

REQUEST FOR PROPOSALS

Milestone Study on Plastic Waste Management in North America

for the project

Transforming Recycling and Solid Waste Management in North America



Commission for Environmental Cooperation

2022

I. Overview

The Commission for Environmental Cooperation (CEC) is requesting proposals from prospective consultants to carry out a milestone study on plastic waste in North America. Specifically, the consultant would be expected to: evaluate the current state of plastic waste collection, sorting, recovery and recycling infrastructure capacity across the region; summarize and evaluate opportunities and barriers in enhancing/improving secondary plastic material markets and trade across North America; and evaluate emerging technologies and sustainable materials design pathways and best practices and examples implementing circular economy principles, taking into account traditional ecological knowledge of Indigenous communities to the extent feasible.

The Commission for Environmental Cooperation (CEC) was established in 1994 by the governments of Canada, the United Mexican States (Mexico), and the United States of America (United States) through the North American Agreement on Environmental Cooperation, a side agreement concluded in connection with the North American Free Trade Agreement (NAFTA). As of 2020, the CEC operates in accordance with the Environmental Cooperation Agreement, which entered into force at the same time as the new trade agreement known as CUSMA, T-MEC and USMCA in each of these three countries, respectively. 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's Council, its governing body, approved the project "Transforming recycling and solid waste management in North America" that focuses on various waste streams – specifically paper, plastics and bioplastics waste. The project is part of the 2021 CEC Operational Plan and its purpose is to accelerate the uptake of circular economy and the sustainable materials management practices that are needed to transform North American recycling and solid waste management. This transformation should bring economic and environmental benefits for the region.

The full project is expected to address information gaps, inform policy-making across Canada, Mexico and the United States, identify potential areas for policy coherence, and advance circularity and sustainable material management practices for the specific materials. The project will support CEC member states in their efforts to promote circular economy and sustainable materials management approaches to encourage eco-design and thus increase product and material reuse, recovery and recycling rates in North America. For a complete description of the project, including tasks and related budget, please visit the CEC website at: <http://www.cec.org/transforming-recycling-and-solid-waste-management-in-north-america/>

The overall goal of the project will be accomplished by developing a series of milestone studies to better understand the opportunities for the recycling sector and secondary material markets in North America, an overview/description of the legal and policy relevant frameworks, identify emerging materials and technologies, and support stakeholder collaboration and knowledge sharing via networking activities. Building on the results of milestone studies and stakeholder input, the project will include pilot projects to assess the feasibility of innovative technologies or practices for adoption at scale across North America. The milestone study requested through this request for proposal would be part of the broader project and would focus on plastic waste.

II. Terms of Reference

A. Overview and Scope

The World Bank estimates that around 2 billion tonnes of municipal solid waste were generated in 2016, with Canada, Mexico and the United States generating 0.4-1.5 kg more waste per capita per day than the global average.¹ North America has the highest per capita plastic consumption in the world and 21% of total global plastics consumption.²

Reducing waste and closing material loops will help minimize the environmental impacts along the value chain of resources and products, as well as presenting considerable economic opportunities. Circular economy strategies are estimated to unlock \$4.5 trillion of economic growth around the globe (Annex I).³

The transition to a circular economy and increased recovery of material also offers solutions to mitigate climate change. The magnitude of avoided GHG-emissions and the benefits from material circularity are highly dependent on the type of material recovered and the local circumstances for energy offsets. For example, the US EPA estimates that recycling of bottles, other containers, and other products made of polyethylene terephthalate (PET), high-density polyethylene (HDPE), and other mixed plastics could result in 1.12, 0.87, and 1.02 Mt CO₂e reduction per short ton of plastic, respectively,⁴ and a study of the Canadian plastics sector estimates that if 90% of the plastic waste now going to landfills could be diverted to reuse, it would result in a 1.8Mt of CO₂e reduction by 2030.⁵

B. Description of Services

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

The project will run for four years and consist of two differentiated phases of two years each. Milestone studies on paper waste, plastic waste and bioplastics waste will be carried out during the first phase.

The incumbent consultant will take existing literature on the topic of plastic into account and carry out a study focusing on plastic waste (anything included in Annex II to this RFP) during Phase I of the project, aiming at:

- Collating foundational knowledge of the current state of recycling in each country to inform policy options that drive the transformation of plastic waste management in North America, including potential ways to scale-up opportunities in this industry.
- Going beyond the existing studies of US and Canadian recycling and recovery infrastructure, including a targeted scoping study of plastics recycling infrastructure in

¹ Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. (2018.). [What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050](#). Urban Development. Washington, DC: World Bank. © World Bank. License: CC BY 3.0 IGO.

