



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



Green Industry

Green Industry:

Deploying Best Environmental Practices and Techniques Africa

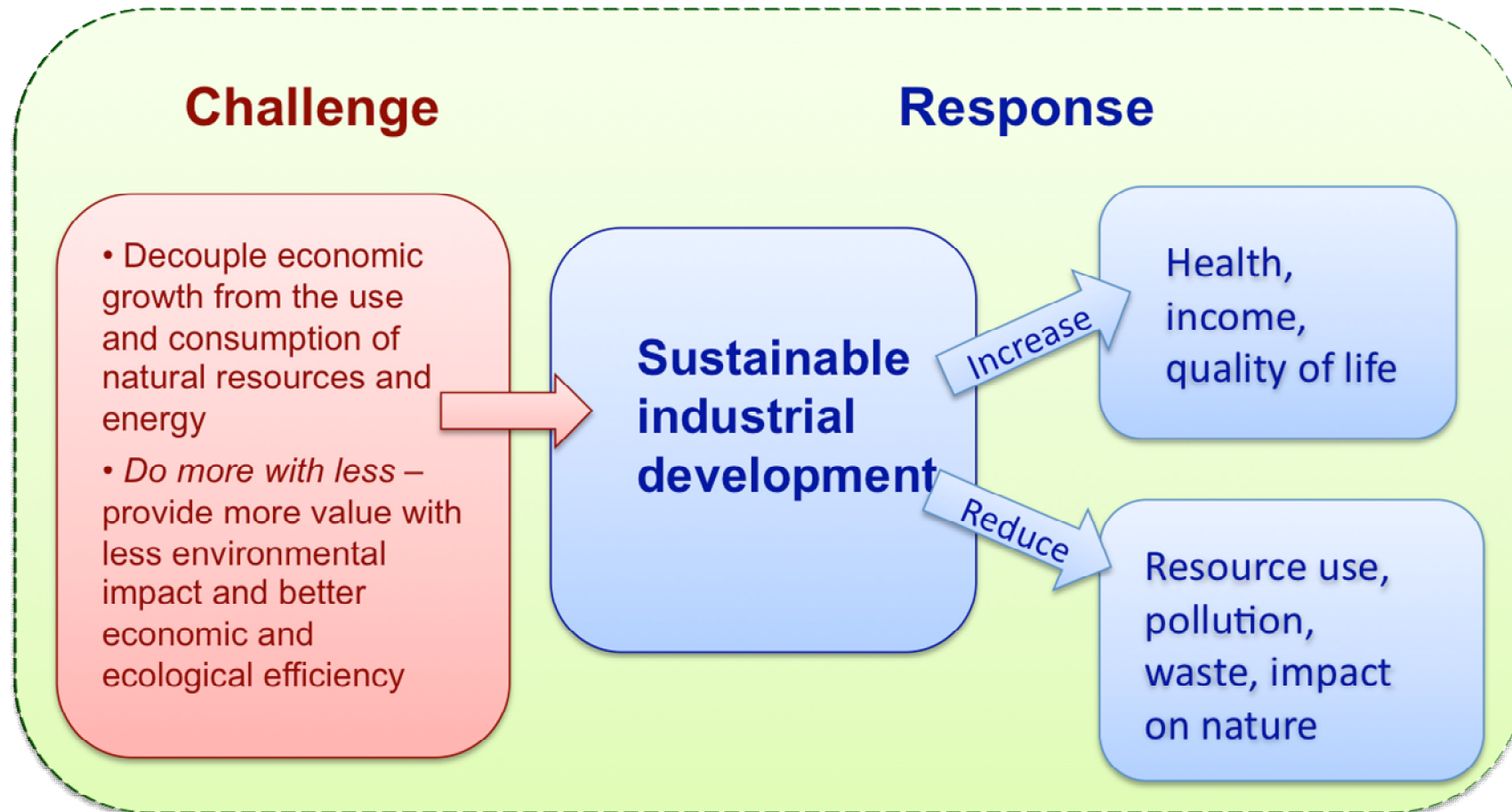
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The Resource Efficiency Challenge



Sustainable industrial development requires technology, innovation and investment which are driven by business



Green Industry



UNIDO Green Industry
Policies for supporting Green Industry



UNIDO GREEN INDUSTRY INITIATIVE
for Sustainable Industrial Development



Green economies ground the world?
Implications of resource use
for development and the environment



Green Growth
From labour to resource productivity

- Greening of Industry
 - Continuous improvement of resource productivity and environmental performance of industries in all sectors
 - Cleaner Production
 - Energy Efficiency
 - Chemicals Management
 - Etc.

