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TERMS OF REFERENCE (TOR)

Title: Identification and dissemination of technologies and practices for the transition to a circular economy, Côte d'Ivoire

25 May 2021

CTCN request reference number: 2021000002

Country: Côte d'Ivoire

UNIDO RFP No.: 7000004893

1 BACKGROUND INFORMATION

The Climate Technology Centre and Network (CTCN) is the operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism and hosted by the United Nations Environment Programme (UN Environment) in collaboration with the United Nations Industrial Development Organization (UNIDO) and supported by 11 partner institutions with expertise in climate technologies. The mission of the CTCN is to promote accelerated deployment and transfer of climate technologies at the request of developing countries for energy-efficient, low-carbon and climate-resilient development.

These requests for Technical Assistance (TA) are being submitted to the CTCN by the National Designated Entity (NDE) of the respective country. The scope of services under these Terms of Reference shall be executed based on a restricted solicitation process. By mandate, only accepted Members of the CTC Network are eligible to execute the required services to implement the response. Should the bidder partner with another institution to deliver a minor part of the services described in these Terms of Reference, it is expected that the partner institution also joins the CTC Network.

In case you are not a CTCN network member yet, you may bid for implementation of the technical assistance, subject to the condition that you submit your completed application for CTC Network membership before the bid closure and the same is acknowledged by the CTCN. Furthermore, the contract award – should your bid be selected – is conditional to your network membership application having been successfully approved by the Director of CTCN. Should the bidder partner with another institution to deliver the services described in these Terms of Reference, it is expected that the partner institution also joins the CTC Network.

The maximum budget for this contract is USD 175,000.

It is mandatory for the implementer(s) to allocate at least 1% of the budget to integrate a gender-approach to the activities. Please refer to the CTCN Gender Mainstreaming Tool for Response Plan Development for



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guidance at <https://www.ctc-n.org/technologies/ctcn-gender-mainstreaming-tool-response-plan-development>.

2 CONTEXT OF THE ASSIGNMENT

Rapid population growth in Côte d'Ivoire, combined with rapid urbanisation, is leading to high consumption of natural resources and a significant increase in waste. Waste management is one of the major problems for cities and regions leading to environmental degradation, threats to public health and increasing greenhouse gas (GHG) emissions. In view of this unsatisfactory situation of the waste sector, the Government through the Directorate of Green Economy and Corporate Social Responsibility (DEVRSO) has formulated the request for the transition to a circular economy for the management of solid waste streams that will contribute to reducing GHG emissions in the waste sector. However, the transition to a circular economy is still hampered by a set of obstacles related mainly to a lack of knowledge, the absence of a specific institutional framework and governance, a lack of funding and an educational deficit. In addition, there is insufficient coordination between the different stakeholders in the field and many activities still take place informally due to the lack of governance. Finally, the circular economy is not yet widely integrated into educational curricula in Côte d'Ivoire, which leaves great potential for youth employment and the development of green jobs.

In order to address these challenges and pave the way for the transition to a circular economy, the CTCN has developed these Terms of Reference, outlining an intervention that will produce the outputs listed below and that will be implemented within a period of up to 12 months. The overarching goal is the development of a waste stream specific circular economy roadmap and the improvement of educational programmes that integrate the circular economy into curricula.

The consultant assignment will consist of the following outputs:

- Status quo analysis of waste management and the circular economy for selected waste streams in Côte d'Ivoire
- Multi-criteria analysis to prioritize a waste stream with the highest circular economy potential
- Analysis of the circularity potential of the prioritized waste stream
- Development of a circular economy roadmap for the prioritized waste stream
- Integration of circular economy knowledge and practices in educational curricula

The technical assistance will focus on the following waste streams: Organic solid waste (households, hotels and markets) and inorganic solid waste (plastic, metal, glass, paper).

