



Closed Looped  
Cycle Production  
in the Americas

## **Mission Report**

### **Program: Closed Looped Cycle Production in the Americas**

Mission Team: Andrea Herrera (Program Officer) and Kevin de Cuba (Program Manager)  
Bogota and Medellin, Colombia  
July 28 - Aug 01, 2014

#### **1. GOAL OF PROGRAM**

To contribute to nations in the Americas' capacity to promote and facilitate the adoption and implementation of Closed Looped Cycle Production design and manufacturing methods as one means of promoting sustainable development.

#### **2. SPECIFIC OBJECTIVES**

Increased awareness and buy-in on the part of stakeholders in Colombia, of the relevance and viability of innovative Closed Loop Cycle Production design and manufacturing methods as means for energy efficient and sustainable production in companies with focus on small and medium sized enterprises.

#### **3. OBJECTIVE OF MISSION**

- (a) To organize and co-host two Awareness Raising Seminars (in Bogota and Medellin) on the topic of CLCP and Circular Economy in collaboration with the Ministry of Commerce, Industry and Tourism (MINCIT), the National Cleaner Production Center of Colombia (CNPML), and the University of San Buenaventura (USB);
- (b) Present the CLCPA Program and the objectives of the project entitled 'Productive Sustainable Development towards a Circular Economy in Colombia' to a broad audience composed of representatives of the public and private sector and academia of Colombia;
- (c) Create awareness regarding CLCP design and manufacturing concepts among the participants;
- (d) Present the three prioritized subsectors as a result of the multi-criteria evaluation and statistical analysis performed by the CLCPA team in collaboration with MINCIT, CNPML, and other national agencies, to the participants; and
- (e) Discuss and announce the launch of a Call for Proposals for Colombia to select host companies in the respective subsectors to implement CLCP design and manufacturing methods with the aim of identifying the potential for closing the material loop of products, in line with the approved work plan.



#### 4. MISSION RELEVANT EVENTS

##### Monday – July 28, 2014 (Bogota)

###### **Preparatory meeting with MINCIT**

A meeting was held with one of the principal Focal Points in Colombia Mrs. Edith Urrego Beltran, Office of Productivity and Competitiveness ([MINCIT](#)) to review the latest version of the documentation for the Call for Proposals to be launched shortly for the selection of host companies for the implementation of the CLCP pilot projects. Some definitions regarding the selection criteria were discussed and modified. Furthermore the details as protocol, logistics, and other matters regarding the CLCP awareness raising seminar were discussed.

Outcome: The criteria for demanding the proof of official registration at the DIAN (National Tax Agency) and official documentation of incorporation at the Chamber of Commerce were added into the list of criteria to enable the CLCPA Team to preselect only formally established SMEs.

###### **Meeting with USB Bogota – Faculty of Business Studies**

A meeting was held with Mr. Edgar Emiro Rodriguez Cardenas, the Dean of the [Faculty of Business Studies of the University of San Buenaventura Bogota](#); Mr. Omar Eduardo Pena Reina, Director of the Center for Innovation and Transfer of Knowledge (ITER) of USB Bogota; Mrs. Irma Liliana Vasquez Merchan, Head of the Office of International Relations and Cooperation, USB Bogota; and Mrs. Edith Urrego Beltran, Principle Focal Point, Ministry of Commerce, Industry and Tourism (MINCIT).

The objective of the meeting was to explore future collaboration among the OAS/DSD CLCPA Team and USB. Among identified collaborative opportunities the following issues were discussed: (1) need for further capacity building regarding the topic of CLCP and Circular Economy in Colombia and the interest of USB in becoming one of the first Universities to lead this process, (2) the possibility of creating a specialized training program on CLCP and Circular Economy, (3) the creation of an internship program where students of relevant programs within USB could be hosted at companies that are selected for the implementation of the CLCP pilot projects; (4) establishing a formal university partnership with international universities with capacity/experience in topics as Circular Economy and/or more specific preparations as for instance the MSc. Program on C2C managed by the University of Twente in the Netherlands to allow for curriculum development and knowledge exchange.

Outcome: The OAS/DSD CLCPA team agreed to take these recommendations into account as potential future activities in the development of the CLCPA Program activities in Colombia.



### Meeting with USB Bogota – Communications and Protocol

Furthermore a meeting was held with Mrs. Natalia Hernandez Alvarez, Head of Communications and Protocol of USB Bogota and Mr. Hernan Felipe Trujillo Quintero, Director of the [Corporate Social Responsibility Program at USB Bogota](#) and also the Focal Point at USB Bogota for the CLCPA program, to discuss the logistics of the event and other preparatory actions for next day's event.

