Technical Assistance Response Plan - Terms of Reference

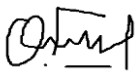
Country	**Zimbabwe**
Request ID#	**2020000023**
Title	*Assessment of the current status of the circular economy in the waste sector for developing a waste stream specific roadmap in Zimbabwe*
NDE	Mr. Elisha N. Moyo Principal Climate Change Researcher Climate Change Management Department, Ministry of Environment, Climate, Tourism and Hospitality Industry Email: enmoyo@gmail.com, moyo_elisha_n@yahoo.co.uk Address: 11th Floor Kaguvi Building, Cnr Fourth Street/Central Avenue, P.O. Box CY7753 Causeway, Harare, Zimbabwe
Proponent	**Co-Applicant 1: Kwekwe Polytechnic College** **Focal point 1**. Canisius Tonderai Matsungo Lecturer B Tech Department Kwekwe Polytechnic Mobile: +263715437640, email: tonderaimatsungo@gmail.com **2. Nigel T. Babvu** Lecturer B Tech Department Kwekwe Polytechnic Mobile: +263772316977, email: tbabvu@gmail.com Postal Address: P.O. Box 399, Kwekwe, Tel: 05522991/3 **Co-applicant 2: Harare Institute of Technology (HIT)** **Focal point:** Plaxedes Musademba Directorate of Environmental Management, Renewable Energy and Climate Change Center-Harare Institute of Technology HIT Campus, Ganges Road, Belvedere, Harare, Zimbabwe Mobile: +26377 265 240, pmusademba@hit.ac.zw, plaxychaps@gmail.com **Main beneficiary: Environment Management Agency** Contact Person: Mr Robson Mavondo, the Provincial Environmental Manager for Harare Province. email: robson.mavondo@ema.co.zw, +263 712 458 171

Summary of Climate Technology Centre and Network (CTCN) technical assistance

The circular economy is a regenerative, restorative, economic and industrial model for design processes that seeks to use materials that have already been processed and can be recovered and reused, thus protecting the natural resources from overexploitation, which is particularly relevant in Africa. This aims to maintain resources for longer periods, driving more efficient processes and technologies and reducing the loss of materials.

To achieve these aims, processes such as redesigning, reusing, recycling, repairing and remanufacturing are required, as well as disruptive business models such as product-as-a-service and product lifecycle extension. CTCN will support Zimbabwe, collaborating with its Nationally Designated Entity counterpart, in the systematization of these experiences in order to develop an analysis of the current situation of the circular economy within the waste sector, identifying and developing an updated map of key players/stakeholders, public/private initiatives, definition of territories, description of gaps and barriers, and a waste stream-specific circularity analysis, to serve as input for the development of a waste stream-specific circular economy road map relating to climate change, that could serve as a management tool for a future implementation phase in order to create new businesses, innovation and technological transfer, generate quality employment and combat climate change in Zimbabwe, while complying with its nationally determined contributions (NDC) and sustainable development goals (SDGs), enabling Zimbabwe to become a leader in the field of circular economy.

Technical Assistance Response Plan - Terms of Reference

Agreement: (If possible, please use electronic signatures in Microsoft Word file format)	
National Designated Entity (THE COUNTRY) to the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism	
Name:	Mr. Elisha N. Moyo
Title:	Principal Climate Change Researcher
Date: Signature:	18 September, 2020 
Project Proponent (Optional)	
Name:	
Title:	
Date: Signature:	
Climate Technology Centre and Network (CTCN)	
Name:	Rose Mwebaza
Title:	Director of CTCN
Date:	18/09/2020
Signature:	

1. Background and context

Since the Industrial Revolution, in the nineteenth century, most countries have based their growth and development on a linear model of production and consumption which can be summed up as "take, make and discard" and an energy matrix that is based on the use of fossil fuels. Some 250 years later, our Earth has become home to 7 billion people, who use resources equivalent to 1.7 planets.[1] Not only is the linear economy inefficient, because out of the 92.8 billion tonnes of resources mined each year, only 9 per cent is reused, but it also contributes to environmental degradation and climate change, as the management of materials accounts for approximately 67 per cent of greenhouse gas (GHG) emissions.[2] Human activity is estimated to have caused the global temperature to increase by about 1°C above pre-industrial levels and, if no rapid and far-reaching action is taken, the temperature is expected to rise by 1.5°C between 2030 and 2053.[3]

Owning to its wealth in natural resources, Zimbabwe's economy is founded on sectors that are contributing to the current linear model, with key industries in the area of mining, steel, cement and agriculture. This has led the country to specialize in economic activities based on the extraction and partial processing of these resources, generating little economic benefit and significant environmental impacts, neglecting industrial activities that generate added value, and hindering industrial development based on technology and innovation. On the other hand, Zimbabwe generates up to 3 kg of waste per capita per day in urban areas[4] which largely exceeds the global average. Yet, less than 48 per cent of solid waste generated in the country is collected, the rest being illegally dumped in open spaces and on roadsides or disposed of by open burning.[5] As one of the fastest growing economies in Africa with a growing middle class and changing consumption and production patterns, waste generation will continue to grow in the upcoming years, exposing Zimbabwe to ever increasing challenges of environmental degradation, rising GHG emissions and health problems.

