Waste Management & the Green Economy

ISWA / APESB
INTERNATIONAL CONGRESS

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What is the Green Economy?

"an economy that results in improved human well-being and reduced inequalities over the long term, while not exposing future generations to significant environmental risks and ecological scarcities"

UNEP definition

Basically

= valuing enterprises where factors such as the creation of sustainable employment and protection of the environment are valued alongside economic growth and profit.

=recognises, that neglecting health and environment comes at a cost

A United Nations study carried out in 2008 calculated that human use of environmental goods and services (ecosystem services) equated to around **$ 6.6 trillion USD** in environmental costs, equal to **11% of the global economy**.

WHY DOES IT MATTER?

Population ↑

Consumption ↑

Extraction of raw materials ↑

Products are becoming more complex (materials, life-span, repairability, recyclability…)

But the earth is limited as a source (*incl. resilience of some renewable resources*) and as a sink

Without approp. management this situation leads to:

- Impact on Human Health
- Increased pollution to water, air and soil
- Increased GHG emissions
- Resource Scarcities
- …

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WASTE GENERATION

II AFRICA SUSTAINABLE WASTE MANAGEMENT

TABLE 4
Waste Generation Projections for 2025 by Region

Region	Current Available Data			Projections for 2025			
	Total Urban Population (millions)	Urban Waste Generation		Projected Population		Projected Urban Waste	
		Per Capita (kg/capita/day)	Total (tons/day)	Total Population (millions)	Urban Population (millions)	Per Capita (kg/capita/day)	Total (tons/day)
AFR	260	0.65	169,119	1,152	518	0.85	441,840
EAP	777	0.95	738,958	2,124	1,229	1.5	1,865,379
ECA	227	1.1	254,389	339	239	1.5	354.810
LCR	399	1.1	437,545	681	466	1.6	728,392
MENA	162	1.1	173,545	379	257	1.43	369,320
OECD	729	2.2	1,566,286	1,031	842	2.1	1,742,417
SAR	426	0.45	192,410	1,938	734	0.77	567,545
Total	2,980	1.2	3,532,252	7,644	4,285	1.4	6,069,703

Waste generation across Africa is projected to grow by **260%** (2010-2025) not expected to peak before **2100**

