

SETTING THE SCENE: WASTE MANAGEMENT IN SOUTH AFRICA

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2013 WASTE KHORO

MAKING THE MANAGEMENT OF WASTE A COLLECTIVE EFFORT



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



OUTLINE

- Feedback on 2012 actions
- Overview of the current challenges
- 2013 Waste Khoro
- Moving forward



STRATEGIC CONTEXT

- **State of Waste**
- **Evolution of waste Management**
- **Transformation of the Waste Sector**
- **Transition to a recycling economy**
- **Waste valorisation**
- **Regulatory**
- **Institutional**

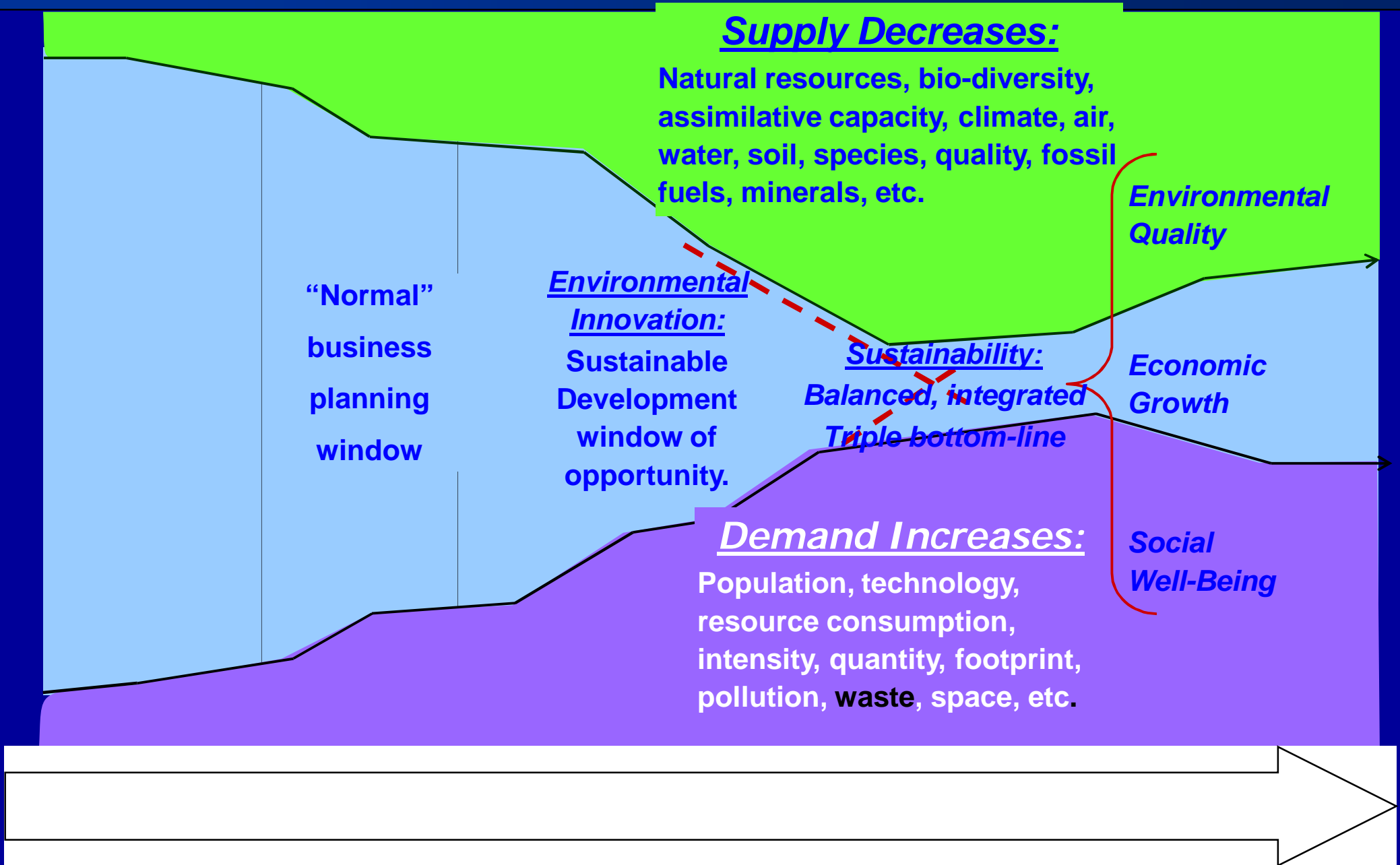


Key issues and challenges

- Institutional and Governance
- Integrated planning and development
- Ineffective Funding and budgetary constraints
- Regulatory and Legislative issues
- Management and Operations –
- Cost recovery models
- Capacity building and Awareness
- Enforcement matters
- Compliance and enforcement issues
- Economic opportunities – recycling economy