### Tuesday – July 29, 2014 (Bogota)

### Awareness Raising Seminar on the topic of 'Closed Looped Cycle Production and Circular Economy' – co-hosted by USB Bogota, MINCIT, CNPML, and OAS/DSD

Please find attached in [Annex I](#) a copy of the event flyer and agenda.



Father Pablo Castillo Nova, Rector of USB Bogota

The seminar was opened with welcoming remarks from Father Pablo Castillo Nova, Rector of USB Bogota. Mr. Castillo elaborated on the role of the University and its responsibility to address the risks and impacts that the society generates related to social and environmental issues. Mr. Castillo highlighted the commitment of this institution to generate knowledge and awareness of stakeholders about the principles of Sustainable Development. In line with this thinking, he presented the seminar as an initiative of the Organization of American States, which together with the Ministry of Commerce, Industry and Tourism of Colombia attempt to consolidate a model of management within organizations and businesses to ensure that waste does not become only outputs for landfill

but inputs for other processes or entities. Mr. Castillo welcomed the CLCPA initiative and expressed his desire to be part of the process in an effective and appropriate manner.



Mrs. Edith Urrego Beltran, MINCIT

Mrs. Edith Urrego Beltran, Ministry of Commerce, Industry and Tourism (MINCIT) provided a short presentation regarding the national industrial development plan of Colombia, and how and why the CLCPA program is a good fit in the ambitions of Colombia to transform their production sector to become more competitive and sustainable.

After the opening session, Mr. Kevin de Cuba (KDC), CLCPA Program Manager, presented the overall goals and objectives of the CLCPA Program, the background and specific activities identified in the approved implementation Work Plan entitled 'Productive Sustainable Development towards a Circular Economy in Colombia'.

Mrs. Andrea Herrera (AH), CLCPA Program Officer, explained the principles of a Circular Economy and Cradle-to-Cradle (C2C). The presentation focused on the difference between eco-effective versus eco-efficient design of products.



Mr. Kevin de Cuba (KDC), CLCPA Program Manager, presenting the CLCPA Program



Mrs. Andrea Herrera, CLCPA Program Officer, explaining the principles of a Circular Economy and Cradle-to-Cradle



Mr. Carlos Cadavid, Sub-Director of the National Cleaner Production Center of Colombia

After the break, Mr. Carlos Cadavid, Sub-Director of the National Cleaner Production Center of Colombia provided a complete overview of the evolution of the international business development environment and how this throughout the past decades has influenced the legal and regulatory framework in Colombia specifically related to environmental performance and compliance, productivity, and sustainability. The message behind his presentation was that it is important to be responsive to changes in the market environment, and be willing and able to adapt to changing international regulations and trade agreements and compliance requirements.



Audience of the CLCPA Workshop in Bogota



Around 60 people attending the workshop

For the final session a panel composed of Mr. Henry Amezcua, Senior Cooperation and Agreements Specialist at [ProExport](#); Mr. Victor Manuel Roza, Representative of [Cosentino](#) in Colombia; Mr. Carlos Cadavid, Sub-Director of the [National Cleaner Production Center of Colombia](#); Mr. Hernan Felipe Trujillo Quintero, Director of the [Corporate Social Responsibility Program at USB Bogota](#); and Mrs. Andrea Herrera, CLCPA Program Officer, [OAS/DSD](#) was set up to allow for an open discussion about CLCP, where from different perspectives ideas and recommendations were shared about the feasibility and applicability of CLCP in the context of Colombia.



Outcomes: Mr. Amezcua (ProExport) confirmed that there are already clear signals in the global market where concepts such as CLCP are getting traction and that he is very happy to be engaged with this CLCPA Program since it allows for the proper outreach and communication to Colombian businesses regarding the need to adopt circular economy principles to remain competitive, maintain access, and increase the share of export of Colombian products to international markets.

As representative of a private sector firm that has a Silver C2C Certification for its product “Eco by Cosentino”, Mr. Rozo, Sales Representative of Cosentino in Colombia, explained that their motivation for securing this particular certification was out of the necessity of showcasing that their business model was not only competitive but also sustainable. This product has allowed Cosentino (a Spanish firm) access very demanding markets, such as the US, where nowadays this product is featured as an [eco-product at a competitive price in large home improvement stores, such as Home Depot](#). Cosentino’s ambition is to broaden their product portfolio with more C2C certified products and achieving higher quality standards.

