

INVESTIGATION OF WASTE MANAGEMENT PRACTICES IN TURKEY WITH A PARTICULAR FOCUS ON INTERIM WASTE STORAGE FACILITIES

C. Polat¹, **H. Yildirim**^{1*}, U. Yetis¹, Y.D. Yilmazel¹, F.B. Dilek¹, B. Başer¹, I. Ince¹, S.B. Yanar¹, M. Tanrıku¹, E. Kucuk¹, T. Pilevneli¹, N. Ulgudur¹, S.U. Yurtseven², O. Yılmaz², A. Durak², Y. Kesimal², M. Ecer², M.E. Birpınar²

¹Department of Environmental Engineering, Middle East Technical University, Ankara 06800, Turkey

² TR Ministry of Environment and Urbanization, General Directorate of Environmental Impact Assessment, Permit and Inspection, Ankara 06610, Turkey

* Present address : Clemson University- Department of Environmental Engineering & Earth Sciences

Outline

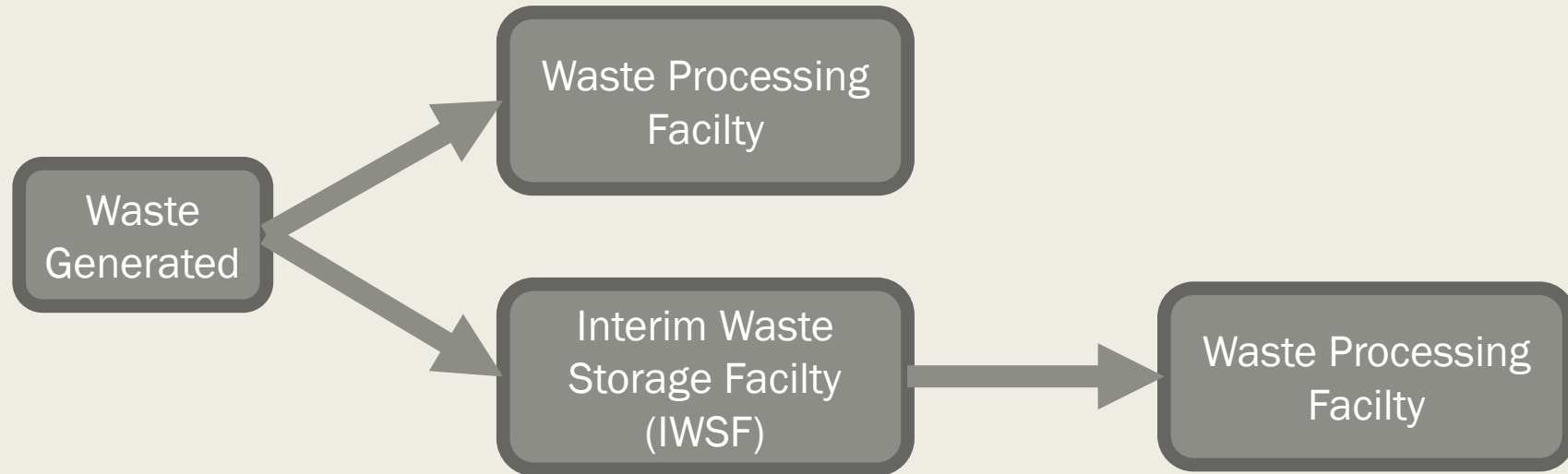
- OBJECTIVE and INTRODUCTION
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OBJECTIVE

- Examination of current status of the existing Interim Waste Storage Facilities (IWSF)
- Developing improvement proposals to increase the functionality of IWSFs

INTRODUCTION

- Nationally municipal and industrial solid waste generation was approximately **58 million** tons in 2018.



WASTE MANAGEMENT PRACTICES IN TURKEY

- *Waste management in Turkey*

The wastes should be reduced primarily at the source, the wastes that cannot be reduced at the source can be recycled as much as possible employing reuse, recycling, composting and energy generation, and safe storage of wastes that cannot be recovered.