Converging Global Supply & Demand



OVERVIEW OF THE 2012 WMO KHORO

Theme

“Creating Jobs and Increasing Efficiencies in the delivery of Waste Services”

Aim

- Job creation is mainstreamed in collection, recycling and recovery
- Efficient use of limited resources in waste management



2012 WMO KHORO ACTIONS AND PROGRESS

- **PROVINCIAL WASTE MANAGEMENT OFFICERS WILL PRESENT REPORTS**
- **DEA train more municipalities on the tariff model**
 - DEA developed a tariff model and trained municipalities on it as part of the Councillor Training programme
- **Municipalities to strengthen revenue collection systems for waste services (use of the tariff model)**
 - On-going



2012 WMO KHORO ACTIONS AND PROGRESS...

- **Municipalities must promote community involvement by engaging various stakeholders to strengthen the recycling initiatives**
 - On-going: Municipalities across the country use community contracting models and promote recycling. More work still required.
- **Municipalities must ensure the diversion of green waste for composting**
 - DEA developed the National Organic Waste Composting Strategy (NOWCS) and currently developing Norms and Standards for composting with an aim to delist composting from activities which require a licence



2012 WMO KHORO ACTIONS AND PROGRESS...

- **DEA, working with relevant partners, must initiate a comprehensive national awareness campaign (guidelines, messaging etc)**
 - Awareness incorporated in the Youth Jobs in Waste programme. DEA will further look into
- **Municipalities should make use the IWMP guidelines**
 - DEA developed IWMP web-portal and IWMP guideline
 - IWMP web portal training done during councillors induction programme



2012 WMO KHORO ACTIONS AND PROGRESS...

- **Strengthening of compliance at Local Government including update of by-laws**
 - DEA conducted workshops on Waste Model by law to all provinces
 - DEA ensure compliance by assisting municipalities to licence disposal sites
- **Roll out of capacity building programme for Municipalities (Political principals, Officials and CFOs) to be done by Provincial and National Departments**
 - Councillor Training sessions were conducted around the country
 - Training of technical directors and CFOs on waste management

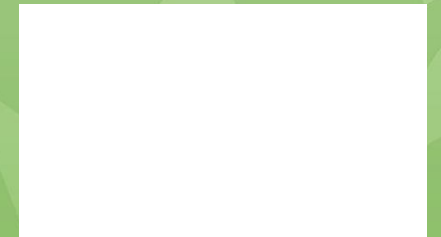
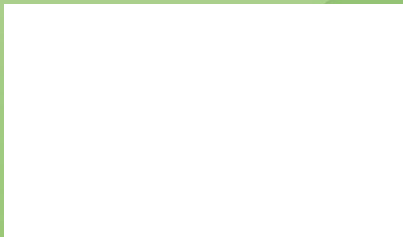
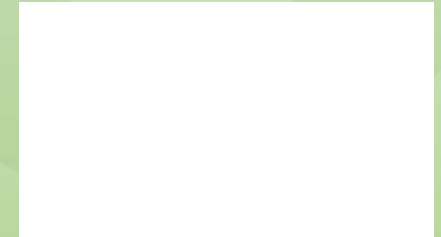


4th WASTE MANAGEMENT OFFICERS KHORO



2013 MAIN THEME

"MAKING THE MANAGEMENT OF WASTE A COLLECTIVE EFFORT"



NATIONAL WASTE STATISTICS

- The Waste Information Baseline Study which was commissioned by the Department of Environmental Affairs (DEA) in 2011 showed that:
 - of the **108 million** tons of waste generated in South Africa, only **10%** was recycled.
 - Approximately **97 million** tons of waste was disposed at landfills
- According to the census data from Statistics SA, In 2001 the household that had access to weekly refuse removal were 55,4% and in 2011 its **62,1%** of households which translates to **37,9%** having not access to weekly refuse removal
- DEA study 2012/13 shows waste service delivery to be 65%



COMPARISON

Country	% of waste Recycled	% of waste Processed WTE	% of waste ends up in Landfills
Germany	65%	33%	2%
Netherlands	59%	38%	3%
Belgium	63%	33.5%	3.5%
Sweden	49%	47.5%	3.5%
Denmark	42%	54%	4%
South Africa	8%	0%	90%

CHALLENGES IN WASTE SECTOR

The NWMS identified some of the following challenges:

- A growing population and economy, which means increased volumes of waste generated.
- Increased complexity of waste streams because of urbanisation and industrialisation.
- A historical backlog of waste services for, especially, urban informal areas, tribal areas and rural formal areas.