The circular economy concept (Figure 1) seeks to replace the current linear economic model with a circular model, to enable the harnessing and efficient use of resources, promoting the use of non-conventional renewable energies (NCRE). Instead of extracting natural resources, the circular economy involves recovering and reusing materials that have already been processed, thus keeping them in circulation for as long as possible, reducing pressure by up to 28 per cent and GHG emissions by up to 72 per cent globally.[6] A circular system allows the decoupling of economic growth from the use of natural resources, promoting the creation of new companies, as well as changes in the production processes of existing companies, with an economic potential of up to US $4.5 trillion,[7] and generating up to 6 million new jobs by 2030 worldwide,[8] thus complying in particular with Sustainable Development Goals (SDGs) 9, 12 and 13, as well as the nationally determined contributions (NDC) agreed to by Zimbabwe, representing a great opportunity for sustainable development in Africa.

[1] Global Footprint Network, 2018, www.footprintnetwork.org
[2] Circularity Gap Report, Circle Economy, 2018
[3] Global Warming of 1.5°C, IPCC, 2018
[4] Indaba, 2017
[5] National Climate Change Response Strategy, 2015
[6] Resource Efficiency: Potential and Economic Implications, IRP, 2017
[7] Waste to Wealth: The Circular Economy Advantage, Peter Lacy, Jakob Rutqvist, 2015
[8] World Employment Social Outlook 2018: Greening with Jobs, ILO, 2018

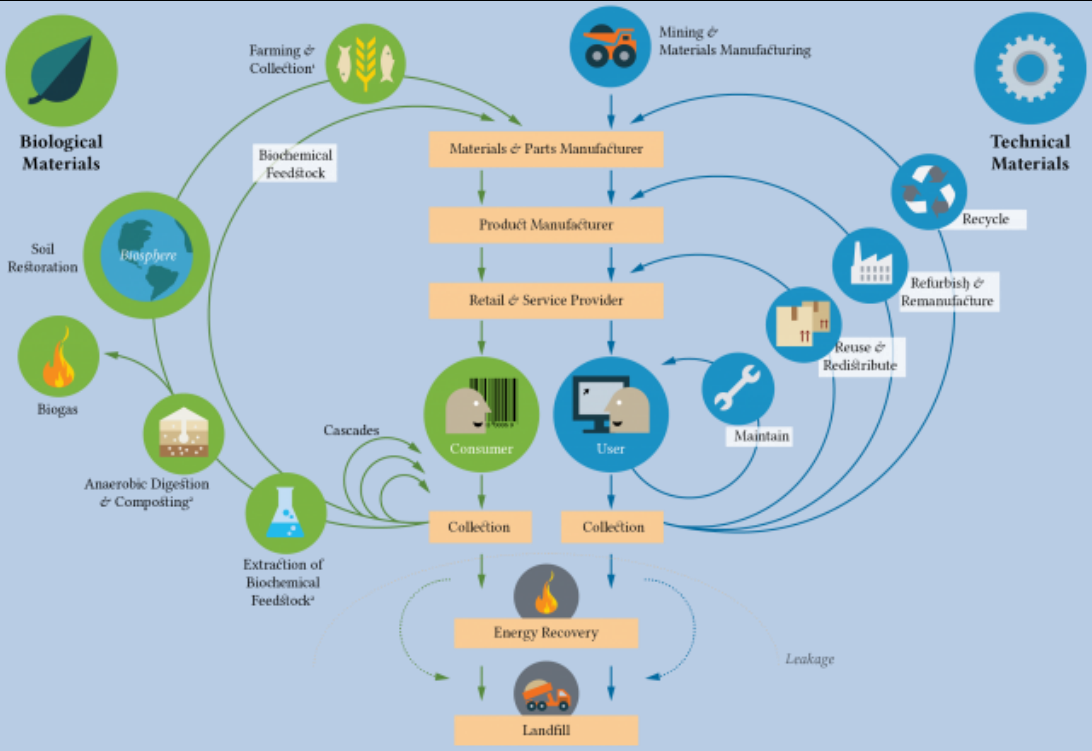


Figure 1: Circular Economy Diagram[9]

2. Problem statement

The problem to be addressed is the lack and asymmetry of information, as well as the coordination failures that exist in Zimbabwe with regard to the state and level of development of the circular economy, as well as the lack of knowledge of the players and the circular initiatives that are being developed in their respective territories, their potential benefits and existing barriers.

Zimbabwe has implemented first public policies and private initiatives to advance towards an integrated waste management and a circular economy, characterized mainly by regulations, programs and initiatives that have established a framework for waste management, and promoted recycling to reduce the generation of waste and its recovery and reuse in order to protect the health of its citizens and the environment. In 2007, the Environmental Management (Effluent and Solid Waste Disposal) Regulations were introduced. The 2014 Solid Waste Management Plan has declared solid waste management as one of the most pressing emerging issues in Zimbabwe and laid out a comprehensive plan to "achieve a safe, secure and sustainable solid waste management system that transforms Zimbabwe into a clean, healthy and environmentally friendly country by 2020 through citizen participation". Three years following the introduction of the plan, a Solid Waste Management Indaba stressed again the necessity to tackle the solid waste management problems in a joint and rapid manner, noting, for example, strong coordination problems between the Environmental Management Agency (EMA) and local authorities. Overall, there has been a lack in terms of coordination and effectiveness of initiatives related to circular economy.

Zimbabwe requires a national strategy for a circular economy that collects and systematizes experiences, defines objectives and establishes clear goals, identifies and launches promising pilot

[9] The Circular Economy, Ellen MacArthur Foundation, 2012

projects, and provides information on the dimension of the existing benefits and barriers, thus enabling the creation of a road map in order to begin the transition towards a circular model aligned to the national strategy for climate change, creating performance indicators that facilitate monitoring compliance with the NDC, the SDGs (9, 12 and 13) and the commitments of Zimbabwe under the Paris Agreement adopted by the Conference of the Parties (COP) to the Framework Convention on Climate Change.

