

# WISP

Western Cape Industrial  
Symbiosis Programme

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Delivered by GreenCape

## IWMSA Seminar Day

**Toward the end of waste: Wise resource use  
in waste management**

Stellenbosch  
20 April 2017

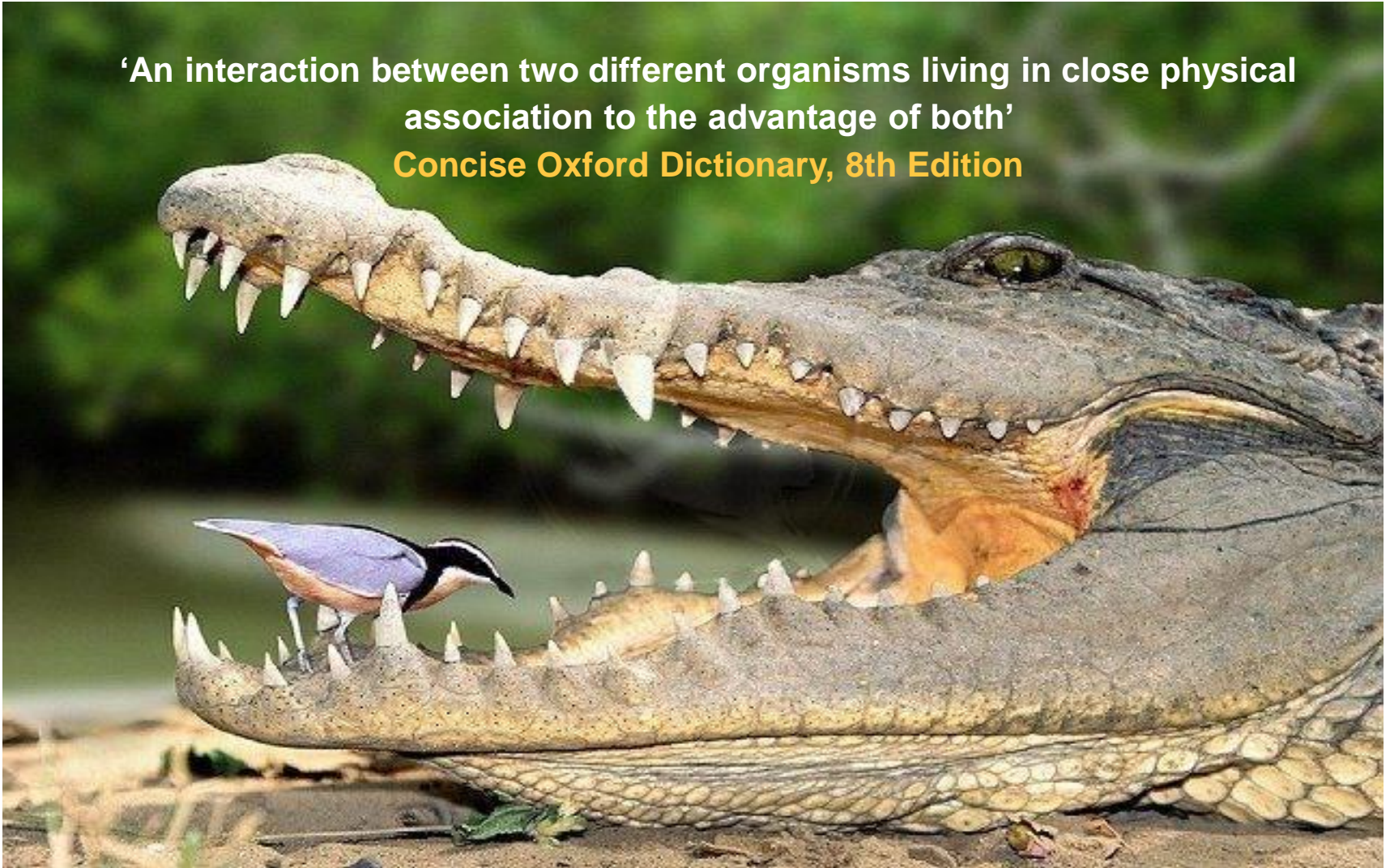


# What is industrial symbiosis?

## A definition

‘An interaction between two different organisms living in close physical association to the advantage of both’

