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REQUEST FOR PROPOSALS

**Study on the Management of Paper, Plastic and Bioplastic
Postconsumer Waste and Secondary Markets in Mexico**

for the project

***Transforming Recycling and Solid Waste Management in North
America***

Commission for Environmental Cooperation

2024

I. Overview

The Commission for Environmental Cooperation (CEC) was established in 1994 by the governments of Canada, Mexico and the United States through the North American Agreement on Environmental Cooperation, a parallel environmental agreement to NAFTA. As of 2020, the CEC is recognized and maintained by the Environmental Cooperation Agreement parallel to the new Free Trade Agreement of North America. The CEC brings together a wide range of stakeholders, including the general public, Indigenous People, youth, nongovernmental organizations, academia, and the business sector, to seek solutions to protect North America's shared environment while supporting sustainable development for the benefit of present and future generations. Find out more at: www.cec.org.

The CEC is requesting proposals from prospective consultants related to the preparation of a complementary study regarding the three flows of postconsumer waste and its secondary markets in Mexico: paper, plastics, and bioplastics. This study seeks to improve the understanding of opportunities in the recycling sector, closing information gaps to provide a basis for facilitating decision-making in the country and to contribute to the design of public policies that foster circularity.

Specifically, the consultant would be expected to review and complement a series of missing aspects with respect to the Mexico information contained in studies that have been conducted on these materials in earlier stages of the CEC project, thereby complementing the findings made for Canada and the United States, which will bring about economic and environmental benefits for the region. Publication of these studies is pending, and will be provided to the consultant for his or her work.

These studies present a series of aspects analyzed in depth for the United States and Canada and can in turn be used as a starting point to complete the sections relating to Mexico, which have gaps as described herein. Together, these studies have covered: assessment of the current state of infrastructures for the collection, classification, recovery and recycling of this postconsumer waste; an inventory and evaluation of opportunities and obstacles for the promotion and the improvement of markets and trading in secondary materials in the region; and an examination of emerging technologies, avenues for the design of sustainable materials, as well as best practices and examples that help put the circular economy principles into practice.

The work described in this request for proposals is part of the project: *Transforming Recycling and Solid Waste Management in North America*, under the CEC Operational Plan 2021, whose full description, including specific tasks and the corresponding budget, can be found on the CEC website, at: <http://www.cec.org/transforming-recycling-and-solid-waste-management-in-north-america/>. The general purpose of this project is to achieve a better understanding of opportunities in the recycling sector and secondary material markets in the region, provide a general outlook and description of the relevant legal frameworks and policies, identify emerging technologies and novel materials, as well as shore up collaboration and the exchange of knowledge among the different interested sectors through networking activities. Based on the results of studies already prepared and as complemented by this study focusing on Mexico, this initiative will drive pilot projects enabling an evaluation of the viability of innovative technologies or practices in Canada and the United States, and eventually Mexico.

II. Terms of Reference

A. Overview and scope

The project *Transforming Recycling and Solid Waste Management in North America* is divided into two phases:

- Phase I (2022–2023): The development of three studies (one for each material flow) enabling a clearer understanding of opportunities in the recycling sector and secondary material markets in North America, providing a general outlook and description of the relevant legal frameworks and policies, identify emerging technologies and novel materials, as well as fostering collaboration and knowledge exchange among the different interested sectors through networking activities.
- Phase II (2024–2025): Based on the results of these studies, the definition of pilot projects enabling an evaluation of the viability of innovative technologies or practices, as well as their potential adoption at a subcontinental scale.

Due to a series of methodological deficiencies in the evaluation and compilation of information in the Mexico sections of the Phase I studies, it is now necessary to conduct new, complementary consulting work to remedy the data gap and offer a clear and complete vision (see Annex 1, 2 and 3 as a reference on the structure and coverage of such studies). This new study covering the three postconsumer waste flows and secondary markets for Mexico will provide Mexican government institutions with the necessary information to support the formulation of public policies.

Throughout the performance of the activities to which this request for proposals refers, the consultant will work in close collaboration with the Mexican coordinating agencies and the CEC Secretariat through a Joint Participation Plan. When ready, the Mexican coordinating agencies will provide the information the consultant may require to perform his or her work, and will be fully involved in the review and approval of deliverables in order to ensure that such work is aligned with the agencies' expectations.