The following waste streams would be analysed within the technical assistance:

- Inorganic domestic waste:
  - Plastics
  - Metals
  - Glass
  - Paper
- Organic waste:
  - Household waste
  - Agricultural waste

Excluded waste streams are:

- Hazardous waste
- Industrial waste
- Liquid waste (waste water)
- E-Waste

Based on the concept of circular economy, the technical assistance foresees to analyse waste streams along the entire value chain with the inclusion of waste prevention so to maximise GHG mitigation benefits:

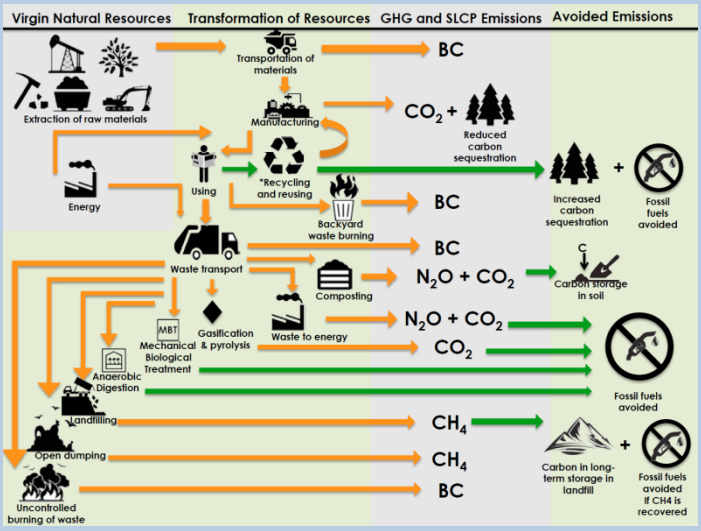


Figure 1: Waste management and climate change[10]

After a general overview and analysis of all waste streams, the technical assistance will put a focus on one specific waste-stream prioritized in coordination with the country and based on the results of a multi-criteria. The technical assistance foresees a comprehensive circularity analysis for the prioritized

[10] Global Waste Management Outlook, 2015

waste stream resulting in a roadmap with recommendations on technologies, policies, private sector engagement and other best practices and on which stakeholders to involve.

3. Logical Framework for the CTCN Technical Assistance:

	Month[12]											
	1	2	3	4	5	6	7	8	9	10	11	12
***Goal**: Development of a waste stream-specific road map[11] for the circular economy in Zimbabwe*												
***Outcome**: Zimbabwe, which is aware of the economic, social and environmental benefits of the circular economy but has no specific strategies for its implementation, may develop a road map for the promotion and development of a waste stream-specific circular model, in which public and private players will be identified to generate national strategies required for the development of the circular economy.*												
Output 1: Development of an implementation plan and communication documents												
Activity 1: *All implementers must undertake the following activities at the beginning and at the end of the CTCN technical assistance.* **Activity 1.1**: Drafting a detailed implementation plan for all activities, deliverables, outputs, deadlines and responsible persons/organizations, including a gender study and an itemized budget for implementing the Response Plan. The detailed implementation plan and budget must be based directly on this Response Plan. **Activity 1.2**: Based on the indicators listed in the Closure and Data Collection Report, drafting a monitoring and evaluation plan with specific, measurable, achievable, relevant and time-bound indicators that can be used to monitor and evaluate the timeliness and appropriateness of implementation. The monitoring and evaluation plan should enable the implementer to complete the CTCN Closure and Data Collection Report at the end of the technical assistance (please refer to Activity 1.4 and Section 14 of the Response Plan); **Activity 1.3**: A two-page description of the expected impact of the CTCN technical assistance at the start of the assistance, updated at the end of the technical assistance (a template will be provided). **Activity 1.4**: A CTCN Closure and Data Collection report completed at the end of the technical assistance (a template will be provided).												

[11] Road maps will be at the national level and will be determined by Zimbabwe; they may have a sectoral or process-specific scope.
[12] The project timeline can be adjusted according to the level of development of the participating country.

Deliverable 1:												
1.1 Implementation plan	X											
1.2 Monitoring and evaluation plan	X											
1.3 Impact description document (initial and final version)	X											X
1.4 Closure and Data Collection Report												X
Output 2: Analysis of existing circular economy initiatives and key players in Zimbabwe												
Activity 2.1: Kick-off meeting for the presentation of technical assistance with the different stakeholders Present the technical assistance plan (Deliverable 1.1). Collect relevant national policies, past and ongoing projects and initiatives in the waste sector, including the activities of the EU and other local, national and international stakeholders in Zimbabwe.												
Activity 2.2: Analysis of the status quo of circularity in the waste sector of Zimbabwe to define a waste sector baseline Identification and analysis of the key initiatives, policies, strategies and stakeholders in the waste sector with a focus on agricultural and household waste (see point 5. below). Classification and data collection of waste sources, quantities and usage through primary and secondary research. This is to define the baseline scenario that will serve as a reference for the outcomes and objective of the technical assistance. 1. Analyse and aggregate policies, strategies, past and ongoing initiatives and projects 2. Identify and incorporate the NDC of Zimbabwe and its commitments to the SDGs, in particular SDGs 9, 12 and 13, as well as other commitment and targets of Zimbabwe's national development plan and legislation. 3. Map key stakeholders in Zimbabwe, including institutions, agencies, public, private partnerships and other relevant stakeholders at local and national level. Ideally group them into the following categories: (a) Government/Public Sector; (b) Companies; (c) Civil Society Organizations; (d) Academia; and (e) Enterprises. 4. Identify stakeholders and other parties interested and committed to the circular economy concept and the road map to be developed. 5. Define waste streams. The following waste streams in domestic and agricultural waste have been identified as relevant: (a) Plastics (domestic), (b) Metals (domestic), (c) Paper (domestic), (d) Glass (domestic), (e) Organic Waste (domestic), (f) Agricultural Waste 6. Collect data on sources, quantities and usage of waste for each of the waste streams. Design and conduct questionnaires and random sampling of waste to collect further data where needed.												