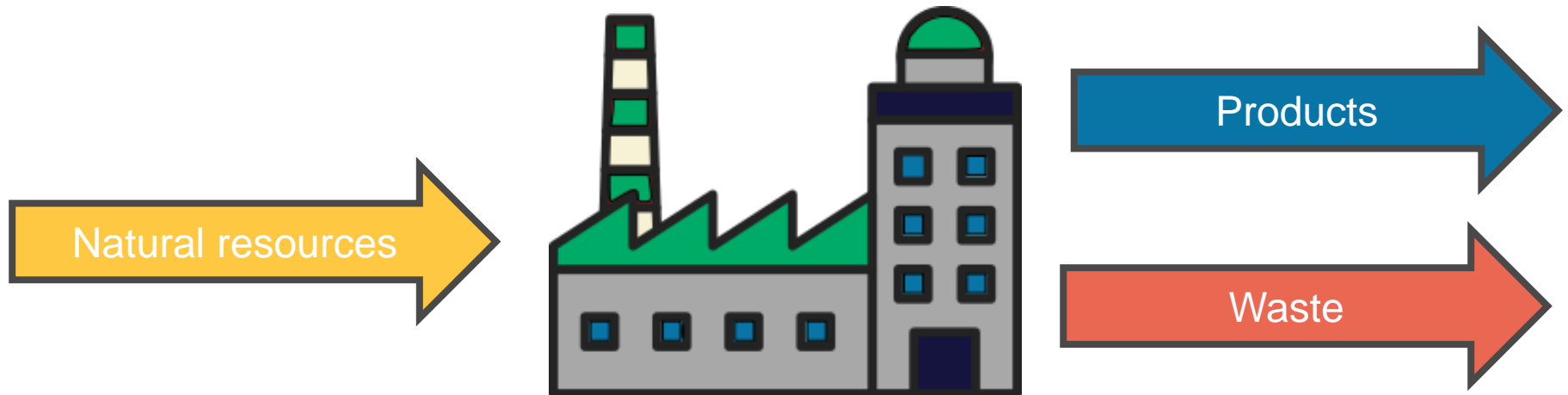
**Concise Oxford Dictionary, 8th Edition**



