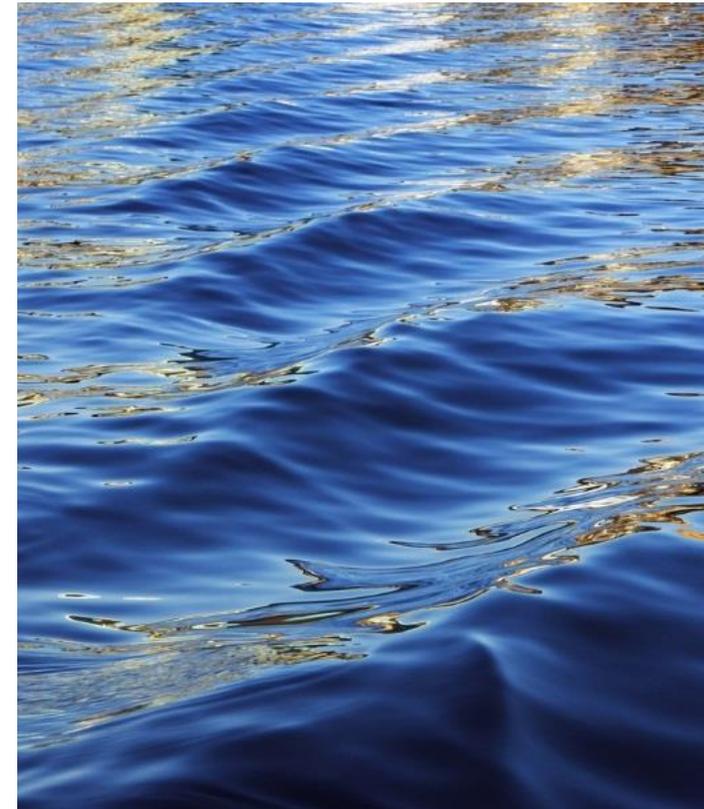


GREENING THE GRASSROOT

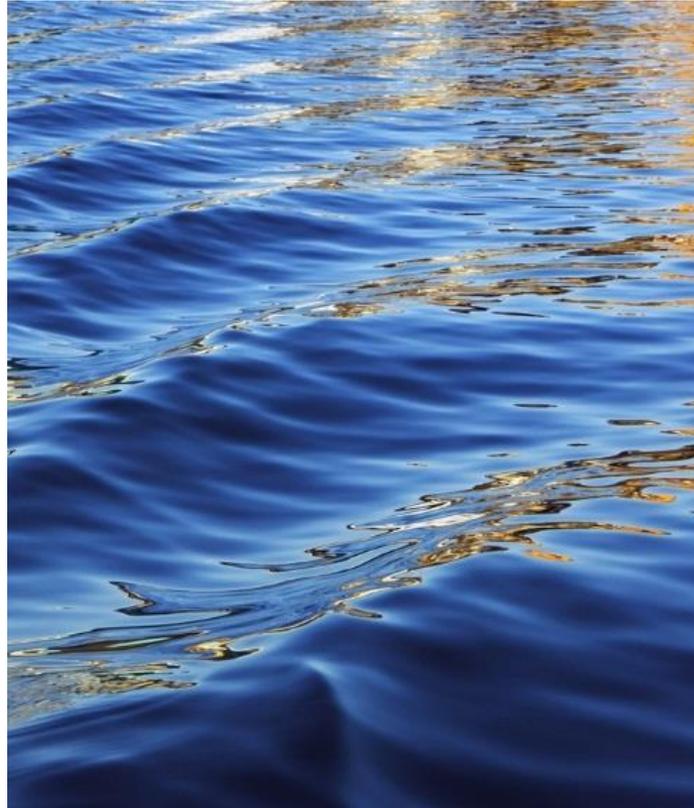
The roles of private agencies in Green Technology Development in Malaysia (Waste Sectors)

By Sarifah bt Yaacob



Content

- Introduction on **WMAM**
- Green Technology from **Waste sectors**
- **Roles of Waste Stakeholders** in Green Technology Development
- **The Way Forward**



Introduction on WMAM

Waste Management Association of Malaysia (WMAM)

❑ WMAM “ Persatuan Pengurusan Sisa Malaysia “ - a non-profit, technical and educational organisation for waste management stakeholders, represents people from many disciplines (engineering, law, science, management, business etc)

