Presentation of the GIZ Guidance on Increasing NDC Ambitions through Circular Action

and the accompanying Circular Activity Sheets

Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Your Moderator

Katja Suhr

Head of Go Circular Project

Some housekeeping

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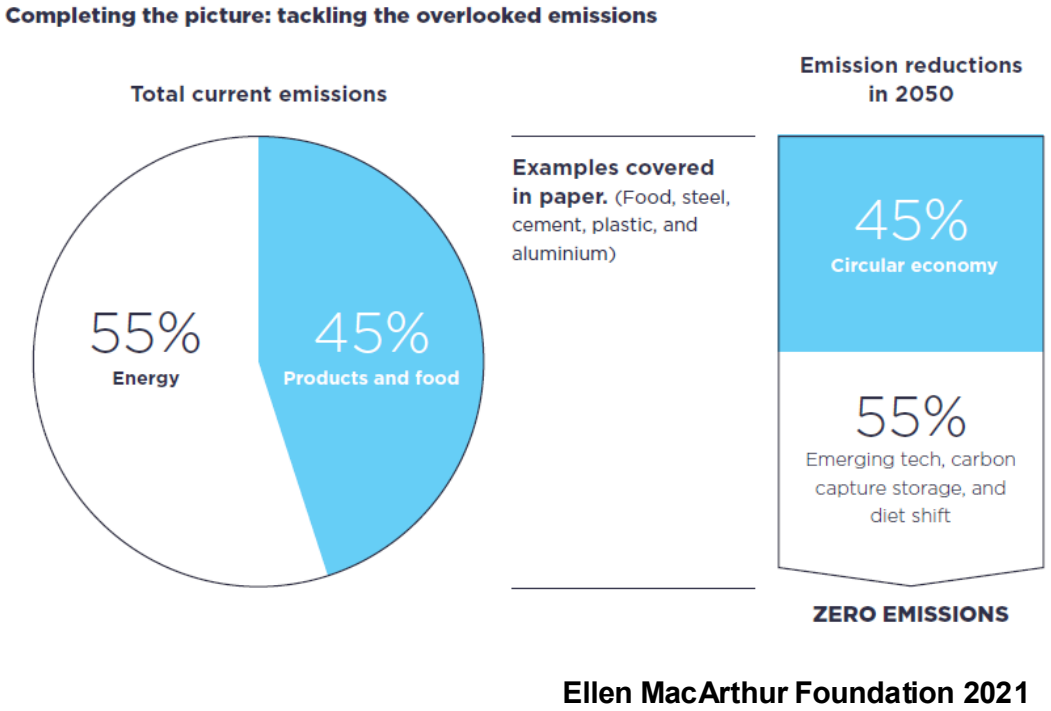
React by using emojis!