Mr. Carlos Cadavid (CNPML) explained that looking at the domestic companies and the ongoing trends and developments; there are already positive signs of companies showcasing their ability to manufacture products that are of higher quality and more sustainable.

From the perspective of the academia, Mr. Trujillo explained that he is not aware of any existing program or specialization in Colombia that focuses on concepts such as CLCP or Circular Economy. He recommended that this CLCP concept should be incorporated in existing and relevant programs in areas as Environmental Management, Corporate Social Responsibility, Sustainable Business Development, and maybe as is the case for the University of Twente, new specializations in topics such as C2C, CLCP, or Circular Economy.

Mrs. Andrea Herrera explained that CLCP is not limited to products but also is applicable to buildings, larger infrastructures, cities or even regions, such as the case of the Venlo Region, that declared their region as the first [Green Port](#) to fully adopt C2C principles in their regional development plan, their physical planning, education plans, business development, living and recreational services, transportation plans, etc.

After a first round of introduction and sharing each respective view regarding CLCP and Circular Economy, the floor was opened for a Q&A session.





At the end of the seminar CLCP Certificates were handed out to the participants. For these CLCP Certificates, vegetable ink was used and locally printed on 100% recyclable paper, as a demonstration of the applicability of the CLCP concept. **Annex II** presents an example of the certificate.

### **Meeting with ANDI, PTP, ACOPI**

After the Seminar, KDC and AH accompanied by Edith Urrego (MINCIT) and Victor Manuel Rozo, Representative of Cosentino in Colombia, visited the offices of the [National Association of Industrialists of Colombia \(ANDI\)](#) for a meeting with several industrial associations in Colombia. The meeting was attended by the Vice-President of Sustainable Development of ANDI, and Director of Sustainable Production and Consumption, Mrs. Nancy Ibarra Palacios; Mrs. Jessica Angulo, Infrastructure and Sustainability Executive at the [Productive Transformation Program](#); Mr. Rafael Humberto Barrera, Member of the Board of the Colombian Association of Micro, Small and Medium sized Enterprises ([ACOPI](#)), and Mr. Fernando Puello, Director of ACOPI.

Outcomes: KDC provided a brief overview of the goals and objectives of the CLCPA Program and the reason for this particular meeting which was to make the associations aware of the Call for Proposals that is planned to be launched shortly in order to select host companies to allow for the implementation of CLCP pilot projects. An explanation was provided regarding how the prioritization or selection of the subsector has taken place (through a statistical and multicriteria analysis) and that the result includes the subsectors of textile, wood & furniture, and chemicals. The associations were asked for their collaboration in sharing the CFP among their membership and to share background information about the CLCPA program.

There was an interest and a request among the participants to launch the CFP not only for SMEs within the prioritized subsectors but for all size companies and all productive subsectors. KDC explained that the prioritized subsectors were the results of a production sector diagnostic using economic and socio-environmental indicators and a multi-criteria analysis that resulted in highlighting three subsectors with the highest potential to host a CLCP Project. Additionally the technical assistance will be limited to 5 products manufactured by SMEs; therefore not many companies could be supported during the upcoming phase. But the CLCPA Team will look into what ways companies within the prioritized subsectors can participate in the CFP.





**Wednesday – July 30, 2014**

**Travel from Bogota to Medellin**

KDC and AH traveled to Medellin and they confirmed meetings and prepared logistics for the following mission days.

**Thursday – July 31, 2014 (Medellin)**

**Attended breakfast meeting (Herbario restaurant)**

During this breakfast different innovative programs of the city presented their goals and their initiatives. KDC and AH had the opportunity to exchange some information about the CLCPA program and identify synergies between this initiative and the local programs of Medellin.

KDC and AH were interviewed by Mr. Jesús A. Vargas, editor of the Economic News of Antioquia. KDC and AH explained to Mr. Vargas the principles and methodologies of CLCP and Cradle to Cradle and gave some examples on how the concept has been applied worldwide resulting in economic and environmental benefits for companies.

David Calle, journalist from El Tiempo Newspaper, interviewed KDC about the CLCPA Program and allowed KDC to announce the upcoming seminar that would be carried out at the auditorium of the USB Medellin.

**Meeting with Juan Esteban Cuervo - USB Medellin**

KDC and AH had a meeting with Juan Esteban Cuervo, architect and investigative lecturer at the Faculty of Integrated Arts from the USB to review all the preparations for the CLCPA workshop. Speakers of the panel were confirmed as well the welcome remarks by the Vice-Rector of the University of San Buenaventura Medellin and Sergio Roldán Gutiérrez, Director of Sapiencia.