Through consultations and interviews with potential participants of the road map, a level of experience, knowledge, competencies, networks, interest, strengths/weaknesses and commitment to the development of a circular economy will be identified. In total, a minimum of five and a maximum of 15 players will be interviewed, prioritizing those that are recognized by national and international organizations as leaders in the field of circular economy. The definition of players and processes for consultation and/or to be incorporated in the analysis for the development of the road maps must have the approval of the NDE of Zimbabwe before the CTCN. Questionnaires and random sampling of waste should be conducted according to the guidelines of the United Nations Statistics Division. The quality should meet requirements for the funding through GEC or GCF of eventual follow-up projects. The sampling process should be informed by the 2012 population census of Zimbabwe. During this activity, the gender perspective must be incorporated transversally, and it must be evaluated how this diagnosis, associated with a baseline in circular economy issues, could carry economic, social and environmental implications, disaggregated by gender. In view of the CTCN's unrestricted commitment to gender equality, throughout this process the active inclusion of women in each phase should be considered, ensuring that their participation is considered incidentally, at all decision-making levels and that the dignity and respect of women also be considered, in line with SDG 5 on gender equality.[13]												
Deliverable 2: 2.1 Meeting report. 2.2 Evaluation report to identify and define the status quo of the waste sector as well as the state of circular economy in this sector in Zimbabwe, describing past and ongoing initiatives, policies, projects and the experience, capabilities and commitments of key stakeholders as well as the status quo within the different waste streams. The report should emphasize the degree of adoption of the circular economy in Zimbabwe, including existing sectoral road maps. The report must contain information relating to the expected outcomes indicated in Activity 2.2.		X		X								
Output 3: Identification of the perceived value of the circular economy and of benefits, weaknesses, opportunities and challenges in Zimbabwe's waste sector.												
Activity 3.1: Analysis of the perceived benefits												

[13] CTCN Gender Mainstreaming Tool for Response Plan Development: https://www.ctc-n.org/technologies/ctcn-geNDEr-mainstreaming-tool-response-plan-development

Analysis of the benefits recognized in the circular economy within the waste sector by the different key players of Zimbabwe identified in Output 2. Differentiation between the concept of 'waste' according to the legal definition in the country and products that still have useful life and value. Summarize the waste and the products or by-products that still have useful life and value for each economic activity evaluated under output 2 and 3 in the context of their economic, social and environmental benefit. The benefit of the circular economy recognized by the players involved will also be analysed. Incorporate the NDC of Zimbabwe and its commitments to the Sustainable Development Goals (SDGs) of the United Nations, in particular SDGs 9, 12 and 13 for this first stage.												
Activity 3.2: Analysis of strengths and opportunities Analysis of the strengths and opportunities of Zimbabwe in the adoption of a general, sectoral or specific circular economy process as agreed with the NDE, among others: (a) Industrial, technological and innovative capacities and infrastructure (b) Policies or initiatives on recycling, climate change and circular economy (c) Governance and leadership (d) Level of integration of non-conventional renewable energies (NCRE) (percentage of the energy matrix) (e) Alignment of public and private agendas (commitment of government, companies, organizations, academia and society) (f) Job creation (g) Impact on NDC and SDGs in Zimbabwe (h) Mapping of the main economic activities of Zimbabwe that may be most impacted by the circular economy. The scope and methodology of the assessment must be previously approved by Zimbabwe's NDE.												
Activity 3.3: Analysis of weaknesses and barriers Analysis of the weaknesses and barriers of Zimbabwe in the adoption of a general, sectoral or specific circular economy process as agreed with the Designated National Entity (NDE), particularly the following barriers: (a) Regulatory (b) Market (c) Cultural (d) Support for entrepreneurship (e) Funding and capital (f) Industrial and technological (g) Recovery of products or materials (logistics, collection, repair and remanufacturing)												

The scope and methodology of the assessment must be previously approved by the Zimbabwe's NDE.												
Activity 3.4: Development of an indicator matrix Generation of a matrix of transparent and comparable circular economy indicators between different economic activities / waste streams.												
Activity 3.5: Stakeholder meeting on prioritization of waste streams In a meeting with the NDE, the project proponent and further participating stakeholders identified under output 2, the results of the indicator matrix should be presented and discussed. Together, one prioritized waste stream should be selected that will be further investigated under output 4 and 5.												
Deliverables 3: 3.1 Report presenting a map of the main economic activities / waste streams of Zimbabwe that may be most impacted by the circular economy and the quantification of the economic, social and environmental benefits, and their impact on Zimbabwe's nationally determined contributions (NDC) and SDGs. It will also include an analysis of the value recognized in the circular economy by the different key players of Zimbabwe identified in Output 2. 3.2 Report on the strengths and opportunities identified. 3.3 Report on the weaknesses and barriers identified. 3.4 Report with indicator matrix on potential for circular economy. 3.5 Meeting report				X X	 X	 X X						
Output 4: Circularity analysis of one prioritized waste stream												
Activity 4.1: Identification and analysis of circularity pathways for the prioritized waste stream Identification of circularity technologies, concepts, policies, engagement strategies and best practices along the whole value chain of the prioritized waste stream. Analysis of general requirements for the adoption and the economic, social, institutional and environmental impact of these pathways towards circularity.												
Activity 4.2: Market analysis for the adoption of the identified circularity pathways in Zimbabwe Analysis of the status quo of the national market for the value chain of the prioritized waste stream. Identification of potential adopters and stakeholders in Zimbabwe with respect to the identified technologies, concepts, policies and best practices for enhanced circularity in the prioritized waste stream. Analysis of their current status of development as well as their potential interest, requirements, benefits and gaps linked to the adoption of the identified pathways towards circularity.												
Activity 4.3: Stakeholder meeting on circularity analysis In a meeting with the NDE, the project proponent and further participating stakeholders identified under output 2, the results of the circularity analysis should be presented and discussed. Together, one prioritized circularity pathway should be selected that will be conceptualized as a pilot project / proof of concept under Output 5.												

