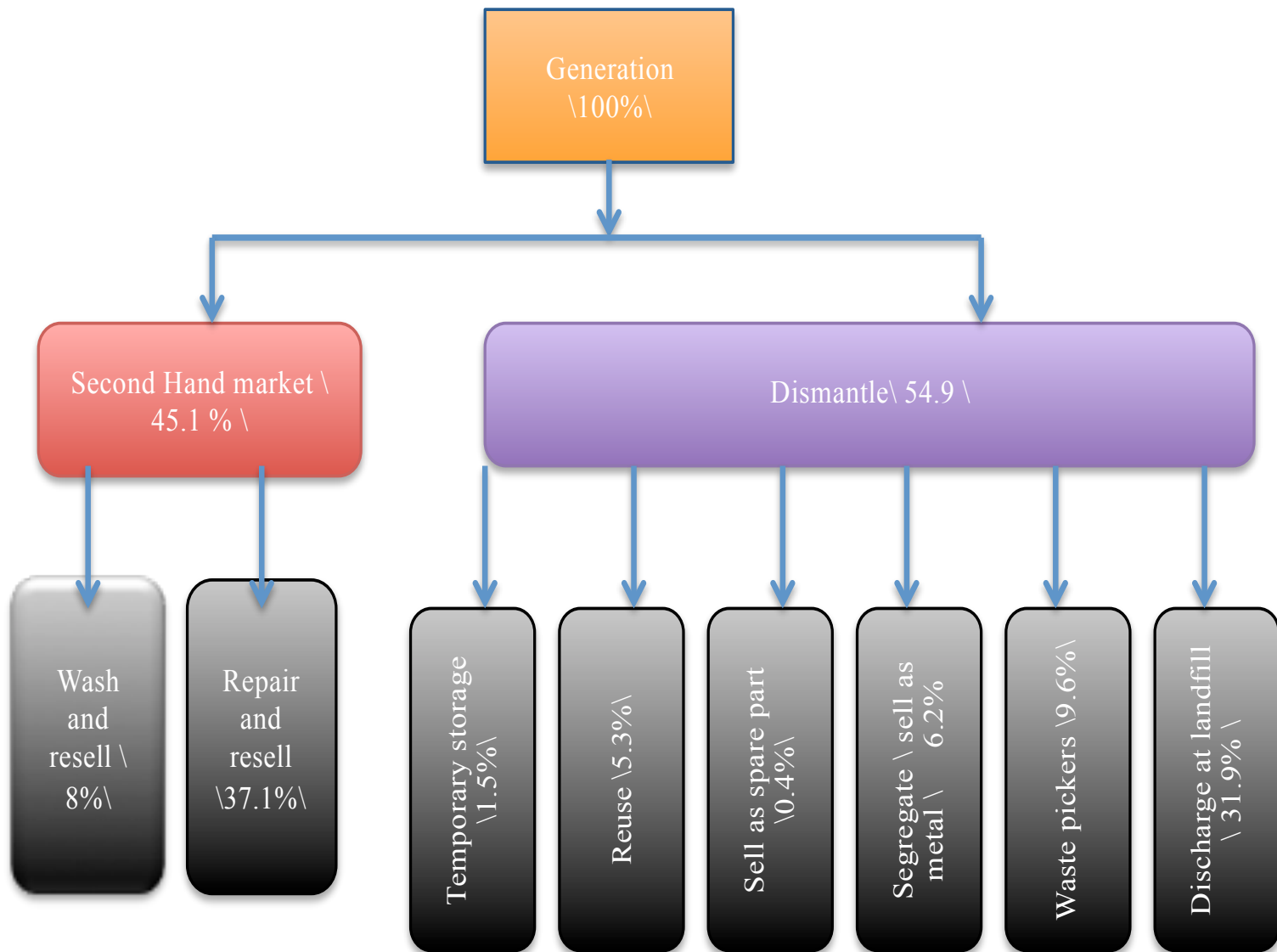
- The majority of EEEs in Mongolia is imported from 121 countries and locally assembled equipment comprise slight part.