Welcome & Introduction

The NDC Guidance and Activity Sheets

By Martin Kerres

Evidence has shown the relevance of Circular Economy for GHG mitigation



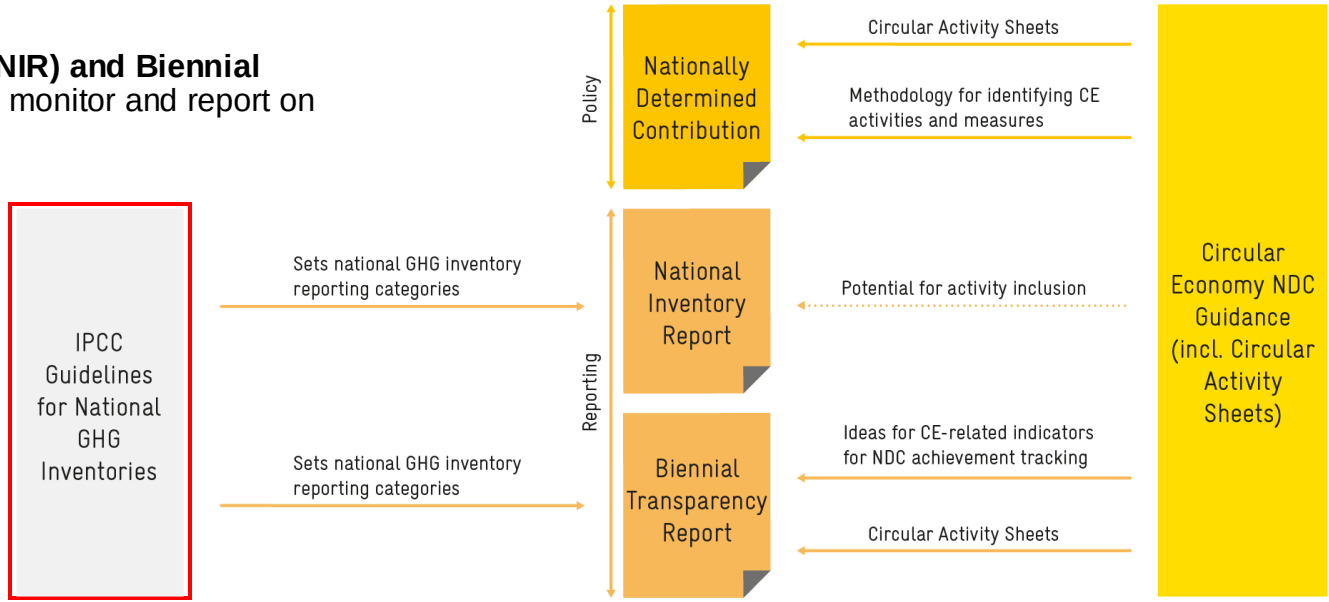
Ellen MacArthur Foundation 2021

- **45%** of global GHG emissions are associated with the **manufacturing of products**
- Circular Economy Strategies could help to **reduce these emissions** by **on average 45%** by 2050
- Circle Economy estimates that the transition to a Circular Economy and waste avoidance could **reduce GHG emissions by up to 39%** by 2032
- IRP (2024) estimates that extraction and processing of material resources are responsible for **55% of global GHG emissions**

Need to comprehend the national climate planning and reporting process

- **NDCs are high level documents** communicating national climate commitments according to Paris Agreement article 4(2)
- **National Inventory Reports (NIR) and Biennial Transparency Reports (BTR)** monitor and report on climate commitments progress
- In particular NIRs follow the **IPCC Guidelines for National GHG Inventories**

→ Need to describe Circular Economy measures **using the existing Guidelines**



Guidance on Increasing NDC Ambitions through Circular Action

Objective

- Assist countries in **increasing climate ambitions** through integrating CE activities within their Nationally Determined Contributions (NDCs)

Target group

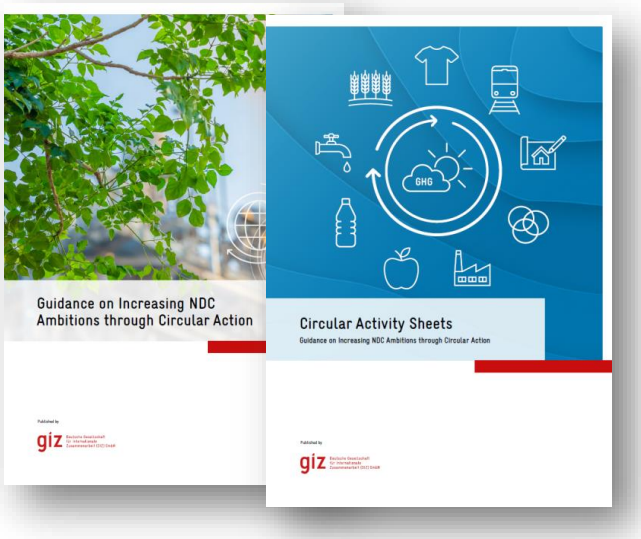
- **NDC developers**
- international climate and CE research and practitioner communities