# What is industrial symbiosis?

Assisting the development of the circular economy

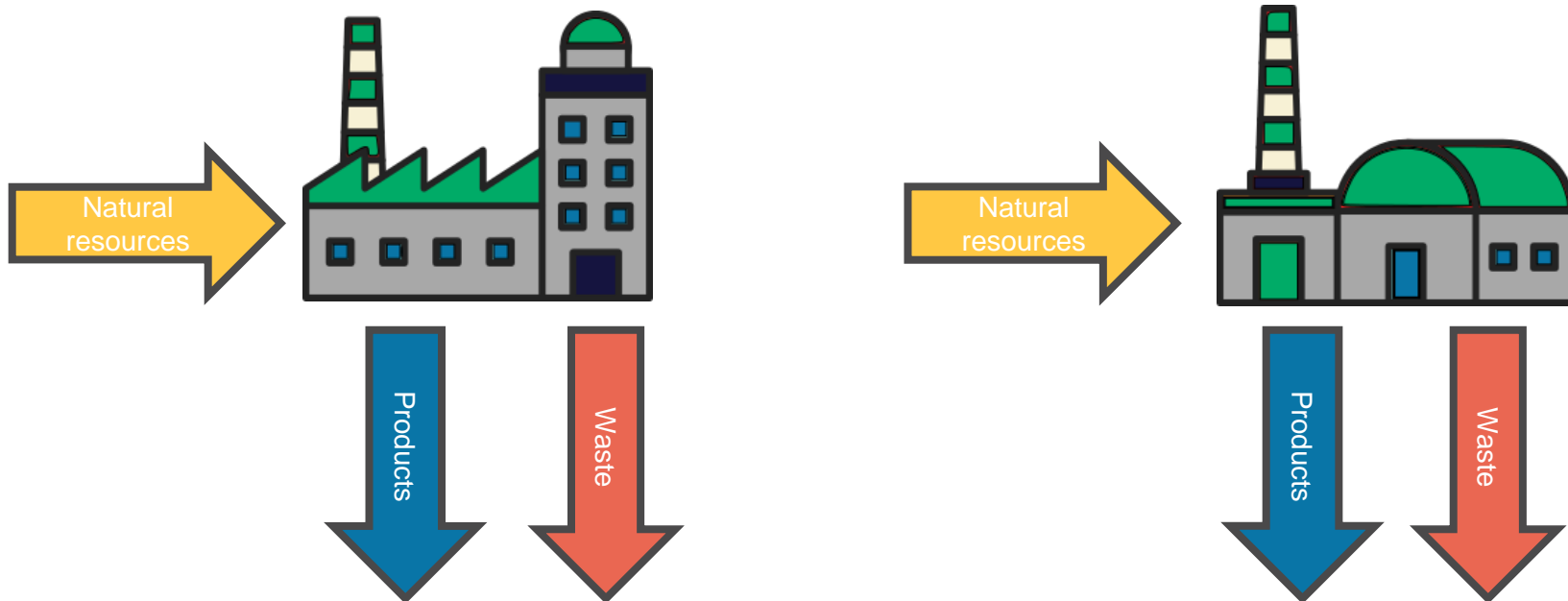
## LINEAR SYSTEM



# What is industrial symbiosis?

Assisting the development of the circular economy

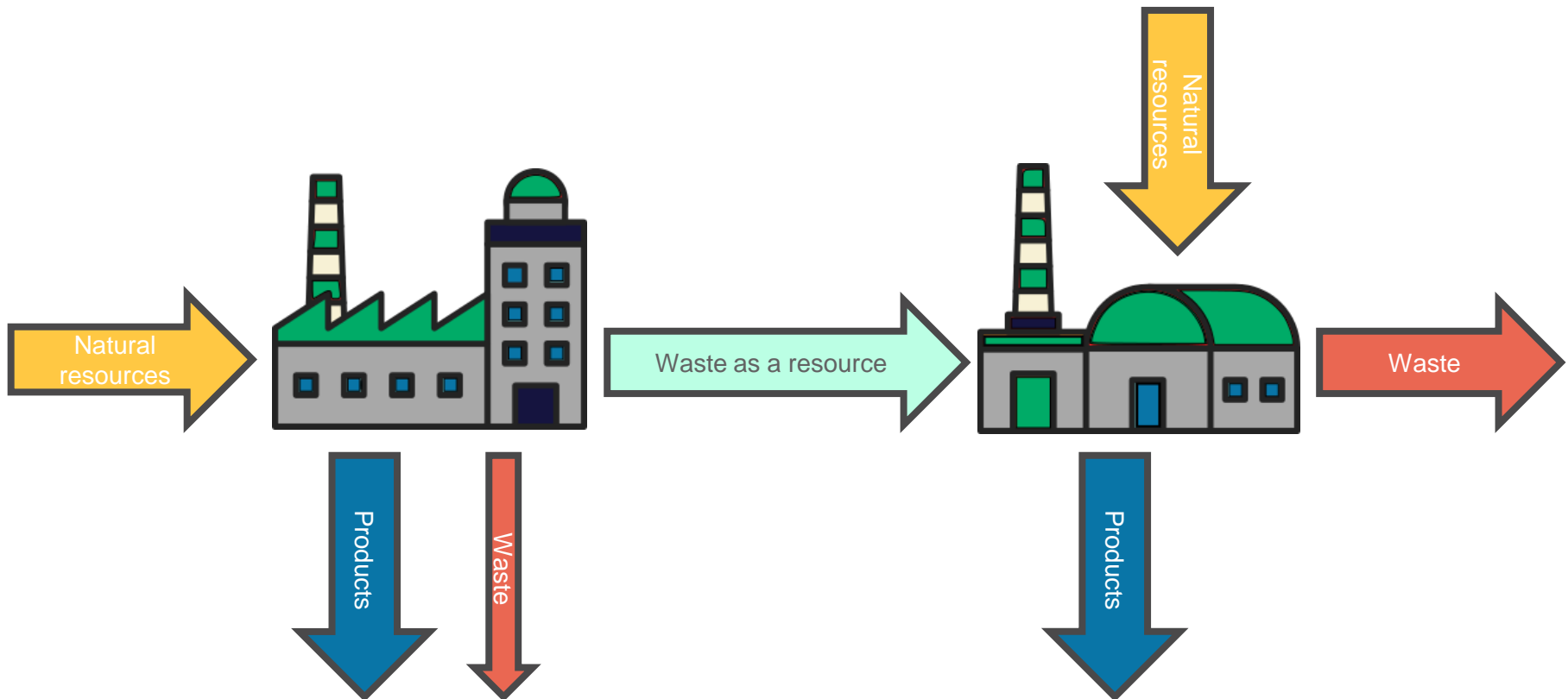