B. Description of services

The consultant shall coordinate with the CEC's designated contacts to accomplish the following:

- Develop a detailed and transparent methodology for this complementary study, which must be approved by both the Mexican coordinating agencies and the CEC. This methodology must include well-defined criteria for the selection and integration of official Mexican information and data from industrial sectors and other relevant agents in the handling of these materials.
- Based on information gaps in existing studies, identify and select key actors in the formal and informal sectors, in order to remedy them. Information must be gathered from these actors, through meticulous fieldwork using a methodology and tools specifically designed for such purpose. This methodology must be generally specified in the consultant's proposal and be approved by the Mexican agencies and the CEC. The aim is to ensure the collection of relevant data.
- Conduct fieldwork through the methodology and instruments approved by the Mexican coordinating agencies and the CEC.
- Integrate the information from the deskwork with that generated in the fieldwork. The consultant must ensure that this information reduces or eliminates information gaps, taking

as a reference the findings and analyses developed in prior studies on the United States and Canada, as well as the incomplete sections corresponding to Mexico. This perspective will ensure that the analysis fully covers Mexico's particularities, such as the informal sector (scavengers), offering a fair comparison with their North American counterparts. It is recommended that all information resulting from the incorporation of data from official sources, the industrial and service sector and field work be clearly accompanied by a description of the assumptions used therewith. It is also crucial to include an assessment of the potential weaknesses and uncertainties associated with these data. Detailing these aspects will enable users of the study to better understand the context and limitations of the information presented, thereby facilitating its interpretation and informed application.

- An evaluation of the recycling and material recovery infrastructure, for urban, rural and indigenous zones alike. The consultant must suggest a list of geographical zones distributed across national territory for discussion and approval by the Mexican coordinating agencies and the CEC. This evaluation will be done through a clear and detailed set of previously defined and standardized criteria. This includes specifications on the infrastructure's capacity, efficiency, sustainability and adaptability vis-à-vis future demands. This will facilitate the identification of critical areas of improvement, contributing to the formulation of specific recommendations geared toward actions to strengthen waste management and recycling in the evaluated context.
- Present a series of recommendations. The research process and work on this study seeks not only to reinforce the reliability and depth of the information compiled, but also to ensure that the conclusions and recommendations are relevant and useful for decision-makers in Mexico and for environmental cooperation in North America. In particular, the intent is that the study contemplates areas of opportunity with respect to the conditions, measures, changes or capacities for reduced generation, redesign, reuse, separation, collection and recycling, leading to better valorization schemes and a circular economy in the country, which can link with regional markets.

The consultant will be able to make use of previously conducted studies as a point of reference for his or her work, including the sections corresponding to Canada and the United States, as well as Mexico.

On these bases, the consultant will coordinate with the contact persons designated by the CEC and other suggested contacts, to carry out the following activities in the form of a study that will be the project's final deliverable:

1. Activity 1 – Definition of the study methodology(ies)

The consultant will include in the study an exhaustive presentation of the methodology(ies) that will be used to develop the study, which must be consistent with the general methodology stated in the consultant's initial proposal and approved by the Mexican coordinating agencies and the CEC. The presentation will cover the three postconsumer waste flows: paper, plastic and bioplastics waste, as described in the original study's terms of reference, including specific criteria for the selection and integration of Mexican official data and data from other relevant sectors, considering the particular aspects of each material. Based on the identification of key actors in the corresponding section (see Activity 2) and the data analysis (Activity 3), this section of the study must be updated to include a detailed plan for the collection of information through field work, specifying the methodology and the tools to be used.

2. Activity 2 – Key actor mapping

The consultant will propose a list of key actors identified in the formal and informal

sectors, based on the information gaps detected in previous studies, in order to obtain the necessary information through interviews, surveys and any other type of methodology agreed upon with the Mexican coordinating agencies and the CEC. It will be necessary to strengthen a work approach largely involving local agencies, which is required to strengthen the recycling and management of solid waste. This list will be discussed and validated by the Mexican coordinating agencies and the CEC.

3. Activity 3 – Integration and update of data analysis

The consultant will include in the study the results of the analysis of data gathered during deskwork, identifying information gaps and taking as a reference existing information from the United States and Canada. This content may use the evidence obtained in prior studies. In addition, the consultant will update the contents from the desk work stage with the results of the field work, highlighting how the identified information gaps are addressed and reduced. This section of the study should offer a comprehensive view of the particularities of Mexico in comparison with United States and Canada.