Added value

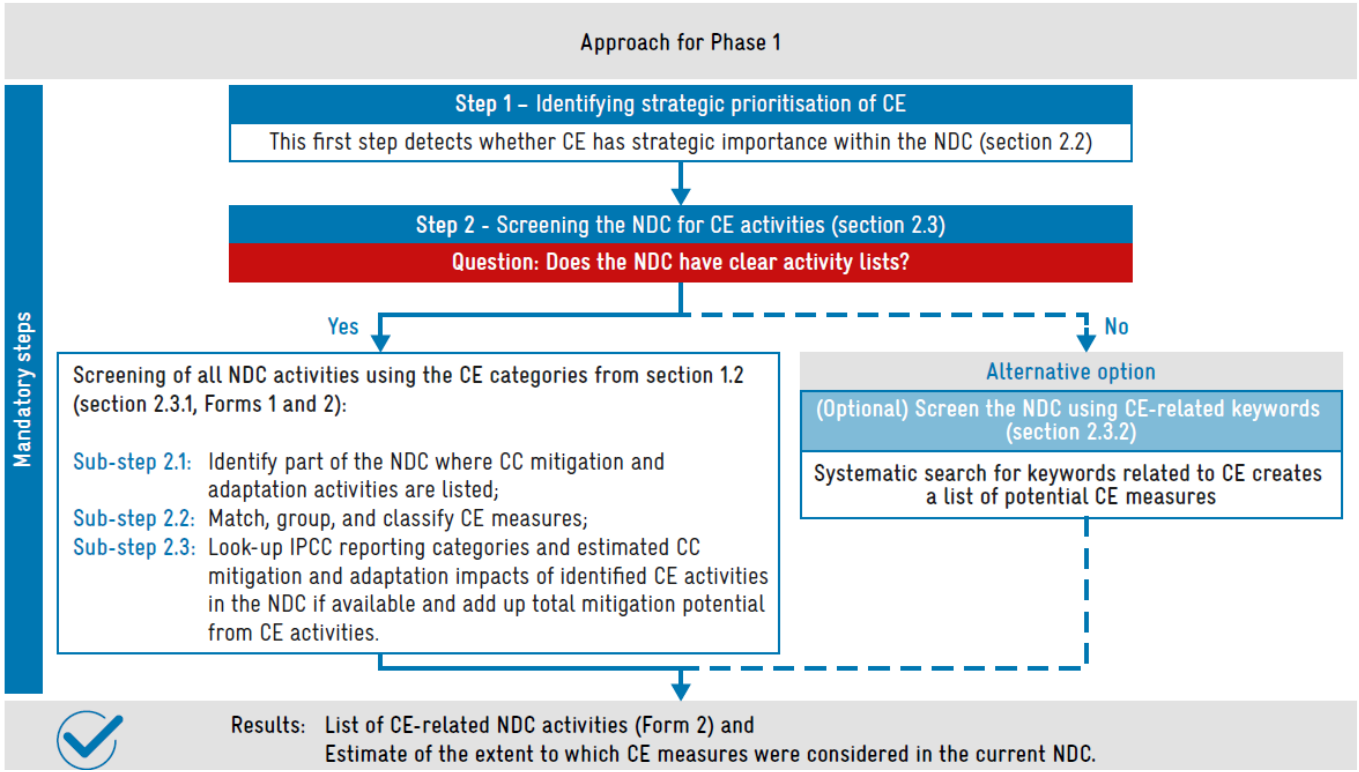
- Distinctive methodology
- Method for highlighting circular elements of existing NDC activities
- **Description of 27 circular activities (Circular Activity Sheets)** considering climate reporting needs

Approach

- **Suggest methodologies** for (i) identifying circular activities in existing NDCs and (ii) adding new circular activities in the NDC update process
- **Convert** circular economy activities into climate change jargon/terminology to **facilitate integration into climate plans, monitoring and reporting**



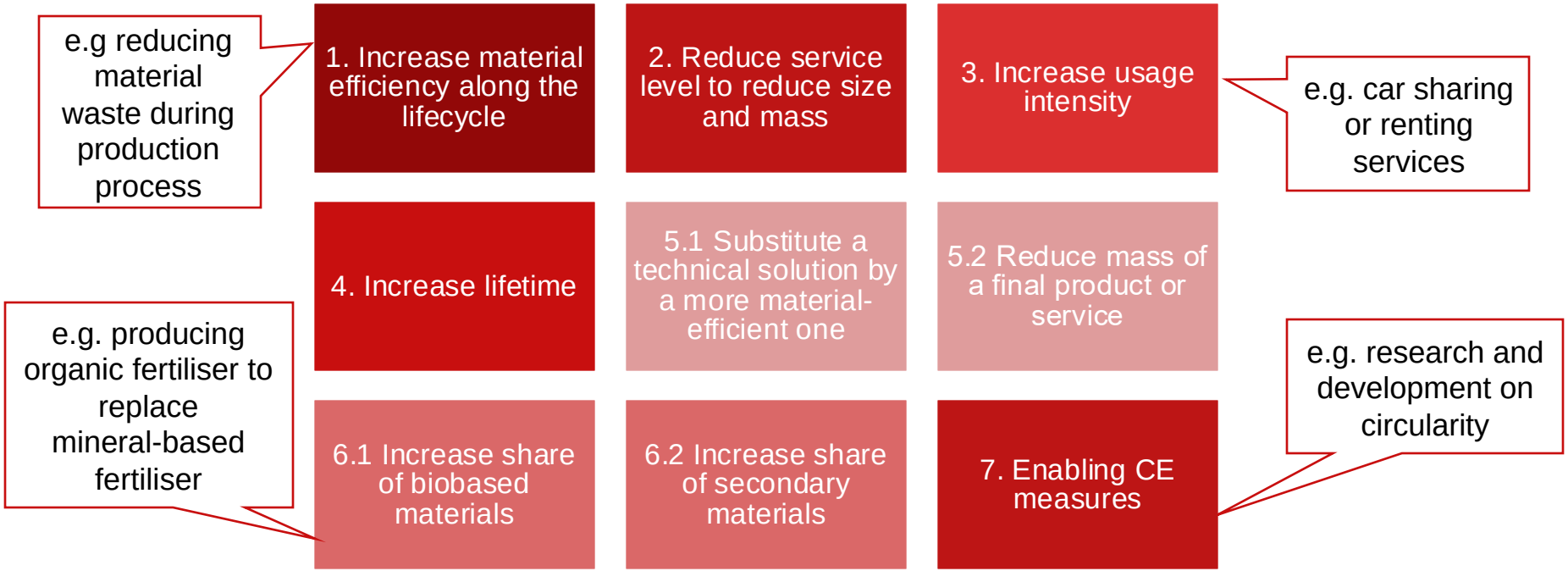
Step 1: Circularity Analysis of current NDC