❑ Founded in March 2005; web site www.wmam.org; National member of

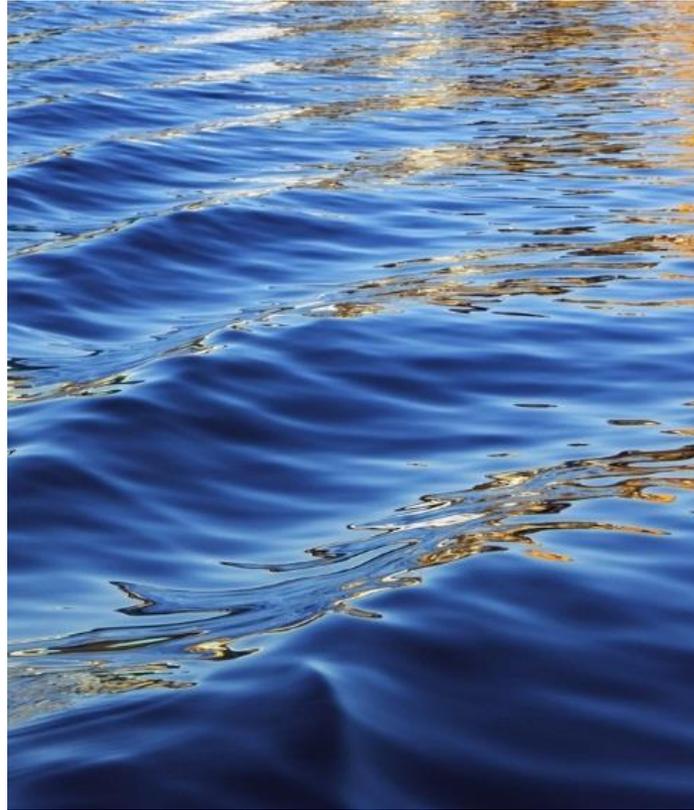


❑ Objectives

- To promote and encourage the maintenance of **high standards of waste management services** in Malaysia in respect of **solid and liquid waste, hazardous, clinical and all other types of waste.**
- To encourage **collaboration and cooperation** between all those interested and concerned with waste management.
- To provide a **forum** where all viewpoints of waste management matters can be discussed.
- To **establish and maintain contact** with local as well as international waste management related organisations (meetings, technical visits, trainings, courses, workshops and seminars on issues of waste management)