## TRANSITION TOWARDS A CIRCULAR SYSTEM



# What is industrial symbiosis?

Assisting the development of the circular economy

## TRANSITION TOWARDS A CIRCULAR SYSTEM



# Eco-industrial parks and facilitated industrial symbiosis

## Industrial symbiosis in Kalundborg

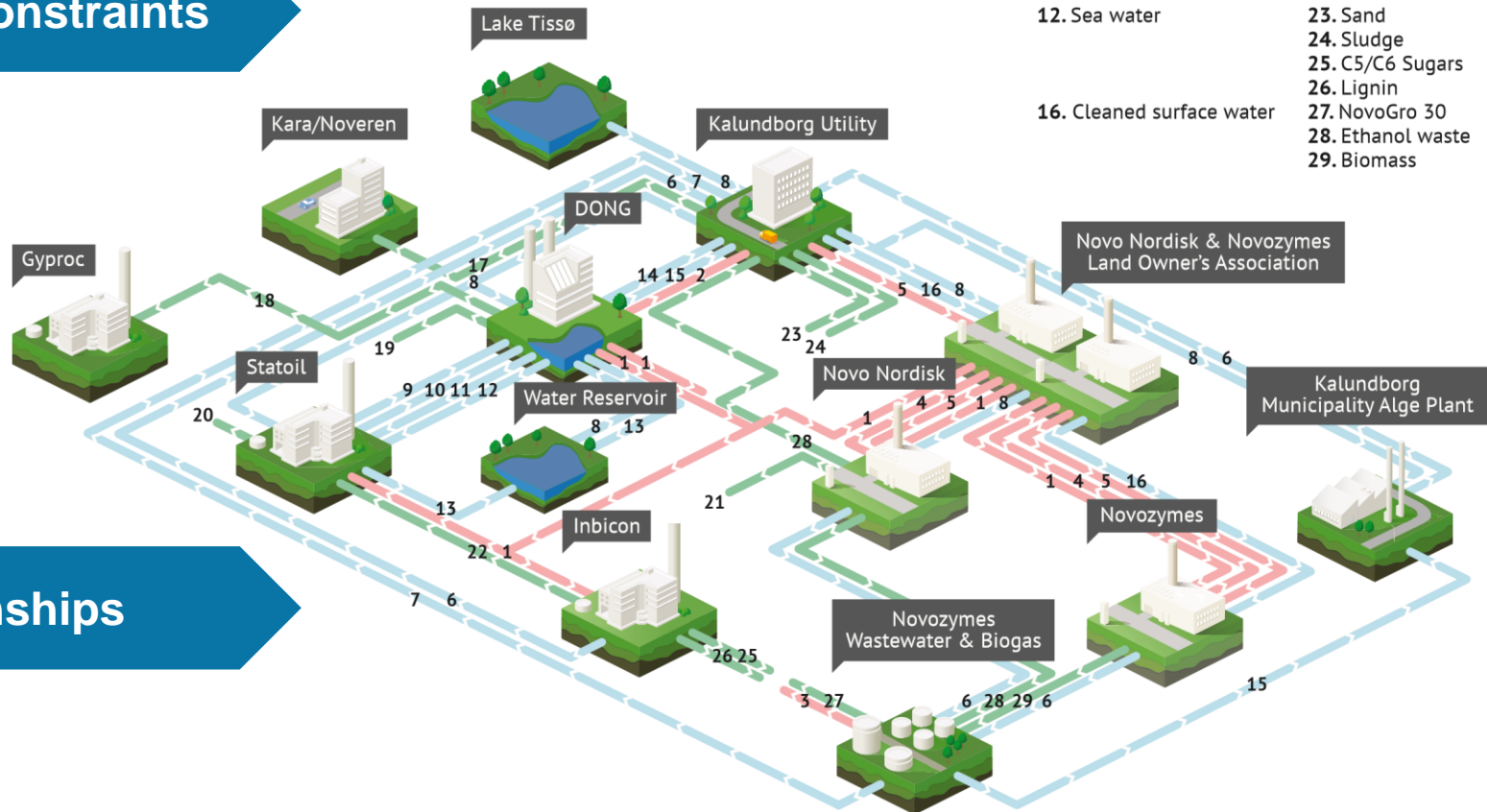
### Resource constraints

12. Sea water

