

# ADVANCING CIRCULAR ECONOMY IN SOUTH AFRICA

## RECOMMENDATIONS FOR ADVANCING CIRCULARITY IN PLASTIC PACKAGING AND SINGLE USE PLASTIC PRODUCTS

**PROBLUE**



Administered by

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Touching lives through innovation

# Why a CE for plastics in SA?

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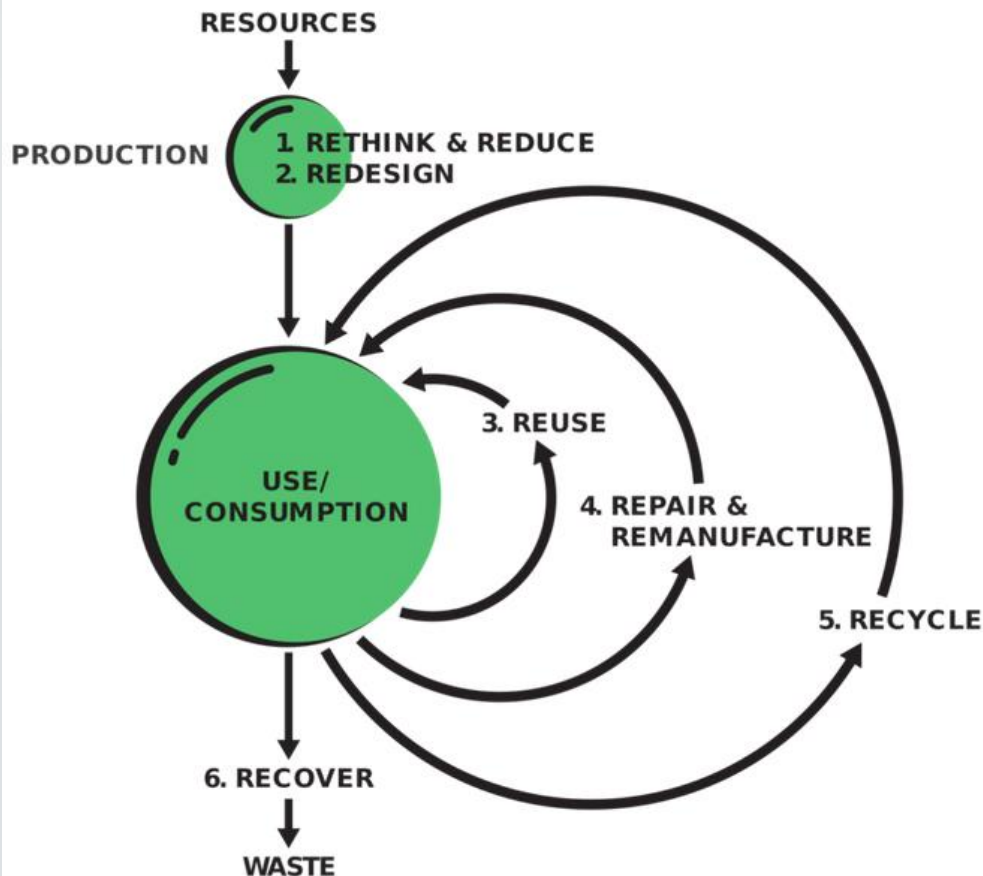
- Increasing levels of waste generation in SA
- Lack of effective waste management systems - significant leakage of waste into the environment
- 15,000 – 40,000 tpa of mismanaged plastic enters the ocean from land-based sources
- Majority of total unmanaged plastic waste (440,000 tpa) remains in terrestrial & freshwater environment.



*Image credit: Steve Cohen*

# Circular economy?

The circular economy entails “**keeping materials and products in circulation for as long as possible through practices such as reuse of products, sharing of underused assets, repairing, recycling and remanufacturing**” (Chatham House 2020)



6 “Rs”, in order of preference:

1. Rethink and reduce
2. Redesign
3. Reuse
4. Repair and remanufacture
5. Recycle
6. Recover

# Objectives of the assignment

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Provide a comprehensive overview of current circular economy initiatives and activities in South Africa



Frame the circular economy in the South African context; and



Inform the development of a Roadmap for advancing a circular economy for plastics in South Africa, by providing a set of recommended short-, medium- and long-term interventions required to transition towards a circular economy pathway.