- Existing **NDCs activities can be circular**, even though they are not called circular
- Analyzing existing NDCs can **reveal implicit circular climate impacts**
- Analysis can **enhance awareness of how circularity contributes to climate goals**

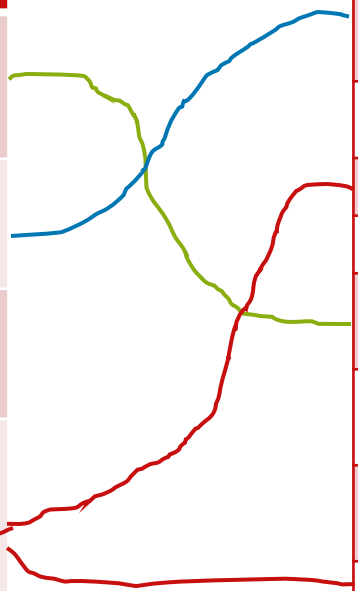
Step 1: Circularity Analysis of current NDC

applying categories of circular GHG mitigation impacts



Step 1: Circularity Analysis of current NDC

Sector	Measure
Energy	Bus Rapid Transport (BRT) System
Agriculture	Reduce pre harvest losses
Industry	Shift from industrial petroleum to electricity
Waste	National Waste Strategy, including waste avoidance and reduction, reuse and recycling, recovery and treatment and disposal



CE Category in NDC Guidance
1. Increase material efficiency along the lifecycle
2. Reduce service level to reduce size and mass
3. Increase usage intensity
4. Increase lifetime
5.1 Substitute a technical solution by a more material-efficient one
5.2 Reduce mass of a final product or service
6.1 Increase share of sustainably-sourced biobased materials
6.2 Increase share of secondary materials
7. Enabling CE measures

Step 2: Identification of additional circular activities for NDC update

- **Circular NDC Activity Sheets** describe Circular Economy activities and their climate impacts
- **General description** suggesting implementation instruments, indicators and other aspects
- **Description of the specific climate impact** including references to the respective IPCC Guidelines volumes and worksheets

→ The Activity Sheets aim at **facilitating the integration of Circular Economy measures into national climate planning and reporting** processes

Step 2: Circular NDC Activity Sheets

Food Loss Reduction	Food Waste Reduction	Transition to a Plant-Based Diet	Reduction of individual space in buildings	Repurpose Buildings Usages	Use of Substitute Cementitious Materials (SCMs) in cement
Reduction of steel use through design adjustments	Reduction of concrete use through design adjustments	Increased longevity of buildings	Public Transport	Increased purity of recycled aluminium	Increase the recycling content in plastics
Use bio-based feedstock for the production of organic chemicals	Eliminate selected plastic products	Ecodesign requirements on packaging for recycling	Increase discarded packaging sorting and recycling efficiencies	Ecodesign requirements for increasing the lifetime of textile articles	Repair textiles for reuse
Anaerobic digestion including biogas generation	Organic waste composting	Diverting waste from landfilling to recycling (adaptation)	Wastewater reuse, including the recovery of nutrients	Awareness campaigns on sustainable consumption	Support for circular procurement in SMEs