² Heller, M., Mazor, M., and Keoleian, G. (2020). [Plastics in the US: toward a material flow characterization of production, markets and end of life](#). Environmental Research Letters, 15(9), 94034ff.

³ Accenture (2018), retrieved Retrieved from <https://newsroom.accenture.com/news/the-circular-economy-could-unlock-4-5-trillion-of-economic-growth-finds-new-book-by-accenture.htm>

⁴ In the US EPA report, Waste Reduction Model (WARM), Documentation for Greenhouse Gas Emission and Energy Factors Used, from which these figures were retrieved, the imperial ton is used as measurement unit: a short ton is the equivalent of 907.18474 kilograms. US EPA (2016), Waste Reduction Model, Documentation for Greenhouse Gas Emission and Energy Factors Used (2016).

⁵ Government of Canada (2019). [Economic Study of the Canadian Plastic Industry, Markets and Waste](#). <https://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf>

Mexico that focuses on sustainable materials, and conducting fieldwork to arrive at an estimate of recycling rates and the contribution of the informal sector (Annex III).

- Evaluating opportunities and barriers in secondary markets throughout North America and consider emerging technology for plastics recovery and recycling infrastructure and product design, as well as resource efficiency in the production processes (e.g., sorting-related, material selection, recycled content requirements, etc.).
- Including recommendations (e.g. tools and resources for key actions by stakeholders) that could further develop the circular economy for plastic waste in North America.
- Using readily available information, to the extent possible consider the different recycling infrastructure and system needs across urban, rural, and Indigenous communities.

This project activity will require the consultant to coordinate with the CEC's designated contacts, and with other suggested contacts, to accomplish the following tasks:

1) Activity 1: Conduct a study relevant to plastic waste on recycling and recovery markets, innovative product design, sustainable packaging designs currently on the market, and recovery and recycling technologies for emerging materials

The consultant will research, collect input from relevant stakeholders, including the informal sector in Mexico⁶ (Annex IV) and analyze the information in order to:

- 1.1) Identify and evaluate the current state of plastic recycling infrastructures and Materials Recovery Facilities (MRFs) in the three countries, with a special focus on collection, sortation and processing.
- 1.2) Gather data on plastic recycling rates in the three countries, including total plastic recycling rates and specific rates by resin code (see Annex II).
- 1.3) Based on the current state of plastic recycling, as well as the plastic recycling rates across North America, identify basic areas of improvement (especially "low hanging fruits") in plastic waste management and recycling that consist of scaling up and maximizing the efficiency of the current plastic recycling system.
- 1.4) Identify specific plastic materials that are difficult to recycle (due to the lack of facilities, technologies, costs, etc.) or are recyclable but lack a viable secondary market, and assess the recyclability of subcategories: e.g., flexible plastics and films, plastic bags, and expanded polystyrene (EPS) foam. Identify and evaluate opportunities to better manage these difficult-to-recycle materials, such as upgrades in the current plastic recycling system, scaling up local practices, or innovative and emerging technology.
- 1.5) Analyze the North American secondary market for post-consumer plastic waste, and cross border trade in waste and scrap. This analysis should focus on the flow of plastic waste for recycling between the three countries, as well as identify capacity gaps and weaknesses in the integrated North American secondary market⁷ for plastic waste and materials (e.g., demand for secondary plastics, volatility of price, lack of information, cross-border recycling hubs).

⁶ The World Bank acknowledges the importance and complexity of the informal sector in solid waste management in its report [What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050](#) from 2018. Page 104: "(...) Disposal costs vary greatly. In some countries, waste disposal is informal and therefore not officially accounted for."

⁷ OECD (n.d.). [Recycling Markets](https://www.oecd.org/env/waste/recyclingmarkets.htm).<<https://www.oecd.org/env/waste/recyclingmarkets.htm>>

- 1.6) Identify and briefly describe the concept of Extended Producer Responsibility (EPR), source reduction, and other policies (where applicable), as well as regulatory frameworks relevant to plastic waste management and secondary market development.