16. Cleaned surface water

23. Sand  
24. Sludge  
25. C5/C6 Sugars  
26. Lignin  
27. NovoGro 30  
28. Ethanol waste  
29. Biomass

### Relationships





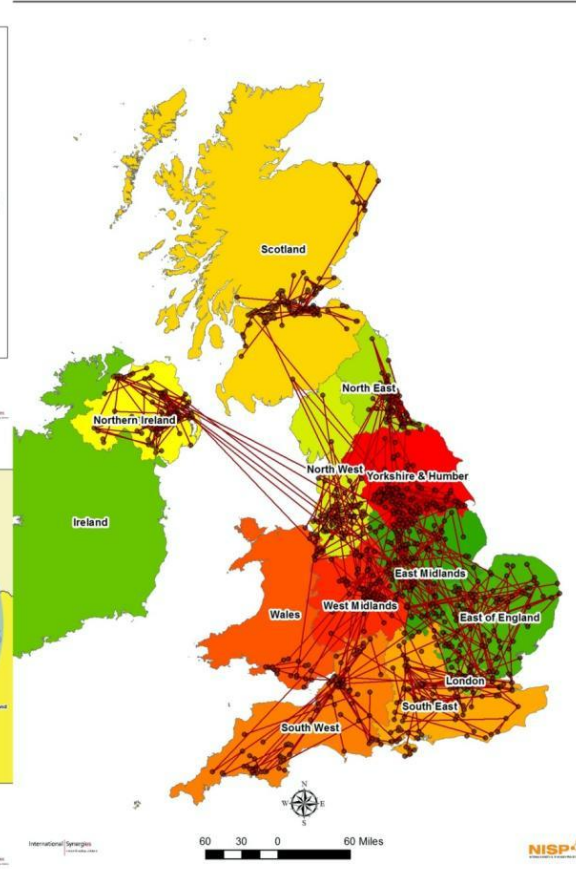
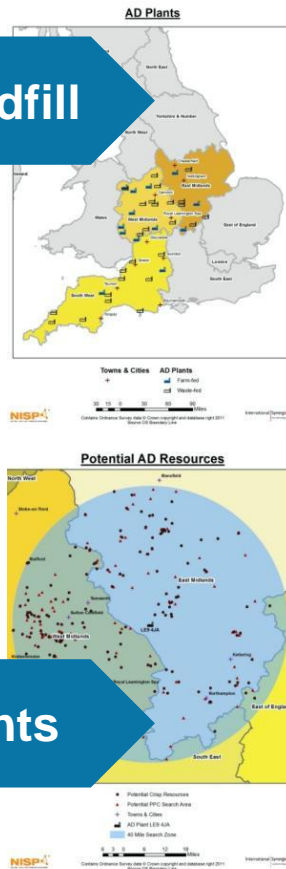
# Eco-industrial parks and facilitated industrial symbiosis