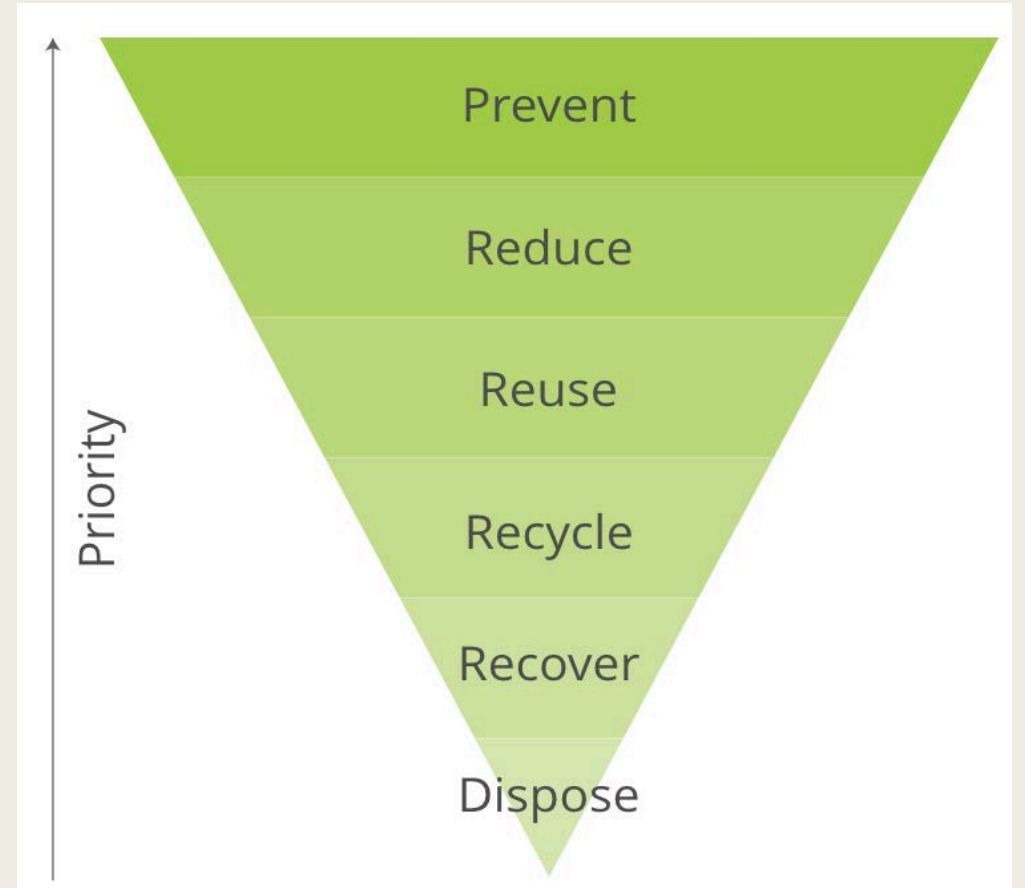


Figure 1. The waste hierarchy

WASTE MANAGEMENT PRACTICES IN TURKEY

- *Regulation on Waste Management*

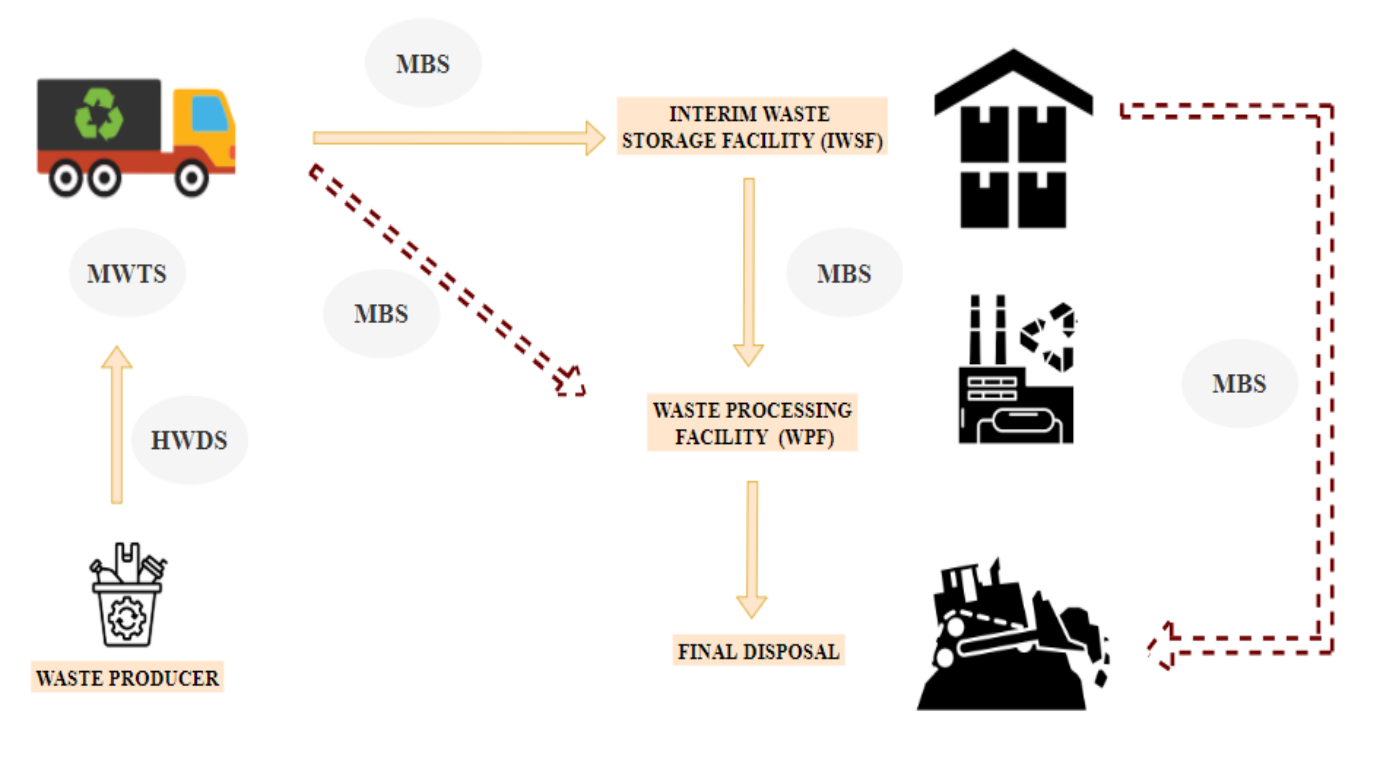
Regulations defines the Waste Processing Facilities (WPF) and Interim Waste Storage Facilities (IWSF) as;

