



Building Circularity into Nationally Determined Contributions (NDCs)

A Practical Toolbox

The joint UNDP, UNEP and UNFCCC secretariat toolbox project is supporting countries to assess, integrate, implement and track circular economy measures in their NDCs and national climate plans to increase ambition and accelerate implementation. In addition to a practical toolbox, the project also delivers technical and advisory support, capacity-building, and regional and peer-learning exchanges, of which 35 countries and other key stakeholders have already benefited.

Why is circular economy important for NDC ambition and implementation?



THE CHALLENGE



2.3–2.5°C

is the current global warming trajectory if all current NDCs are fully implemented.¹



AMBITION



Transitioning to a circular economy is crucial for tackling nearly half of global greenhouse gas (GHG) emissions that are not addressed by the shift to renewable energy alone.² The importance of circular economy to address climate change is also recognised in the Global Stocktake Outcome.³



IMPLEMENTATION



While countries are increasingly including circular economy references in their NDCs, support is needed to move from planning to implementation in order to achieve mitigation targets, drive sustainable development priorities, restore nature and build resilience.

» Why use the toolbox?

Polymakers can use the toolbox to:



Assess GHG emission hotspots from material use, including socio-economic indicators such as jobs and GDP, to prioritize sectors/sub-sectors for circular economy in the NDC.

STAGE 1



Identify and analyze circular economy measures for NDC targets and indicators.

STAGE 2



Implement measures by selecting policy instruments and assessing access to finance.

STAGE 3



Track and report progress in the Biennial Transparency Report (BTR).

STAGE 4

¹ UNEP Emissions Gap Report 2025 - Key Messages.

² Ellen MacArthur Foundation (2021). Completing the picture: How the circular economy tackles climate change.

³ Decision 1/CMA.5 Outcome of the first global stocktake.

Who is the primary user of the toolbox?

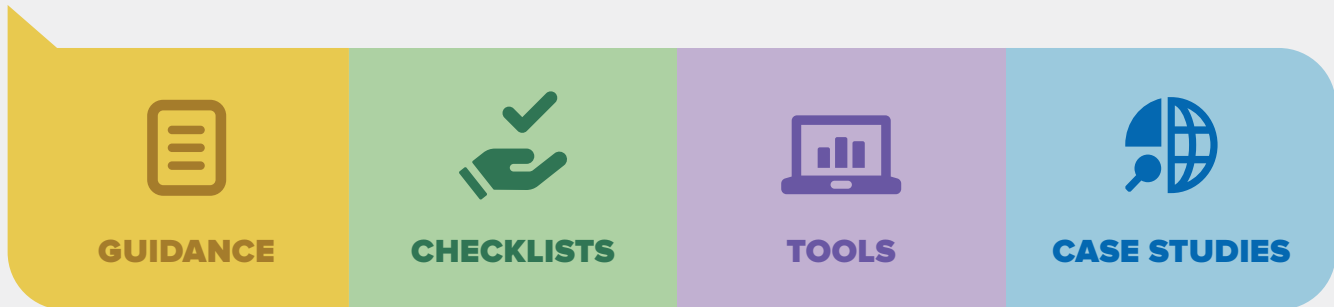


The toolbox is designed for policymakers working in climate policy, specifically NDCs and circular economy as well as lead and line ministries who are seeking to connect climate action with the circular economy and capitalize on co-benefits such as the creation of decent jobs.

What will you find in the toolbox?