## Industrial symbiosis in the UK

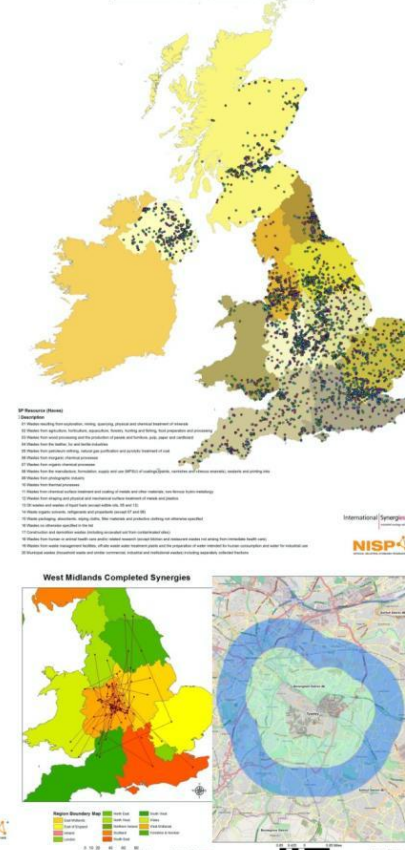
Increase cost to landfill

UK-NISP

Resource constraints



**Resources By 2 Digit EWC**



# Eco-industrial parks and facilitated industrial symbiosis

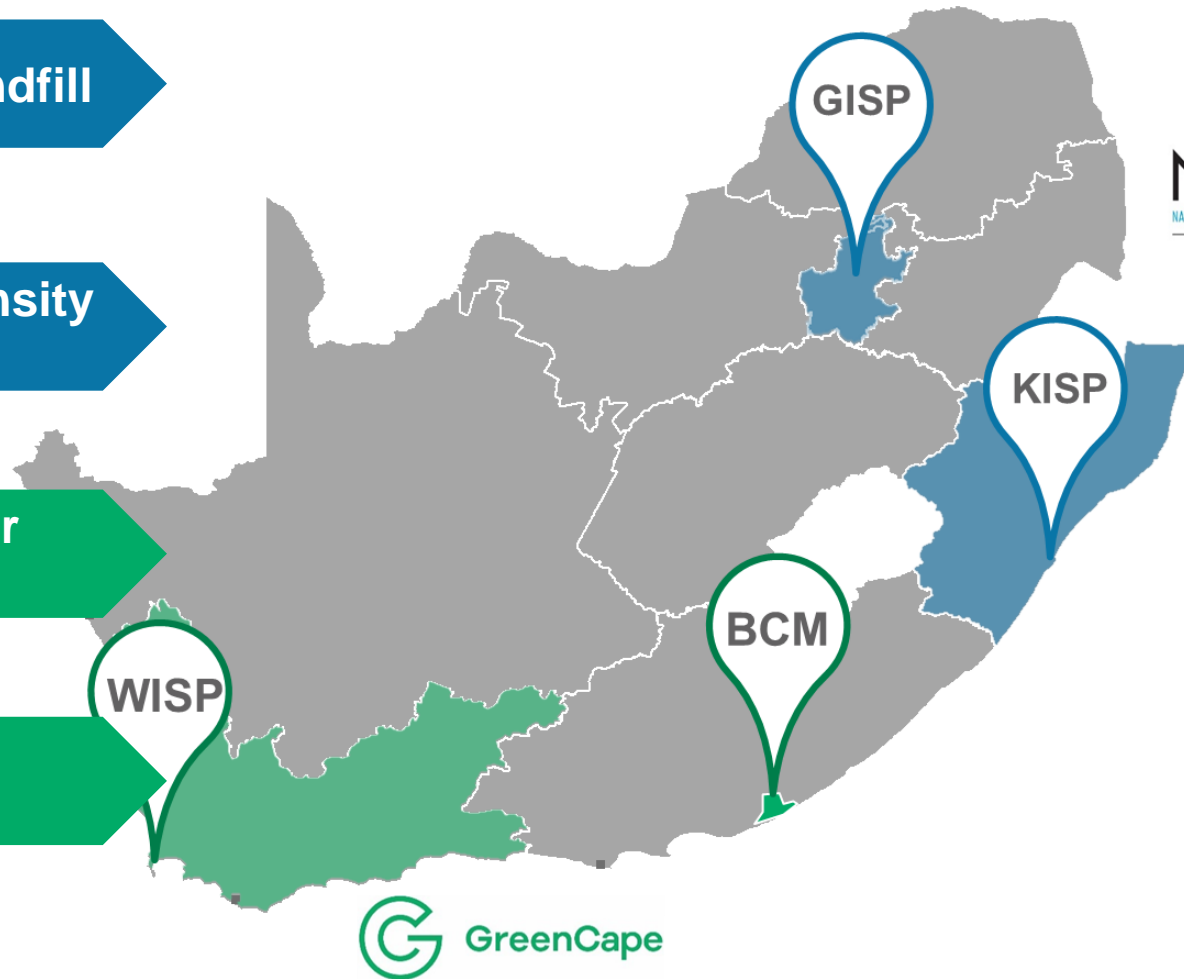
Industrial symbiosis in South Africa

Increase cost to landfill

Reduce carbon intensity  
of production

Financial benefits for  
business

Job creation







**WISP**  
Western Cape Industrial  
Symbiosis Programme

**in a nutshell.....**

The **Western Cape Industrial Symbiosis Programme (WISP)**  
is a **free service**

which **connects companies** so that

they can **identify and realise** the **business opportunities**

enabled by using **unused or residual resources**

(materials, energy, water, assets, logistics, expertise)

Connecting Industry  Creating Opportunity



# WISP

Western Cape Industrial  
Symbiosis Programme

## in a nutshell.....

Funded by



CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD

Delivered through



GreenCape

In collaboration with

International Synergies  

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industrial ecology solutions



# The Team

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van Staden

Construction &  
Demolition  
Chemicals  
Pharmaceuticals  
Plastics

Agroprocessing,  
Clothing &  
Textiles  
Wood  
Bioenergy

Metals &  
Engineering  
Electronics  
Boat Building  
Plastics

Food &  
Beverages  
Commercial  
Buildings

Clothing &  
Textiles  
Paper &  
Publishing

# How does WISP work?

1. We visit companies
2. We ask them a lot of questions to understand their operations and their waste streams
3. We identify unused/underutilised resources
4. We record and upload this data onto SYNERGie™