4. Activity 4 – Evaluation of the infrastructure

The consultant will detail the evaluation of the postconsumer materials recycling and recovery infrastructure in the study, contemplating the peculiarities of the previously designated urban, rural and indigenous zones. This section and subsections must include evaluation criteria standardized through quantitative and qualitative analysis. This evaluation will lead to the identification of areas for improvement and specific recommendations to strengthen the waste management and recycling in Mexico, to be presented in the “Findings and Recommendations” section of the study.

5. Activity 5 – Assumptions and limitations

The consultant will include the necessary content in the study along with all information generated, describing the assumptions used when managing data and evaluating the associated weaknesses and uncertainties. This will facilitate the interpretation and informed application of the study’s findings and recommendations.

6. Activity 6 – Finalization of the study with documentation of the conclusions of the studies and description of next steps

The consultant will conclude the study identifying and evaluating the following points:

- 1) Description of the principal findings, identification of areas requiring improvements or specific solutions and proposal of potential solutions in response to the areas identified throughout the paper, plastics and bioplastics value chain; for example, product design, materials recovery facilities, recycling technologies and processes, recycled content, new product applications for recycled plastic, and cross-border recycling centers.

- 2) Definition of the principal recommendations and potential tools or resources facilitating future tasks that various interested parties could perform with a view to ensuring the development of a circular economy in North America. The recommendations proposed in this study will offer a clear roadmap for the project results to effectively act as the basis for the formulation of public policies and eventually a pilot project, to foster circularity and sustainable materials management in Mexico, in the North American context. As mentioned above, these recommendations must consider those elements that enable an improvement of valorization schemes and the circular economy in the country,

contemplating the stages of the materials and waste cycle, as well as their relevance in a regional context.

All of this information will be structured by type of material (paper waste, plastic and bioplastic waste) in the final study. The structure will correspond to that of the precedent studies, which will be provided to the consultant. The main sections are:

- Executive summary
- Introduction
- Value chain
- Market overview
- Overview of material flows and performance
- Secondary markets
- Regulatory framework
- Best practices (alternative models, policy definition options, and emerging technologies)
- Findings and recommendations
- Bibliography
- Appendices

The Mexican coordinating agencies will provide the consultant with a list of contact persons for each technical area responsible for overseeing specific sections of the study. The purpose is to ensure a fluid, continuous discussion with national governmental experts, and thus the progressive tracking of work progress. (See also section *C. Requirements for preparing and submitting periodic progress reports*).

This study will be published by the CEC in Spanish, English and French, as a complement to Canada and US studies to be published in the coming months. At the consultant's request, and on a confidential basis, the CEC may consider sharing the Mexico information contained in studies that have been conducted on these materials in the first stage of the CEC project, as well as yet-unpublished findings for Canada and the United States.

All work is expected to be completed in a period of 9 (nine) months following the contract starting date.

C. Requirements for preparing and submitting periodic progress reports

Throughout the performance of the activities to which this request for proposals refers, the consultant will work in close collaboration with the Mexican coordinating agencies and the CEC Secretariat through a Joint Participation Plan.

The consultant will define this detailed Plan so as to ensure the active and ongoing participation of the Mexican coordinating agencies and the CEC in all stages of development of the study. This plan must include mechanisms for communication with and review by the contact persons (focal points by institution) previously designated by the Mexican coordinating agencies, to ensure that the study adequately reflects Mexico's needs and realities.

The CEC Secretariat will organize conference calls with the consultant and the Mexican coordinating agencies, including related specialists, as required. The purpose of these work sessions will be to present the work product created and evaluate the progress of the activities.

When requested, the consultant must present periodic progress reports to the Mexican coordinating agencies and to the CEC-designated personnel, including a summary of the following items:

- progress recorded in the preceding month;
- current project status;

- expected progress for the following month;
- possible issues, including a description of any delay and the reasons for them, and
- measures that the Mexican coordinating agencies and/or the CEC Secretariat might implement in order to facilitate completion of the study.

D. Quality of deliverables

The consultant will be responsible for providing deliverables in Spanish of **publishable quality** (i.e., copy-edited prior to submission) and, when applicable, for the technical review and editing of the materials. Technical review and style correction required to ensure the quality of the materials will be the responsibility of the consultant.