\*Main focus was on packaging and other single use plastic items

# Approach to the study

## Component 1: Stock-take of existing CE activities in SA

Identify & map existing policy, legislation, initiatives, activities, projects, investments and role-players relevant to the plastics CE in SA.

Baseline report (March 2022).

## Component 2: Framing CE in SA context & providing recommendations to advance circularity

1. Frame a CE 'vision' for plastics in SA
2. Critically review existing policies, legislation, strategies, initiatives, activities, projects, investments, etc.; to
  - identify gaps, obstacles and barriers
  - identify opportunities
3. Inform development of a roadmap for advancing the CE
  - recommend short-, medium- and long-term interventions for transitioning to a CE pathway

Draft report (May 2022)

Final report (Sep 2022)

Consultative, multi-stakeholder approach used throughout

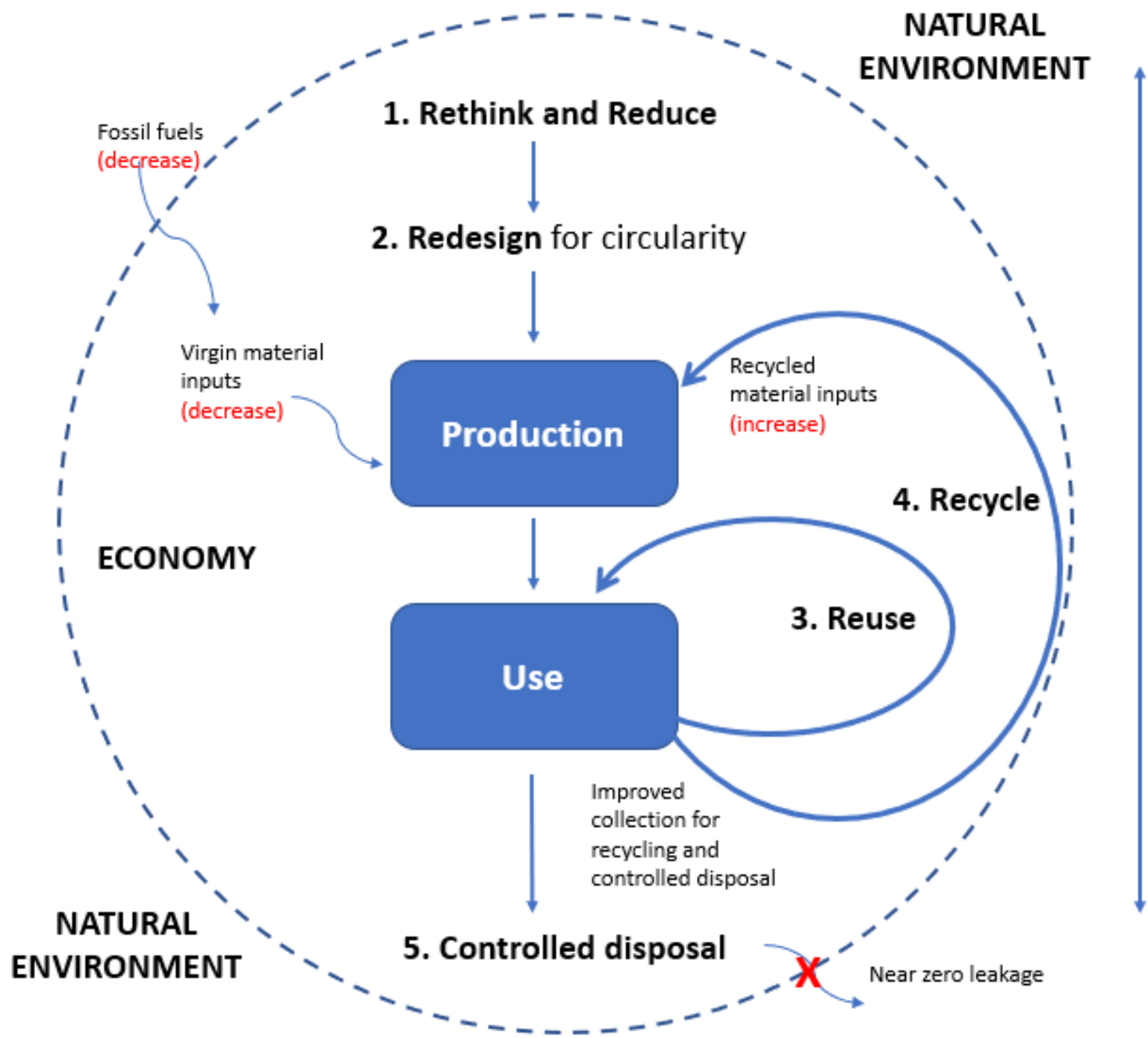
# Vision for a circular plastics economy

SA has a **thriving, equitable and inclusive circular plastics economy**, which is **driven by innovation**, and generates **well-being for society and the environment**.