Annual generation of main E waste in Ulaanbaatar city \ton\



Overall E waste flow in Ulaanbaatar

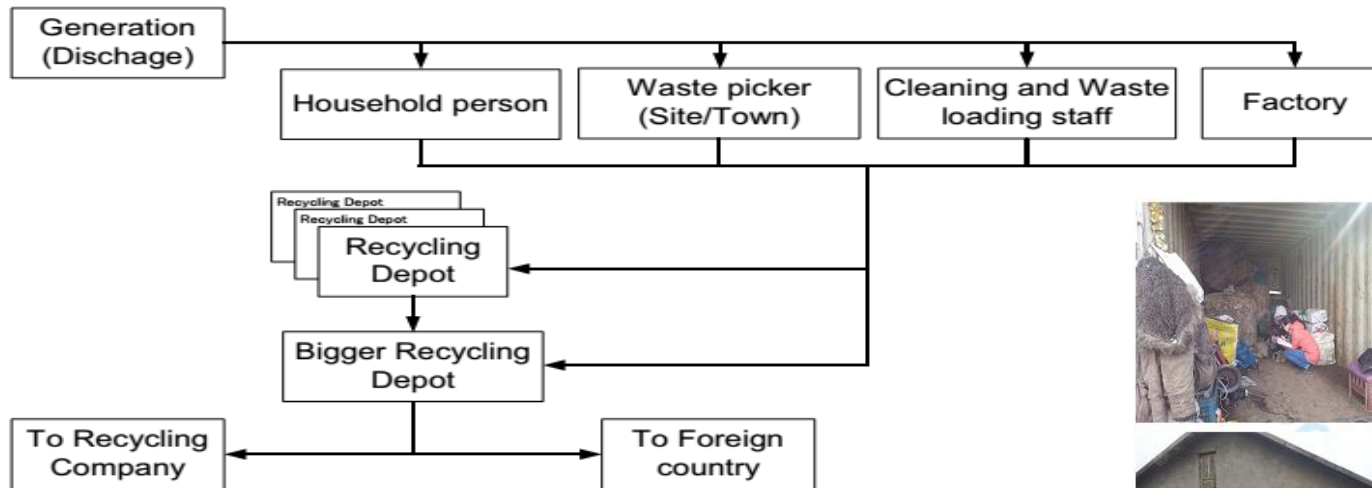


*Need to take the following measures to improve
E waste management in Mongolia is :*

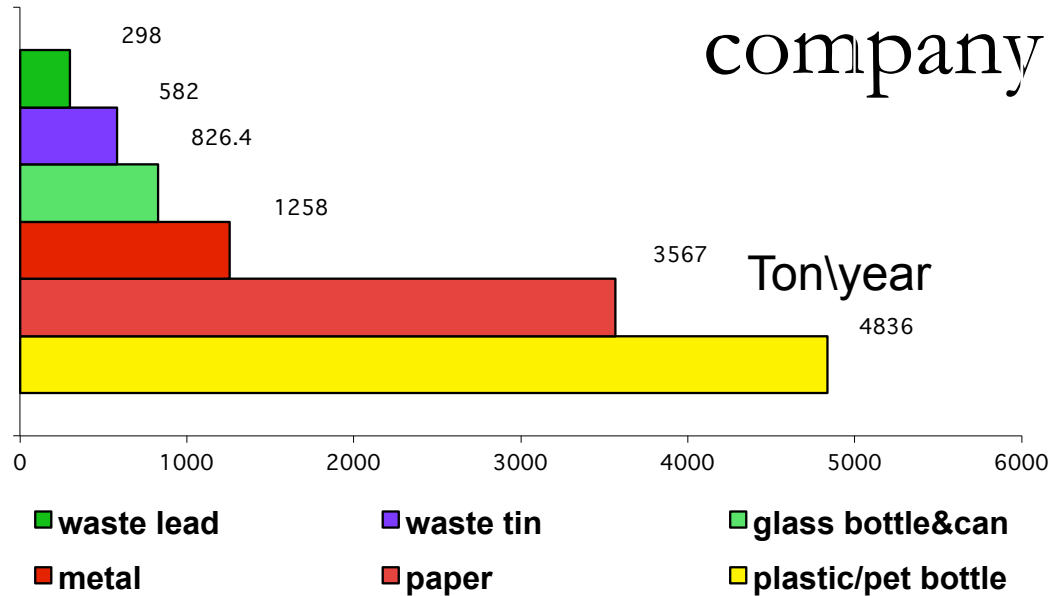
- To create a new legal framework for E waste \ policy, strategy, regulation and standard \
- To establish E waste separate collection, transportation mechanism
- Study and survey \ inventory \ on E waste in nationwide Mongolia \ creating an accurate database \
- To create E waste formal recycling system \ to build specific recycling and dismantling yard \
- Training programme and capacity building efforts are required \ foreign experience , management, and guidelines and needs managerial and modern management training as well as policy makers and related governing bodies \
- Capacity development and financial assistance in all aspects.