Step 2: Example Circular Activity Sheet (1/3)

AFN1: Food Loss Reduction	
CE category	1 Increase material efficiency in production and other processes along the lifecycle
Product group	Food and feed products
Context	Food losses refer to food lost at the production, post-harvest, processing and transportation stages of the food chain before the retail level. It is estimated that 13% of global food produced is lost between harvest and retail. Food losses can generate GHG emissions, for instance methane (CH_4) if landfilled. Reduction of food losses can avoid CH_4 emissions from landfills and improper organic waste treatment. In addition, as food is produced more efficiently, reducing food losses can prevent the conversion of land into agricultural soils and respective GHG emissions. Increased food production efficiency also translates into a more efficient use of energy, water and other resources and their emissions.
Instruments for implementation	National: National food loss and waste reduction strategies and policies, incentives for sustainable practices, investment in infrastructure and research Local: Community engagement and capacity development involving farmers and food producers, introduction of several methods, including e.g. improved grain storage, climate friendly (low GHG) storage and transport cooling, food processing technologies, enhancing capacities on post-harvest management and data collection etc.
Potential Climate adaptation impact	Reduced food losses can decrease food insecurity caused by impacts of climate change such as intense precipitation and drought events threatening crop development and revenue loss in agriculture and therefore reduce climate change induced vulnerability.

Step 2: Example Circular Activity Sheet (2/3)

Co-benefits	Improved agricultural productivity and food security Improved land use efficiency, protecting forests and natural carbon sinks Improved water use efficiency, protecting available freshwater resources
Potential indicators	Yield gap: Difference between potential and actual yield Food losses before retail including production, post-harvest, processing and transportation stages
Assumptions and preconditions	Improved agricultural productivity prevents the need to expand cultivation. GHG-intense cooling technologies are avoided. Capacity building is available for farmers and processors.
Time schedule	Medium to long: several agricultural cycles are needed to sustainably reduce food losses.
Proposed steps to determine GHG emission impacts and Emission Factors	1. Collect data on amount of food lost 2. Estimate GHG emissions from food losses using e.g. FAO approach (Emissions = activity data * emission factor) 3. Apply food loss GHG emission reduction figures according to measures taken 4. Add emissions from food loss prevention strategies if applicable 5. Calculate the amount of mitigated GHG emissions These steps do not cover GHG emission reductions from avoided land use change.

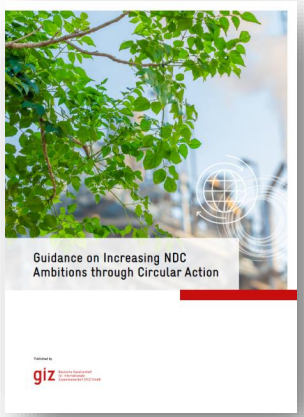
Step 2: Example Circular Activity Sheet (3/3)

IPCC Guidelines volumes, chapters, and worksheets	Volume 3: IPPU: worksheet 2H2 Food and Beverages Industry Volume 4: Agriculture, Forestry and Other Land Use: Worksheets: 3B1a Forest Land Remaining Forest Land, 3B3a Grassland Remaining Grassland, 3B4a Wetlands Remaining Wetlands, 3C4 Direct N_2O Emissions from Managed Soils Volume 5: Waste: Chapters 3 Solid Waste Disposal, Chapter 4 Biological Treatment of Solid Waste, and Chapter 5 Incineration and Open Burning of Waste
Data needs	Amount and GHG emissions from food losses e.g. disposed of, burnt or composted GHG emissions from agricultural processes including energy use secondary data of potential relevance including emissions from supply-chain activities, Life-Cycle Analysis data
Further guidance, research, and tools	EX-Ante Carbon-balance Tool (EX-ACT) FAO Food Loss App (FLAPP) IFC's Food Loss Climate Impact Tool The Cool Farm Tool UNEP, UNDP and UNFCCC secretariat (2023): Building Circularity into Nationally Determined Contributions (NDCs): Section on Food Loss and Waste in Chapter 4
Covered in NDCs	Gambia, Uruguay, and others