**Meeting with Sergio Roldán Gutiérrez (Sapiencia) and Carlos A. Pinto Santa (USB Medellin)**

KDC and AH had a meeting with Mr. Roldán, Director of the Higher Education Agency of Medellin (SAPIENCIA) and Mr. Pinto, Dean of the Integrated Arts Faculty of USB. Both Mr. Roldan and Mr. Pinto presented how the Education institutions are trying to complement each other and implement programs that meet the demands of the society. Sapiencia works on the implementation of policies and guidelines of the education system in the Municipality of Medellín. It proposes, promotes and develops tools to orientate and coordinate strategies among the public institutions of educations in the region. The faculty of Integrated Art of the USB aims to promote research and knowledge on Sustainable Development among their students.







Mr. Carlos Pinto from USB Medellin and Mr. Kevin de Cuba

Mr. Roldán and Mr. Pinto see the CLCPA program as an opportunity to address the environmental problems from a different perspective and showed high interest in learning about how the Cradle to Cradle principles have been incorporated in curricula for teaching in Dutch and other international universities and schools. They would like to see a similar program and such as development in their region.

### Meeting with Carlos Mario López from Parque E

Mr. Carlos Mario López is in charge of projects at Parque E (Entrepreneurship Park). Parque E is an initiative of the Mayor of Medellín and the Antioquia University that seeks to strengthen the culture of entrepreneurship and support the creation of companies from business opportunities or outcomes of researches and academic activities. The lines of action of Parque E are defined by two basic objectives: (i) creating entrepreneurial culture and (ii) supporting the creation of companies and strengthening the existing ones.



Mr. Carlos Mario López from Parque E explaining the process followed by the entrepreneurs in the program

Outcome: KDC and AH presented the CLCPA program to Mr. López and few entrepreneurs that participated during the meeting. Mr. López expressed his interest in becoming familiar with CLCP and providing capacity training on CLCP to the entrepreneurs and expressed his support inviting their membership to participate during the seminar at USB and the CFP.

#### **Meeting with David Hernández García and Juan Carlos from Antioquia University**

Mr. Carlos Pinto introduced KDC and AH to Mr. David Hernández García, Dean of the Communications Faculty of Antioquia University and Juan Carlos Program, Director of the Pharmaceutical Chemistry and Food Engineering program.

Outcomes: Mr. Hernández highlighted the program of Environmental Engineering at Antioquia University and the alliances that they have with Sustainable Development research groups. The representatives of Antioquia University offered their support to disseminate the work of the CLCPA Program and help in establishing new alliances with the research groups within the university. They were interested in securing the participation of the CLCPA team as lecturers in the Social and Environmental Responsibility course that the university currently offers to its students. It was mentioned as well that the Communications Faculty could help in raising awareness about CLCP and Cradle to Cradle. The CLCP Team commended their recommendations and will take these into account for the further development and implementation of the CLCPA Program in Colombia.

#### **Meeting with Samuel Urquiju from Ruta N Medellín**

KDC and AH visited the headquarters of Ruta N which is located in a sustainable building in the center of Medellín. Ruta N is an entity created by the Mayor of Medellín, Empresas Publicas de Medellín (EPM) and a Telecommunications Company (UNE), from which they develop different programs and where resources are channeled for the development of science, technology and innovation. It promotes innovative businesses that increase the competitiveness of the city, revitalize the economy, strengthen the clusters and enable strategic and better jobs for the citizens of Medellín. The vision of Ruta N, as explained by Mr. Urquiju, is to become in the innovation center of Latin America that generates capacities and innovative businesses.

Outcome: Since Ruta N offers programs to train entrepreneurs and citizens, the CLCP team was suggested to use this as an opportunity to build capacity about CLCP in the city through their platform.

**Friday – August 01, 2014 (Medellin)**

**Awareness Raising Seminar on the topic of ‘Closed Looped Cycle Production and Circular Economy’ – co-hosted by USB Medellin, MINCIT, CNPML, and OAS/DSD**



Vice-Rector of the USB Medellin, Mr. Jorge Herrera



Mr. Sergio Roldán Gutierrez, Director of Sapiencia

The event was opened by the Vice-Rector of the USB Medellin, Mr. Jorge Herrera, who welcomed the audience and speakers at the university and highlighted the relevance and value of the CLCPA seminar which reflects the philosophical field of the Franciscan Catholic thought on which the University is founded. One of the pillars of the Educative project of the University is the respect for the environment and this purpose comes from the Franciscan tradition. Mr. Herrera mentioned the need that the current society is facing, to switch to a green economy that contributes to a sustainable development and eradicates poverty.