- (Creating) Green Industries
 - Industrial supply of environmental goods and services
 - Waste management
 - Resource recovery
 - Renewable energy
 - Etc.

Through the widespread transfer and deployment of better environmental practices and techniques





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GREEN INDUSTRY PLATFORM

- Multi-stakeholder forum for mobilizing, mainstreaming and advancing Green Industry around the world
- Launched with UNEP during Rio+20 Conference
- Governed by Executive and Advisory Boards with support from Technical Expert Committee
- Supported by 146 organizations, representing government (25), business (70) and other organizations (51)

– Including 19 from Africa

- National governments of Burkina Faso, Cote d' Ivore, Guinea, Kenya, Nigeria, Sierra Leone and South Africa

www.greenindustryplatform.org





Resource Efficient and Cleaner Production

• Chandaria Paper (Kenya)

• Sanitary paper products from waste paper

Improvement Area	Principal Options	Economic Benefits	Resource Conservation	Pollution Reduction
Energy Management	<ul style="list-style-type: none"> Sub-metering electricity Motor downsizing and introduction of VSD Boiler efficiency monitoring 	~ USD 260,000	Power savings of 5.4 MWh	1,450 ton GHG reduction
Water Management	<ul style="list-style-type: none"> Metering and sub-metering water and waste water Preventive maintenance (leak reduction) Reuse of clean water Higher grade waste paper 	~ USD 22,000	150,000 m3 water saving	150,000 m3 effluent reduction and reduced pollutant concentration by 50%
Materials Management	<ul style="list-style-type: none"> Better process monitoring and tests, for process control Selection of appropriate chemicals for water treatment Inclined screens to prevent overflows 	~ USD 350,000	3,200 ton materials conservation	900 ton reduction in sludge disposal
		>USD 630,000		

- Assisted by Kenya Cleaner Production Centre, one of 11 NCPCs in Africa and founding member of global RECPnetwork





Chemical Leasing (Egypt)

- Service based business model for sustainable chemicals' use and disposal
 - ABB ARAB white goods' producer



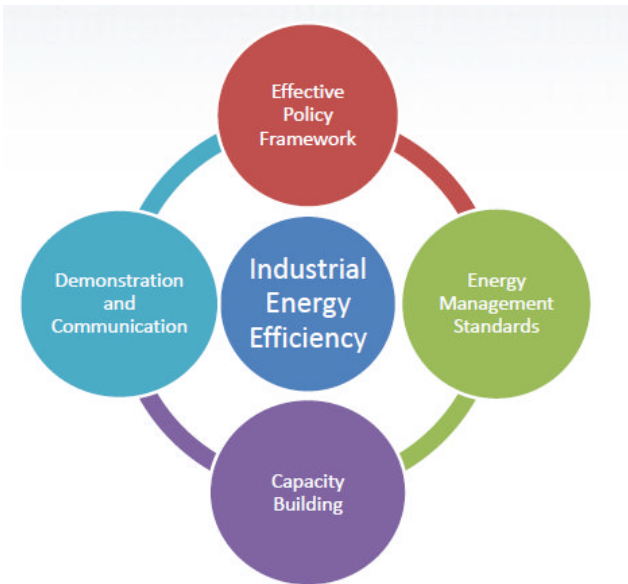
Parameter	Before ChL	After ChL	Difference
• Consumption of powder coat	0.2 kg/m ²	0.16 kg/m ²	-20%
• Cost of powder coating	3.8 l.E/ m ²	3.2 l.E/ m ²	-16%
• Powder waste	12% (disposal)	4-5% (recycle)	-100%
• Production capacity			+20%





Industrial Energy Efficiency (South Africa)

Four energy intensive industries were in first 2 years after implementation of Energy Management System were to conserve > 190million kWh and save ~ 18million USD



Company Name	Savings (kWh)	Savings (ZAR)	tCO ₂ Emissions Reduction	Capital Investment (ZAR)
ArcelorMittal	174 002 409	170 300 000	166 519	500 000
Toyota-SA	13 845 056	9 630 962	11 904	4 913 612
Gelvenor Textile	1 993 340	1 096 336	1 908	0
Saint-Gobain	1 835 832	1 009 706	1 757	0
Total	191 676 637	182 037 004	182 088	5 413 612