WPF: The facilities where the wastes are recovered or recycled.

IWSF: The facilities where the waste is stored safely until the amount of it is reached a sufficient capacity before its transfer to WPFs and/or disposal plants. (Regional Servise)

WASTE MANAGEMENT PRACTICES IN TURKEY

- Waste tracking system



HWDS : Hazardous Waste Declaration System
MWTS : Mobile Waste Tracking System
MBS : Mass Balance System

Figure 2. Schematic Representation of the National Waste Management System in Turkey

CURRENT SITUATION OF IWSFs

Is an Interim Waste Storage Facility Non-Processing Facility or Integrated Interim Waste Storage Facility ?

- HWR :Hazardous Waste Recovery Unit
- RDF :Refuse Derived Fuel Preparation Unit
- WTF :Waste to Energy Unit
- CSF :Collection and Sorting Unit
- R :Reuse and Recovery Equipment
- WEEE :Waste Electrical and Electronic Equipment

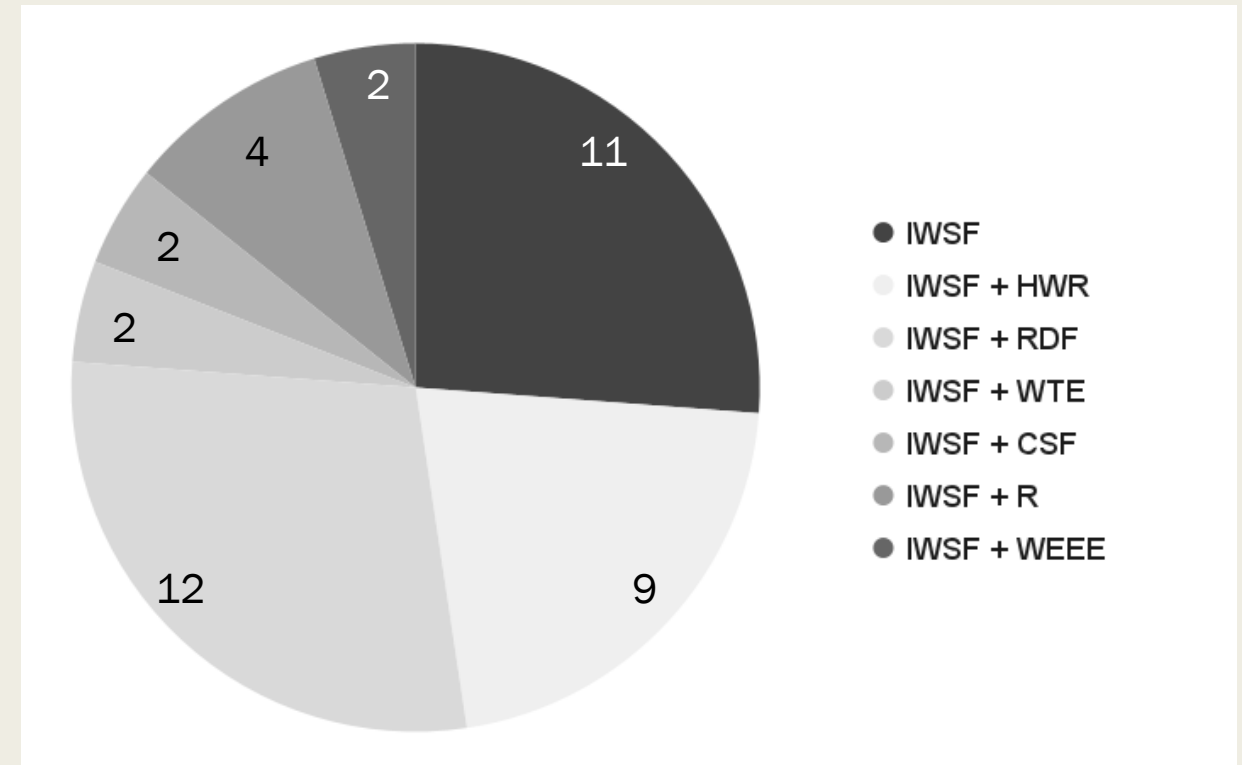


Figure 3. The distribution of IWSFs and integrated IWSFs

CURRENT SITUATION OF IWSFs

- *Geographical distribution of IWSFs*

Section 2, Article 5 of the Communiqué on Interim Waste Storage Facilities;
“IWSFs are directed toward regional service.”



Figure 4. The division of areas on the map

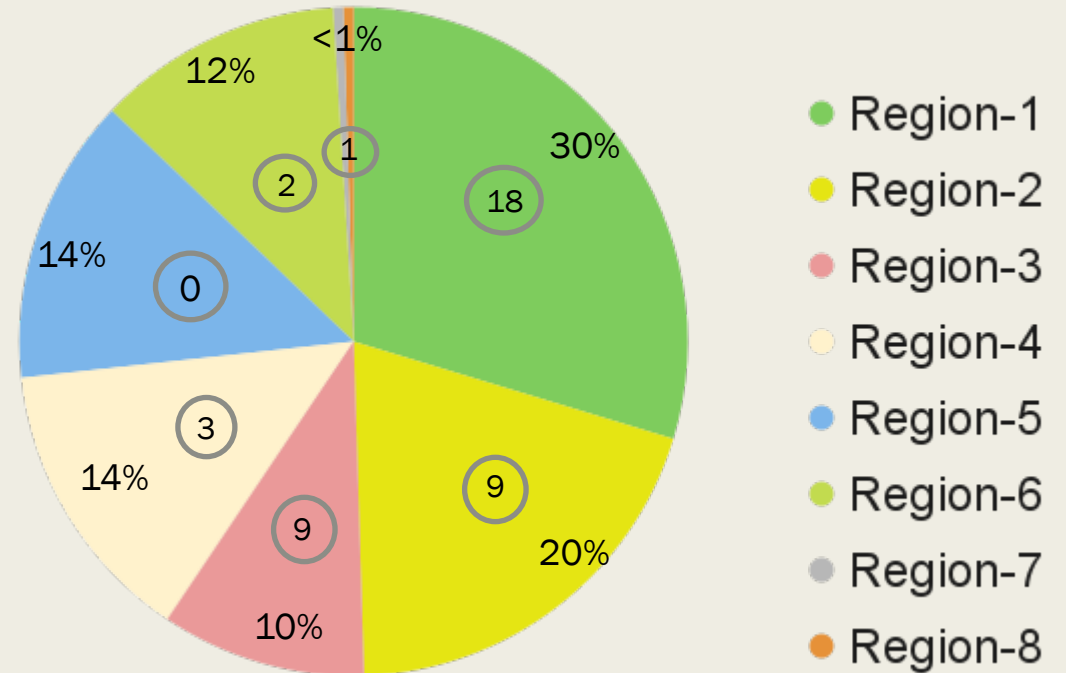


Figure 5. The percentage of waste generation and the number of IWSFs (in the circle) in each region

CURRENT SITUATION OF IWSFs

- *Challenges and issues related to IWSFs*
- IWSFs are commonly constructed to be used as a stockyard of other waste processing facilities.