Mr. Sergio Roldán Gutierrez, as the Director of the Higher Education Agency of Medellin (SAPIENCIA) that groups several education institutions of the region, also shared welcome remarks. Mr. Roldán mentioned the importance that the CLCPA seminar has in showing to the students and academics the experience of other countries about Closed Looped Cycle Production. He said that Medellin understands nowadays that experiences are very important and that is why Sapiencia is sending academics to other countries so they can learn about other optimal and sustainable production systems to replicate them in the city.



From left to right: Mr. Carlos Pinto, Mr. Jorge Herrera, Mr. Kevin de Cuba, and Mr. Sergio Roldán

After the opening session, Mr. Kevin de Cuba (KDC), CLCP Program Manager, presented as he did it in the Bogotá the overall goals and objectives of the CLCP Program, the background and specific activities identified in the approved implementation Work Plan entitled 'Productive Sustainable Development towards a Circular Economy in Colombia'.

Mrs. Andrea Herrera (AH), CLCP Program Officer, explained the principles of a Circular Economy and Cradle-to-Cradle (C2C). The presentation focused on the difference between eco-effective versus eco-efficient design of products and how the Cradle to Cradle principles have been applied in the Netherlands and elsewhere in the globe. Due to the interest of the audience in urban development and architecture, Mrs. Herrera presented, among other C2C certified products, a C2C inspired building, and about the greenest building of the Netherlands: Villa Flora.



Mr. Kevin de Cuba, Presenting the CLCPA Program



Mrs. Andrea Herrera, explaining the Sustainability concept and C2C principles

After the break, Mrs. Edith Urrego Beltran, Ministry of Commerce, Industry and Tourism (MINCIT) opening the second session provided a short presentation regarding the national industrial development plan of Colombia, and how and why the CLCP program is a good fit in the ambitions of Colombia to transform their production sector to become more competitive and sustainable.

Her introduction of how the program is being implemented in Colombia was followed by Mr. Carlos Cadavid, Sub-Director of the National Cleaner Production Center of Colombia, who provided a complete overview of the evolution of the international business development environment and how this throughout the past decades has influenced the legal and regulatory framework in Colombia specifically related to environmental performance and compliance, productivity, and sustainability.



Mrs. Edith Urrego, MINCIT, at the CLCPA seminar in Medellin



Mr. Carlos Fernando Cadavid, CNPML, at the CLCPA seminar in Medellin

A panel session followed Mrs. Edith Urrego's and Mr. Carlos Cadavid's presentations. Two architects and lectures from Universidad Pontificia Bolivariana and Universidad de San Buenaventura Medellin, joint the panel team together with Mr. Victor Rozo from Consentino, Mr. Carlos Cadavid from CNPML, Mr. Henry Amézquita from [Proexport](#), Mrs. Andrea Herrera from OAS and Mr. Kevin de Cuba as the moderator of the panel.

Outcomes: An dynamic discussion took place among the panelists of which the conclusion was that it is important to obtain the know how of CLCP methodologies and example of their application in other countries as the Netherlands and the United States but also acknowledge that when implementing in Colombia it is important to adapt the methodologies to the local context and conditions of the country.



Panel session and audience of the CLCPA seminar in Medellin, around 350 people attended the CLCPA seminar.

### Meeting at the headquarters of the National Cleaner Production Center of Colombia

A meeting was held at the offices of CNPML with 10 company representatives that expressed particular interest in participating in the CLCP Program but could not attend the event in the morning at the University of San Buenaventura. [Annex III](#) includes the minute

of the meeting (in Spanish). During this meeting Mr. Kevin de Cuba presented the scope and goals of the CLCPA Program and the following information was clarified:

- The OAS will launch the call of proposals and their requirements in the upcoming days. This call will be available for one month and the applications should be sent by email to [convocatoriapcc@gmail.com](mailto:convocatoriapcc@gmail.com).
- This call is open to companies of any size (big, medium, small, or micro enterprises), as long as the company can showcase that SMEs are highly represented in its supply chain.
- Companies will obtain technical assistance to elaborate proposals and be able to apply to financial mechanisms. At this phase of the project none direct investment from companies is required, only a high level of commitment, motivation, and collaboration from the companies.