The full text of the request submitted to the CTCN can be found here: <https://www.ctc-n.org/sites/www.ctc-n.org>



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[n.org/files/request/Technical%20Assistance%20Request%20Form.%20French%20RCI Economie%20circulaire O.pdf](https://www.ctcn.org/files/request/Technical%20Assistance%20Request%20Form.%20French%20RCI%20Economie%20circulaire%20O.pdf)

The Response plan developed in collaboration with Côte d'Ivoire can be found here: [https://www.ctcn.org/system/files/response_plans/CTCN_Reponse%20Plan_C%C3%B4te%20d%27Ivoire Economie%20Circulaire%20Counter-Signed.pdf](https://www.ctcn.org/system/files/response_plans/CTCN_Reponse%20Plan_C%C3%B4te%20d%27Ivoire_Economie%20Circulaire%20Counter-Signed.pdf)

The specific activities are detailed in section 3.

3 OBJECTIVE OF THE CONTRACT

The objective of this contract is the development of a waste stream specific circular economy roadmap and the integration of circular economy practices into educational curricula in Côte d'Ivoire.

Scope and activities of the proposed contracted services

Once the contract is signed, the CTCN will organize a kick-off call among all relevant parties involved in the request to introduce the Contractor to the NDE and Proponent. This kick-off virtual meeting shall present the activities, their timeline and clarify roles and responsibilities.

The Contractor shall undertake the following activities:

Output 1: Development of implementation planning and periodical reporting documents

Activity 1.1: Preparing the consultancy work plan, periodical progress reports and final reports.

Deliverable 1.1.i: A detailed work plan of all activities, deliveries, outputs, deadlines and responsible persons/organizations and detailed budget to implement the CTCN response plan. The detailed work plan and budget must be based directly on the CTCN response plan included in the tender package, as per CTCN standard procedure in all technical assistances (In French). The response plan framework represents the basic common structure of the work.

Deliverable 1.1.ii: Based on the work plan, a monitoring and evaluation plan with specific, measurable, achievable, relevant, and time-bound indicators used to monitor and evaluate the timeliness and appropriateness of the implementation. The monitoring and evaluation plan should apply selected indicators from the Closure and Data Collection report template and enable the lead implementer to complete the CTCN Closure and Data collection report at the end of the assignment (in English).

Deliverable 1.1.iii: A two-page CTCN Impact Description formulated in the beginning of the technical assistance and update/revised once the technical assistance is fully delivered (a template will be provided) (in English)

Deliverable 1.1.iv: A Closure and Data Collection report completed at the end of the technical assistance (a template will be provided) (in English)



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Output 2: Analysis of the status quo of waste management and the circular economy in Côte d'Ivoire

Activity 2.1: (Digital) kick-off meeting with key stakeholders

During a kick-off meeting with key representatives, including NDE, the Ministry of Environment and Sustainable Development, the Directorate of Green Economy and Corporate Social Responsibility, the Institute of Circular Economy of Abidjan, local governments, CTCN, the team of consultants with national and international experts and other stakeholders, the following topics will be covered:

- i) Presentation of the consultant team and project stakeholders
- ii) Exchange of reference documents (national strategy, studies, regulations, laws, progress of the Cocody regreening project, etc.)
- iii) Presentation of the work plan, activities to be carried out within the framework of this technical assistance, expected results.
- iv) Identification of stakeholders

Activity 2.2: Analysis of the solid waste status quo to define a waste sector baseline

An analysis of the status quo of solid waste in Côte d'Ivoire will be conducted to define a waste sector baseline. The waste sector baseline will serve as a reference for the results and focus of the technical assistance.

This analysis will include, among others, the following elements

- Analysis and aggregation of past and ongoing policies, strategies, projects.
- Identification and mapping of key stakeholders. The following classification of stakeholders is suggested: (a) government/public sector, (b) private sector companies, (c) civil society organizations, and (d) academia. A minimum of 3 consultations and interviews per stakeholder group should be conducted, with the aim of capturing different perspectives and waste streams. The level of experience, knowledge, skills, networks, strengths/weaknesses and commitment to the development of a circular economy should be assessed.
- Definition of waste streams. The technical assistance will cover solid waste streams, excluding sanitary, electronic, and industrial waste. The following waste streams have been identified as relevant: (a) organic waste, including waste from households, hotels and markets; and (b) inorganic waste, including plastics, metals, paper and glass.
- Analysis of waste infrastructure. The waste infrastructure, from waste generation and segregation to collection, transport and disposal, should be analysed by waste stream.
- Mapping of informal activities: Informal activities along the waste chain should also be mapped and analysed.
- Data collection. Data should be collected on the sources, quantities and use of waste for each of the waste streams. In cases where representative secondary data is not available, primary data should be collected through questionnaires and random sampling of waste if necessary.