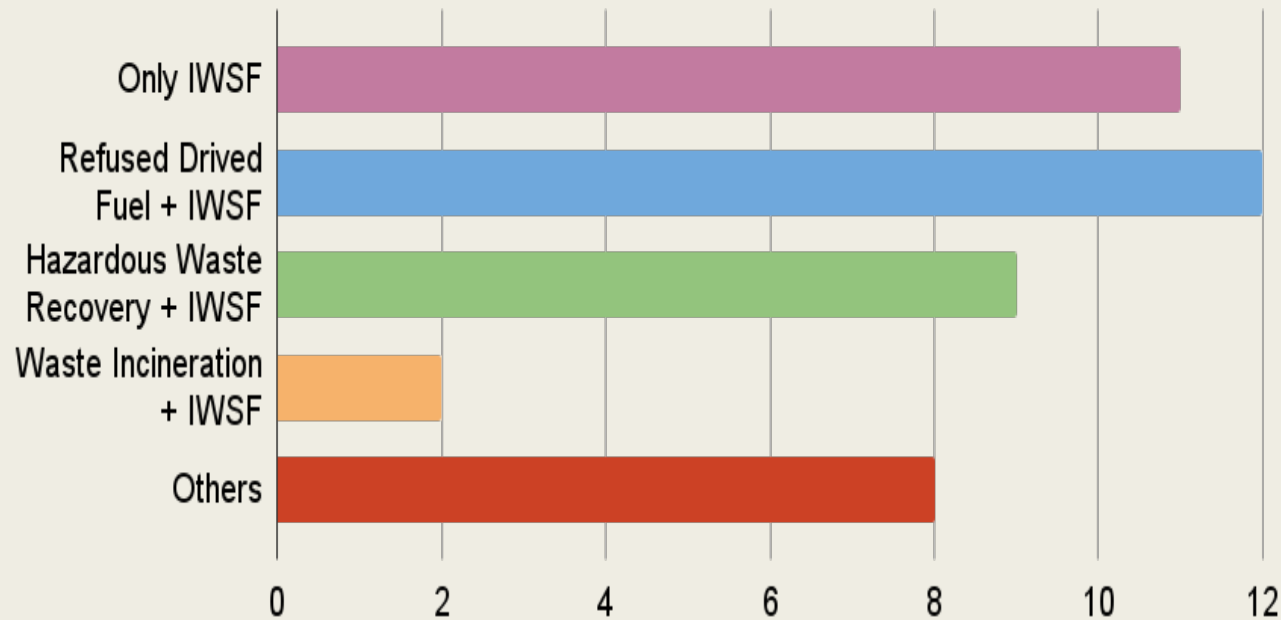


Figure 6. The number of facilities with IWSF license

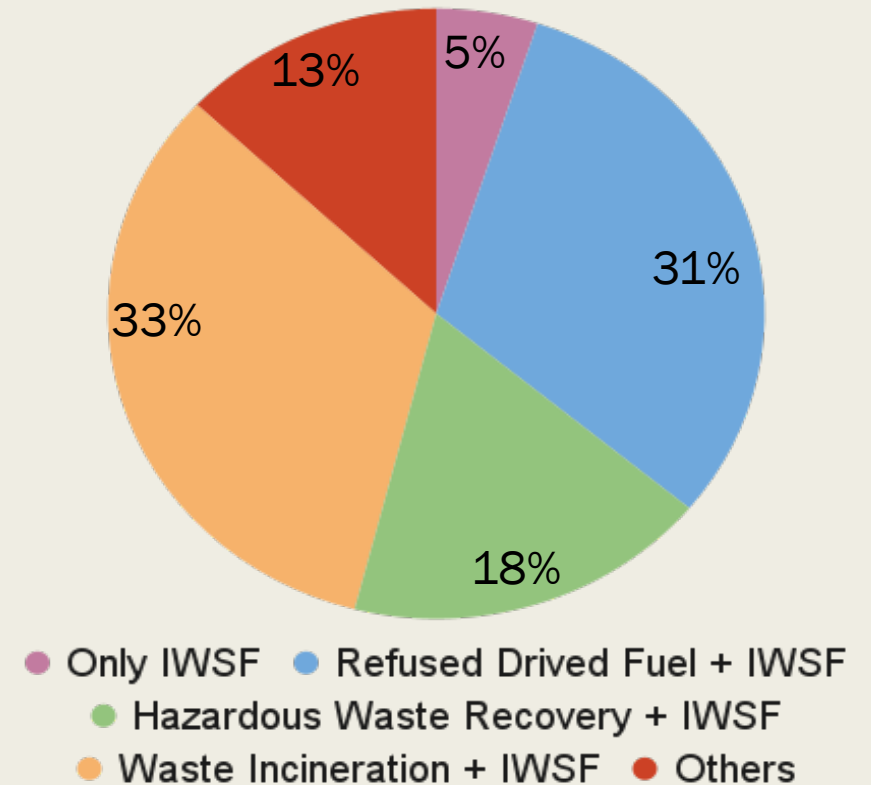


Figure 7. The distribution of waste through the only and integrated IWSFs

CURRENT SITUATION OF IWSFs

- *Challenges and issues related to IWSFs*
 - Transportation of waste over long distance
 - Disobeying requirement of the notifications
 - Incompetent tracking of waste