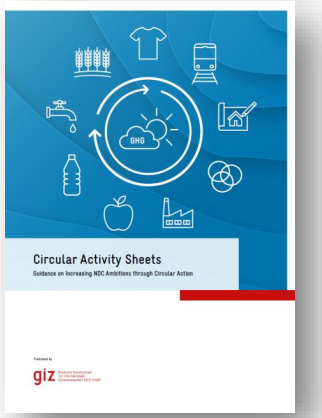
NDC Guidance and Activity Sheets

- Recommendation to apply NDC Guidance and Activity Sheets **together with other approaches** (see UN “Building Circularity into NDCs” Toolbox) **based on country needs**

- **Please reach out to us** if you are interested in applying the Guidance or discussing the approach



Download the NDC Guidance



Download the Activity Sheets

Panel Discussion

» on the new GIZ Guidance, the UN Building Circularity into NDCs Toolbox, and their application for strengthening Circular Economy in NDCs

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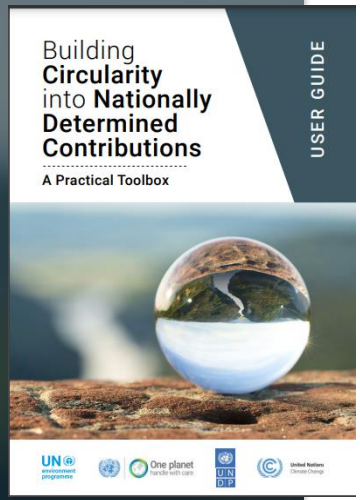
Building Circularity into Nationally Determined Contributions (NDCs)

A Practical Toolbox



Explore the toolbox here:

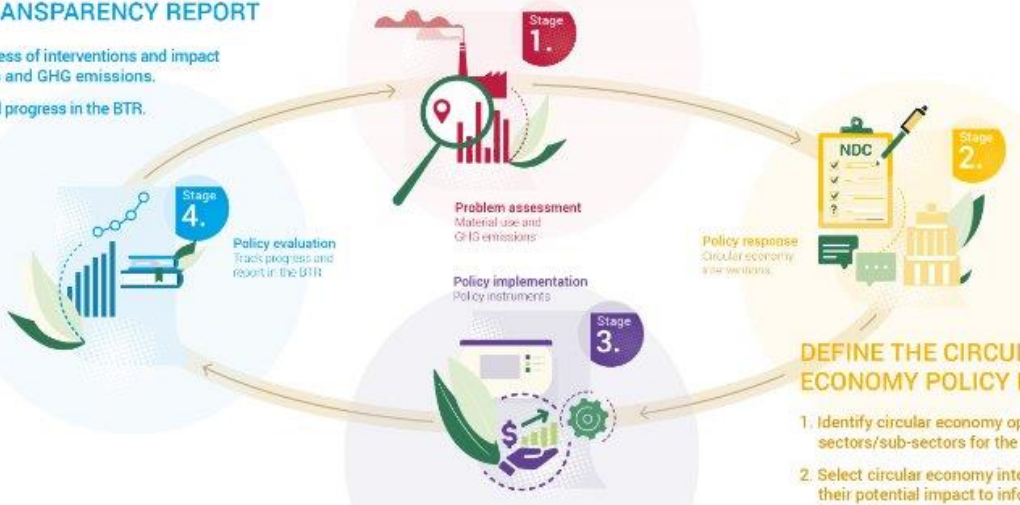
Figure 4.
An overview: The 4-stage policy cycle.

ASSESS THE PROBLEM WITH AVAILABLE DATA

1. Determine the GHG emissions associated with material use in the economy to prioritize sectors/sub-sectors for circular economy interventions in the NDC.
2. Assess current NDC to identify entry points for circular economy interventions.
3. Identify relevant stakeholders to engage.

TRACK AND REPORT PROGRESS IN THE BIENNIAL TRANSPARENCY REPORT

1. Assess effectiveness of interventions and impact on material flows and GHG emissions.
2. Report impact and progress in the BTR.



DEFINE THE CIRCULAR ECONOMY POLICY RESPONSE

1. Identify circular economy opportunities in prioritized sectors/sub-sectors for the NDC.
2. Select circular economy interventions and assess their potential impact to inform the NDC update (ex-ante).
3. Strengthen political will and establish institutional arrangements to ensure implementation.

IMPLEMENT CIRCULAR ECONOMY FOR THE NDC

1. Identify policy instruments for the implementation of selected circular economy interventions.
2. Assess feasibility and establish indicators to track implementation and inform the NDC.
3. Explore financial resources for implementation.

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UNDP

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