Meeting at the National Cleaner Production Center of Colombia.

### **Meeting with the Council of the Municipality of Itagui**

A meeting was requested through another ECPA Initiative Partner, ONWARD International, to attend a Council Meeting of the Municipality of Itagui.

Outcome: During this meeting the mayor of the Itagui municipality was interested in seeking opportunities to apply the principles of CLCP within their region in a similar way on how the Venlo region in the Netherlands has done it, Itagui has particular interest in becoming more innovative and sustainable. Likewise the manager of the Local Development Agency of Itagui was interested in extending and sharing the CFP to the companies of this municipality. They also expressed interest in working closely with the CLCP Team in helping Itagui in the development of a long term strategic plan for the transition toward a circular and green industrial area. The CLCP Team explained that these request will be taken into consideration in the further development of the CLCP program in Colombia.

## 5. MAIN OUTCOMES OF THE MISSION

- First collaboration between the OAS/DSD CLCP Program and a local Education institution as the University of San Buenaventura regarding capacity building in CLCP and explored potential areas of further collaboration for the implementation of the CLCPA Program in Colombia.
- Co-organized two successful seminars, and promoted and created awareness about Closed Looped Cycle Production, Circular Economy and C2C among 470+ public, private, academic, and civil society participants that attended the two organized CLCP Awareness Raising Seminars held in Bogota and Medellin, Colombia.
- Presented the results of the quantitative evaluation of the productive subsectors in Colombia and secured agreement on the next steps to follow for the development of the project with the key focal points (MINCIT).
- Had contact with companies of the three preselected subsectors where the CLCPA team had the opportunity to answer their questions about the Program and the Call for Proposals.
- Please find the presentations provided during the CLCP Awareness Raising Seminars on the following page: [http://www.oas.org/en/sedi/dsd/Energy/CLCP\\_Col.asp](http://www.oas.org/en/sedi/dsd/Energy/CLCP_Col.asp)

## 6. STEPS FORWARD/ACTIONS

- Complete the application form template for companies and disseminate the Call for Proposals on the website of the DSD/OAS and consortium's home pages after considering recommendations from the local stakeholders.
- Form an Evaluation Committee to evaluate the application of the Colombian companies to the CFP. This includes sending letters to members and creating the evaluation sheets according to the criteria of evaluation.
- Review the options for collaboration with the programs of ANDI, Proexport, Bancoldex, PTP and ACOPI.
- Share the final diagnostic report of Colombia with the local stakeholders.
- Send thank-you letters to panelist and speakers of the CLCPA seminars.
- Confirm activities, dates and of next phases of the CLCPA Project in Colombia.



## 7. CONTACTS

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Closed Looped  
Cycle Production  
in the Americas

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For more information please contact:

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## Annex I



Producción en  
Ciclo Cerrado  
en las Américas



Alianza de Energía y  
Clima de las Américas



### Organiza:



MinComercio  
Ministerio de Comercio,  
Industria y Turismo



Organización de los  
Estados Americanos



UNIVERSIDAD DE  
SAN BUENAVENTURA



### Expositores:

#### Kevin de Cuba, OEA

Especialista Senior de Energía y Desarrollo Sostenible del Departamento de Desarrollo Sostenible de la OEA. Creador y gerente del programa de Producción en Ciclo Cerrado en las Américas (2010 - en curso), en el cual junto con sus colegas es pionero de la introducción de la filosofía de diseño Cradle-to-Cradle hacia una economía circular en las Américas.

#### Andrea Herrera, OEA

Miembro de la primera generación de profesionales con énfasis en Cradle-to-Cradle de la Maestría en Ciencias en Ingeniería de Diseño Industrial de la Universidad de Twente, Holanda. Actualmente es parte del equipo del Programa de Producción en Ciclo Cerrado en las Américas, de la OEA.

#### Carlos Fernando Cadavid R, CNPML

Sub Director Ejecutivo del Centro Nacional de Producción Más limpia y Tecnologías Ambientales de Colombia. Ingeniero Químico, Especialista en Ingeniería Ambiental, Especialista en Gerencia del Ambiente y Máster en Planeación Ambiental. Experto en cierre de ciclos de flujos de materiales y energía en sistemas industriales y urbanos.