MAIN IMPROVEMENT REQUIRED

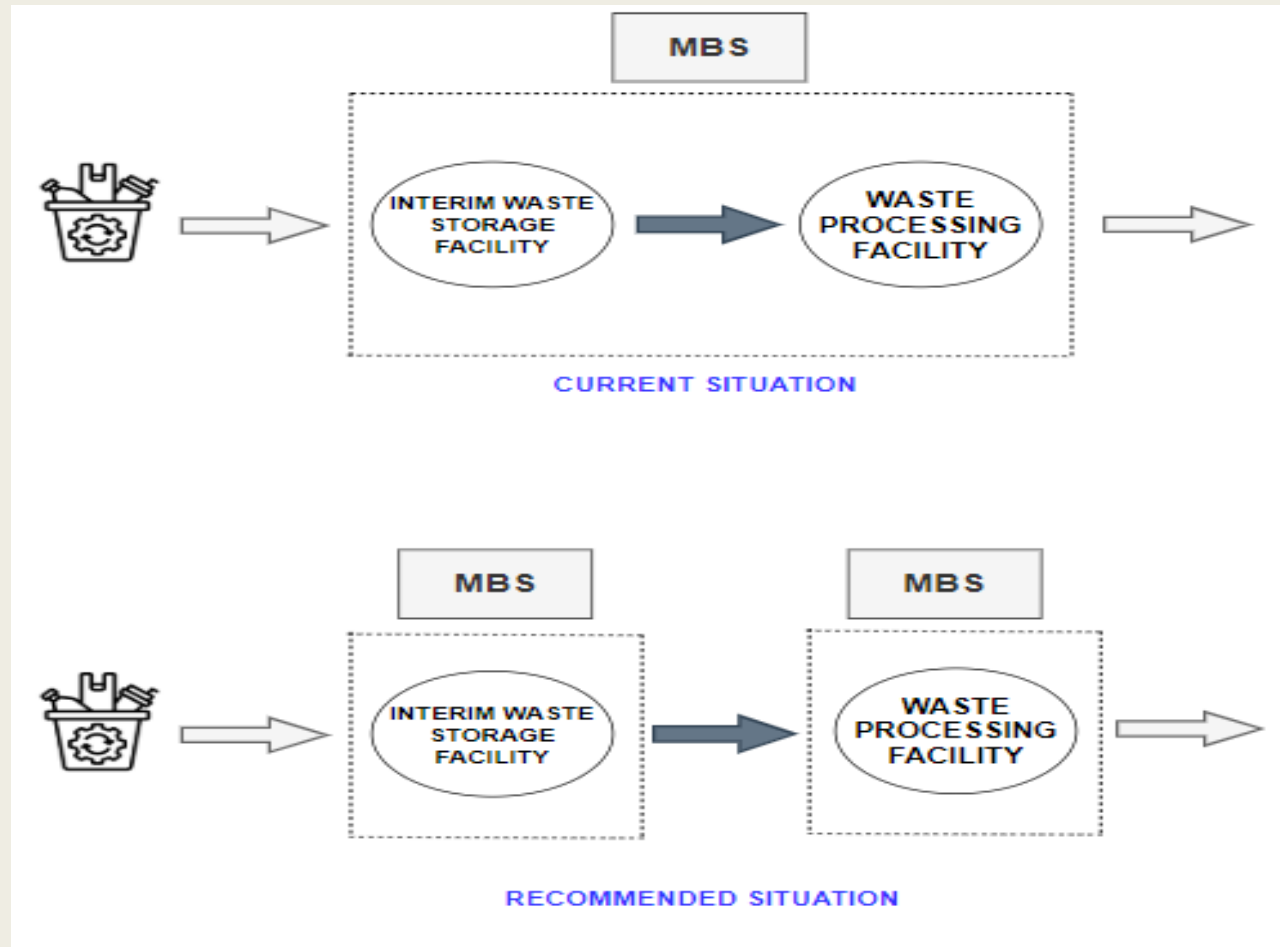


Figure 8. The current and recommended application of MBS

OTHER IMPROVEMENTS REQUIRED

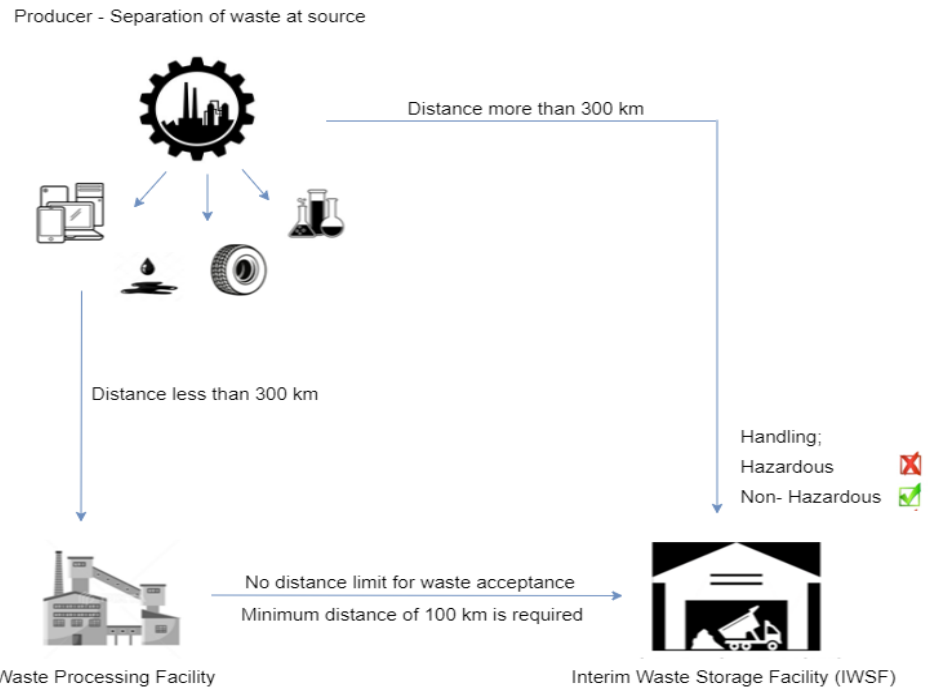
- In the establishment of new facilities, priority should be given to the regions with a low number of facilities and the number of facilities should be determined in proportion to the waste generation.
- Data matrix tracking system should be implemented and integrated to MBS.

IMPROVEMENTS

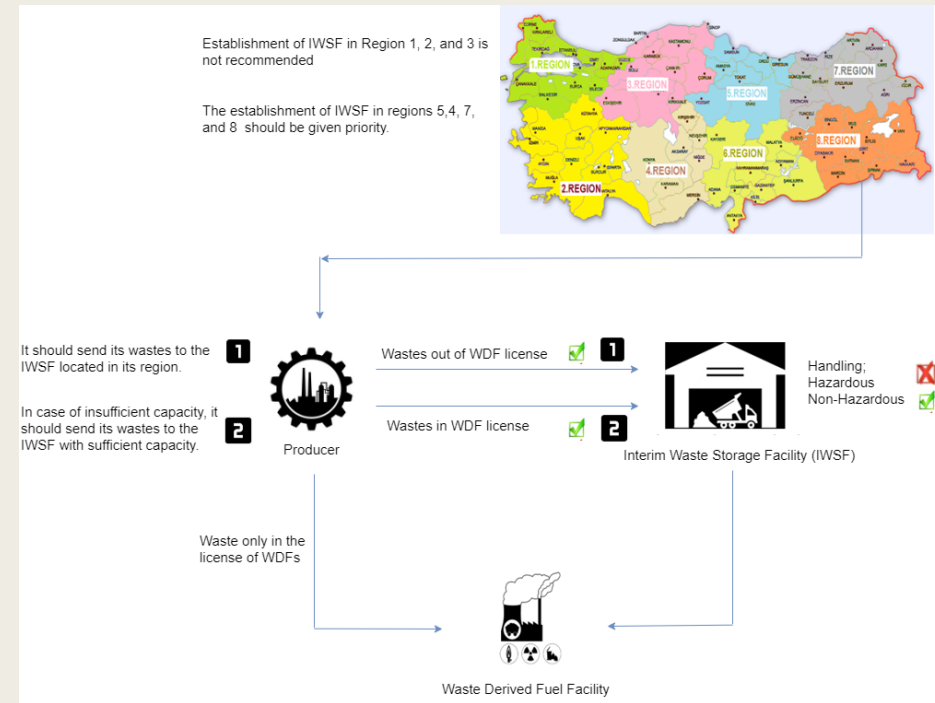
Data matrix tracking system should contain the following information:

- Name, address, telephone number of the business/institution/organization where waste is produced
- Waste code and characteristic (hazardous/suspect/inert)
- Waste amount
- The date of departure from the enterprise/institution/organization (date of receipt by the waste carrier)
- Physical form (gas/liquid/solid)
- Hazard code
- Whether there is a flammable content pressure box
- Recycling/disposal method to be applied
- Name of IWSF to be sent with TAD/ Environmental Permit License number