The consultant will submit to the CEC Secretariat all written material (including complete drafts and final reports) in Microsoft Word, following the format of the CEC's **Report Template** if applicable, or in another format approved by the CEC, and adhering to the precepts of the [Guidelines for CEC Documents and Information Products](#), as supplemented by the CEC's English [Style Guide](#). Supporting documents for tables, figures and maps will be submitted with the report in their original file format (e.g., Excel or ArcGIS). Note that all amounts shall be presented in metric units. The CEC Secretariat will be responsible, when applicable, for translation, printing, publication and distribution of products from this activity.

Upon delivery by the consultant of reports or other materials under the project, the CEC will require a 15-business day period to review the document(s), notify the consultant of any potential issues or errors, and return the document(s) to the consultant for appropriate corrections, at no extra cost. Under the established Joint Participation Plan (section C), contact persons (focal points by institution) previously designated by the Mexican coordinating agencies will be fully involved in the review and approval of deliverables in order to ensure that the work is aligned with agency expectations.

E. Plagiarism

Plagiarism is the act of conveying someone else's original expression or creative ideas as one's own and can be a violation of copyright law. Neither intentional nor unintentional plagiarism is acceptable to the CEC. The consultant must follow good scholarly methodology in preparing reports and deliverables under the contract, including systematic referencing in footnotes or in-sentence references, for any secondary sources, quotations, data, etc., that do not originate with the author. Sources for tables and figures reproduced from other literature must be given in a "Source" attribution immediately below the table or figure. Failure to properly reference the source of such borrowed material constitutes plagiarism and will be considered a breach of contract.

For further information, see [Guidelines for CEC Documents and Information Products](#). In addition, for every written deliverable submitted, the Consultant must use iThenticate software, or an equivalent software approved by the Commission, to validate the written product in question and must forward the plagiarism review results to the CEC at the time of document submission. Contract payments will be retained if products do not fulfill these requirements.

III. Requirements and Proposal Evaluation

A. Mandatory requirements

To be eligible for further consideration, all consultants must fulfill the following basic requirements.

1. In-country ability

The consultant, as well as all their personnel and subconsultants, must reside and be authorized to work legally in Canada, Mexico or the United States of America. If travel is required, the consultant must possess valid documentation to travel and comply with sanitary regulations/restrictions within the three countries.

2. Key personnel

For the purposes of this RFP, the term "consultant" may refer to either a group or company or a single individual.

If a proposal is submitted by a group of individuals or institutions, a "lead" consultant should be designated to take responsibility for ensuring overall coordination, the coherence of activity outputs, and the integration of information and ideas.

3. Qualifications required

Project proposals must clearly demonstrate that the consultant possesses knowledge, skills, and expertise at North America level in the area of work presented in Section II of this document.

The consultant and their personnel must demonstrate ability to work fluently in written and spoken Spanish, which is the language in which the fieldwork will be conducted and this study will be delivered. Having previous work experience involving the use of English will be considered an asset.

The consultant entity must also be qualified, competent and with sufficient expertise to conduct field work with the designated actors in the agreed upon geographical zones, previously discussed and validated by the Mexican coordinating agencies and the CEC.

The consultant will work in his or her own offices.

The consultant entity must also demonstrate competency and five years (not overlapping) of work experience acquired during the last ten years, in the field of solid waste and material management, and especially prove its knowledge in the management of paper, plastics and bioplastics waste in Mexico. It must also have broad knowledge of the management of postconsumer waste, practices to eliminate such waste and related matters, such as circular economy, sustainable consumption and production, efficient use of resources, etc.

The proposed consultant must provide at least three (3) examples of projects it has completed, to support its qualifications as aforesaid.

For each project, the consultant must provide:

- i. Name of the client organization, project title and industry sector
- ii. Client contact name and title
- iii. Description of the project, contribution of the proposed team members, results and methodologies, and lessons learned.

4. Proposal submission

Prospective consultants should refer to the **Terms of Reference (Section II)** of this document for more detailed information on the project and the services to be provided. Prospective consultants are requested not to reiterate the Terms of Reference in their submissions but are invited to suggest modifications to enhance the proposal, if applicable.