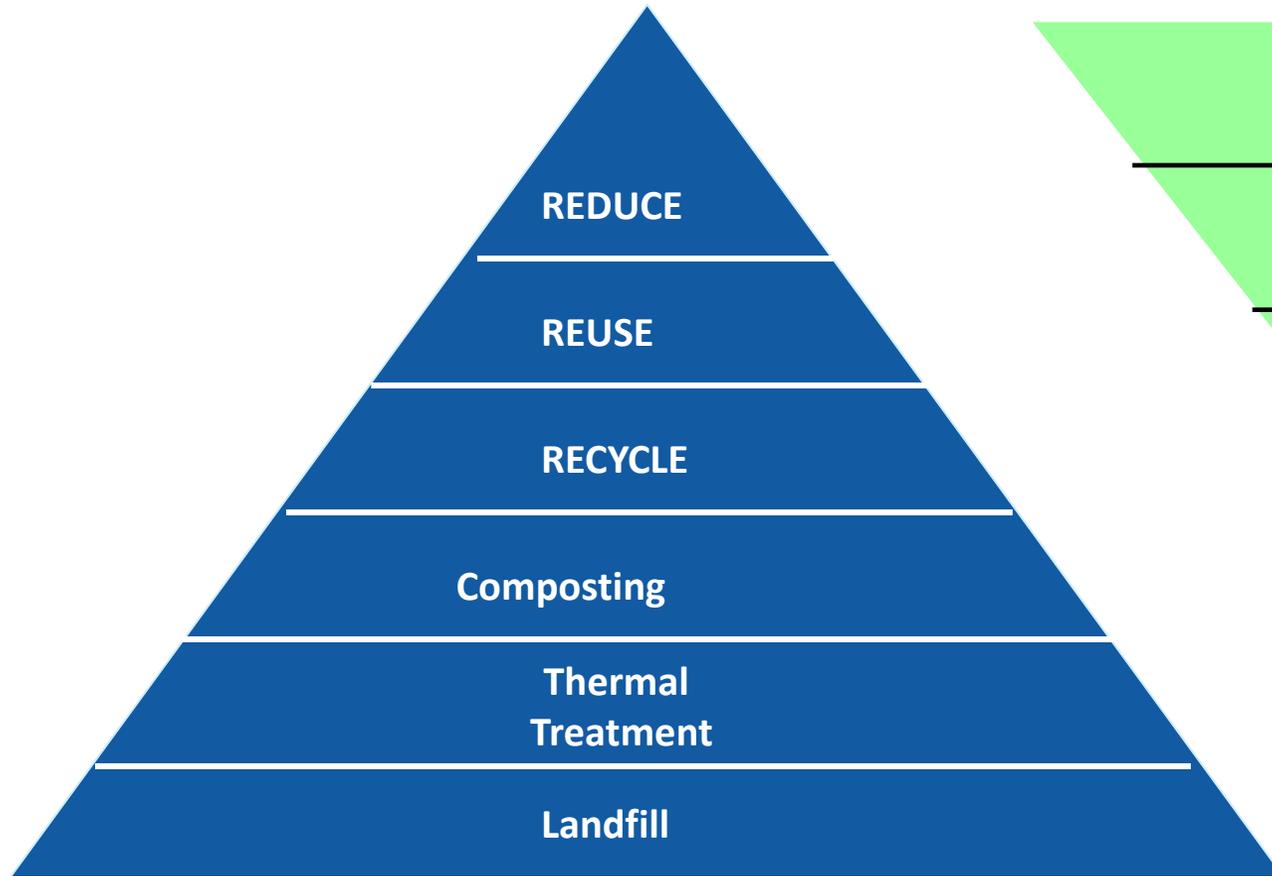


Green Technology in Waste Sectors