FIG. 3
Urban Waste Generation by Income Level and Year

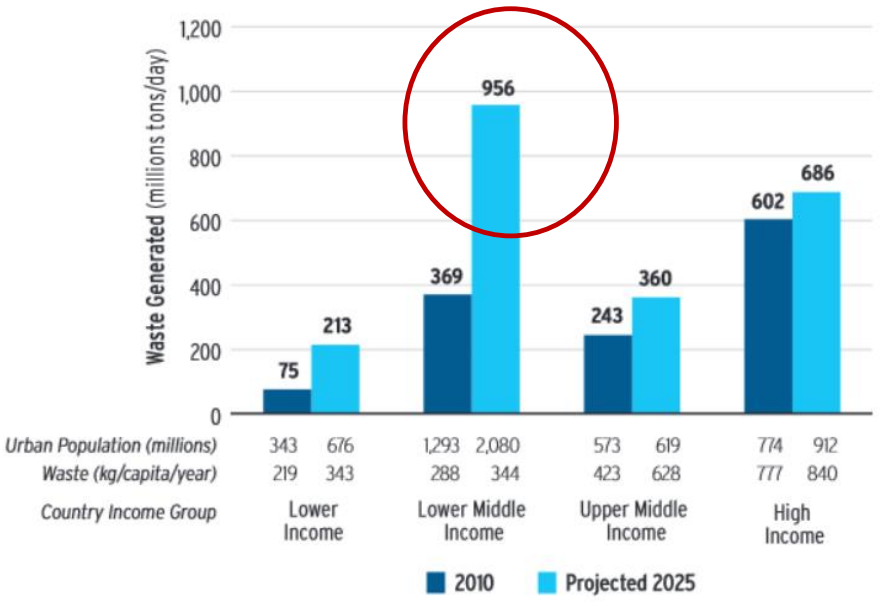


Figure Source: What a Waste World Bank

EXTERNAL COSTS

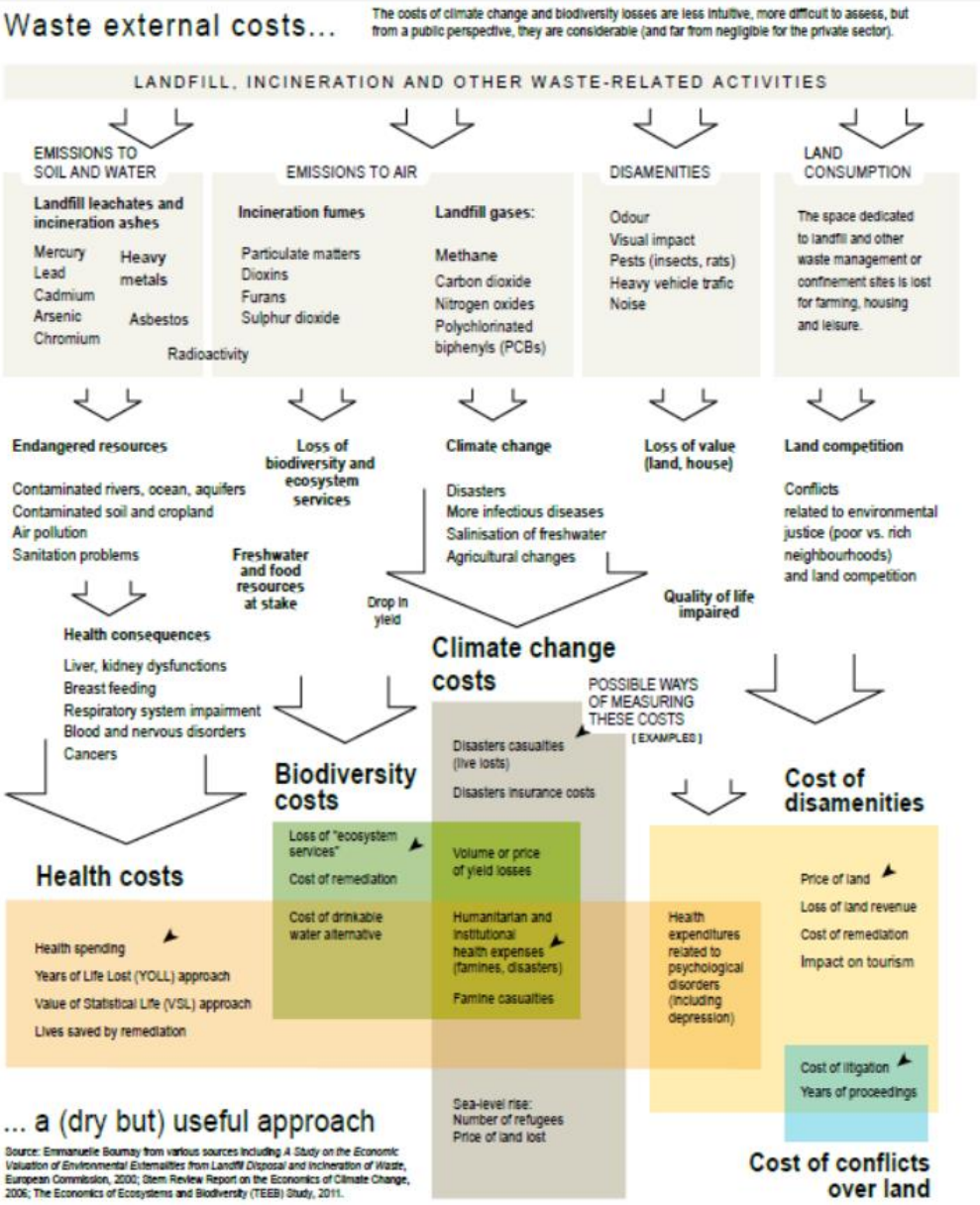


Figure Source: Vital waste Graphics 3; Secretariat of the Basel Convention

Costs unaccounted for by improper practices in waste management

In Mexico the average life expectancy of a waste worker is **39 years**, while the normal life expectancy is **69**.