The circular plastics economy is characterised by the following **principles**:

- **Designing out** plastic items that are either **problematic** or **unnecessary** (or both)
- All plastic products are **reusable, recyclable, or compostable** in the South African context
- Plastics are **circulated within the economy (at their highest value, and for as long as possible)**, and **kept out of the natural environment**
- **Decoupling** plastic production from the consumption of finite resources, in favour of using **recycled materials**
- There is **collaboration** across the value chain. All role-players are engaged and active in keeping plastic in the economy and out of the environment
- There is a **just transition** to the circular economy; the health, safety and livelihoods of all role-players across the value chain are respected.

Innovation and collaboration across the value chain



Just transition / inclusive circular economy

# Challenges

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**Legislative / regulatory barriers:** Issues with national, provincial & local legislation, regulations, policies, standards, strategies, plans etc.

**Market / economic / financial / financing issues** (e.g. incentives/disincentives, markets, availability of financing/capital/entrepreneurship support, etc.)

**Technical / technological / infrastructural / logistical issues** (e.g. access to services/materials, logistics of collection & markets, recycling technology, etc.)

**Social / political / cultural / behavioural issues** (e.g. relating to national & local government, producers, consumers, collectors etc.)

**Regional / global issues**

**Other issues**



# Recommendations

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There's no “silver bullet” – system-wide interventions are needed:

- Adopting a common vision and roadmap for the circular economy
- Creating an effective enabling environment
- Improved waste collection and management to ensure recovery of recyclables and elimination of leakage
- Designing out unnecessary & problematic plastic items
- Driving design for circularity
- Scaling up reuse models
- Further development of recycling capacity where required
- Driving demand for post-consumer recycle
- Improved communication, education and behavioural change
- Promoting inclusivity and a just transition

# Adopting a common vision and roadmap for the circular economy

#	Required action / intervention	Proposed timeframe	Proposed role-players*
A1	<b>Identify appropriate custodian</b> for the circular plastics economy roadmap	Immediate	All role players to agree on relevant custodian
A2	All role-players to <b>adopt agreed, common vision</b> for the circular plastics economy; to guide collective action and ensure alignment and collaboration	6 months	Custodian identified in # A1; in consultation with all role-players
A3	Conduct <b>further research</b> required to inform the circular economy roadmap	1-2 years	DSI, research entities, academia
A4	Develop a <b>circular plastics economy roadmap</b>	2-3 years	Custodian identified in # A1, in consultation with all role-players
A5	<b>Invest in capacity and infrastructure</b> for further R&D and testing to provide the evidence-base	Start in short term; medium term for national LCA database	DSI, NRF, research entities, academia, Plastics SA, dtic, SANAS

# Creating an effective enabling environment

#	Required action / intervention	Proposed timeframe	Proposed role-players*
B1	Government to provide <b>clear policy direction</b> and create <b>leaner, more effective enabling environment</b> to support the CE vision & roadmap	Immediate, ongoing	DFFE, dtic, DSI, National Treasury, CoGTA
B2	<b>Review and update</b> definition of waste, waste classification regulations, municipal by-laws, EIA and licensing requirements	Immediate	DFFE, municipalities
B3	<b>Improved regulation and quality control of imported</b> products and materials, with strict monitoring and enforcement	Short term; ongoing monitoring	ITAC, dtic, SARS, SABS, NRCS, Plastics SA, PROs
B4	<b>Evidence-based standards</b> for reusability, recyclate quality, use of recycled content, and new materials	Medium to long term	SABS, NRCS, Plastics SA, SAPRO, DFFE, dtic
B5	<b>Independent, standardized testing, verification and certification</b> for products claimed as recyclable, compostable or biodegradable; with clear, standardized labelling	Ongoing	Plastics SA; CSIR; SABS; NRCS; DFFE; COPCO; PROs