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During this activity, the gender and youth perspective should be integrated in a cross-cutting way, and it should be assessed how this solid waste management diagnostic has specific economic, social and environmental implications for women, youth and other vulnerable groups.

Activity 2.3: Identification of circular economy activities

In addition to the waste sector baseline, an analysis of past, ongoing and planned circular economy activities will be conducted. This should map, among others, activities related to (a) regulations, (b) strategies, (c) projects (infrastructure, technology, etc.), (d) informal activities. Information can be collected throughout the interviews in Activity 2.2.

Deliverable 2.1: Meeting report

Deliverable 2.2: Report on the status quo of the waste sector

Deliverable 2.3: Report on circular economy activities

Output 3: Prioritisation of a waste stream with the highest circular economy potential based on a multi-criteria analysis

Activity 3.1: Analysis of perceived benefits

The perceived benefits of the circular economy in the waste sector will be analysed on the basis of the information collected under output 2. In this context, a differentiation between "waste" according to the legal definition in Côte d'Ivoire and products or by-products that still have value or are useful should be made. The identified valuable products and by-products need to be summarised and evaluated in terms of their economic, social and environmental benefits. This will also include the circular economy value recognised by stakeholders.

Activity 3.2: Analysis of strengths and weaknesses

Strengths and weaknesses in the context of current waste management and the state of development of the circular economy will be summarised by waste stream. These may relate to

- Industrial and technological capacity and infrastructure
- Private sector activities
- Policies and regulations
- Governance and leadership
- Level of integration of renewable energy
- Alignment with public and private sector programmes
- Inclusion of the informal sector

Activity 3.3: Analysis of Opportunities

Opportunities for the adoption of circular economy processes will be explored, covering the following areas:



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- Industrial and technological innovation, capacity and infrastructure
- Policy and regulation
- Governance and leadership.

These opportunities can create benefits such as:

- Environmental (in terms of reduced material use, waste generation and/or GHG emissions, impact on NDCs, etc.)
- Economic (in terms of market creation, competitiveness, value creation, inclusion of the informal sector, engagement of the private sector, strengthening of innovation and entrepreneurship, etc.)
- Social (in terms of job creation, youth employment, gender equality, etc.)
- Institutional (in terms of improved capacity, institutions, human capital, knowledge, etc.)

Activity 3.4: Analysis of Barriers

The barriers to the adoption of circular economy processes will be analysed, in particular the following barriers:

- Regulatory
- Market
- Cultural
- Financing and capital
- Industrial and technological

Activity 3.5: Assessment of the relevance of waste streams based on a multi-criteria matrix

A multi-criteria matrix will be developed based on the criteria defined in activities 3.1 to 3.4, on which the circular economy potential of each waste stream will be assessed and compared.

Activity 3.6: Stakeholder meeting to select prioritized waste streams

In a meeting with the NDE, the project proponent and other stakeholders identified under output 2, the results of the multi-criteria matrix should be presented and discussed. Together, a priority waste stream should be selected for further investigation under outputs 4, 5 and 6.

Deliverable 3.1: Report on the perceived benefits of circular economy across the waste streams

Deliverable 3.2: Report on the identified strengths and weaknesses

Deliverable 3.3: Report on the identified opportunities

Deliverable 3.4: Report on the identified barriers

Deliverable 3.5: Report on the multi-criteria matrix and the prioritization of waste streams

Deliverable 3.6: Meeting report

Output 4: Circularity analysis of the selected waste stream



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Activity 4.1: Identification of international best practices in terms of circular economy

Best practices for a circular economy in priority waste streams will be identified at international level. Best practices should cover the entire waste chain, from generation to separation, collection and transport, to reuse, recycling and disposal, and may relate to, among others, (a) technologies and processes, (2) regulations and policies, (3) governance, and (4) communication and engagement. Particular attention should also be paid to best practices in private sector engagement, gender and youth, and inclusion of informal activities.