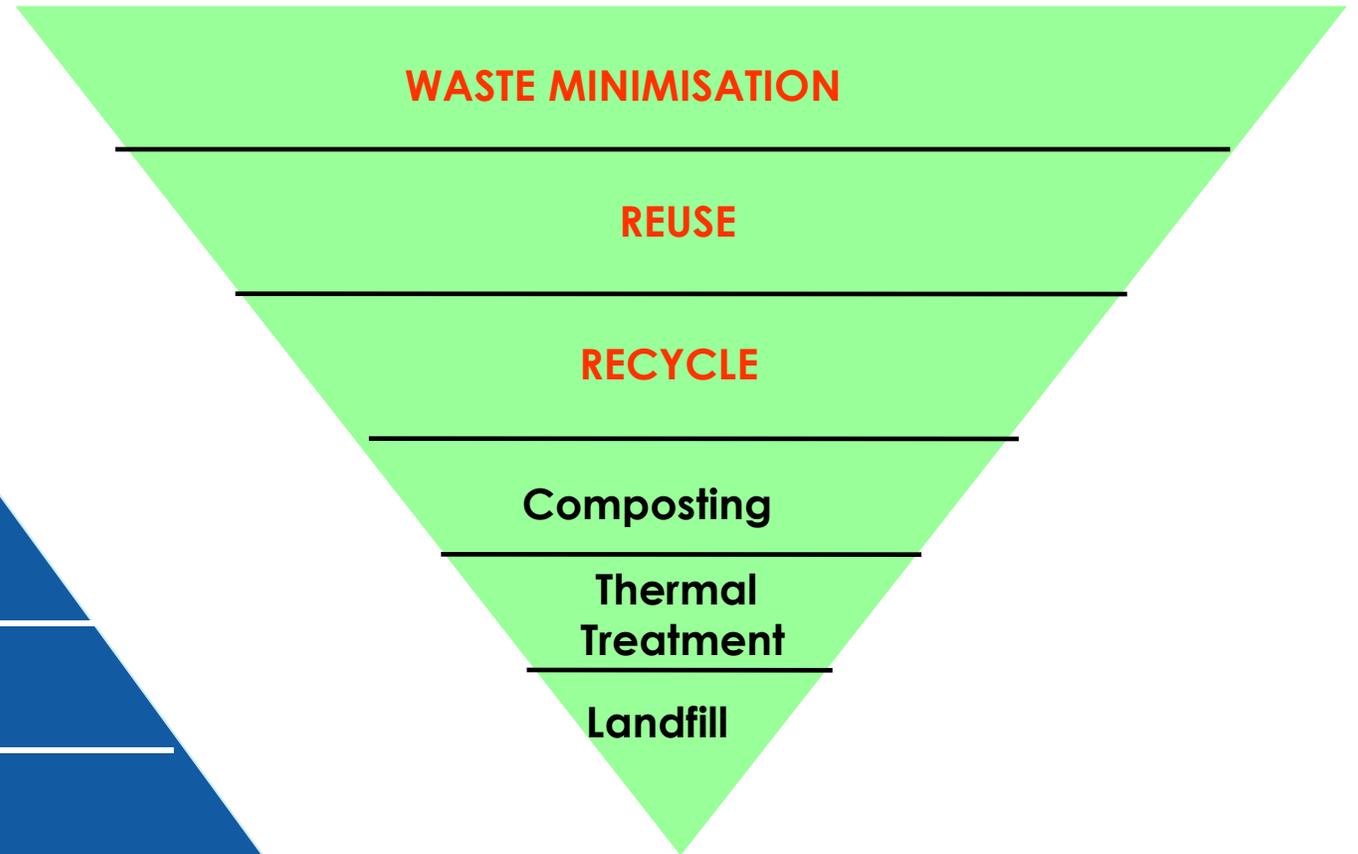


SWM HIERARCHY

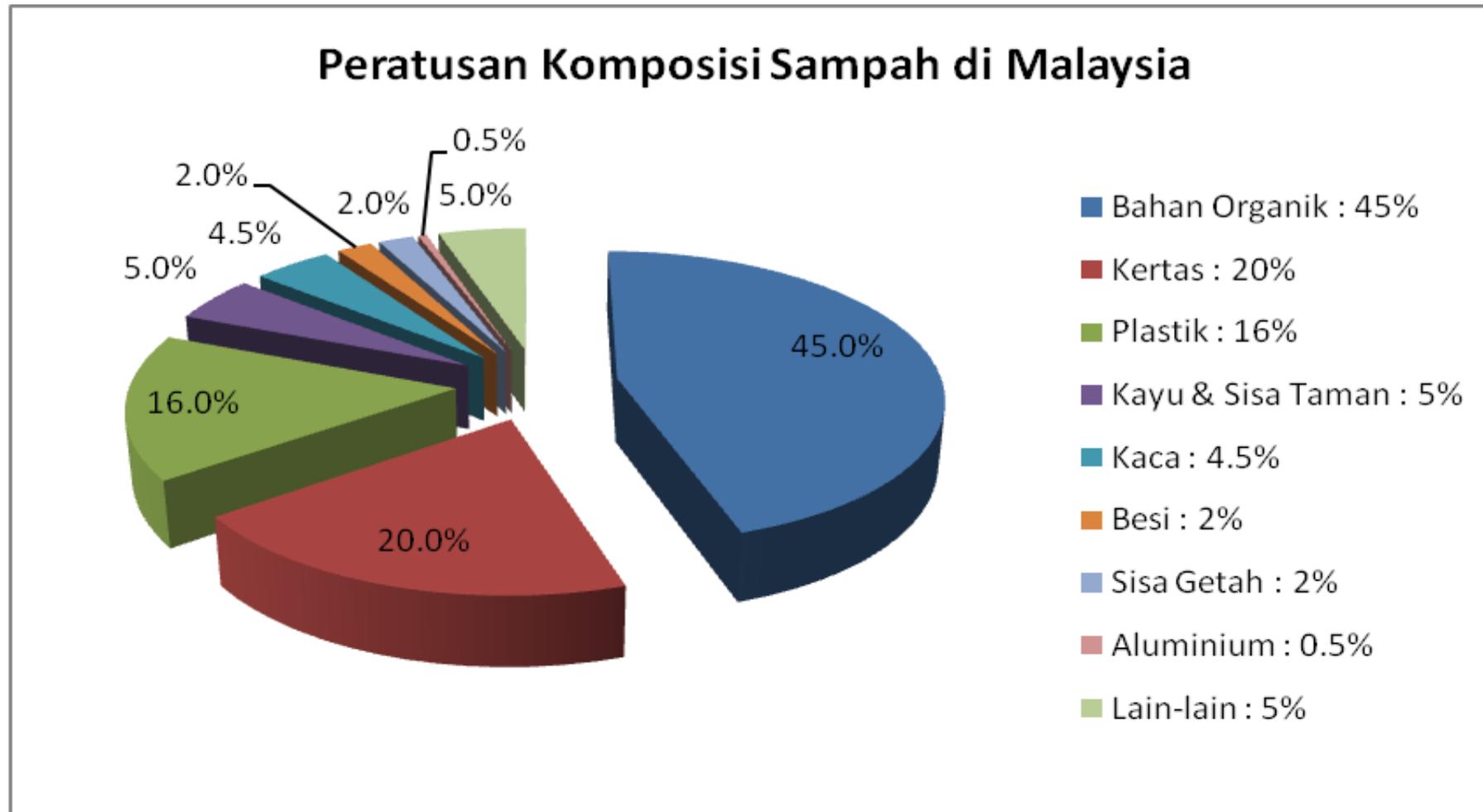
CURRENT... ..