2) Activity 2: *Finalize report documenting findings of studies and outlining next steps*

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

- 2.1) Description of the main findings of the report, identification of areas requiring specific improvements or solutions, and the proposal of possible solutions in response to those identified areas along the plastic product value chain: e.g., product design, MRF and recycling technologies and processes, recycled content, new product applications for recycled plastic, and cross-border recycling hubs.
- 2.2) Recommendations and possible tools and resources for key actions by stakeholders that would strengthen circularity in the sector in North America.

This milestone study will provide key input for defining and developing appropriate pilot projects in Phase II of the project.

Separate from this milestone study but part of the larger overall project, scheduling and implementing a work program on stakeholder engagement is intended. This will ensure the organization and hosting of networking events for stakeholders to permit sharing and seeking feedback on the results of the milestone studies, as well as feedback and recommendations in the scoping pilot projects to be carried out over the second phase. This milestone study is primarily intended for governments, relevant institutions, charities, nongovernmental organizations, industry and business, as well as outreach to the wider public. Therefore, writing style must be very clear, accessible, and consistent with this purpose.

Project activities will take place according to the timetable below. This schedule is approximate, and subject to change.

Activity 1	Activity Description	Deliverable(s)	Date(s)
Project kick-off call with CEC	Review report outline, discuss sources of data and information, develop draft work plan	Revised outline and final work plan	Start of contract
Research, compilation and drafting of report text for Activity 1	Conduct research; prepare draft text, text boxes, graphics and illustrations Identify information gaps and potential information sources with the CEC	Draft text for Activity 1	Two months after the start of contract
Revisions of draft text for Activity 1 (following CEC review)	Discuss comments with the CEC Revise text (tracked changes), checking as needed with the CEC	Revised draft text for Activity 1	Nine months after the start of the contract

Activity 2	Activity Description	Deliverable(s)	Date(s)
Research, compilation and drafting of report text for Activity 2	Conduct research; prepare draft text, text boxes, graphics and illustrations Identify information gaps and potential information sources with the CEC	Draft text for Activity 2	Twelve months after the start of contract
Revisions of draft text for Activity 2 (following CEC review)	Discuss comments with the CEC Revise text (using tracked changes), checking as needed with the CEC	Revised draft text for Activity 2	Fourteen months after the start of contract
Revisions to draft report (following technical and external stakeholder review)	Co-facilitate the discussion with expert stakeholder group meeting/s hosted by the CEC Co-facilitate networking events with key stakeholders and general public hosted by the CEC Discuss comments with CEC Revise text (tracked changes), checking as needed with the CEC	Meetings with stakeholders Final draft report	During the first sixteen months of the project
Final report review and editing (in collaboration with CEC)	Final review for errors, inconsistencies and lack of clarity in text or graphics	Final report ready for editing, layout and translation	Twenty months after the start of contract

C. Periodic Reporting Requirements

Throughout the project, the consultant will work in close collaboration with the CEC, the project's Steering Committee, and experts to gather information to support delivery of the work. The consultant may consult directly with government officials and other experts linked to the Steering Committee, as needed and in coordination with the CEC designated staff. However, the consultant shall report only to, and receive direction only from, the CEC designated staff.

The CEC Secretariat will forward draft deliverables to the project's Steering Committee and other experts, for their review and comment. The CEC Secretariat will arrange teleconferences with the consultant, the CEC designated staff, and other experts on an as-needed basis. The goal of these meetings will be to present the products and assess progress on the project.

The consultant will present periodic status reports to the CEC designated staff, and to the Steering Committee when requested by CEC, that summarize the following:

- progress in previous month;
- current status;
- anticipated progress in upcoming month;
- potential problems, with description of and reasons for any delays; and
- actions that should be taken by the CEC Secretariat to facilitate the project.

A copy of these reports is to be sent to the CEC designated staff by e-mail.

The consultant will work in their own offices.

D. Quality of Deliverables

The consultant is responsible for providing deliverables of **publishable quality** (i.e., copy-edited prior to submission) in English and, when applicable, for the technical editing of the materials. 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](#) and adhering to the precepts of the [Guidelines for CEC Documents and Information Products](#), as supplemented by the CEC's English [Style Guide](#). [Include reference to any other CEC guideline as necessary.] 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 for the translation into Spanish and French of the final version of this milestone study and, if applicable, for printing, publication and distribution of products from this activity.