Proposals must be organized as indicated below and include the following information:

1. Knowledge and understanding of work

Provide brief background information relevant to this project that will serve to demonstrate the consultant's experience and subject knowledge. The presentation consists of a general work plan that demonstrates that the requirements and deadlines indicated in the service description can be met, and a general schedule respecting the duration set forth in this request for proposals. Bidders must also present and explain the methodology(ies) to carry out this study. This work plan will include the following items:

- The methodology(ies), guidelines or parameters according to which the results will be obtained;
- Available resources (human, financial, technical and organizational support resources that will contribute to achieving the results);
- The desired results, and
- Other aspects that the consultant entity deems relevant.

The purpose of this statement is to demonstrate not only the consultant's general and specific familiarity with the subject area, but also to highlight writing skills.

2. Organization, qualifications and experience of project team

- Identify organization of Project Team, including project manager and country team leads for Canada, Mexico and the United States where relevant;
- Provide a summary of qualifications and experience for each team member (including alternates) and any other relevant information (e.g. language proficiencies).

3. Allocation of time (hours) and costs by task and team member

- For each member of the project team, provide a detailed breakdown of assigned tasks, hours worked, and labor costs;
- Identify any other direct and indirect costs, including travel costs if applicable (include estimate for in person meetings taking place at any of the three countries) and applicable taxes;
- Clearly identify total hours worked under and the total cost (including taxes) of this project.

The consultant must provide the following documents:

Annex 4: Declaration of Acceptance and Impartiality and Independence for Contract

- Provide a completed copy of the CEC form identified in the Annex 4 to this Request for Proposals.

Annex A: Letters of Recommendation and References

- Two letters of recommendation from previous assignments;
- Details and contact information for three or more references.

Annex B: Résumés for Each Team Member

- Résumés for all project team members;

Annex C: Examples of Previous Work

- Provide two samples of previous work.

B. Other information to be provided

Potential consultants are encouraged to submit any additional information that they believe will assist the CEC Secretariat in the evaluation of their proposal.

C. Type of contract to be used for these services

The CEC Secretariat intends to use its standard milestone contract for these services. A sample is available upon request.

All work included in the contract must be completed within a term of 9 (nine) months following the execution date.

D. Selection procedure

The consultant deemed best qualified will be selected on the basis of a competitive process, in accordance with sections 2.5-2.7 of the [CEC Consultant Services Procurement Manual](#).

Proposals that the CEC Secretariat determines to be complete will be evaluated by the CEC Secretariat according to the following criteria:

Evaluation Criteria	Maximum Point Rating
Understanding of project requirements and relevance of the work plan	30
Suitability of the proposed methodology(ies) and approach	30
Consultant's experience and qualifications and competency of key personnel	20
Consultant's ability to show analytical capabilities and effective writing	10
Adequacy of budget	10
<i>Total</i>	100

E. Estimated Level of Resources Required

The maximum budget for this activity is C\$100,000 (one hundred thousand Canadian Dollars), including professional fees and expenses.

If the proposal was presented by a consultant established in Mexico, the applicable value-added tax will be 0%, in accordance with Article 29, section IV, paragraph a) of Mexico's VAT Act, as these are technical services that were engaged from abroad.

For universities and nongovernmental organizations, note that the CEC accepts that overhead be charged for administration and other indirect costs up to 15% of the total value of the contract.

If a currency other than Canadian dollars is used in the proposal, the consultant should indicate the total cost in Canadian dollars as well as the currency of choice, for comparison purposes, detailing the exchange rate used.

F. Deadlines for Proposal Submission and Decision

The proposal, including all relevant attachments, must be received by the CEC Secretariat by **12:00 EDT on July 29**. Proposals submitted after this deadline will not be considered.

Proposals must be submitted via e-mail to:

Antonia Andúgar Miñarro

Project Lead

Commission for Environmental Cooperation

aandugar@cec.org

Proposal format must be in Adobe PDF format. Once the proposal has been submitted electronically, the CEC will confirm receipt within three (3) business days.

The CEC Secretariat intends to select the consultant and notify the applicants within a reasonable period following the proposal submission deadline.