CHALLENGES IN WASTE SECTOR

- Limited understanding of the main waste flows and national waste balance because the submission of waste data was not obligatory, and where available is often unreliable and contradictory.
- A policy and regulatory environment that does not actively promote the waste management hierarchy. This has limited the economic potential of the waste management sector, which has an estimated turnover of approximately R10 billion per annum.

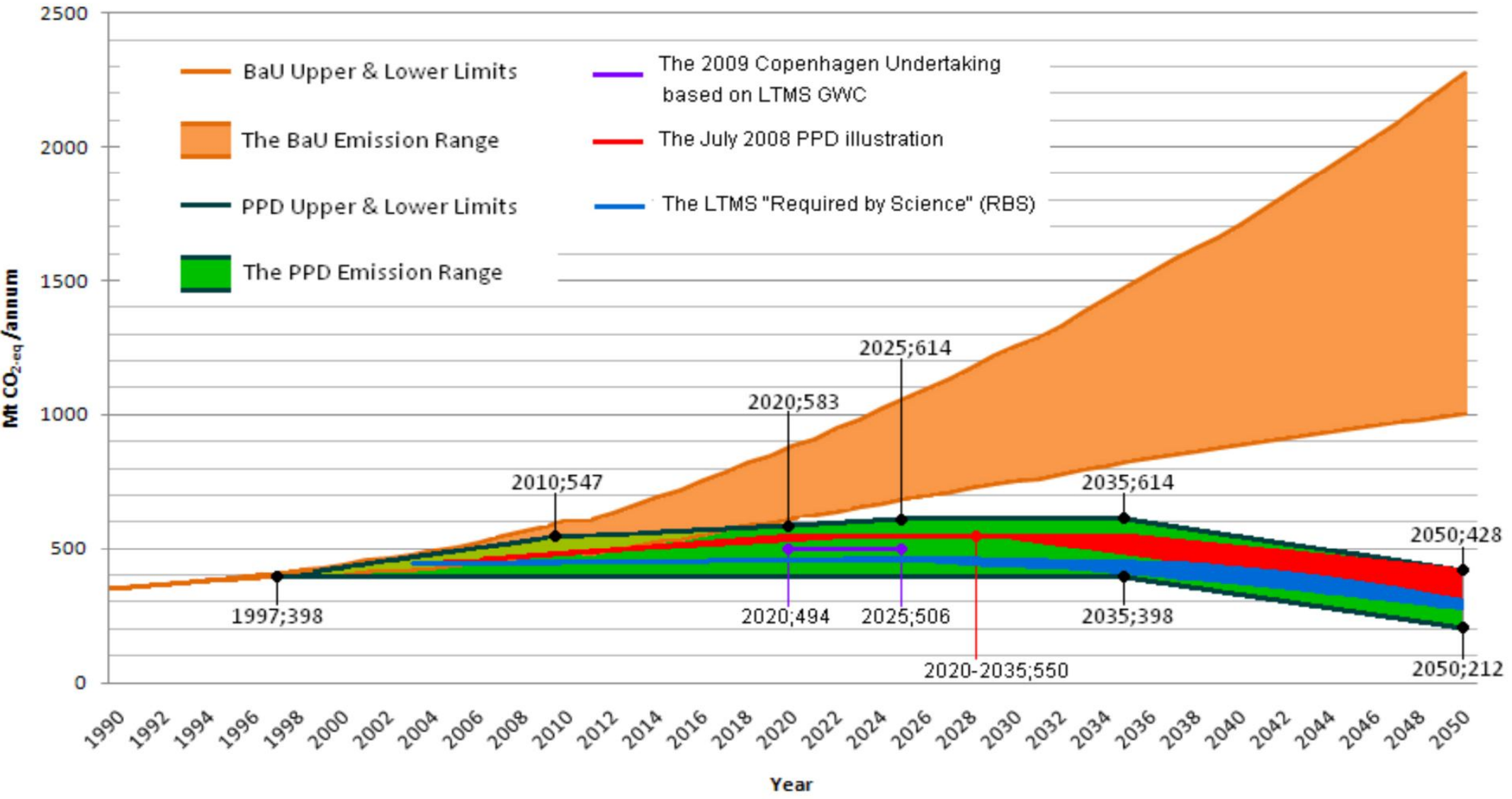


CHALLENGES IN WASTE SECTOR