Upon delivery by the consultant of a final version of the milestone study or other written materials under the project, the CEC reserves the right to 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. In all cases, contract payments will be withheld if products submitted to the CEC fail to fulfill the quality and formatting requirements specified above. In the event that the consultant neglects to make the required corrections or if, following corrections, a deliverable remains unsatisfactory, the document shall be edited or revised by a third party designated by the Secretariat, the cost of which shall be deducted from the consultant's fees at a rate of C\$60 per hour.

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 fulfil 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 his or her personnel and sub-consultants, must be domiciled and able to legally work in at least one of the three North American countries. If travel is required, the consultant must possess valid documentation to travel within these countries and comply with the current health regulations and restrictions in the three countries.

2. Key Personnel

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

If a proposal is submitted by a consortium 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

The consultant and key support personnel must be qualified, competent and experienced in the subject area. The consultant must demonstrate competency and document 5-years (non-overlapping) in the field within the past 10 years of work experience of solid waste and material management and in particular familiarity with the three countries plastic waste management. The consultant will also have in-depth knowledge of post-consumer waste management, plastic waste disposal practices, and related issues, such as circular economy, sustainable consumption and production, efficient use of resources, etc.

Having a branch/subsidiary company or partners/associates, or hiring subconsultants in Mexico is required to minimize travel while ensuring a team bilingual in Spanish and English to carry out fieldwork in this country.

To demonstrate the qualifications mentioned above, the proposed consultant must provide a minimum of three (3) examples of projects completed.

For each project, the consultant must provide:

- i. Client organization name, project title and industry sector;
- ii. Client contact name and title;
- iii. Description of the project, involvement of proposed team members, deliverables expected and methodologies; and
- iv. Lessons learned.

The consultant must have excellent writing skills and be fluent in both written and spoken English and Spanish; proficiency in French is desirable.

4. Proposal Submission

It is the intention of the CEC Secretariat to include the **Terms of Reference (Section II)** of this document) in the contract negotiated with the successful applicant. Therefore, prospective consultants should refer to these 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 if applicable, within the imposed timeline and budget.

Proposals must include the following:

- A brief statement of interest and intent. This statement should be based upon and serve to demonstrate the consultant's experience and subject knowledge. The statement should address desired results; guidelines (parameters within which results are to be accomplished); resources (human, financial, technical, or organizational support available to help accomplish the results); and other aspects deemed applicable by the consultant. 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;
- A general Work Plan and Schedule as well as the proposed methodology for carrying out this project. The bidder must submit a Work Plan that demonstrates they can meet the requirements and timelines outlined in the Description of Services.

The Work Plan must include:

- An overview and understanding of project requirements.
- The bidder's approach and a detailed description of the methodology, providing clear and logical explanation of data gathering and analysis.
- Breakdown of each project tasks and scheduling: a detailed description of timing and task allocation for each team member.
- Suggested modifications to the Terms of Reference, if applicable, and the reasons for such modifications;
- Resumes of the key personnel involved in the project;

For all members of the team, the prospective consultant must submit a detailed *curriculum vitae* (CV), including their individual educational backgrounds and professional designations, if applicable. It must also include work experiences for the major tasks as described in the Description of Services.

- Detailed cost breakdown, including number of person/days of key and other personnel, direct and indirect costs, and travel costs.

The proposal must identify:

- The team members/resources that will be assigned to the project and their role and contribution to the project;
- Number of years of each resource experience and expertise directly relevant to the work, industry and sector;
- Number of years of experience directly related to the work as outlined in the Description of Services.

The Project Team should be composed of a balanced mix of individuals/resources with the knowledge, skills and experience to accomplish specific project-related tasks outlined in the Description of Services.

In case the bidder is a sole consultant, demonstration of experience consulting and undertaking large projects independently is required.

- References must be presented upon request.

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. However, the additional information should not exceed six (6) pages, excluding applicant resumes, samples of previous work or corporate brochures.

C. Type of Contract to be Used for These Services

The CEC Secretariat intends to use its milestone-based contract for these services. A sample is available upon request. If the contract is negotiated with a consortium, the CEC will offer the consultants the option to have separate contracts between each consultant and the CEC.

All work within the contract must be completed by 15 December 2023.

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 according to the procedure described below. Prospective consultants who submit proposals determined by the CEC Secretariat to be incomplete will be so notified in writing.