Recycling

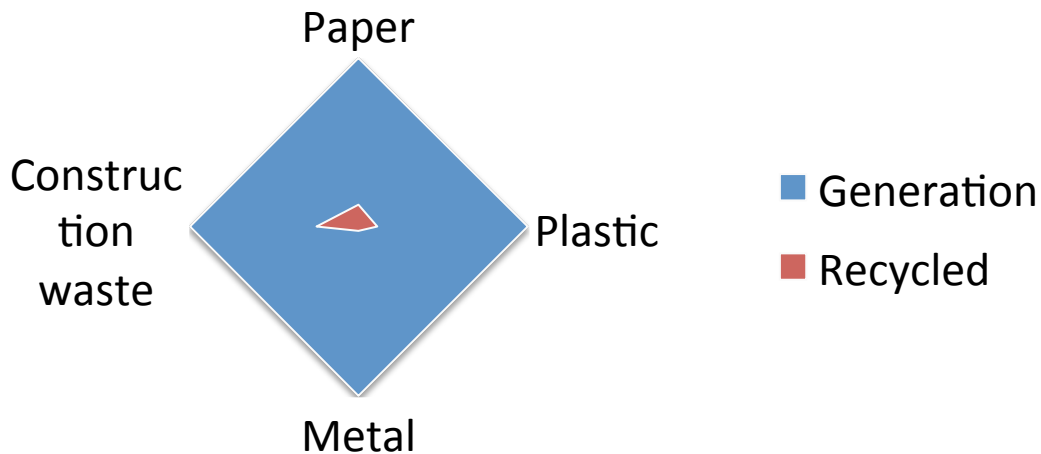
Sorting and recycling is undertaken by the private sector, and is at informal scale. A significant proportion of waste is recycled by small businesses or collected and exported to China for recycling. The first stage sorting is conducted when wastes are picked from apartments and households, either by the collection crew or the care takers of the housing apartments. Thus collected materials are then sent off to the secondary raw material collection points. The remaining recyclables that reach the centralized landfill sites are further sorted by waste scavengers. There are around 200 scavengers, most of them live in the dump sites, collect recyclable waste products, including glass, cans, cardboard and bones and sell to transfer centres. From there, those recyclable waste products go to primitive recycling plants and the remaining items are exported to China



Recycled waste export done by private company



Total exported
recycle waste -11 300 ton
Total export cost -1.5 mill USD



13% of paper, 11% of plastic,
2.5% of metal, and 25-30% of
construction waste is recycled
in the country.

Challenges (policy/ institutional/ technological/ financial) faced in 3R implementation:

- Lack of financial resource and no incentive system for recycling.
- No specific policy and legislation for recycling
- Scavengers (informal sector) who are currently playing a substantial role in collection of recyclables so no clear data
- There is also limited technological and financial capacity of the domestic recycling industry and the outflow of recyclables to big international markets such as China.
- Lack of a strong policy, legal and regulatory framework for 3R
- Weak enforcement and monitoring of the existing laws and regulation
- Institutional inefficiencies and overlaps and limited availability of human capacity, technology, and financial resources.

Immediate improvement is required in building human resource capacity, establishing up-to-date provincial and national waste law and regulations, and setting up ambitious yet achievable 3R targets in the National Waste Management Strategy.

धन्यवाद

terima kasih

Ташаккур

Рахмат!

THANK YOU ...

cảm ơn bạn

Kaadinchhey La

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