

POTENTIAL OF ECO-INDUSTRIAL PARKS TO ADDRESS WASTE MANAGEMENT CHALLENGES IN SOUTH AFRICA

WASTE MANAGEMENT CHALLENGES IN SOUTH AFRICA

South Africa's re-integration into the global economy and the Southern African political arena necessitates an improved pollution and waste management system. The country's economic and industrial policy has turned towards export promotion as a pillar of South Africa's development. Therefore, the country has a growing obligation to meet international commitments and to be a globally responsible country. The government therefore promotes an integrated approach to pollution and waste management as a key factor in achieving sustainable development.

Waste management in South Africa has, in the past, been uncoordinated and poorly funded. Key issues include inadequate waste collection services for a large portion of the population, illegal dumping, unlicensed waste management activities including unpermitted disposal facilities, a lack of airspace at permitted landfills, insufficient waste minimisation and recycling initiatives, a lack of waste information, lack of regulation and enforcement of legislation, and limited waste-related legislation.

SOUTH AFRICAN WASTE MANAGEMENT LEGISLATIVE FRAMEWORK

South Africa's waste regime has been improved and is managed by the National Environmental Management: Waste Act (NEMWA), Act 59 of 1998.

The purpose of the Act is:

- to reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development;
- to provide for institutional arrangements and planning matters;
- to provide for national norms and standards for regulating the management of waste by all spheres of government;
- to provide for specific waste management measures;
- to provide for the licensing and control of waste management activities;
- to provide for the remediation of contaminated land;
- to provide for the national waste information system;
- to provide for compliance and enforcement; and
- to provide for matters connected therewith.

NATIONAL WASTE MANAGEMENT STRATEGY 2020

The Department of Environment, Forestry and Fisheries (DEFF) published the National Waste Management Strategy in 2020 to promote waste minimisation, re-use, recycling, and recovery of waste.

It aims to ensure the effective and efficient delivery of waste services and grow the contribution of the waste sector to the green economy and ensure that people are aware of the impact of waste on their health, well-being and the environment.

It provides guidance to achieve integrated waste management planning and ensure sound budgeting and financial management for waste services. It also provides measures to remediate contaminated land and establish effective compliance with and enforcement of the Waste Act.

This supports the vision of eco-industrial parks (EIPs) as they encourage resource efficiency and cleaner production (RECP) and industrial symbiosis, which integrate waste

minimisation strategies. Furthermore, EIPs are often well positioned to accommodate recycling facilities which process urban waste streams (e.g. plastics, construction waste, paper and cardboard, glass, municipal waste), and thereby create urban-industrial synergies.

The South African Government signed a Green Economy Accord in November 2011 that focuses primarily on job creation. Key messages emanating from which include the opportunity to benefit from new prospects for economic activity from climate change, innovation drawn from technology, research and manufacturing, the responsibility of government to create an enabling environment, and partnership of all constituencies and citizens to achieve the goals of the green economy.

WAYS IN WHICH EIPS CAN ADDRESS WASTE MANAGEMENT CHALLENGES

Key components of EIPs can assist in addressing the waste management challenge in the following ways:

- **Park management services:** Park management to coordinate a support programme for the industrial park to increase waste reuse and recycling. Furthermore, park management can coordinate centralised services and facilities on waste collection, storage, recycling, and disposal.
- **RECP:** Undertake on-site assessments with tenant companies to reduce their waste generation and increase waste separation, reuse and recycling.
- **Industrial and infrastructure synergies:** Establish recycling facilities which process urban waste streams (e.g. plastics, construction waste, paper and cardboard, glass, municipal waste).
- **Community and jobs:** Create skilled jobs in waste management since recycling is needed by industrial parks and tenant companies.
- **Spatial planning and zoning:** Planning of industrial park is optimised to accommodate waste processing facilities and centralised waste infrastructures/services to tenant companies.



PRACTICAL EXAMPLE

The Western Cape Industrial Symbiosis Programme (WISP) is a multiple award-winning free facilitation service to businesses, which is now funded by the City of Cape Town. WISP facilitators provide business members with dedicated time and technical expertise, connecting companies with unused or residual resources such as materials, energy, water, assets, logistics, and expertise.

By sharing resources, their members:

- cut costs and increase profit;
- improve their business processes;
- create new revenue streams;
- learn from us and each other; and
- operate more sustainably.

GLOBAL ECO-INDUSTRIAL PARKS PROGRAMME

The Global Eco-Industrial Parks Programme (GEIPP) demonstrates the viability and benefits of greening industrial parks by improving resource productivity and economic, environmental, and social performances of businesses. GEIPP includes incentivisation of EIPs in policies and regulations and identification and implementation of EIP opportunities in selected industrial parks.

GEIPP South Africa is implemented from 2021 to 2023 through a collaboration of United Nations Industrial Development Organisation (UNIDO) with the Department of Trade, Industry and Competition (**the dtic**) and the National Cleaner Production Centre South Africa (NCPC-SA). The GEIPP is made possible by funding provided by the Swiss Government through the State Secretariat for Economic Affairs of Switzerland (SECO).