Activity 4.2: Evaluation of best practices most appropriate for the national context

A shortlist of best practices will be established on the basis of their relevance using the knowledge gained throughout Outputs 2 and 3. The shortlisted best practices will have to be analysed in more detail, taking into account their characteristics:

- Impact
 - Environmental (in terms of reduction of material use, waste generation and/or GHG emissions, impact on NDCs, etc.)
 - Economic (in terms of market creation, competitiveness, value creation, inclusion of the informal sector, engagement of the private sector, strengthening of innovation and entrepreneurship, etc.)
 - Social (in terms of creation of new business opportunities and the development of new business models) o Social (in terms of job creation, youth employment, gender equality, etc.)
 - Institutional (in terms of improved capacity, institutions, human capital, knowledge, etc.)
- Acceptance
- Costs

Activity 4.3: Stakeholder meeting to validate the best practices

In a meeting with the NDE, the project proponent and other stakeholders identified under output 2, the results of the circularity analysis and the identified best practices should be presented and discussed. The final selected best practices should be validated and the stakeholders interested in implementing the selected best practices should be identified.

Activity 4.4: Development of best practice guides and toolkits

Guides and toolkits for selected best practices will be developed for presentation and distribution.

Deliverable 4.1: Report on the identified international best practices

Deliverable 4.2: Report on the best practices most appropriate for the national context

Deliverable 4.3: Meeting report

Deliverable 4.4: Best practices guides and toolkits



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Output 5: Integration of circular economy practices in educational curricula

Activity 5.1: Review of current educational curricula related to the prioritized waste stream

Educational curricula ((1) university degrees, (2) vocational training, and (3) secondary education) related to the priority waste stream, as well as any relevant national educational programmes will be identified and reviewed. The level of coverage of content related to the circular economy will be analysed.

This analysis should be done for at least 2 institutions per type of educational curricula mentioned above.

Activity 5.2: Development of recommendations for integrating circular economy practices into educational curricula

Based on the review of educational curricula and their coverage of circular economy topics, recommendations should be developed on the integration of circular economy perspectives into existing educational curricula and the possibility of new curricula. In particular, these recommendations should incorporate aspects of collaboration with the private sector, gender and youth, and innovation and entrepreneurship.

Activity 5.3: Organisation of a workshop on the integration of circular economy practices in educational curricula

A two-day workshop will be held on waste management, circular economy and improving related education programmes. On the first day, the challenges of waste management (Outputs 2 and 3) and best practices for the circular economy (Output 4) will be shared. On the second day, opportunities to integrate circular economy practices into educational programmes will be presented (Activity 5.2) and discussed. Guides and good practice sheets should be distributed.

The workshop should include a range of stakeholders, including the Ministry of National Education, Technical Education and Vocational Training, the Ministry of Environment and Sustainable Development, representatives of the educational institutions analysed (management, professors, teachers and student representatives), and the private sector.

Deliverable 5.1: Report on the reviewed educational curricula

Deliverable 5.2: Report on recommendations to integrate circular economy practices into educational curricula

Deliverable 5.3: Workshop report and material

Output 6: Development of a circular economy roadmap and project closure

Activity 6.1: Development of a circular economy roadmap for the prioritized waste stream



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A roadmap for priority waste streams to improve circular economy practices will be developed based on the ideas and best practices resulting from outcomes 2, 3 and 4. The roadmap should include, among others, the following elements:

- An analysis of the status quo
- Goals and objectives of the transition to a circular economy
- Best practices prioritised and categorised by type (as defined in activity 4.1)
- Impact (economic, environmental, social; as defined in activity 4.2)
- Timeframe with short, medium and long term objectives and activities.
- Budget and funding
- Stakeholders and responsibilities
- Monitoring and evaluation

Activity 6.2: Final meeting

A final meeting will be organised to present the final results of the technical assistance to the NDE, the project proponent and other participating stakeholders.