Deliverable 4: 4.1 Report presenting technologies, concepts, policies, engagement strategies and best practices enhancing circularity in prioritized waste streams, including requirements and benefits. 4.2 Report presenting the market analysis for the adoption of the identified circularity pathways in Zimbabwe. 4.3 Meeting report.							X	 X X				
Output 5: Development of a circular economy road map and identification of a potential circularity pilot project												
Activity 5.1: Development of a road map for increased circularity in the prioritized waste stream in Zimbabwe Development of a road map for the prioritized waste stream to enhance circular economy in Zimbabwe, including results of the outputs 2, 3, 4 and 5. The road map should include, i.e.: a) Circularity analysis of prioritized waste stream b) Roadmap with short-, medium-, and long-term recommendations for a. Appropriate technologies b. Legal reforms, policies and regulations c. Concepts for capacity building and awareness campaigns d. Private sector engagement and market creation e. Further best practices												
Activity 5.2: Identification of a potential circular economy project for Zimbabwe within the prioritized waste stream Based on the results of the circularity analysis and the stakeholder meeting of output 4, a potential circular economy project will be identified and conceptualized for a proof of concept. To that end, the following steps must be followed: a) Define the economic activities and/or productive process within the prioritized waste stream. b) Identify and define the supply of waste usable in economic activities and/or production processes (and its location in the value chain). c) Identify and define the demand for waste usable in economic activities and/or production processes (and its location in the value chain). d) Evaluate the economic, social, institutional and environmental impact. e) Identify existing productive and technological structures in order to create partnerships.												

f) Identify local public and private bodies that are already developing or are interested in developing the pilot circular model. g) Develop and establish performance indicators to track and measure progress and compliance of the pilot project.												
Activity 5.3: Establishment of communication material Development of communication material on the results of the technical assistance, summarizing the road map and the potential of circular value chains in Zimbabwe.												
Activity 5.4. Presentation of final results Present the final results of the technical assistance to the NDE, the project proponent and further participating stakeholders.												
Deliverables 5: 5.1 Development of a road map for circular economy within the prioritized waste stream in Zimbabwe. 5.2 Evaluation report to identify and define potential project agreed with the NDE and project proponent of Zimbabwe, describing their potential benefits in economic, social, institutional and environmental terms. 5.3 Material for communication and the final presentation of the results to the NDE, the project proponent and other participating stakeholders. 5.4 Meeting report.									X	X	X X	

4 Resources required and itemized budget:

Provide an indicative summary of the necessary resources and detailed budget required to implement the technical assistance of the CTCN, including monitoring and evaluation activities, with the help of the following table. It is important to note that a minimum of 1 per cent of the budget must be explicitly aimed at gender-specific activities related to technical assistance (see Section 10 for more information on gender). Once the response plan is completed, the Climate Technology Centre (CTC) will select the implementers responsible for implementing the response. *The CTCN and the chosen lead implementer will need to agree on a detailed activity-based budget.*

Activities and Outputs	**Input: Human resources** *(Title, role, estimated number of days)*	**Input: Travel** *(Purpose, national vs. international, number of days)*	**Inputs: Meetings and events** *(Meeting title, number of participants, number of days)*	**Input: Equipment and resources** *(Item, purpose, buy/rent, quantity)*	**Estimated cost (US $)** *Please indicate the cumulative cost of the activities and outputs and provide an estimated cost range for each activity and the entire Response Plan.*	
					Minimum	**Maximum**
Output 1: Development of the work plan and related communication documents	***NC1, 10 days*** ***NC2, 10 days***				***4,000***	***4,800***
Activity 1.1: Work plan	*NC1, 2 days* *NC2, 2 days*	-	-	-	*800*	*960*
Activity 1.2: Monitoring and evaluation plan	*NC1, 2 days* *NC2, 2 days*	-	-	-	*800*	*960*
Activity 1.3: Impact description document (initial and final version)	*NC1, 2 days* *NC2, 2 days*	-	-	-	*800*	*960*

Activity 1.4: Closure and Data Collection Report	*NC1, 4 days* *NC2, 4 days*	-	-	-	*1,600*	*1,920*
Output 2: Analysis of existing circular economy initiatives and key players in Zimbabwe	**E1, 22 days** **E2, 22 days** **NC1, 22 days** **NC2, 22 days** **GE, 7 days**	-	-	-	***55,120***	***66,144***
Activity 2.1: Kick-off meeting for the presentation of technical assistance with the different stakeholders	*E1, 2 days* *E2, 2 days* *NC1, 2 days* *NC2, 2 days* *GE, 2 days*	*1 international trip to Zimbabwe for E1 and E2* *1 national trip for NC1, NC2 and GE*	*Kick-off meeting, 1 day, 25 participants*		*17,140*	*20,568*
Activity 2.2: Analysis of the status quo of circularity in the waste sector of Zimbabwe to define a waste sector baseline	*E1, 20 days* *E2, 20 days* *NC1, 20 days* *NC2, 20 days* *GE, 5 days*	*4 national trips for E1, E2, NC1 and NC2*	*Interviews with local players: 5 focus groups (minimum 1 and maximum 3 local players per group)* *Random sampling of waste at landfills and households by E2 and NC2*	*Local transportation for 6 days (car rental)* *Waste sampling equipment*	*37,980*	*45,580*
Output 3: Identification of the perceived value of the circular economy and of benefits, weaknesses, opportunities and	**E1, 26 days** **NC1, 26 days**	-	-	-	***18,200***	***21,840***