Each complete proposal that is submitted will be evaluated by the CEC Secretariat according to the following criteria, with a point rating assigned for each:

Evaluation Criteria	Maximum Point Rating
Understanding of milestone study requirements, adequacy of work plan	20
Consultant's ability to analytically approach the subject, the suitability of the proposed approach, and demonstrated writing ability	30
Consultant's experience and qualifications and competency of key personnel	20
Consultant's ability to successfully manage and deliver reports and/or projects similar in scope to this milestone study or larger, on time and on budget	20
Adequacy of budget	10
	<i>Total</i> 100

A minimum score of 80 will be required for the prospective consultant's proposal to be eligible for further consideration.

Proposals in response to this request will be evaluated by the CEC designated staff and technical reviewers, who will form an Evaluation Committee. Each member of the Evaluation Committee will receive a copy of the proposals and will be asked to rate each proposal using the evaluation criteria and its maximum point ratings given above.

The CEC designated staff will arrange for a conference call/meeting among the members of the Evaluation Committee to discuss the ratings, arrive at final scores, and, subsequently, a ranking of all proposals. The strengths and weaknesses of each proposal, in terms of the evaluation criteria, will be noted and summarized. Once the selection has been made, each prospective consultant will be provided with their score—if requested—along with their comparative ranking. However, neither the evaluations nor the scores of other bidders will be provided.

E. Estimated Level of Resources Required

The budget for this activity is expected to be C\$170,000 (one hundred and seventy thousand Canadian dollars), including professional fees and expenses.

Eventually reimbursable expenses would be detailed in the CEC standard contract; in addition, the cost of using iThenticate software (US\$50) or other approved software to detect plagiarism should also be considered.

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 the proposal were 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.

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

F. Basis of Payment Required

The consultant will be paid according to the table on deliverables and milestones in the "Description of Services" and "Estimated level of resources required" sections above.

Payment shall be made only for bona fide consultant fees and legitimate expenses incurred in accordance with the contract for professional services, and only upon receipt and documented acceptance by the Secretariat of statement(s) of account/invoice(s) from the consultant.

Settlement of invoices that are acceptable for payment will normally be made 30 days from the date of receipt by the Commission.

G. Conflict of Interest

"Conflict of interest" means, but is not limited to, a situation where a consultant's personal interest is sufficiently connected with professional duties under the contract, such that it results in a reasonable apprehension that said personal interest may influence the exercise of professional responsibilities under the contract. For example, a direct conflict of interest exists when the consultant is also a CEC government official or is related to or closely affiliated with a CEC government official, CEC staff member or third party involved with the performance of the services.

The consultant will inform the CEC Secretariat of any circumstance that existed prior to the execution of this contract, or that could manifest during the performance of this contract, which could constitute a conflict of interest. The consultant will complete and sign, on behalf of all his or her personnel, the attached *Declaration of Acceptance and Impartiality and Independence* (see Annex). The Consultant will also take note of the [CEC Consultant Services Procurement Manual](#).

H. Deadlines for Proposal Submission and Decision

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

Proposals must be submitted via e-mail to aandugar@cec.org. Proposal format may be in Microsoft Word or Adobe PDF format. Once the proposal has been submitted electronically, the CEC will confirm receipt within three business days. If receipt is not confirmed by e-mail within this time, **applicants must contact the CEC**. The contact person is:

Antonia Andúgar Miñarro, Project Lead
Commission for Environmental Cooperation
700 rue de la Gauchetière, Suite 1620
Montreal, Quebec, Canada H3B 5M2
Tel: 514-350-4300; Fax: 514-350-4314

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

Annex I. Circular Economy Definitions

Currently, there is no standard, internationally-recognized definition of “circular economy.” Below are several appropriate definitions to provide guidance and reference for carrying out this RFP.

Domestic

1. Government of Canada:

The circular economy is a different way of doing business.

The way our economies extract, use, then dispose of resources is putting pressure on our natural systems, communities, and public health. This is a linear economy—it moves in a straight line from resource extraction to waste disposal.

In a circular economy, nothing is waste. The circular economy retains and recovers as much value as possible from resources by reusing, repairing, refurbishing, remanufacturing, repurposing, or recycling products and materials.

It’s about using valuable resources wisely, thinking about waste as a resource instead of a cost, and finding innovative ways to better the environment and the economy.

Source: <https://www.canada.ca/en/services/environment/conservation/sustainability/circular-economy.html>

2. Government of the United States:

The term “circular economy” means: an economy that uses a systems-focused approach and involves industrial processes and economic activities that; are restorative or regenerative by design; enable resources used in such processes and activities to maintain their highest values for as long as possible; and aim for the elimination of waste through the superior design of materials, products, and systems (including business models).