Source: Solid Waste Management in the World Cities, UNHABITAT 2010

In Austria between 1989 until 2002, **~€700 Million** (collected from landfill taxes) were spent to cover the costs of >140 land remediation projects.

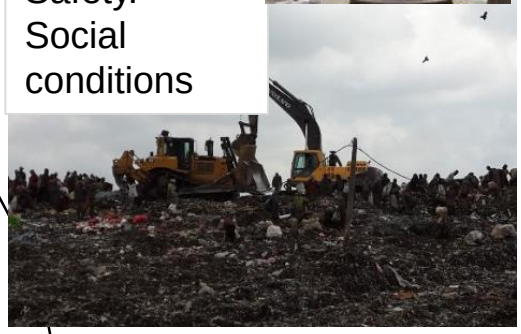
Source: European Environmental Agency, 2011

A study by the New Zealand Ministry of the Environment in 2001 calculated that a degraded environment could result in a loss of **$938 Million NZD** from the tourism sector.

Source: MfE (2001) Valuing New Zealand's Clean Green Image

How can waste management contribute to a Green Economy?

affordable technologies that are environment ally sound and suitable for local conditions



Protection of Public (& workers) Health & Safety. Social conditions

However need to apply LCA principles and a holistic view

Treatment operations for reuse, recycling and recovery need to be cost effective, so that materials are increasingly recycled and recovered above being disposed.

Avoid and mitigate harmful emissions to Land, Water & Air

BENEFITS OF A GREEN ECONOMY

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GREEN ECONOMY

ECONOMIC

$ Economic savings/gains through waste prevention measures

$ Value obtained from waste in form of secondary material/ energy

$ Resource security and availability of less costly substitute materials for production through recycling

$ Less costs associated with residual waste management

$ Greater availability and value of land

HEALTH & SOCIAL

↓ medical costs through improved health & safety

↑ productive work force through less sickness

↑ Job creation unemployment

Poverty alleviation

Improved employment conditions

Improved public amenity

Public engagement/ participation

ENVIRONMENTAL

Conservation of natural resources (raw materials), water and fossil fuels (energy)

Environmental protection
Saved environmental costs (flooding, water quality, air quality, land, biodiversity and ecosystem services)

Climate benefits – through↓ GHG emissions

SPECIFIC BENEFITS

Market and Employment Opportunities

- The **global waste market**, from collection to recycling, is estimated at **US$ 410 billion** a year, not including the considerable informal segment in developing countries.

  Source: UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication.

- **12 million people** are currently **employed in recycling** in the 3 major economies of- **Brazil, China** and the **United States**. Sorting and processing recyclables alone sustain ten times more jobs than landfilling or incineration on a per tonne basis.

  Source: UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication.

- According to Italian Composting and Biogas Consortium (CIC) the Italian **Composting** and **Anaerobic Digestion** sector has a turnover of **640M€/yr,** including the cost for collecting Bio-waste and the management of composting and AD-plants. CIC estimates that about **3000 working places** have been created between the late '90s and today for **managing composting plants** in Italy

  Source: 20 years of CIC, anniversary publication, 2012, Rome

KEY POINTS

- Waste Management is the **largest expense** for many cities
- Poorly managed waste has a **huge & costly** impact on health, environment, and economy
- Improperly managed waste usually results in **greater costs** than what it would have cost to manage the waste properly in the first place

- **Most important** service a city provides – particularly in low & middle income countries
- Can be one of the **largest employers** for municipalities
- **More Jobs** can be created from implementing IWM rather than just disposal
- **Value** can be obtained from waste
- Properly managed waste **protects human health** and the **environment**, avoiding associated costs