# Improved waste collection & management to ensure recovery of recyclables and elimination of leakage

#	Required action / intervention	Timeframe	Proposed role-players*
C1	Drastically <b>improve waste collection</b> services and ensure waste that can't be reduced, reused or recycled is <b>disposed in fully compliant landfill sites</b>	Immediate, ongoing	DFFE, provincial government, municipalities, SALGA
C2	Research <b>feasibility of alternative systems for collection, recovery and aggregation</b> of source-separated waste	Immediate	DSI, research entities, academia, consultants, PROs, waste picker associations
C3	<b>Implement S@S</b> and appropriate, inclusive systems for collection and aggregation of recyclables	Short term, ongoing	Municipalities, waste collectors (formal and informal), producers / PROs.
C4	Ensure <b>close collaboration between municipalities, waste collectors</b> (formal and informal), <b>and producers/PROs</b> to facilitate collection	Immediate; ongoing	DFFE, CoGTA, SALGA, provinces, municipalities, waste collectors, producers / PROs, SAIEPW, SAPP
C5	Facilitate establishment of <b>longer-term contracts</b> between municipalities and private enterprises	Immediate, ongoing	National Treasury, municipalities, private WM companies, PROs, SALGA
C6	<b>Improve landfilling standards and increase disposal costs</b> ; to incentivize diversion of waste towards alternatives, while reducing leakage	Immediate, ongoing	National Treasury, DFFE, provinces, SALGA, municipalities, IWMSA, PROs
C7	Systems to enable <b>tracking, recovery and sustained circulation</b> of materials through all sectors	Medium - long term	Producers, DFFE

# Designing out unnecessary and problematic plastic items

#	Required action / intervention	Proposed timeframe	Proposed role-players*
D1	<b>Multi-stakeholder dialogue</b> to <ul style="list-style-type: none"><li>• agree on <b>criteria</b> for identifying unnecessary and problematic items</li><li>• develop <b>preliminary list of items</b> to be considered for designing out (pending outcomes of research to assess impacts)</li></ul>	Immediate	DFFE, DSI, dtic, Plastics SA, SA Plastics Pact, CSIR
D2	<b>Assess the impacts</b> of designing out unnecessary and problematic items	1-2 years	DSI, research entities, academia
D3	Based on evidence provided under # D2; <ul style="list-style-type: none"><li>• <b>finalize agreed list of unnecessary and problematic items</b> to be designed out</li><li>• develop <b>evidence-based policy approach and guidelines</b> for addressing them</li></ul>	2-3 years	DFFE, DSI, dtic, Plastics SA, SA Plastics Pact, CSIR

# Driving design for circularity (design for reuse, DfR and design for inclusion of PCR content)

#	Required action / intervention	Proposed timeframe	Proposed role-players*
E1	<b>Brand owner and retailer commitment</b> to drive redesign for circularity	Immediate, ongoing	Brand owners, retailers, PROs, converters, SA Plastics Pact
E2	<b>Standardize materials</b> used for specific applications	Short term	Plastics SA, SAPRO, PROs, SA Plastics Pact
E3	Expand existing DfR guidelines into <b>evidence-based Design for Circularity (DfC) guidelines</b>	Short term	Plastics SA, Packaging SA, PROs, SA Plastics Pact
E4	Apply <b>eco-modulated EPR fees</b> based on application of DfC principles	Medium term	PROs
E5	<b>Private sector</b> to specify requirements for <b>incorporation of DfC principles in procurement policies</b>	Medium term	Private sector
E6	Update <b>public procurement regulations</b> to specify requirements for incorporation of DfC principles	Medium term	National Treasury

# Scaling up reuse models

#	Required action / intervention	Proposed timeframe	Proposed role-players*
F1	<b>Research</b> on reuse and refill models and their <b>appropriateness to SA context</b>	1-2 years	DSI, research entities, academia, consultants, PROs, SA Plastics Pact, WWF-SA, Plastics SA, waste picker associations
F2	<b>Support for development and implementation</b> of reuse and refill initiatives	Ongoing	PROs, DFFE, SA Plastics Pact, DSI (Waste RDI Roadmap)
F3	<b>Multi-stakeholder engagement</b> to drive awareness around reuse models and achieve scaling	Ongoing	Designers of reuse models, suppliers, producers, brand-owners, retailers, CGCSA
F4	Add <b>reuse targets</b> for certain classes of packaging (where feasible) within EPR Regulations; informed by dialogue with relevant role-players	Medium term	DFFE, PROs, SA Plastics Pact