Source: **Save Our Seas 2.0 Act** - [United States law enacted on December 18, 2020](#)

Reports/Studies

3. Closed Loop Partners Report (2020):

Put simply, the circular economy eliminates the concept of waste and makes the most of materials that are already in play, much like natural systems in which nutrients are continually cycled. Resource efficiency, and the resulting opportunities for savings and profit, is at its core.

Source: [The Circular Shift: Four Key Drivers of Circularity in North America Report](#)

4. McCarthy et al. (part of OECD Environment Working Papers series):

There is no single commonly accepted definition of the term “circular economy”, but different definitions share the basic concept of decoupling of natural resource extraction and use from economic output, i.e. increased resource efficiency as outcome. One core view of the circular economy is that it can be defined relative to a traditional linear economic system, i.e. one that focuses on closing resource loops. A second, slightly broader, view of the circular economy stresses the importance of slower material flows, either within an economy with some degree of material circularity, or within one that is more linear. The third, and broadest, view of the circular economy is that it involves a more efficient use of natural resources, materials, and products

within an existing linear system. This broad view of the circular economy affects potentially all economic activities, not only those that have a high material use profile, and is the one applied in most modelling assessments and in this review.

Source: [McCarthy, A., Dellink, R. and Bibas, R., 2018. The Macroeconomics of the Circular Economy Transition: A Critical Review of Modelling Approaches.](#)

5. Circle Economy – Circularity Gap Report (2018):

At the heart of the circular economy is the idea of moving away from linear value chains that we have had in place for more than 200 years. It means breaking with the ‘take-make-waste’ tradition and transitioning towards a circular approach that is much less heavily reliant on raw material extraction and much more focused on minimising and eliminating waste. The broader benefit of this circular model is to separate things we do want from our economic system - such as equally distributed prosperity and a bright future for the next generations - from those we do not want – like wasteful use of scarce natural resources and adverse effects on our environment and society. A circular economy is thereby a decoupling strategy aimed at growing prosperity, whilst intelligently managing resources within the boundaries of our planet.

Source: <https://www.circularity-gap.world/>

Organizations

6. Ellen MacArthur Foundation:

Systems solution framework that tackles global challenges like climate change, biodiversity loss, waste, and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature. It is underpinned by a transition to renewable energy and materials. Transitioning to a circular economy entails decoupling economic activity from the consumption of finite resources. This represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits.

Source: <https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary>

7. International Resource Panel (IRP) & United Nations Environment Programme (UNEP):

The circular economy is one in which the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste is minimized. This is in contrast to a ‘linear economy’, which is based on the “extract, make and dispose” model of production and consumption.

Source: <https://www.resourcepanel.org/glossary>

8. United Nations:

Whilst there is no universally agreed definition of a circular economy, the 2019 United Nations Environment Assembly, the UN’s flagship environment conference, described it as a model in which products and materials are “designed in such a way that they can be reused, remanufactured, recycled or recovered and thus maintained in the economy for as long as possible”.

Source: <https://news.un.org/en/story/2021/06/1093802>

Events and related communications

9. Sitra / World Circular Economy Forum (WCEF):

The circular economy is not a new idea. Indigenous communities across North America and beyond have been practicing principles of circularity, including regeneration and reciprocity, since time immemorial.

Source: <https://www.sitra.fi/en/publications/wcef2021-summary-report/>

An economic model which does not focus on producing more and more goods, but in which consumption is based on using services – sharing, renting and recycling – instead of owning. Materials are not destroyed in the end, but are used to make new products over and over again.

Source: <https://www.sitra.fi/en/dictionary/the-circular-economy/>

The circular economy is part of the glue that binds together the need to tackle climate change, the loss of biodiversity and the overconsumption of natural resources with an inclusive democracy, economic growth and increasing social well-being.

Source: <https://www.sitra.fi/en/blogs/circular-economy-makes-business-sense-and-can-help-tackle-global-crises/>

10. Circular North America – Discussion Paper and Event Summary (May 2021):

The circular economy has come to the forefront as a solution for moving away from today's linear 'take-make-waste' society, addressing growing environmental and social challenges and risks while generating significant economic benefits. Defining the opportunities for North America requires an understanding of where things are today, what the end goal is, and how to get there – identifying relevant natural resource industry strengths while leveraging service-based sectors and the broader innovation ecosystem.