### Donante del Programa:



United States Government

### Socios del Programa:



Division of Energy and Climate Change Mitigation | Department of Sustainable Development - DSD | Executive Secretariat for Integral Development - SEDI



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## Producción en Ciclo Cerrado y Economía Circular: Una visión innovadora de Productividad



### Bogotá: Martes 29 Julio, 2014

Universidad de San Buenaventura  
Auditorio 309 Edificio Guillermo de Ockham  
Carrera 8H # 172-08

### Medellín: Viernes 01 Agosto, 2014

Universidad de San Buenaventura  
Auditorio Fray Pablo García Escudero  
Calle 45 N° 61-40 Barrio Salento – Bello

Hora	Actividad
8.00	Registro
9.00	Palabras de bienvenida Ministerio de Comercio, Industria y Turismo Universidad de San buenaventura
9.30	Introducción a Producción en Ciclo Cerrado Kevin de Cuba, Gerente del programa PCCA Organización de los Estados Americanos
9.45	Pausa
10.00	Producción Más Limpia en Colombia Carlos Fernando Cadavid R, Subdirector Ejecutivo Centro Nacional de Producción más limpia y tecnologías ambientales de Colombia
10.30	Producción en Ciclo Cerrado y Economía Circular Andrea Herrera, Oficial del Programa PCCA Organización de los Estados Americanos
11.00	Lanzamiento Convocatoria MiPymes Kevin de Cuba, Gerente del programa PCCA Ministerio de Comercio, Industria y Turismo
11.15	Panel con expertos y sesión de preguntas MINCIT/Proexport Universidad San Buenaventura Consentino (empresa con productos C2C) Carlos Fernando Cadavid, CNPML Andrea Herrera, OEA Moderador – Kevin de Cuba
12.30	Clausura

Hora	Actividad
8.00	Registro
9.00	Palabras de bienvenida Universidad de San Buenaventura Sapiencia
9.30	Introducción a Producción en Ciclo Cerrado Kevin de Cuba, Gerente del programa PCCA Organización de los Estados Americanos
9.45	Pausa
10.00	Producción Más Limpia en Colombia Carlos Fernando Cadavid R, Subdirector  Centro Nacional de Producción más limpia y tecnologías ambientales de Colombia
10.30	Producción en Ciclo Cerrado y Economía Circular  Andrea Herrera, Oficial del Programa PCCA Organización de los Estados Americanos
11.00	Lanzamiento Convocatoria MiPymes Kevin de Cuba, Gerente del programa PCCA Ministerio de Comercio, Industria y Turismo
11.15	Panel con expertos y sesión de preguntas Universidad UPB Universidad San Buenaventura Consentino (empresa con productos C2C) Carlos Fernando Cadavid, CNPML Andrea Herrera, OEA Moderador – Kevin de Cuba
12.30	Clausura

Division of Energy and Climate Change Mitigation | Department of Sustainable Development - DSD | Executive Secretariat for Integral Development - SEDI



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Producción en  
Ciclo Cerrado  
en las Américas

## Annex II



**MinCIT**  
Ministerio de Comercio,  
Industria y Turismo



Organización de los  
Estados Americanos

# Producción en Ciclo Cerrado y Economía Circular:


Una visión innovadora de productividad - Julio 29 Bogotá - Colombia



Gracias por su participación y por convertirse  
en un agente de cambio para la transición  
hacia una economía circular en Colombia.

**Maria del Mar Palau M.**  
Viceministra  
Viceministerio de Desarrollo Empresarial  
Ministerio de Comercio, Industrias y Turismo

**Cletus I. Springer**  
Director  
Departamento de Desarrollo Sostenible  
Organización de los Estados Americanos.

	<b>Annex III</b>	Código: FO-047
	Fecha de entrada en vigencia: 05/02/2008	Página: 23 de 24
		Versión del documento: 1


<b>Nombre del Proyecto</b>	Cradle to Cradle		
<b>Lugar</b>	Sala de Capacitaciones CNPMLTA		
<b>Fecha</b>	01-09-2014		
<b>Hora de inicio</b>	3:30 pm	<b>Hora de salida</b>	5:00 pm

<b>Asistentes</b>		
Nombre	Entidad	Cargo
Kevin de Cuba	OEA	Gerente del Programa PCCA
Andrea Herrera	OEA	Oficial del Programa PCCA
Gloria Restrepo	CNPMLTA	Profesional de Apoyo
Representantes de las empresas invitadas. Ver tabla al final del acta		

<b>Temas tratados</b>
Introducción a producción en ciclo cerrado
Presentación de la convocatoria para empresas
Sesión de preguntas