Annex 1

Description of services for precedent studies (reference for this study)

Paper waste management study

The purpose of this study was:

- To gather information on each country's recycling situation, to be used as the basis for guiding policy alternatives to drive the transformation of paper waste management in North America, contemplating possible ways to broaden opportunities regarding this industry.
- Contribute new perspectives beyond the current studies on recycling and recovery infrastructure in Canada and the United States, in order to include a timely exploratory analysis of the paper waste recycling infrastructure in Mexico focusing on estimated recycling rates and the contribution of the informal sector, through field work.
- Evaluate the opportunities and obstacles in secondary markets in the region and consider emerging paper recovery technologies, recycling infrastructure and product design, as well as the efficiency of resources in production processes (e.g., the classification and selection of materials, recycled content requirements, etc.).
- Include recommendations (for example, potential tools and resources to facilitate the undertaking of key actions by groups of interest) that translate to greater progress toward the adoption of a circular economy at a subcontinental scale with respect to paper waste.
- Consider the different needs of the recycling systems and infrastructure in urban, rural and indigenous communities, using information already available to the extent possible.

For this purpose, the following tasks were established:

- 1) **Activity 1: Performance of a study on recycling and recovery markets, innovative product design, sustainable packaging models already in the market and emerging materials of relevance for paper waste recovery and recycling technologies**

The consultant will research, gather comments from relevant groups of interest and analyze the information in order to:

- 1.1) *Show an outlook of paper waste collection and classification capacity in North America (municipal or postconsumer):*
 - *Characterization of the type and availability of collection systems (e.g., curbside, collection centers, etc.), including a proportional comparison of single and dual collection systems and central management, in comparison with extended producer responsibility.*
 - *Preparation of an inventory of material recovery facilities in terms of operations, capacity and principal type of paper bales produced and sold to recyclers or product manufacturers.*

- *An overview (and estimation) of the contribution of the informal sector¹ in Mexico in the collection, classification and separation of paper waste.*

1.2) *Show an outlook of the paper waste (postconsumer) recycling capacity in North America, including the informal sector in Mexico:*

- *Identify establishments (i.e., pulp or paper factories, paper product manufacturers or secondary pulp-only producers), types of paper waste bales (including laminated cardboard boxes, UHT containers) and type of pulp (brown, gray or bleached) or other items produced (e.g., recycled paper).*

1.3) *Analyze the region's secondary market for purposes of the cross-border trade of postconsumer paper waste. The analysis will focus on these waste flows (specifically for recycling) among the three countries, and identify capacity gaps and weaknesses in the secondary market in North America (e.g., types of paper with little demand, little economic value or oversupply in the region and in each respective country).*

1.4) *Identify optimal practices throughout the paper value chain (e.g., product design, material recovery facilities and recycling technologies and processes, recycled content, new applications for recycled pulp products, cross-border recycling centers), which strengthen circularity in the sector and improve the North American secondary paper market.*

2) Activity 2: Finalization of the report, documenting the studies' conclusions and defining next steps

The consultant will conclude the study with a summary that:

- 2.1) *Describes the principal conclusions of the report and identifies areas requiring improvements or specific solutions; for example, to strengthen the circularity of the postconsumer paper waste second and the secondary paper market in North America;*
- 2.2) *Proposes potential solutions in response to the areas of improvement or gaps identified throughout the paper products value chain.*

¹ On page 104 of its 2018 report entitled [What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050](#), the World Bank acknowledges the importance and complexity of the informal sector in managing solid waste: "Disposal costs vary greatly. In some countries, waste disposal is informal and therefore not officially accounted for."

Annex 2

Description of services for precedent studies (reference for this study)

Plastic waste management study

The purpose of this study was:

- To compile basic knowledge of the current recycling conditions in each country, enabling the foundation of policy options to foster the transformation of plastic waste management in North America, as well as alternatives to grow opportunities in this industry.
- Taking account of studies on the recycling and recovery infrastructure in the United States and Canada, to carry out a well-defined study on the plastics recycling infrastructure in Mexico, focusing on sustainable materials, with field work to estimate recycling rates and the contribution of the informal sector.
- To evaluate opportunities and obstacles in the region's secondary markets and consider emerging technologies with respect to the recovery of plastics, recycling infrastructures and product design, as well as the efficiency of the use of resources in production processes (e.g., with respect to classification, selection of materials, recycled content requirements, etc.).
- To include recommendations, potential tools and resources to facilitate the undertaking of key actions of groups of interest, which translate to greater progress toward the adoption of a circular economy at a subcontinental scale.
- Using available information whenever possible, to examine the different needs of recycling infrastructures and systems in urban, rurales and indigenous communities.

