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# Workshop on Best Practices on Circular Economy: Redefining Growth From - Waste to Worth, Mexico City, 16–17 October 2018

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Asia-Pacific
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# APEC WORKSHOP ON BEST PRACTICES ON CIRCULAR ECONOMY:

# REDIFINING GROWTH FROM - WASTE TO WORTH

## Mexico City, 16 – 17 October 2018

**Committee on Trade and Investment (CTI)**

**October 2018**

## Introduction

José Ramón (ABAC Member-México)

- Introduction to speaker participants.
- Introduction to agenda and sessions

María Cristina Hernández Zermeño ( Mexico´s SOM)

- Explained Mexico's priorities in APEC, highlighting three priorities for this year: support to the multilateral system; regional economic integration agenda and sustainable growth.
- Recalled that the issue of circular economy has been present in APEC since 2014 when the Leaders recognized the economic value of waste. Noted the relevance which won the issue when president Enrique Peña Nieto presented good practices in México on matters during the meeting of leaders in Viet Nam on 2017.
- Noted the interest of Mexico to share their best practices on circular economy and recycling and listening to their experience of other economies.
- APEC has been one step ahead to reduce global impact and minimize global trending problems.
- Enhance regional economic integration of Asia-Pacific Region
- Promote Sustainable growth

Three concepts of utmost importance:

  - Regional Economic Integration Agenda
  - Critical situation in trading systems
  - Sustainable growth through the development of Green Initiatives

## Session 1. Ms. Chever Voltmer- Ocean Conservancy

### The Challenge of Post Consumption Waste in the world -From pollution to business opportunities

Ocean Conservancy for 33 years has organized the Coastal Cleanup. This cleanup helps them to gather data about the quantity and the type of trash they are collecting. They had 12.1 million volunteers from 153 economies and picked up 244 million items collected.

The amount of volunteers in their Coastal Cleanup program is not enough. They needed a way to stop trash from getting into the ocean. They invented the Trash Free Seas Alliance integrated by NGO's and various companies. With the alliance they are try integrate engagement, science, policies, and actions to generate impacts.

They started by asking the following questions:

1. How much enters?
2. Where does it go?
3. What are the impacts?

. They needed to figure out how to help these economies with fast growing amounts of pollutants.

Their first step was to compromise and try to reduce plastic waste entering the ocean by 45% by the year 2025. They also specified that its needed to accelerate development of local waste management systems, keep plastic pollution leakage points closed, and re-engineer plastic lifecycle through innovation. As any environmental project, its imperative to apply a full range of solutions to achieve those goals.

In terms of multidisciplinary solutions Ocean Conservancy has pinpointed that the solution must come combining the following actions:

Support Smart Policy

- Funding Innovation
- Develop on the ground solutions
- Build shared priorities and goal in numbers, there are 150 million tons of plastic in the ocean right now, it is required a $26 trillion investment to enhance the infrastructure in Asia to achieve approximately a 45% reduction of plastic leakage in the world.

Cities and local communities are key actors to promote waste collection. Their ultimate goal is to sustainably reduce the amount of plastic waste leaking into the ocean annually by 50 percent globally by 2025.

**What are micro-plastics, and how are they being introduced to the ocean?**
Once you throw away a plastic item, it starts decomposing and reduced in size until they become small and it is increasingly difficult to clean these types of plastics. However, it is more difficult to clean oceans from plastic fibers.
**How do you bring investors and interest them enough so they take action in waste management?**
Waste management is underdeveloped because it does not make money. You can't bring investors until you show them that they can get their money back. A solution to this is to show them that it is possible to build value chains within companies to further develop their economies.
**What does your research say about all the other counties that are polluting the oceans?**
Another region that is of utmost interest is Africa because their consumption rates are increasing slowly but steadily. Information from their research actually shares key points from various economies from all over the world.
**Most important method of cleaning up the ocean?**
Ocean Conservancy is focusing on solutions that are applicable now. It is uncertain to point to one specific solution to clean the ocean but it is currently in debate and is one of the most talked about subjects within this NGO.