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CCAC MSW INITIATIVE

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	PARTICIPATING CITY	MENTOR CITY
WHO CAN JOIN THE MSW INITIATIVE?	Cities in developing CCAC or non-CCAC partner countries that are interested in gaining access to resources that can help them improve their waste management practices and reduce SLCP emissions	Cities that are advanced in waste management and are interested in exchanging information about improving waste management practices and reducing SLCP emissions
WHAT ARE THE BENEFITS OF JOINING?	• Access to an expert network • Access to information on best practices • Capacity building (e.g., trainings and events) • Potential support in identifying sources of sustainable financing of MSW Initiative-related projects • Potential technical advice* (e.g., feasibility assessments) **Assistance does not include support for establishment of infrastructure or capital investments.*	• Opportunity to share know-how and promote successful MSW management experiences • Recognition as a leader and expert in MSW management • Access to information on best practices and lessons learned from other mentor cities • Access to an expert network

MSW Knowledge Platform **http://waste.ccac-knowledge.net/**

Webinar Series on Organic Waste Management & Treatment Options

26th May and 9th June.

For details see **http://waste.ccacknowledge.net/content/webinars-online-training**

Global Waste Management Outlook

Authoritative, analytical, evidence-based, concise and visual: To be published in early 2015

To raise the profile of waste management as a priority for action, to protect public health & the environment and achieve sustainable development

Global Waste Management Outlook (GWMO)

MANDATE	From UNEP's Governing Council, Post Rio+20: 'To develop a global outlook of challenges, trends and policies in relation to waste prevention, minimization and management, …'		
AIM	To raise the profile of waste management as a priority for action, to protect public health & the environment and achieve sustainable development		
AUDIENCE	High-level decision-makers	Professional	Public
OUTPUTS	Executive report	100-150 p. main report	Media briefs

AMBITIONS OF THE GWMO

HOLISTIC APPROACH	Waste management within context of sustainable development
WASTE A PRIORITY	Why waste should be a priority – both for decision makers AND the people
SITUATION ANALYSES	Showcase the real progress made as well as remaining challenges
PARADIGM SHIFT IN THINKING	Move upstream – reduce consumption, consider waste management as a resource, improve resource efficiency and create jobs for green growth
RENEWED FOCUS	Focus on governance, implementation and financial sustainability – technical solutions alone are not enough
COMING TOGETHER	Promote partnerships and inclusive approach

UNEP

ISWA International Solid Waste Association

GWMO is…..

- Authoritative, evidence based, analytical

- Concise, use 'vital info-graphics'

To be launched in June 2015

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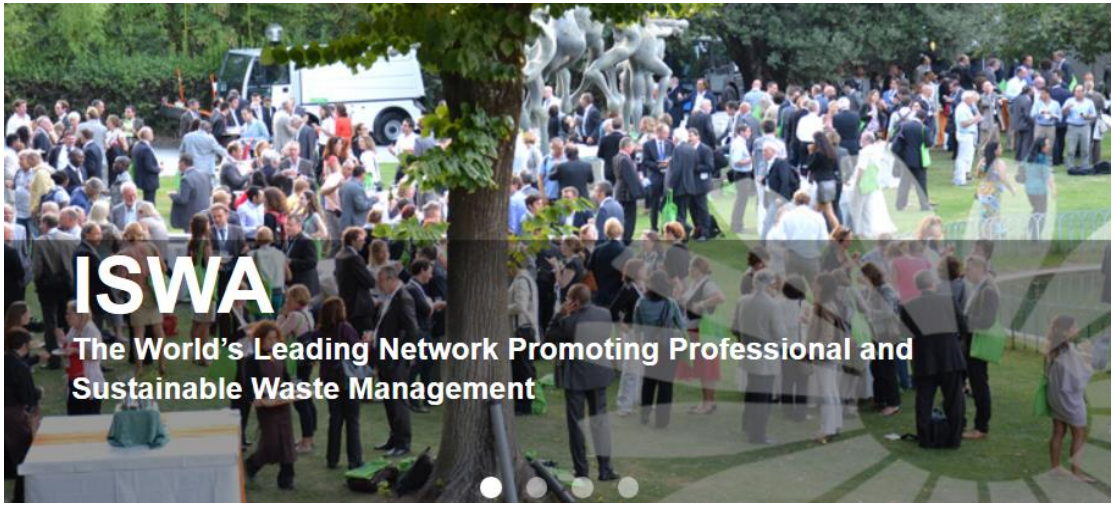

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