For this purpose, the following tasks were established:

1) Activity 1: *Performance of a study on plastic waste in recycling and recovery markets, innovative product design, sustainably designed containers currently used in the market, and emerging technologies for the recovery or recycling of materials.*

The consultant will be responsible for investigating and compiling contributions from the relevant interested parties, including the informal sector in Mexico², and will analyze the information to:

- 1.1) Determine and evaluate the current state of plastic recycling infrastructures and materials recovery facilities in Canada, the United States and Mexico, primarily in collection, classification and processing.
- 1.2) Gather data on plastic recycling rates in the three countries, including total rates and specific rates by resin identification code.
- 1.3) According to the current conditions and plastic recycling rates in North America, identify the principal areas for improvement (in particular the most affordable) in handling and recycling plastic waste, to broaden and

² On page 104 of its 2018 report entitled [What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050](#), the World Bank acknowledges the importance and complexity of the informal sector in managing solid waste: "Disposal costs vary greatly. In some countries, waste disposal is informal and therefore not officially accounted for."

expand to the greatest extent possible the efficiency of the current recycling system for these materials.

- 1.4) Detect the specific plastics whose recycling is problematic (by reason of lack of facilities, inadequate technologies or elevated costs, among other factors), or which are recyclable but do not have a viable secondary market, and an evaluation of the recyclability of subcategories such as flexible plastics and films, plastic bags and expanded polystyrene foam. Define and analyze opportunities to better manage these hard-to-recycle materials, such as by renovations in the plastics recycling system, promoting local practices or innovative and emerging technologies.
- 1.5) Prepare an analysis of the subcontinent's secondary market with respect to postconsumer plastic waste and the cross-border trade of such waste, and industrial waste. This analysis should focus on the flow of plastic waste intended for recycling among the three countries, identifying capacity limitations and weaknesses found in the North American secondary market³ with respect to plastic waste and materials (e.g., in demand, price volatility, gaps in data and cross-border recycling centers).
- 1.6) Identify and succinctly describe concepts such as extended producer responsibility, reduction at the source and other policies (as appropriate), in addition to the relevant normative frameworks for managing plastic waste and developing a secondary market.

2) Activity 2: Finalization of the report with documentation of the studies' conclusions and description of next steps

The consultant will conclude the study by identifying and evaluating the following points:

- 2.1) Description of the report's main findings, identification of areas requiring improvements or specific solutions and proposal of potential solutions in response to the areas identified across the plastics value chain, such as product design, materials recovery facilities, recycling technologies and processes, recycled content, new product applications for recycled plastic, and cross-border recycling centers.
- 2.2) Recommendations and potential tools or resources facilitating future tasks that various interested parties could perform with a view to ensuring the development of a circular economy in North America.

3 OECD (s.f.), "Recycling Markets", Organisation for Economic Co-operation and Development: <www.oecd.org/env/waste/recyclingmarkets.htm>.

Annex 3

Description of services for precedent studies (reference for this study)

Bioplastics waste management study

The purpose of this study was:

- To gather knowledge to be used as the basis for guiding policy alternatives driving the transformation of materials management in North America toward a circular economy, contemplating possible ways to broaden recycling opportunities and the reuse and composting of bioplastics.
- With regard to existing literature on bioplastics, provide new perspectives that transcend current studies on recycling, composting and recovery infrastructure in the region, to evaluate the specific challenges associated with managing bioplastics.
- Evaluate the opportunities and obstacles that arise in secondary markets in the region and consider emerging technologies for the recovery of materials, composting processes, recycling infrastructure and product design (e.g., those that may apply to material classification and selection activities).
- Include recommendations and potential tools and resources to facilitate the undertaking of key actions by groups of interest, which translate to greater progress toward the adoption of a circular economy at a regional scale.