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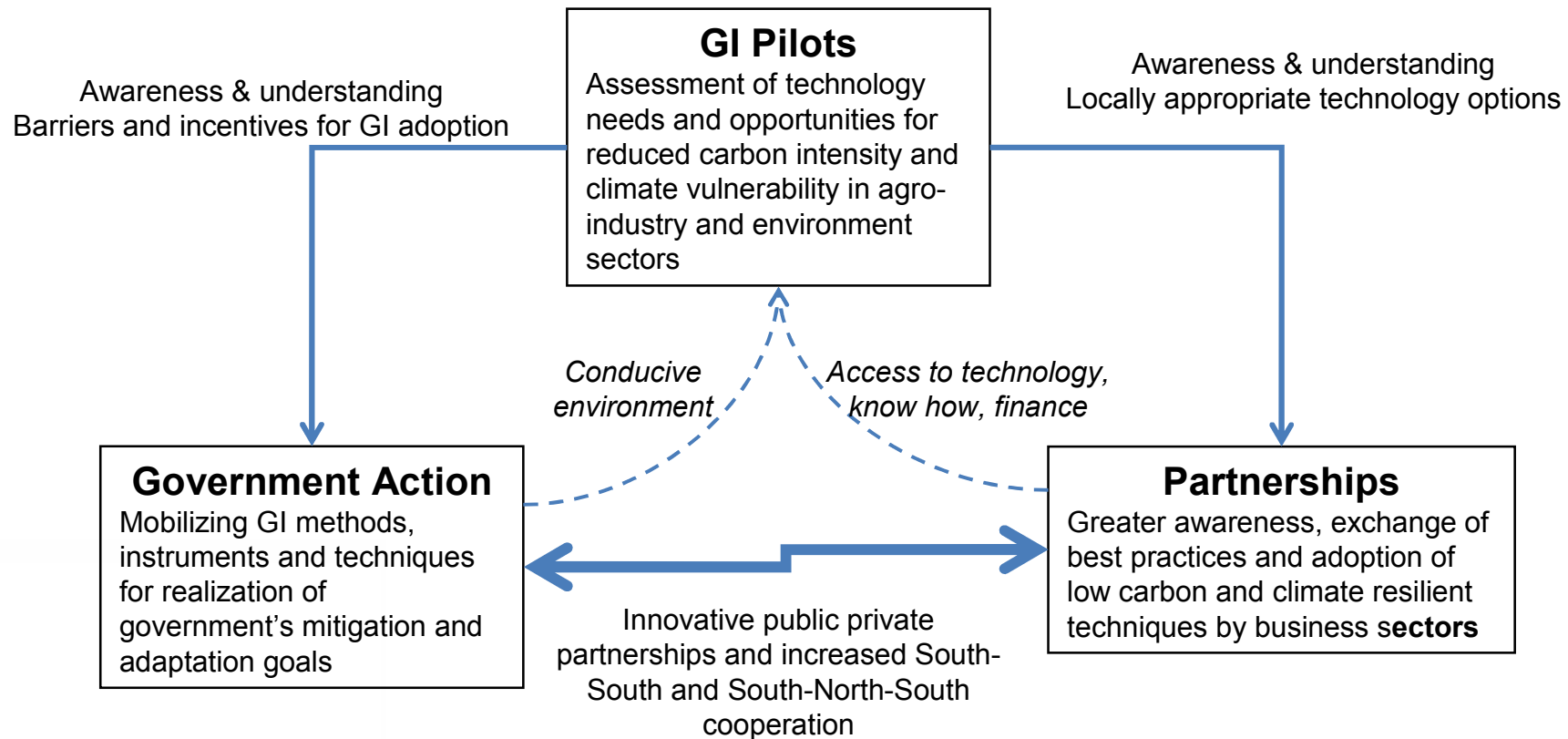
Renewable Energy (Zambia)

- Demonstrations of renewable energy for sustainable rural development
 - 1 MW small hydropower with mini grid for productive uses
 - 60 kW PV to power fishing villages
 - 25 kW biomass gasifier supporting sustainable forestry management





Low Carbon and Climate Resilient Industrial Development



New pilot project funded by Japan to start in Q3 2014 in Egypt, Kenya Senegal and South Africa



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Green Industry = Development Priority

- Triple bottom line development benefits
 1. Income and employment creation
 2. Competitive and sustainable business
 3. Innovative and value-adding products
 4. Natural resource security
 5. Mitigation and adaptation to climate change
 6. Environmental management
 7. Industrial and chemical safety



Chairs' Summary, Senior Officers Meeting, TGIC, 15 November 2011

Tokyo Green Industry Conference 2011 

June 1, 2013

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Thank you

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www.greenindustryplatform.org

www.recpNet.org