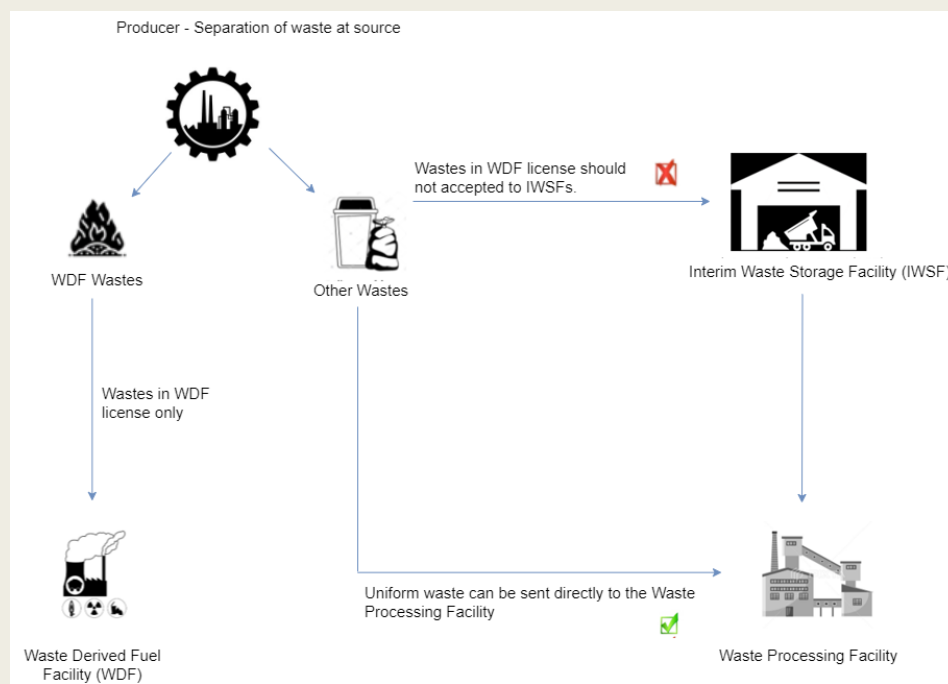
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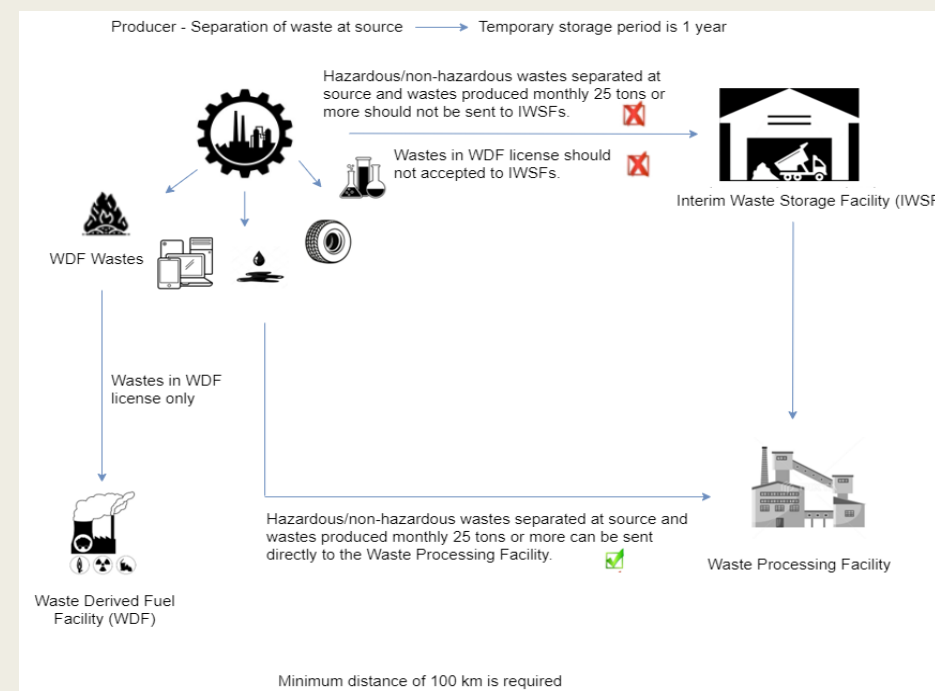
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CONCLUSION

The Waste Interim Storage Facilities Communiqué defines “interim storage” as “safe storage of waste until it reaches sufficient capacity before it is delivered to recycling or final disposal facilities.”

Not behave by definition

With the implementation of improvements, the current situation of IWSFs should be improved and these facilities should function as it supposed to be

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THANK YOU