For this purpose, the following tasks were established:

- 1) ***Activity 1: Conduct a study of recycling, composting and recovery operations for nonconventional, biodegradable and compostable plastics manufactured using fossil and biological raw materials, as well as the recovery and recycling technologies for emerging materials applicable to nonconventional, biodegradable and compostable plastic waste.***

The consultant will conduct research, compile comments from relevant groups of interest and analyze the information in order to determine the current quantity of bioplastics waste generated, available recycling and composting systems, problems and success cases specifically relating to bioplastics, as well as future trends observed in the production of this type of materials and waste markets. It will be necessary to conduct data collection field work in Mexico and, based on the results of the research, perhaps in Canada and the United States as well:

- 1.1) Compile data and information on the generation and handling of bioplastics waste, with regard to:
 - a) quantities and types of bioplastics introduced into waste flows (e.g., according to the treatment required at the end of their useful life);
 - b) collection and classification capacity (e.g., compostable versus non-compostable bioplastics);
 - c) recycling and composting infrastructures, including the technology used for such processes (e.g., aerobic and anaerobic composting);

- d) identification of product design options when using bioplastics, with a view to determining whether such alternatives improved or undermined the product's capacity for recycling or composting, and
 - e) quantity and value of the bioplastics waste trade in North America, or exports from the region.
 - 1.2) Evaluate current bioplastic recycling and composting practices in the United States and Canada, and identify the challenges and positive outcomes with respect to bioplastics waste (e.g., classification issues, inadequacies in composting infrastructure and product design, closed-circuit recycling or composting and labeling systems, among others). This examination must also:
 - a) Evaluate optimal practices currently applied in the United States and Canada and which could help Mexico foster its recycling and composting industry with respect to bioplastics, with special attention on the collection, classification (and the problems posed thereby), as well as paths to take.
 - 1.3) Briefly analyze market trends and growth rates in the production of bioplastics, as well as demand and the main uses of the different forms of these materials.
- 2) **Activity 2: Finalization of the report with documentation of conclusions drawn from the studies, evaluation of potential actions to be taken and description of next steps.**

The consultant will conclude the study by identifying and evaluating the following points:

- 2.1) Promising strategies and circular technologies throughout the bioplastics value chains that could maximize value recovery and ensure net positive environmental results, derived from the same use of these materials. This could include:
 - a) emerging technologies de recycling or composting and avenues for the design of sustainable materials applicable to bioplastics;
 - b) innovative recycling and composting technologies;
 - c) review of areas in which additional results could be obtained;
 - d) favorable and effective regulations or rules, and
 - e) best practices throughout the bioplastics value chain, with potential to be reproduced at a large scale.
- 2.2) Recommendations and potential tools and resources facilitating future tasks that various interested parties could perform directly, with a view to fostering the development of a circular economy in North America.

Annex 4

CONSULTANT'S DECLARATION OF ACCEPTANCE AND IMPARTIALITY AND INDEPENDENCE FOR CONTRACT (XX)

I, the undersigned,

Last Name: _____ First Name: _____

ACCEPTANCE

___ I hereby declare that I **accept** to serve as Consultant in the subject contract.

NON-ACCEPTANCE

___ I hereby declare that I **decline** to serve as Consultant in the subject contract. (If you wish to state the reasons for checking this box, please use a separate sheet of paper, attaching that to this declaration.)

IMPARTIALITY AND INDEPENDENCE

(If you accept to serve as a consultant, please check one of the two following boxes. The choice of which box to check will be determined after you have taken into account, inter alia, whether there exists any past or present relationship, direct or indirect, with any of the Parties to the North American Agreement on Environmental Cooperation ("NAAEC") or their Commission for Environmental Cooperation ("CEC") representatives, Secretariat staff, and/or third parties involved in the performance of this contract, whether financial, professional, familial, or of another kind and whether the nature of any such relationship is such that disclosure is called for pursuant to the criteria set out below. Any doubt should be resolved in favor of disclosure.)

___ I am **impartial and independent** with respect to the NAAEC Parties and their CEC representatives, CEC Secretariat staff, and third parties involved in the performance of this contract, and intend to remain so; to the best of my knowledge, there are no facts or circumstances, past or present that need be disclosed because they are likely to give rise to justifiable doubts as to my impartiality or independence, and that may constitute a conflict of interest.

OR

___ I am **impartial and independent** with respect to the NAAEC Parties and their CEC representatives, Secretariat staff, and/or third parties involved in the performance of this contract, and intend to remain so; **however**, I wish to call your attention to the following facts or circumstances which I hereafter disclose because they might be of such a nature as to give rise to justifiable doubts as to my impartiality or independence, and that may constitute a conflict of interest. Where facts or circumstances exist that might give rise to the latter such doubts, I may set out measures I intend to take to mitigate or eliminate any doubts regarding my impartiality and independence, and/or a possible conflict of interest. (Use separate sheet and attach.)

Date: _____

Signature: _____