- A policy and regulatory environment that does not provide the policy certainty for industry to invest in waste management technologies.
- Absence of a recycling infrastructure which will enable separation of waste at source and diversion of waste streams to material recovery and buy back facilities.
- Growing pressure on outdated waste management infrastructure, with declining levels of capital investment and maintenance.



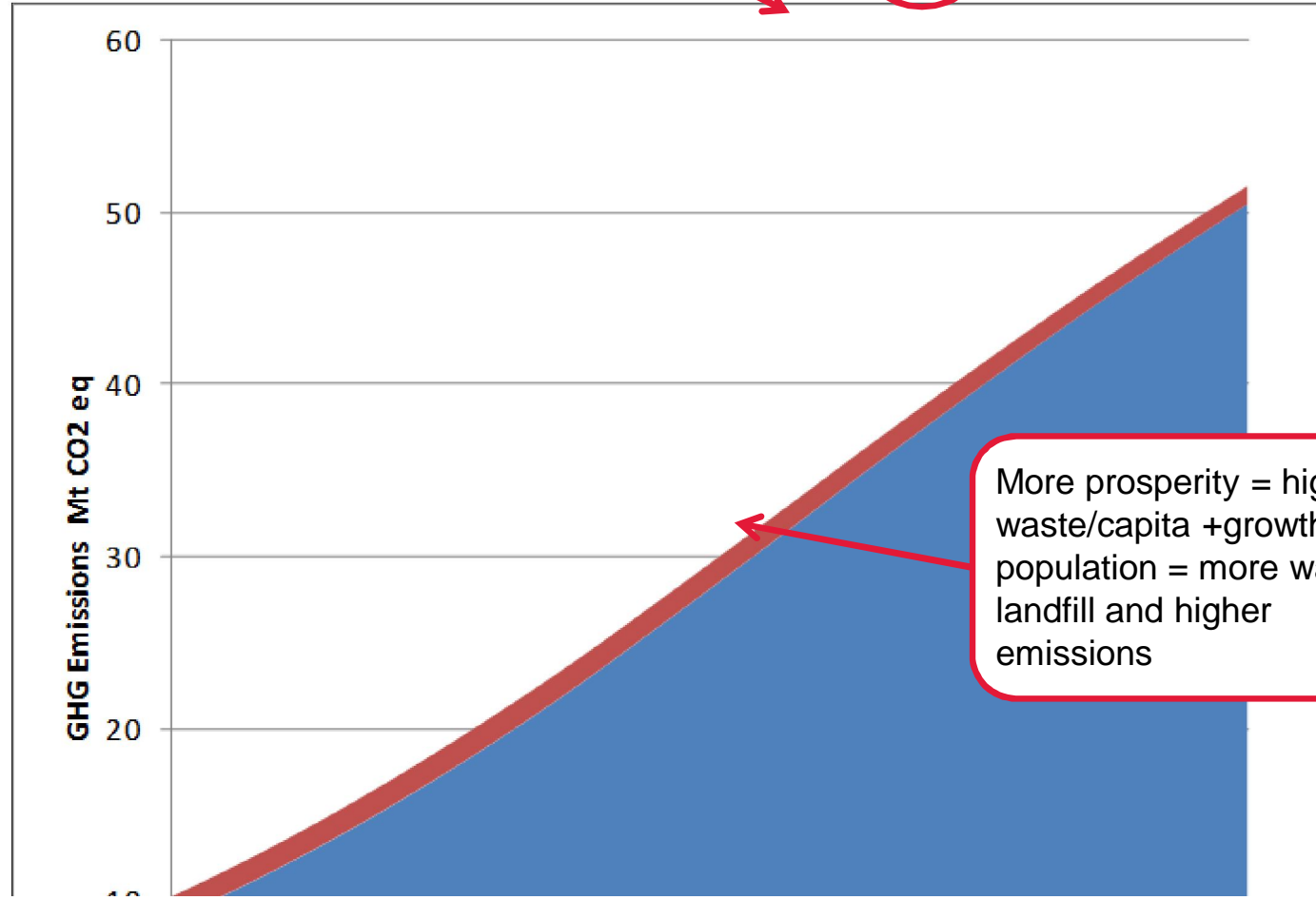
The desired South African climate change mitigation outcome - the "Peak, Plateau and Decline" (PPD) greenhouse gas emission trajectory – comparison with other popularised conceptions of PPD