challenges in Zimbabwe's waste sector.						
Activity 3.1: analysis of perceived value	*E1, 5 days* *NC1, 5 days*	-	-	-	*3,500*	*4,200*
Activity 3.2: Analysis of strengths and opportunities	*E1, 5 days* *NC1, 5 days*	-	-	-	*3,500*	*4,200*
Activity 3.3: Analysis of weaknesses and barriers	*E1, 5 days* *NC1, 5 days*	-	-	-	*3,500*	*4,200*
Activity 3.4: Development of an indicator matrix	*E1, 10 days* *NC1, 10 days*	-	-	-	*7,000*	*8,400*
Activity 3.5: Stakeholder meeting on prioritization of waste streams	*E1, 1 day* *NC1, 1 day*	-	Online Meeting	-	*700*	*840*
Output 4: Circularity analysis of one prioritized waste stream	**E1, 27 days** **E2, 27 days** **NC1, 27 days** **NC2, 27 days**	-	-	-	***36,400***	***43,680***
Activity 4.1: Identification and analysis of circularity pathways for the prioritized waste stream	*E1, 10 days* *E2, 10 days* *NC1, 10 days* *NC2, 10 days*	-	-	-	*14,000*	*16,800*
Activity 4.2: Market analysis for the adoption of the identified circularity pathways in Zimbabwe	*E1, 15 days* *E2, 15 days* *NC1, 15 days* *NC2, 15 days*	-	-	-	*21,000*	*25,200*

Activity 4.3: Stakeholder meeting on circularity analysis	*E1, 1 day* *E2, 1 day* *NC1, 1 day* *NC2, 1 day*	-	Online Meeting	-	*1,400*	*1,680*
Output 5: Development of a circular economy road map and identification of a potential circularity pilot project	**E1, 33 days** **E2, 33 days** **NC1, 35 days** **NC2, 35 days** **GE, 6 days**				***62,140***	***74,568***
Activity 5.1: Development of a road map for increased circularity in the prioritized waste stream in Zimbabwe	*E1, 20 days* *E2, 20 days* *NC1, 20 days* *NC2, 20 days* *GE, 2 days*				*28,400*	*34,080*
Activity 5.2: Identification of a potential circular economy project for Zimbabwe within the prioritized waste stream	*E1, 10 days* *E2, 10 days* *NC1, 10 days* *NC2, 10 days* *GE, 1 day*				*14,200*	17,040
Activity 5.3: Establishment of communication material	*E1, 1 day* *E2, 1 day* *NC1, 3 days* *NC2, 3 days* *GE, 1 day*				*2,400*	*2,880*
Activity 5.4: Presentation of final results	*E1, 2 days* *E2, 2 days* *NC1, 2 days* *NC2, 2 days*	*1 international trip to Zimbabwe for E1 and E2*	*Closure meeting, 1 day, 25 participants*		*17,140*	*20,568*

	GE, 2 days	*1 national trip for NC1, NC2 and GE*				
Estimated cost range for the entire Response Plan (US$)					***175,280***	***210,336***

5 Profile and experience of experts

Experts required	Brief description of required profile
Expert 1 (E1)	Economist or commercial engineer, M.Sc., with experience in the design and development of road maps, knowledge and experience in circular economy policies and development, project management, technological innovation, industry 4.0, lifecycle assessment of products and services, climate change, SDGs and NDC with a minimum of seven years of experience. Fluency in English is required.
Expert 2 (E2)	Industrial engineer or mechanical engineer, M.Sc., with specialisation in the waste sector, knowledge and experience in circular economy policies and development, technological innovation, industry 4.0, lifecycle assessment of products and services, climate change, SDGs and NDC with a minimum of seven years of experience. Fluency in English is required.
National consultant 1 (NC1)	Economist or commercial engineer, expert in evaluation and development of industrial policies (technological innovation, road maps, national programs) and environmental policies (waste management, climate change, NDC (nationally determined contributions), TNAs (technology needs assessments), TAPs (technical assistance programmes), NAPs (national action plans) or NAMAs (nationally appropriate mitigation actions), according to the experience of the country), with a minimum of seven years of experience. Fluency in English is required.
National Consultant 2 (NC2)	Industrial engineer or mechanical engineer, M.Sc., with specialisation in the waste sector, knowledge and experience in circular economy policies and development, technological innovation, industry 4.0, lifecycle assessment of products and services, climate change, SDGs and NDC with a minimum of seven years of experience. Experience working in Zimbabwe. Fluency in English is required.
Gender expert (GE) – National Consultant	Social science professional (sociologist, anthropologist or psychologist) expert in gender studies and management of equality policies, with experience in research methodologies and data processing, with a minimum of seven years of experience. Experience working in Zimbabwe. Fluency in English is required.

6 Intended contribution to the expected impact of the technical assistance

The products developed under Section 3 will allow Zimbabwe to have practical tools to identify players, technologies, territories and local and national initiatives relating to circular economy that will facilitate the development of a road map in order to generate a first updated map of stakeholders in the development of a circular economy to further the transition of Zimbabwe towards circularity, with defined potentialities, identification of circular opportunities and clear recommendations for governments in order to strengthen the competitiveness and sustainability of Zimbabwe. Moreover, the selection of a specific project in Zimbabwe will facilitate access to other financial mechanisms that can scale up the work of this technical assistance.