<b>Observaciones y Recomendaciones</b>
<ul style="list-style-type: none"> <li>• Se realizó presentación con los aspectos generales de la producción en ciclo cerrado, haciendo especial énfasis en la actual demanda y disponibilidad de recursos, y en el potencial que presenta la adopción de la producción en ciclo cerrado para la industria.</li> <li>• Se presentó el alcance y los principales elementos del proyecto "Producción en Ciclo Cerrado" a las 10 empresas asistentes a la reunión.</li> <li>• En la sesión de preguntas se aclararon los siguientes puntos: <ul style="list-style-type: none"> <li>○ La OEA presentará la convocatoria y sus respectivos requerimientos en los próximos días. El CNPML se encargará de contactar y enviar dicha información a las empresas asistentes a la reunión empresarial.</li> <li>○ La convocatoria tendrá una vigencia de un mes. Período en el que las empresas deberán presentar los documentos requeridos en el correo <a href="mailto:convocatoriapcc@gmail.com">convocatoriapcc@gmail.com</a>.</li> <li>○ La elegibilidad de las empresas para participar de este proyecto dependerá del cumplimiento de los criterios de selección previamente establecidos. No es requisito contar con programas que se acerquen a la filosofía C2C.</li> <li>○ De esta convocatoria podrán participar empresas de todos los tamaños.</li> <li>○ No se requieren de inversiones directas por parte de las empresas para esta primera etapa del proyecto. Se requiere un alto compromiso y motivación de estas.</li> </ul> </li> </ul>



	<b>ACTA</b>	Código: FO-047
	Fecha de entrada en vigencia: 05/02/2008	Página: 24 de 24
		Versión del documento: 1

<b>Tareas pendientes</b>		
<b>Tarea</b>	<b>Responsable</b>	<b>Fecha ejecución</b>
Presentar términos de referencia para la convocatoria	OEA	
Contactar empresas y enviar términos de referencia de la convocatoria	Gloria Restrepo	

### Empresas participantes en la reunión:

NOMBRE	SECTOR	UBICACION	CONTACTO	CARGO	NUMERO	EMAIL
Compañía de Empaques S.A	Textil	Cra 42 N° 86-25, Itagui	Lina Foronda	Coordinadora Ambiental	3 65 8888 Ext 947	<a href="mailto:lina.foronda@ciaempaques.com.co">lina.foronda@ciaempaques.com.co</a>
Prebel S.A	Químico - Cosméticos	Cra.59 N° 10-131, Medellín	Lina María Goetz	Ingeniera Ambiental	365 60 00 Ext	<a href="mailto:linamaria.goez@prebel.com.co">linamaria.goez@prebel.com.co</a>
CI Leonisa S.A	Textil	CR 51 # CL 13-158, Medellín	Alejandro Monsalve	Ingeniero de Procesos Ambientales	350 63 70	<a href="mailto:amonsalve@leonisa.com">amonsalve@leonisa.com</a>
Ecoflora S.A.S	Químico	Calle 80S N° 47D - 65 Int 103, Sabaneta	Adrian Giraldo	Vicepresidente de Negocios	444 8974 - 314 887 9515	<a href="mailto:agiraldo@ecofloracares.com">agiraldo@ecofloracares.com</a>
MUMA	Mobiliario	Cll 80S N° 52-12, La Estrella	Ximena Montes / Jessica Castaño	Jefe de Calidad / Auxiliar Ambiental	309 3535 Ext 129	<a href="mailto:xmontes@muma.co">xmontes@muma.co</a> <a href="mailto:jcastano@muma.co">jcastano@muma.co</a>
Fabricato S.A	Textil	Cra 50 N° 38-320, Bello	Maria Teresa Salazar / Juan Prado	Coordinadora de Medio Ambiente / Ingeniero de Procesos	448 35 00 Ext 2233	<a href="mailto:msalazar@fabricato.com">msalazar@fabricato.com</a> <a href="mailto:jprado@fabricato.com">jprado@fabricato.com</a>
Andercol S.A	Químico	Medellín	David Alejandro Zuluaga	Analista Ambiental	470 0700 Ext 1209 - 300 614 2875	<a href="mailto:david.zuluaga@otek.com">david.zuluaga@otek.com</a> <a href="mailto:david.zuluaga@grupomun.com">david.zuluaga@grupomun.com</a>
Grupo Orbis	Químico	Medellín	Estefanía Ortiz		5698245	<a href="mailto:estefania.ortiz@grupo-orbis.com">estefania.ortiz@grupo-orbis.com</a>