Reference Case Projection

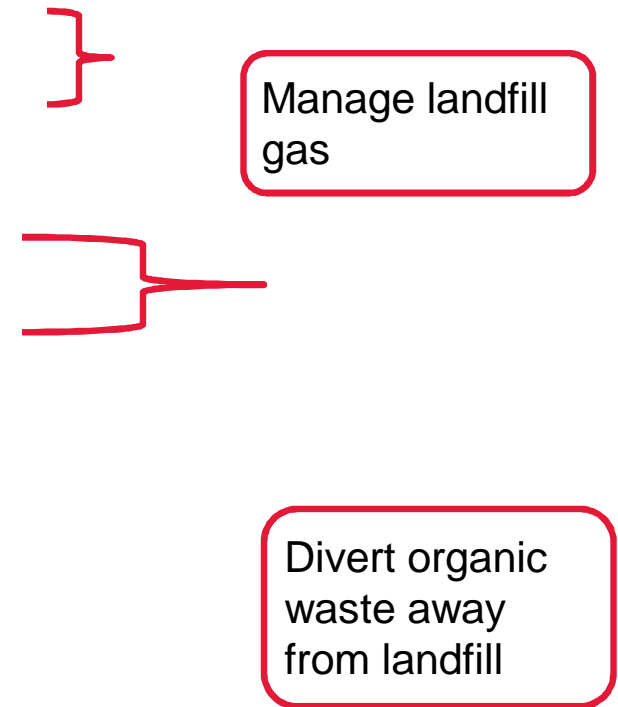
Waste water emissions decrease due to more of population connected to sewerage systems

Emissions rise more than fivefold between 2000 and 2050

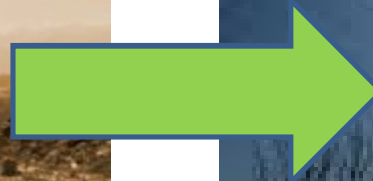


Mitigation Opportunities

- Landfill gas recovery - flaring
- Landfill gas recovery – electricity generation
- Energy from waste (EfW)
- Anaerobic digestion (AD)
- Windrow composting
- In vessel composting
- Household waste separation and composting
- Paper recycling- revenue from all dry recyclables