Zimbabwe will obtain an analysis of its productive matrix, identifying the potential for territorial development, considering at least the following aspects:

(a) Economic (productive chains that add value to industry and competitiveness to the country)
(b) Social (increased employment rate and impact on gender equality)
(c) Environmental (saturated or latent zones and quantification of greenhouse gas emission reduction)
(d) Institutional (capacities, institutions, human capital, knowledge)

As noted by the request made by Zimbabwe to the CTCN, this technical assistance (TA) will enable the country to enhance the potential of these aspects, facilitating the creation of new national policies and initiatives, and to quantify these results to develop performance indicators that enable the country to delineate and measure progress and compliance with the draft circular economy, as well as the implementation of the NDC and SDGs signed by Zimbabwe.

7 Relevance to NDCs and other national priorities

In 2014, Zimbabwe introduced the Solid Waste Management Plan that envisions a “safe, secure and sustainable solid waste management system that transforms Zimbabwe into a clean, healthy and environmentally friendly country by 2020 through citizen participation”. Its objectives range from solid waste management minimization and separation to maximizing resource recovery, investing in environmentally sound infrastructure and educating citizens on sustainable solid waste management.

Within its nationally determined contributions (NDCs), Zimbabwe has set a commitment to save 17,316 Gg of CO2eq. The NDC prioritizes waste as a key mitigation sector, targeting an integrated waste management.

The National Climate Change Response Plan from 2015 identifies solid waste management as a major national challenge, targeting better capacity building of local authorities, creating an enabling policy environment for waste to energy and developing an enabling framework to promote waste minimization.

The waste sector is a priority mitigation area and is equally a sector where the circular economy has one of the greatest impacts. This is of high importance, since the TA seeks to lay the foundations for the development of a road map to create a general, sectoral or specific circular economy strategy that

generates an economic, social, institutional and environmental impact through the identification of players and territories that have favourable conditions for the development of a circular model, improving the competitiveness and efficiency of local businesses, enterprises and organizations that operate in these three sectors, particularly small and medium-sized enterprises (SMEs) that require sustainable and inclusive development due to the high impact that this type of enterprise has for Zimbabwe as a main source of employment.

The intersection between circular economy and industry 4.0 represents a great opportunity for companies, organizations and academia to develop new circular business models through the incorporation of technologies and continuing competitivity, and to reduce the environmental impact of their productive activities.

8 Links to relevant parallel activities:

This TA is built on the basis of Zimbabwe's identification of the circular economy as an economic model with a triple impact that offers economic, social, institutional and environmental benefits.

The 2014 Solid Waste Management Plan as well as the 2015 National Climate Change Response Strategy have laid out comprehensive objectives in the area of sustainable solid waste management. The coordination with projects under implementation linked to these national strategies will be ensured. [any projects under implementation to be added]

In 2017, Zimbabwe organized a Solid Waste Management Indaba to find sustainable solutions not just to address existing challenges but also to keep solid waste management under control into the future. [any projects under implementation to be added]

Furthermore, several research projects have recently been conducted including an evaluation of the effectiveness of strategies used for household solid waste management in Harare (2018) and an assessment of the least impactful municipal solid waste management option in Harare (2019). Both research papers included a set of recommendations that can result in implementation projects.

9 Anticipated follow-up activities after this technical assistance is completed:

The TA will be the beginning of a set of activities that will lead to the development of specific circular economy road maps in Zimbabwe. However, the future and continuity of this initiative will be underpinned by the following actions:

(a) Communication and promotion of the road map at a government, business, academic and social organization level.
(b) Dissemination of the results and potential benefits of the triple impact that the implementation of the circular economy road map could have in Zimbabwe.
(c) Use of the road map by government agencies for the creation of new instruments to promote the development of circular business models in specific territories and/or economic activities.
(d) Use and continuous updating of Outputs 2, 3 and 4 by the country.
(e) Fulfilment of commitments taken on by public and private players for the implementation of actions that enable the development of a circular economy and the reduction of greenhouse gas emissions.

(f) Creation and/or continuation of support programmes for circular economy projects by development organizations or corporations in Zimbabwe.
(g) Institutionalize this initiative in order to update the list of relevant players and promote the development of national and territorial circular economy strategies.
(h) Update and monitor the NDC committed by Zimbabwe and incorporation of new SDGs.
(i) Seek opportunities for South-South cooperation from lessons learned. Potential cooperation partners will be identified through the coordination with other Circular Economy projects of the CTCN in the region.

10 Benefits in terms of gender and co-benefits:

Imbedded into the design of the activities:	Consideration should be given to the active inclusion of women at each stage, ensuring that their participation is taken into account at all levels of decision making, as well as respect for women and their dignity. This is why this condition is clearly defined in the design of this TA in outputs 1 and 2. The road map must transversely incorporate a gender perspective. The challenge is to evaluate how this analysis associated with a baseline in circular economy issues (and the subsequent road map) could create economic, social and environmental implications, disaggregated by gender. Once the project is established, the expected results and impact should be established in terms of gender perspective, in compliance with SDG 5 on gender equality. This considers the inclusion of appropriate gender indicators in the monitoring and evaluation process.
Gender and co-benefits of the activities:	The benefits in terms of gender will be the incorporation of women into new business models based on a circular economy that, being intensive in skilled labour and use of technology, offer new and better opportunities for their education, training and subsequent participation in economic activities with circular models, as well as in the creation of new ventures and academic research. These new opportunities have the potential to improve women's living conditions, offering economic stability, security, health and equal opportunities for access to jobs, whilst at the same time reducing the wage gap, in compliance with SDG 5 on gender equality. In general, the following benefits are envisioned through circular economy implementation: (a) A new awareness of the importance of moving towards a circular, low-carbon economy. (b) A decrease in the use of resource requirements per unit produced. (c) A reduction in waste generation, which increases the useful life of waste disposal sites. (d) A reduction in the amount of energy consumed and the reuse of raw materials, which reduces the energy required to produce the same product or another (if it cannot be recycled, the mineral must be extracted and refined, and the raw materials required for the manufacture of the final product must be produced, with all externalities associated with mining and industrial operations).