5. We identify potential matches between the companies in our network
6. We facilitate the engagements between companies
7. We ask for feedback on the economic, environmental and social benefits from the matches implemented
8. We do regular catchups with our members

# Achievements to date

**>400**  
 Companies in the  
 Network

**>4000**  
 Under-utilised  
 Resources  
 Identified

Key Performance Indicator	To Date (March 2017)	March 2018 Projection (Assuming No More Synergies Completed)
Waste Diversion	5,200 tonnes	7,940 tonnes
Additional Revenue	R 12.6 million	R 18.2 million
Cost Savings	R 11.6 million	R 15.4 million
Private Investment	R640 000	R4.0 million
Fossil GHG Savings	27,000 tonnes CO <sub>2</sub> e (16,600 trees planted)	46,700 tonnes CO <sub>2</sub> e (28,700 trees planted)
Job Creation	25 temporary, 20 permanent, 64 other economy wide jobs	25 temporary, 20 permanent, 85 other economy wide jobs



# Achievements to date

>350

>3000

For every R1 government invests in us we return R3 to our network in economic benefits

Key Performance Indicator	To Date	5 Year Projection (Completed)
Waste Diverted	>350 tonnes	>3000 tonnes
Additional Revenue	R 7.0 million	R 10.7 million
Cost Savings	R 8.5 million	R 15.8 million
Private Investment	R100 000	R100 000
Fossil GHG Savings	7,200 tonnes CO <sub>2</sub> e	36,800 tonnes CO <sub>2</sub> e
Job Creation	14 temporary, 12 permanent, 5 indirect and 5 induced	14 temporary, 12 permanent, 5 indirect and 5 induced

It costs us about R1300 to divert a tonne of waste from landfill

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An initiative of the Forum of Young Global Leaders  
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Media Partner: Fortune

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