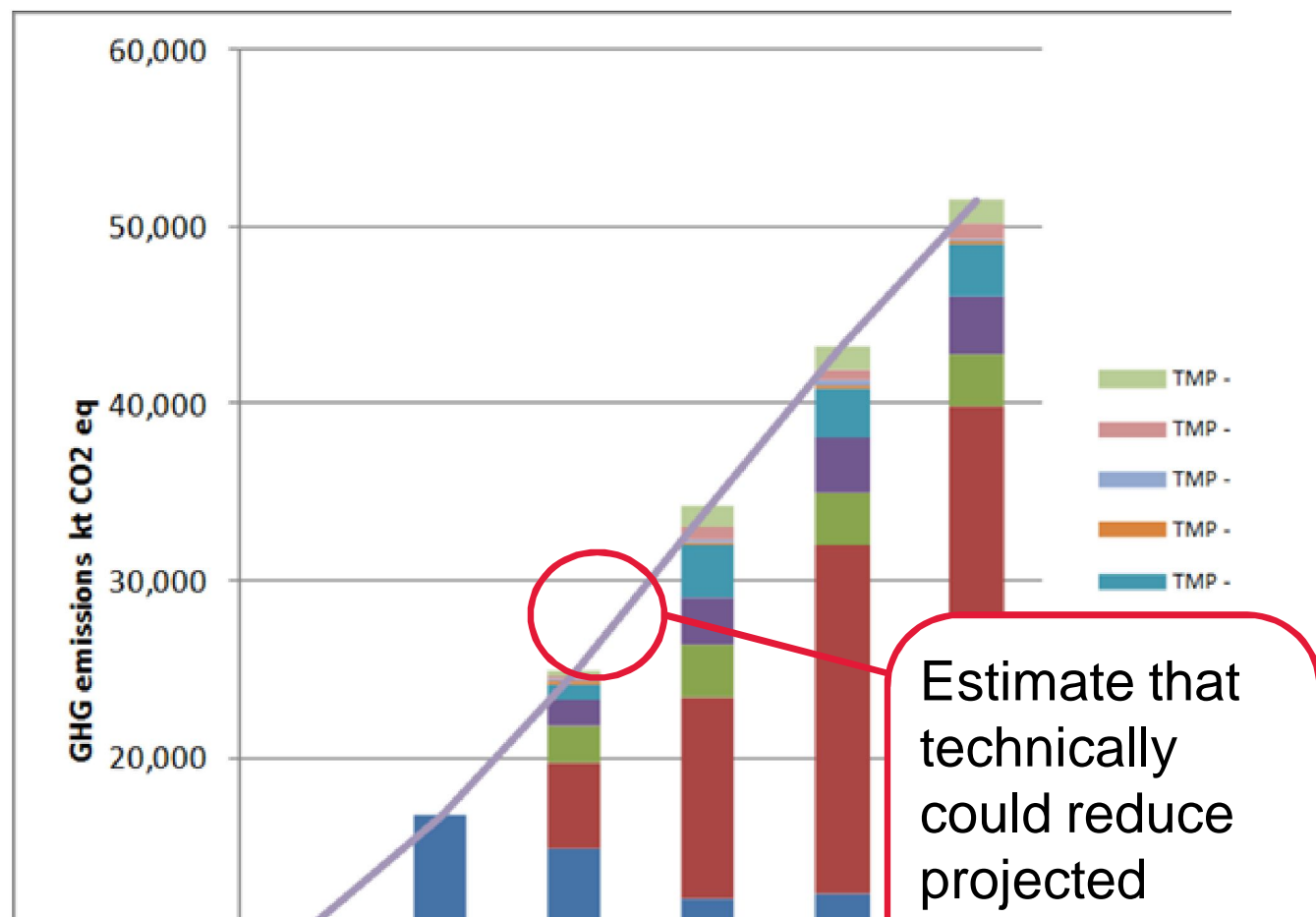


Waste to Energy



Marginal Abatement Cost Curves

Technical Mitigation Potential



Actions ordered by impact by period

Work Together
Saving Tomorrow Today



2010-2020	2021-2030	2031-2040
Industrial energy efficiency	electricity supply options	electricity supply options
electricity supply options	Industrial energy efficiency	Industrial energy efficiency
Land use - fire/savannah	Synfuels CO2 CCS	Improved vehicle efficiency
Waste management	Land use - fire / savannah	Synfuels CO2 CCS
Agriculture - enteric fermentation	Waste management	Passenger modal shift
Residential energy efficiency	Residential efficiency	Electric vehicles / Hybrids
Agriculture - reduced tillage	Commercial efficiency	Residential energy efficiency
SWH	Improved vehicle efficiency	Commercial energy efficiency
Commercial energy efficiency	Electric vehicles	Waste management
Synfuels methane reduction	Afforestation	SWH
Afforestation	Agriculture - enteric fermentation	Land use - fire / savannah
biofuels	SWH	Cleaner coal
Improved vehicle efficiency	Hybrids	Agriculture - enteric fermentation
Passenger modal shift	Passenger modal shift	Biofuels

NATIONAL WASTE MANAGEMENT STRATEGY

- Waste management suffers from a pervasive under-pricing, which means that the costs of waste management are not fully appreciated by consumers and industry, and waste disposal is preferred over other options.
- Market failure – dual economy
- Few waste treatment options are available and so they are more expensive than landfill costs.
- Contribution to the Green Economy



WMO- 2013 TO DELIBERATE ON:

- Public awareness
- Waste innovation and technology
- Waste to energy options
- Climate Change mitigation
- Recycling and recycling jobs
- Waste collection systems and community involvement
- Regionalisation of waste services



WMO- 2013 TO DELIBERATE ON:

- Waste disposal management
- Integrated waste management planning
- Funding for waste services
- Update on legislation



MOVING FORWARD...:

AMENDMENT OF LEGISLATION

- NEM: WASTE ACT
- LIST OF WASTE MANAGEMENT ACTIVITIES

NEW REGULATIONS AND STANDARDS

- WASTE INFORMATION REGULATIONS
- WASTE CLASSIFICATION AND MANAGEMENT REGULATIONS
- NORMS AND STANDARDS



THANK YOU
WASTE MANAGEMENT
ENGINEERS



We appreciate you!