Source: https://www.canada.ca/content/dam/eccc/documents/pdf/circular-economy/north-america-paper/WCEF-Circular-North-America_Report_2021_EN.pdf and <https://circulareconomyleaders.ca/circular-north-america/>

Annex II. Resin Codes

ASTM International, an international standards organization, develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. In this annex, the seven commonly used plastics resin codes are outlined as follows:⁸

1. Resin code 1: Polyethylene terephthalate (PET)
2. Resin code 2: High-density polyethylene (HDPE)
3. Resin code 3: Polyvinyl chloride (PVC)
4. Resin code 4: Low-density polyethylene (LDPE)
5. Resin code 5: Polypropylene (PP)
6. Resin code 6: Polystyrene (PS)
7. Resin code 7: Other resins

⁸ ASTM D7611/D7611M-20 Standard Practice for Coding Plastic Manufactured Articles for Resin Identification
https://webstore.ansi.org/Standards/ASTM/ASTMD7611D7611M20?source=blog&_ga=2.113105280.565418050.1643648377-344199423.1643648377

Annex III. Outline of the fieldwork to be carried out in Mexico

Objective: Develop an analysis of the current state of recycling of plastics in Mexico, considering industrial and collector's associations statistics, and an estimation of the contribution of the informal sector through interviews.

The following activities are only an example for designing the interviews and the collection of information, such as:

- 1. Design of surveys for interviews for the compilation of information on plastic waste recycling from industry and collector's associations, in order to provide knowledge for the analysis of industrial statistics:**
 - 1.1 Sources of data
 - 1.2 Contact and information of Collectors' associations
 - 1.3 Information of recycling process
 - 1.4 Inputs
 - 1.5 Recycled material used (if used)
 - 1.6 Production
 - 1.7 Market
 - 1.8 Best practices
 - 1.9 Personnel
 - 1.10 Challenges and opportunities
 - 1.11 Recommendations (depending on the restrictions due to the COVID-19)

- 2. Estimation of the contribution of the informal sector - Interviews with collectors' associations (*asociaciones de pepenadores*) to request information on:**
 - 2.1 Plastic collection
 - 2.2 Number of people employed in the activity
 - 2.3 Working conditions
 - 2.4 Volume collected
 - 2.5 Market
 - 2.6 Challenges and opportunities
 - 2.7 Recommendations

Recommended but not limiting content of surveys and interviews:

- **Recycling programs:** Start of operations, characteristics, program managers, volume of waste collected and partners
- **Description process:** Equipment, sorting systems, supplies and process efficiency
- **Recycling Process Inputs:** Quantity of energy, material, water, transportation, labor and capital inputs to recycling processes
- **Recyclable Material Production:** Quantity and types of waste collected, recyclable materials produced, and production history

- **Market of recyclable materials:** Sectors to which recyclable materials produced are distributed, prices, supply and demand, synergies with governments, chambers or associations
- **Personnel:** Number of people employed in the activity (men and women), working conditions and functions
- **Obligations:** Regulatory instruments, certifications, official Mexican standards that regulate the production/distribution/sale/recycling of plastic
- **Best practices and recommendations**

Annex IV. The Informal Sector in Mexico

It is possible to distinguish between the formal and informal sectors in Mexico. The formal sector refers to productive activities that respect fiscal, labor and social laws in general in all senses. The product or service, as well as the production and commercial trade, in this sector complies with the governmental regulations in force and a record related to the process is kept. However, not all laws in the informal sector are respected, mainly those that refer to taxation, labor standards and the social rights of workers.

In the informal sector, the manufactured product is considered legal (just like a service provided), but its production and marketing are not. For example, in the field of municipal solid waste handling, unofficial collectors or *pepenadores* (not part of an organized, official service) who collect from dumps and on the streets are not committing any crime, since the collection of recyclable material in the dump or from discarded material on the street is not illegal but hiring collectors who lack the due recognition of social rights is indeed illegal.

Annex V (see also Schedule D in CEC standard contract)

CONSULTANT'S DECLARATION OF ACCEPTANCE AND IMPARTIALITY AND INDEPENDENCE FOR CONTRACT

I, the undersigned,

Last Name: _____ First Name: _____

ACCEPTANCE

hereby declare that I accept to serve as consultant in the subject contract.

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 Environmental Cooperation Agreement (ECA) 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 ECA 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 ECA 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: _____