IDEAL...



NATIONAL WASTE COMPOSITION STUDY



GREEN TECHNOLOGY IN WASTE SECTORS

- Waste storage and transportation;
- Waste reduction, reuse and recycling;
- Waste to energy;
- Waste to fertilizer;
- Waste treatment and disposal;



Composting Plant

GREEN TECHNOLOGY IN WASTE SECTORS

Waste Recycling

- Recycle of paper, plastics, metals
- Waste cooking oil to biofuel;
- Recycle of used batteries;
- Recycle of construction waste;
- Recycle of tires
- Recycle of Electronic Waste (E-Waste)



GREEN TECHNOLOGY IN WASTE SECTORS

Waste to energy

- Biogas production from organic waste;
- Waste to electricity;



Biogas Plant



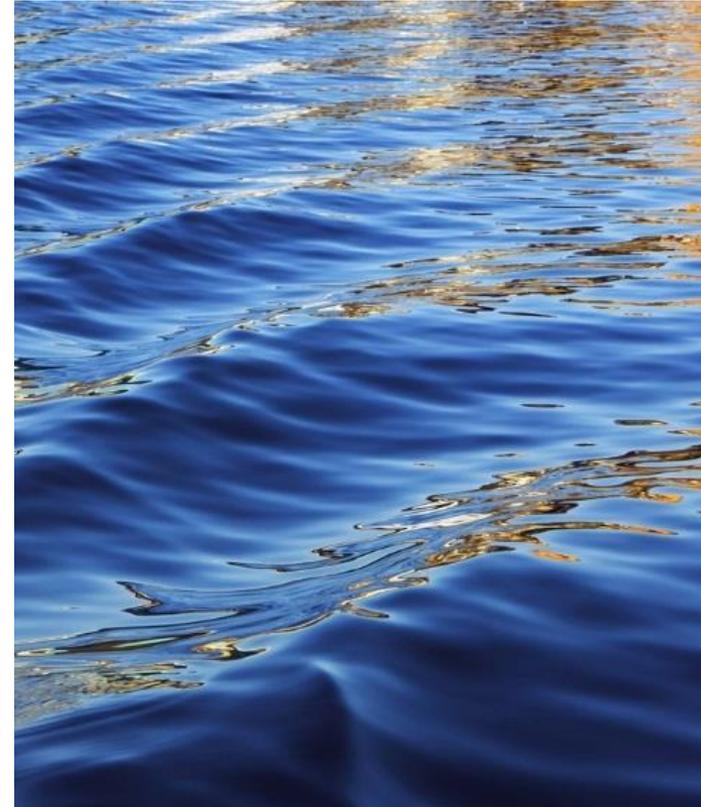
Methane filling station



Spittelau incineration plant provides **district heating in Vienna**

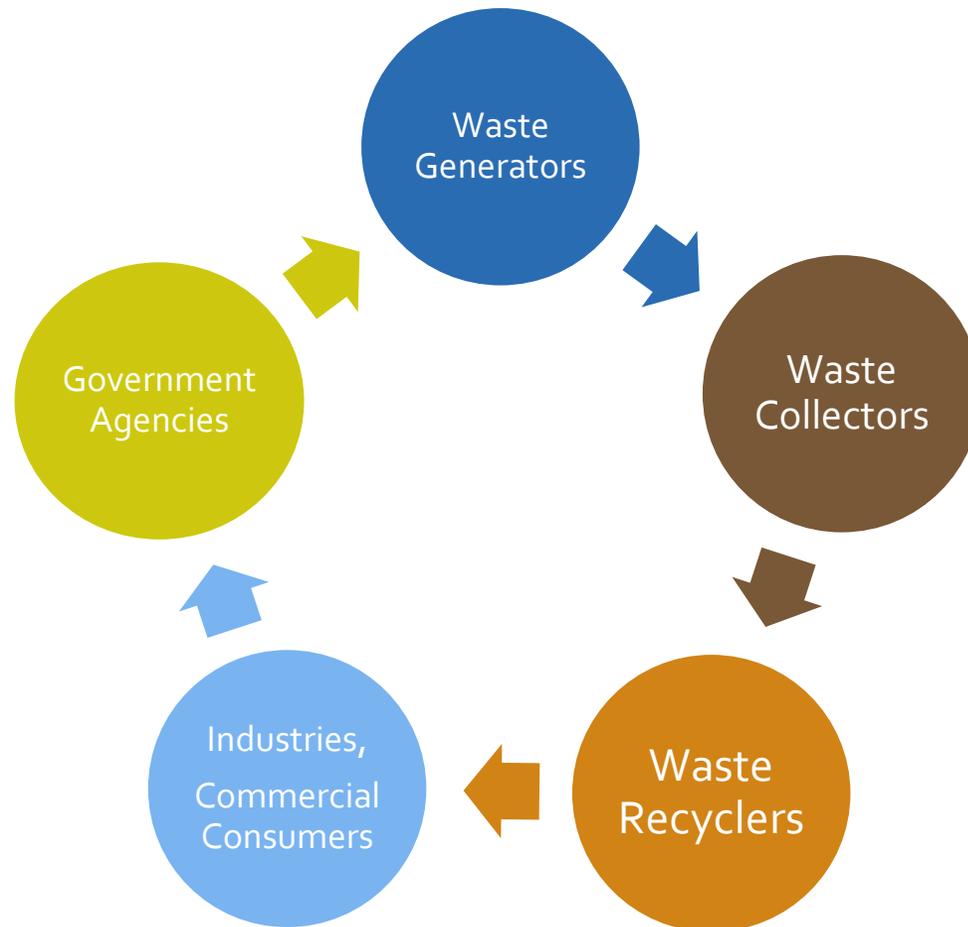


Roles of Waste Stakeholders in Green Technology Development



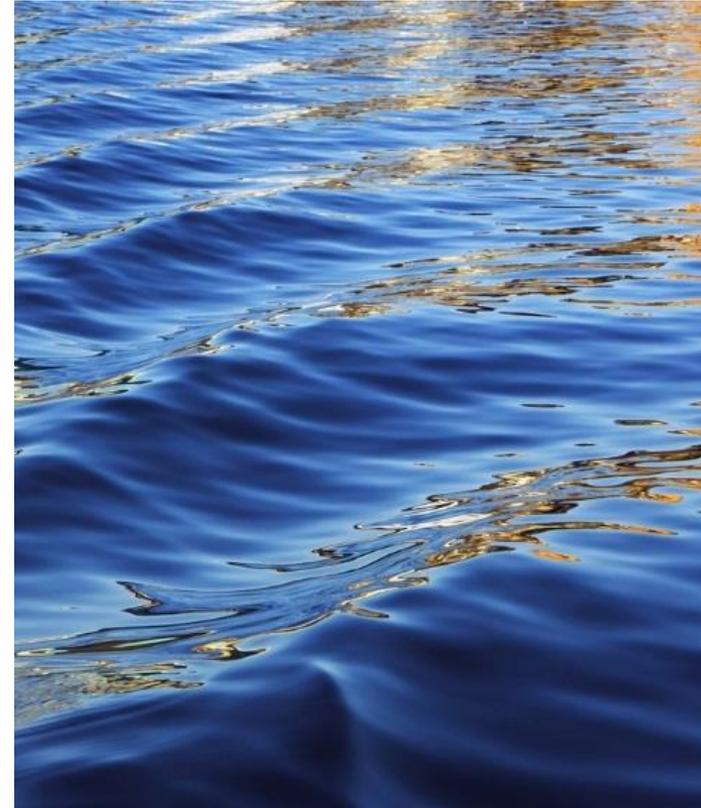
Waste Stakeholders

- **Waste Generators** – Reduce Waste, Reuse and Recycle (through separation at source)
- **Waste Collectors** – use green transport, develop recovery facility
- **Waste Recyclers** – use green technology, energy saving equipment, less natural resources, reuse/recycle water/heat
- **Industries/Commercial/Consumers** – optimise packaging, resources consumption, maximize reuse and recycle
- **Government Agencies** – promote and “support” separation at source, reuse, recycle and green technology (renewable energy etc)





The Way Forward



The Way Forward for Waste Sectors

- To provide a coordinating agency/body to manage **cross-sectors and grey areas issues**
- To support **existing green technology** initiated by private sectors to ensure **sustainability**
- To create **market demand** for Green Technology initiatives/products to ensure **sustainability**
- To promote to the public the importance of **waste segregation** at source and provide the **relevant infrastructures**
- To get the **media support** to promote Green Initiatives

SUSTAINABILITY is the key for the success (triple bottomline)

THANK YOU FOR YOUR ATTENTION

www.wmam.org