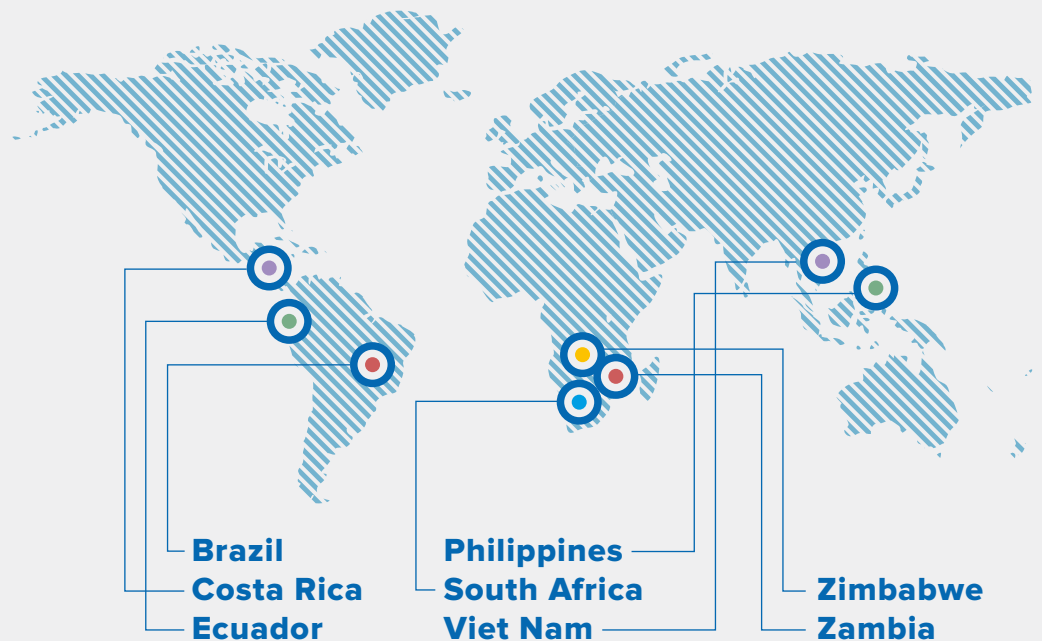


A step-wise methodology in multiple languages (English, Spanish and French) with contextualized guidance, tools, user guides, country case studies and checklists, aimed to be tailored to national contexts, needs and priorities.



Countries putting the toolbox into action

As of 2026, eight countries around the world are implementing the toolbox. Tailored to national contexts, countries have identified additional sectors/sub-sectors and circular measures, developed new complementary tools to track GHG emission reductions, and strengthened political will and national capacities. Below we spotlight four.





Brazil

SECTOR FOCUS: Food and Construction

STEP: Stage 1 and Stage 2

LEAD MINISTRY: Ministry of Development, Industry, Trade and Services

ACTIVITIES CONDUCTED: With circular economy included as a National Mitigation Objective in Brazil's NDC 3.0, the project identified GHG emission and material use hotspots for sector prioritization using the National GHG Inventory and the [Sustainable Consumption and Production Hotspot Analysis Tool \(SCP-HAT\)](#). Environmental and socio-economic indicators were analysed including material use, GHG emissions, value addition and employment.

OUTCOMES: For food and construction, over 19 circular economy interventions were identified with their GHG emission reduction potential estimated demonstrating very high mitigation potential. In-depth impact analysis covered interventions on food loss and waste (demonstrating GHG emission reduction potential of 122 Mt CO₂e/year, and potential to create 668,000 jobs) and redesign for circular agriculture and agro-industry (demonstrating potential to create of 580 000 jobs). Results were shared with key climate and circular economy stakeholders, contributing to the development of the [national circular economy plan](#) and review of sectoral mitigation plans for NDC implementation.



Ecuador

SECTOR FOCUS: Buildings and Construction

STEP: Stage 1 and Stage 2

MINISTRIES: Ministry of Environment and Energy (MAE) with the participation of the Ministry of Infrastructure and Transport (MIT)

ACTIVITIES CONDUCTED: Identified hotspots of GHG emissions and material use in the economy which helped prioritize the Industrial Processes and Product Use (IPPU) sector, specifically the cement and concrete value chains. The development and testing of a composite material, which has significant potential for CO₂ emissions reductions, was carried out in collaboration with the Polytechnic University of Quito. Socio-economic impact assessments, value chain stakeholder mapping as well as regulatory, cost and scalability analyses in relation to Ecuador's NDC were also conducted.

