



OPERATION PHAKISA

CHEMICALS AND WASTE ECONOMY

ASBESTOS AND LAND REMEDIATION EAP WORKSHOP

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Zimasa Nhlapo



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OPERATION PHAKISA – CHEMICAL AND WASTE MANAGEMENT LAB AIMS TO SUPPORT SA ECONOMY WHILE REDUCING ITS ENVIRONMENTAL FOOTPRINT

CONTEXT

- Operation Phakisa is a presidential program to support implementation the National Development Plan to promote SA economy. The focus of this Phakisa lab is on **chemicals and waste**.
- Current South African waste management sector is not sufficiently developed, leading to both missed economic opportunities and unnecessary negative environmental impact
- Chemicals workstream aspires to focus on prioritizing initiatives that address South Africa's competitiveness in the chemicals industry, in an environmentally and economically sustainable manner

CRITERIA TO SUCCESS

- GDP contribution
- Job creation
- Reducing negative environmental impact
- Formalization and protection of informal workers
- Economic transformation



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2 The Phakisa addresses the opportunity to enhance South Africa's Chemicals and Waste Economy

THE CHEMICALS AND WASTE SECTOR HAS A CRITICAL ROLE IN THE ECONOMY

LAB ASPIRATION



South Africa has a responsibility to **protect the environment** for present and future generations through the **promotion of sustainable conservation** and **ecologically sustainable development** and sustainable use of natural resources



Despite its rich natural resources, **South Africa lacks adequate measures and/or tools for effective transformation** of its waste into goods and services for social and economic development



Government is mandated to **promote economic opportunities in the chemicals and waste sectors**



DST's 10-year Waste Research, Development and Innovation Roadmap has a goal of **growing the waste sector from currently 0.62% of GDP¹ to 1-1.5% of GDP in the next 5 years** via a number of levers:

- Accelerating the waste recycling economy
- Growing the waste-to-energy economy

- **Reduce the negative environmental and health impact** of waste and risks posed by chemicals
- Increase **commercialisation of the circular economy** and create value from resources currently discarded as waste
- **Foster inclusive growth** through positioning of South Africa as a globally competitive producer of sustainable products



3 Objectives and expected outcome



4 PHAKISA – CHEMICALS AND WASTE (20 X INITIATIVES)

Bulk industrial waste



Municipal



Product design and waste minimisation



Chemicals



- 1 Increase ash uptake for alternate building materials¹
- 2 Accelerate innovation and commercialize existing R&D¹
 - Use ash as soil ameliorant
 - Use ash to treat acid mine drainage and backfill mines
- 3 Export ash and ash products¹
- 4 Zero sewage sludge to land(fill)
 - Anaerobic Digester Biogas to Energy
 - FBR Thermal Treatment
- 5 Towards Zero meat production waste to land(fill) by 2023

- 6 Introduction of an E-waste levy to increase collection rate
- 7 Unlocking government ICT legacy volumes
- 8 Achieving a minimum of 50% of households separating at source by 2023
- 9 Introduction of materials recovery facilities and palletization plants to increase plastic recycling rates
- 10 Produce building aggregates and construction inputs from rubble and glass

- 11 Developing capacity through a specialised programme which upskills agri-stakeholders to minimize food loss
- 12 Consumer awareness campaign to use and consume ugly food²
- 13 Compilation/update of packaging design guidelines
- 14 Formalising the packaging industry producer responsibility plans
- 15 Establish refuse-derived fuel plants across South Africa

- 16 Establish a refrigerant reclamation and reusable cylinder industry
- 17 Ban import of harmful chemicals (e.g. leaded paint/paint pigments)

18 **Collect and dispose stockpiles of harmful substances (asbestos, mercury)**

Revised:
Development of a national strategy for management of harmful substances (asbestos, mercury)



Cross-cutting initiatives



- 19 **Coordinate SMME development opportunities across initiatives**
- 20 **Roll out national awareness campaigns**



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5 INTER SECTOR / INTER DEPARTMENTAL COLLABORATION

Business

Government

Associations and social sector¹

Bulk Industrial Waste

Municipal Waste

Waste minimisation and product design

Chemicals

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¹ Includes academia



6 HOW DO WE ACHIEVE COLLABORATION



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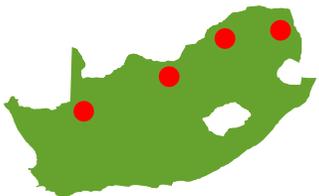
- **Strengthen co -operation** between partners
- Identify areas of **capacity** that need to be addressed.
- Applying the principles of the **District Presidential Model.**
- Proper reporting on non compliances through structures.
- Ensure **advocacy and awareness** on waste management programmes
- Active involvement in **Waste Management Forums.**
- **IDP alignment** on Government projects linked to this initiative
- Political buy – in and support
- Community mobilisation



7 Funding strategy for implementing reviewed Secondary Asbestos Remediation Plan (SARP)

Context

- Asbestos was commercially mined in four SA provinces: Northern Cape, North West, Limpopo and Mpumalanga
 - 185 mines, 578 waste disposal sites



- Between 1977 – 1985, peak production was ~379,000 Tonnes p.a., and SA was responsible for 97% of global amphibole asbestos production



- Secondary asbestos impacted nearby towns and communities (e.g. 6,200 homes, 65 schools etc.)



Proposal

- Produce reviewed Secondary Asbestos Remediation Plan (SARP) for SA



- Create reviewed budget for implementing secondary asbestos remediation plan



- Prioritise fund allocation and fast track execution of secondary remediation plan



Impact: Jobs	
▪ TBD	
Impact: Environmental	
Contaminated homes remediated	6,200
Contaminated schools remediated	65
Length of contaminated roads remediated (Km)	275
Other contaminated buildings remediated	600
Other contaminated sites remediated (Hectares)	40
Funding requirement (TBD)	
Target share of donor funding	50% TBD
Target share of government funding	50% TBD
Possible agencies: DOH, DPW, DAFF, DHS, DOT	

1 Secondary asbestos is carried by winds from original locations, are currently located in poorer communities, and exposure through inhalation of airborne fibres leads to asbestosis which is a chronic fatal illness



8 Summary Progress on the 3ft plan activities- Asbestos Initiative

Main Outputs	Planned end date
Develop a baseline plan/evaluation plan	2020/03/31
Engage service provider to develop the National Asbestos Management Strategy	2020/03/26
Conduct the baseline study to be incorporated into the National Asbestos Management Strategy document	2020/03/31
Analyze the collected data, review the generated results, and develop an implementation plan	2020/09/04





Thank You



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