# Further development of recycling capacity where required

#	Required action / intervention	Proposed timeframe	Proposed role-players*
G1	<b>Funding / incentives</b> for development of processing technologies, infrastructure and additional recycling capacity where required	Ongoing	National Treasury, DFFE, dtic, DSBD, PROs, financing institutions
G2	Investment in innovative solutions to enable <b>improved quality and grading</b> of recycled polymers	Medium term	PROs, dtic
G3	<b>Assess feasibility and suitability</b> of developing processing technology for difficult to recycle waste streams and more advanced forms of recycling in SA context	Medium term	PROs, DSI, NRF, research entities, academia
G4	Invest in <b>developing processing technologies</b> for more difficult to recycle waste streams and more advanced forms of recycling.	Long term	PROs, dtic



# Driving demand for post-consumer recyclate

#	Required action / intervention	Proposed timeframe	Proposed role-players*
H1	Develop <b>further capacity for independent verification of PCR content</b>	Immediate	Plastics SA, SAPRO, PROs, dtic, SANAS
H2	Develop a brief evidence-based <b>guideline</b> identifying <b>suitable end-markets for PCR</b>	Short term	SAPP, SAIEPW, SAPRO, dtic
H3	PROs, brand-owners/retailers, converters, recyclers and virgin polymer producers to <b>collaborate to drive demand for PCR</b> as substitute for virgin inputs	Short term, ongoing	PROs, brand-owners/retailers, converters, recyclers, virgin polymer producers
H4	Brand-owners and retailers to <b>specify requirements for PCR content</b> in products and packaging	Short term, ongoing	Brand-owners and retailers
H5	Where feasible (e.g. for non-food contact), add mandatory <b>phased targets for inclusion of PCR</b> in products and packaging within the EPR Regulations	Medium term	DFFE, PROs
H6	<b>Private sector</b> to specify requirements for <b>inclusion of PCR in procurement policies</b>	Medium term	Private sector
H7	<b>Public procurement regulations</b> to be updated to specify requirements for the inclusion of PCR content	Medium term	National Treasury

# Improved communication, education and behavioural change

#	Required action / intervention	Proposed timeframe	Proposed role-players*
11	Mandatory application of <b>harmonized OPRL system</b> across <i>all</i> products and packaging (including compostables, as well as non-plastic products and packaging)	Immediate, ongoing	SA Plastics Pact, WWF-SA, brand owners, retailers, dtic
12	Develop <b>evidence-based, credible, ongoing awareness and education campaign</b> ; with clear and consistent message for all role-players	Short term, ongoing	Central message to be developed by the dtic, DFFE, PROs. WWF-SA and SA Plastics Pact; and communicated via existing education initiatives, municipalities, brand owners, retailers, schools, media etc.
13	<b>Incentives and behavioural change interventions</b> (e.g. ‘nudges’) aimed at promoting reducing, reusing and recycling	Ongoing	PROs, brand owners and retailers, CGCSA, media, municipalities

# Promoting inclusivity and a just transition

	Required action / intervention	Proposed timeframe	Proposed role-players*
J1	Ensure <b>integration of informal collectors</b> within collection and recovery systems (including separation at source)	Short term, ongoing	Municipalities, industry, PROs, CSOs, waste picker associations
J2	Ensure <b>inclusion of the informal sector within the circular economy more broadly</b>	Ongoing	DFFE, DSI, CSOs, waste picker associations
J3	Develop <b>decentralized, local solutions</b> for areas located far from recycling markets (e.g. develop local value adding/recycling capacity and local markets)	Ongoing	DALRRD, provincial government, district and local municipalities
J4	<b>Safeguarding of livelihoods and employment</b> , e.g. through retraining / reskilling and development of transferable skills.	Ongoing	Relevant industry associations, DHET, merSETA, BUSA, BBC, Unions, NBI, education and training institutes

**Many thanks!**

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