OUTCOMES: The findings from implementing the toolbox show measurable contributions to Ecuador's NDC targets through reducing cement consumption and strengthened circular economy strategies in the IPPU sector. By 2035, circular construction practices could achieve cumulative emission reductions of up 178 kt CO₂-eq, driven by the introduction of the composite material into the market, which optimizes cement use and significantly enhances its mitigation potential. Considering the associated innovation, the development of new skills, employment opportunities, and other important socio-economic co-benefits, initial steps were taken to explore the development of technical standards and update the construction building codes for changes in national regulation.



South Africa

SECTOR FOCUS: Mining and Construction

STEP: Stage 1 and Stage 2

MINISTRIES: The Council for Scientific and Industrial Research (CSIR) South Africa, with funding from the Department of Science, Technology and Innovation (DSTI) under South Africa's Circular Economy STI Strategy.

ACTIVITIES CONDUCTED: Identified opportunities for material circularity in metals and quarrying-construction value chains; conducted detailed hotspot analysis of raw material use and associated GHG emissions in building and civil engineering construction; and eight viable circular economy measures were identified in priority value chains.

OUTCOMES: Implementation of the toolbox demonstrated that if circular economy measures were implemented, GHG emissions could be reduced by 12.3 MtCO₂-eq or 52 percent in the building and civil engineering construction sub-sectors.



Viet Nam

SECTOR FOCUS: Agriculture

STEP: Stage 1 and Stage 2

MINISTRIES: Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) of the Ministry of Agriculture and Rural Development (MARD), now Ministry of Agriculture and Environment (MAE)

ACTIVITIES CONDUCTED: Identified emissions reductions potential through four circular models in the rice value chain by developing a tailored Carbon Calculator for Circular Practices in Rice Production (CARICE) to assist practitioners. In addition, three circular models in the coffee value chain were also identified and a Handbook on Circular Economy Models in Coffee Production, co-produced with the Ministry of Agriculture and Environment, was published. High-level and strategic activities were also organised to help raise awareness and strengthen political will to advance the policy framework on circular agriculture and propose circular economy measures for Viet Nam's NDC 3.0.

OUTCOMES: The implementation of the toolbox demonstrated the feasibility of circular agriculture practices and GHG emissions reduction for Viet Nam's NDC 3.0 and findings were shared with the drafting team for the enhancement of the agriculture chapter.

Getting started with the toolbox

Jump in at any stage of the toolbox, depending on your current circular and climate journey, and follow the stage-by-stage steps, guiding questions, practical checklists, and illustrative case studies to help translate your national vision into concrete reality.



ACCESS THE TOOLBOX

Available in [English](#), [Spanish](#) and [French](#)



SCAN ME



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SCAN ME

About the Project Partners

UNDP'S CLIMATE PROMISE is the UN system's largest portfolio of support on climate action, working with more than 140 countries and territories and directly benefiting 37 million people. This portfolio implements over US\$2.45 billion in grant financing and draws on UNDP's expertise in adaptation, mitigation, carbon markets, climate and forests, climate risk and security, and climate strategies and policy. Visit our website at climatepromise.undp.org and follow us at @UNDPplanet.

UNEP'S ONE PLANET NETWORK is a global solutions-oriented stakeholder network comprised of Member States, inter-governmental organizations, civil society and private sector organisations, that work together to accelerate the implementation of sustainable consumption and production and circular economy practices. It is built on a multi-stakeholder UN partnership that implements the 10-year Framework of Programmes on Sustainable Consumption and Production (10YFP).

UNFCCC SECRETARIAT (UN CLIMATE CHANGE) is the United Nations entity tasked with supporting the global response to the threat of climate change. UNFCCC stands for United Nations Framework Convention on Climate Change. The Convention has near universal membership (198 Parties) and is the parent treaty of the 2015 Paris Agreement.

With the support of:



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