Deliverable 6.1: Circular Economy Roadmap

Deliverable 6.2: Meeting report

4 GENERAL TIME SCHEDULE

CTCN technical assistance activities under this contract have an expected duration of up to twelve (12) months from the contract signature. The proposed plan for the implementation of activities and deliverables:

Outputs	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
O1. Planning and communication documents												
D1.1.i. Work plan in the form of CTCN response plan template	*											
D1.1.ii. Monitoring and Evaluation Plan	*											
D1.1.iii. CTCN Impact Description	*											*
D1.1.iv. Closure and Data Collection Report												*
O2. Analysis of the status quo of waste management and the circular economy in Côte d'Ivoire												
A2.1 (Digital) kick-off meeting with key stakeholders												
A2.2 Analysis of the solid waste status quo to define a waste sector baseline												
A2.3 Identification of circular economy activities												
D2.1 Meeting report	*											
D2.2 Report on the status quo of the waste sector			*									
D2.3 Report on circular economy activities			*									



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All drafts and final deliverables are subject to approval by the CTCN Climate Technology Manager, before these can be considered as completed. Deliverables will be produced as agreed with the CTCN.

5 PERSONNEL IN THE FIELD (PROFESSIONAL EXPERIENCE AND QUALIFICATIONS)

The Contractor is expected to provide the services of a team that should ideally comprise the following competencies (see Section 4 in the Response Plan for a detailed description):

Expert title	Minimum qualification requirements	Necessary experience
Consultant 1: Team leader and Policy Expert / Economist	<ul style="list-style-type: none"> • M.Sc. / M.A. or higher in politics, economics or related fields 	<ul style="list-style-type: none"> • Minimum of 7 years of experience in the fields of circular economy and waste management in the context of developing countries, with knowledge of climate technologies, technological innovation, policies, and the design and development of sectoral roadmaps in these fields. • Knowledge of international climate policies, the SDGs and NDCs. • Extensive experience in project management • Fluency in English and French is required
Consultant 2 : Waste Engineer	<ul style="list-style-type: none"> • M.Sc. in industrial, mechanical, chemical or waste engineering, PhD is a plus. 	<ul style="list-style-type: none"> • Minimum 7 years experience in waste management, circular economy, technology innovation, life cycle assessment of products and services, and waste sampling in a developing country context. • Fluency in English and French is required
Consultant 3: Educational Expert	<ul style="list-style-type: none"> • M.Sc. / M.A. or higher in social or education sciences or related fields 	<ul style="list-style-type: none"> • Minimum of 7 years experience in the analysis, development and implementation of educational and capacity building programmes in the field of sustainable development, climate technologies, circular economy or similar fields in a developing country context. • Fluency in English and French is required
Consultant 1: Policy Expert at local level	<ul style="list-style-type: none"> • B.Sc. / B.A. or higher in politics, economics or related fields 	<ul style="list-style-type: none"> • Minimum of 5 years' experience in the fields of circular economy and waste management, with knowledge of climate technologies, technology innovation, policy, and the design and development of sectoral roadmaps in these areas. • Knowledge of international climate policies, the SDGs and the NDCs.



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		<ul style="list-style-type: none"> • Knowledge of the national context, policies and stakeholders in Côte d'Ivoire. • Fluency in English and French is required
Consultant 2: Waste Engineer at local level	<ul style="list-style-type: none"> • MSc or higher in industrial, mechanical, chemical or waste engineering 	<ul style="list-style-type: none"> • Minimum of 5 years experience in waste management, circular economy, technology innovation, life cycle assessment of products and services, and waste sampling. • Knowledge of the national context, waste infrastructure and stakeholders in Côte d'Ivoire. • Fluency in English and French is required
Consultant 3: Capacity Building Expert at local level	<ul style="list-style-type: none"> • B.Sc. / B.A. or higher in social sciences, education sciences, communication or related fields 	<ul style="list-style-type: none"> • Minimum of 5 years experience in education and capacity building programmes in the field of sustainable development, climate technologies, circular economy or similar fields • Fluency in English and French is required
Consultant 4: Gender Expert at local level	<ul style="list-style-type: none"> • B.Sc. / B.A. or higher in social sciences, gender sciences, equity policy or related fields 	<ul style="list-style-type: none"> • Minimum of 5 years experience in gender and equity policy, research methodologies and data processing in a developing country context. • Knowledge of the national context in Côte d'Ivoire • Fluency in English and French is required

The CVs of the respective experts assigned to this assignment by the Contractor must be provided.

6 LANGUAGE REQUIREMENTS

The working languages for the purposes of this assessment is French, thus an excellent command of French is required for the proposed personnel. All delivered documents must be of sufficient quality (in French) with an executive summary of reports in English (except for workshop/meeting /presentation) so that no further editing shall be required.