	(e) The development of new businesses and creation of new jobs. The recycling rate in Zimbabwe is currently low, and an increase will create the need to hire more staff for the different tasks required in each link of the value chain of every product. (f) The promotion of innovation, because it is necessary to change the production model and update production infrastructure, its equipment and technologies in order to process what is now considered waste (a future raw material). (g) The promotion of the use of non-conventional renewable energies (NCRE). (h) Tools for monitoring compliance with NDC and SDGs (i) Climate change mitigation and adaptation.

11 Main national stakeholders in the implementation of the technical assistance activities:

National Stakeholder	Function in the implementation of the technical assistance
Climate Change Management Dept (NDE)	Oversight and coordination
Kwekwe Polytechnic College and Harare Institute of Technology	Co-applicants and responsible for implementation of the TA, document review and preparing for meetings and all activities
The Environmental Management Agency (EMA)	Document review and recommending actions for approval. Policy guidance on waste management for
Local Authorities	Document review and recommending actions for approval. Sharing strategic documents and input
Ministry of Local Government	Policy guidance on waste management for Local Authorities
Ministry of Energy and Power Development	Document review and recommending actions for approval especially energy-waste nexus
Ministry of Environment, Climate, Tourism and Hospitality Industry	Policy guidance on waste management and climate action
UNDP and UN Agencies	Technical support
Ministry of Health and Child Welfare	Policy guidance on waste and health
Private Sector e.g. Zim Sunshine Group, Alpha Packaging, DevPact & BCSDZ	Document review and recommending actions for approval
Academia	Provision of research studies and feasibility studies including baseline information
Media	Information dissemination to sustain uptake
Women and the Youths	Identification of upscaling opportunities including co-benefits of the interventions

Ministry of Finance and Economic Planning	Creating the enabling environment for investments
Commercial, Development and Int'l Banks	Provision of funding support and technical assistance

12 Contribution to the SDGs:

Goal:	Sustainable Development Goal	Direct contribution from CTCN TA
1	End poverty in all its forms everywhere	
2	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	
3	Ensure healthy lives and promote well-being for all at all ages	
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
5	Achieve gender equality and empower all women and girls	
6	Ensure availability and sustainable management of water and sanitation for all	
7	Ensure access to affordable, reliable, sustainable, and modern energy for all (consider adding targets for 7)	
	7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services	
	7.2 - By 2030, increase substantially the share of renewable energy in the global energy mix	
	7.3 - By 2030, double the global rate of improvement in energy efficiency	
	7.a - By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	
	7.b - By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support	
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	The objective of the technical assistance (TA) is to promote the development of circular models in the waste sector that incorporate innovative technologies and approaches aiming at strengthening

		the resilience of supply chains and the waste value chain.
10	Reduce inequality within and among countries	
11	Make cities and human settlements inclusive, safe, resilient and sustainable	
12	Ensure sustainable consumption and production patterns	The circular economy is directly related to SDG 12, promoting sustainable consumption and developing technologies and business models that enable this change with focus on the waste value chain.
13	Take urgent action to combat climate change and its impacts	*All technical assistance should indicate relevance to SDG 13 and at least one of the following targets (13.1 to 13.b).*
	13.1 - Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	
	13.2 - Integrate climate change measures into national policies, strategies and planning	The circular economy, through new business models and reuse of resources, allows for the direct reduction of greenhouse gas emissions.
	13.3 - Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	
	13.a - Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible	
	13.b - Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities	
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
16	Promote peaceful and inclusive societies for sustainable development, provide access to	

	justice for all and build effective, accountable and inclusive institutions at all levels	
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	

13 Classification of technical assistance:

Please tick the relevant boxes below	Primary	Secondary
☐ 1. Decision-making tools and/or information provision		X
☐ 2. Sectoral road maps and strategies	X	
☐ 3. Recommendations for legal reforms, policies and regulations		X
☐ 4. Financing facilitation		
☐ 5. Private sector engagement and market creation		X
☐ 6. Research and development of new technologies		
☐ 7. Feasibility of technology options		
☐ 8. Piloting and deployment of technologies in local conditions		X
☐ 9. Technology identification and prioritization		

Please note that all CTCN technical assistance contributes to strengthening the capacity of in-country actors.

14 Monitoring and evaluation process

Upon contracting the implementing partners to implement this Response Plan, the lead implementer will produce a monitoring and evaluation plan for the technical assistance. This monitoring and evaluation plan must include specific, measurable, achievable, relevant, and time-bound indicators that will be used to monitor and evaluate the timeliness and appropriateness of the implementation. The CTCN Technology Manager responsible for the technical assistance will monitor the timeliness and appropriateness of the Response Plan implementation. Upon completion of all activities and outputs, evaluation forms will be completed by (i) Zimbabwe on overall satisfaction level with the technical assistance service provided; (ii) the Lead Implementer on the experience and knowledge gained through the technical assistance; and (iii) the CTCN Director on the timeliness and appropriateness of the activities and outputs.