## **Session 2**: **Waste Management into Sustainable Development Goals**

-**Ms. Dolores Barrientos,** United Nations Environment Programme

We watch a video of a Nacional Campaign regarding oceans. It is about how oceans are affected, and other video is about turtles killed because of plastics.

In Mexico the public awareness about the plastic pollution is really high: news, social media, NGO's, public, private and social sector.

*Publications:*
Global Waste Management Outlook
Single-use plastics: a roadmap for sustainability report
Waste Management Outlook for Latin America and the Caribbean

Statistics:

- Packaging is the 36% of the global plastic production by industrial sector
- We became a plastic society before World War II. It is exponential the increase of plastic waste generation.
- 79% of the plastic sits in landfills, dumps or in the environment, 12% has been incinerated, 9% has been recycled.
- 13 million of oil bars are in the production of plastics each year.
- 5 billion plastic bags are use each year.
- 50% of the plastic is single use.
- 10% of the waste generated is plastic
- 100,000 marine animals are killed because of the plastic production each year
- 90% of the water that we drink from plastic bottles contain micro-plastics
- Industries that use a lot of plastics: consumption, domestic, automobile

The UN in a lot of economies is working with the consumers to change the behavior about waste and plastics.

Where the economies are banning the use of plastics?

- Thailand
- Chile
- Brazil
- Ecuador
- Peru and Uruguay

Conclusions of the reports:

- We should reduce the single use plastics
- We have to improve the waste management in the cities
- We have to eradicate the micro plastics
- Promote the investigation

Municipal Solid Waste Generation. When an economy goes to higher income, increase the use of plastics.

Latin America and the Caribbean Key Facts

- Regular and reliable waste collection service for the entire population is required
- Open dumpsites is a practice that must be eliminated
- Organic waste ranking first in generation
- It is necessary to accelerate the transition towards a circular economy

Circular Economy: Where starts the responsibility of the companies and the consumers?

- Steps: design, produce, distribute, consumer, reuse/repair, recycle

Clean Seas Campaign: 44 economies and 9 companies

Q&A

The problem is not the plastics, is the bad use of plastics.

- Golden triangle: participation of the government, organized society, industry
    - We need laws, more education to know how to dispose plastics

Is the UN doing work about how to replace the plastics?

- What is the cost, carbon emissions, etc.
- We have to work to find the solution to the problem of plastics

## Session 3. Mr. Mathy Stanislaus- Circular Economy, World Resource Institute

### The circular economy -concept how to be implemented for post-consumption waste

Why circular economy?

There was an acceleration of GHG emissions and global resource consumption. By 2050 it is projected that raw material consumption will double just to maintain the current economic growth.

So circular economy is a path that can accelerate the progress towards Paris Agreement and SDG's, especially the 12$^{th}$ SDG "Sustainable Production and Consumption".

Circular economy has the following approach:

- Give proper importance to resource efficiency
- Job creation across industrial sectors
- Systemic shift to a circular economy to properly mitigate risk resource-related conflicts

Waste needs to be seen in 4 dimensions:

1. Wasted Resources
2. Wasted Capacity
3. Wasted embedded Values
4. Wasted Lifecycles

Each type of industry has a unique way to leverage Circular Economy. Every industry according to the raw materials and production processes that they use have many areas of opportunities to develop innovative solutions to implement a circular economy in its environment.

The U.S. approach to this is a "Cradle to Grave" problem first. They have to take into account what happens to the produced materials after the consumer has thrown them away.

One theory for policy-makers is that banning single use plastic items is not the correct solution. They believe that one of the most effective solutions is to influence consumer behaviors to refuse the consumption of plastic items.

The economic incentive to minimize the loss of materials to producers is linked to the boom of commodity trend consumables. It is incentivized remanufacturing sub-products from their manufacturing processes to keep waste at a minimum amount.

Other probable solution is to enable a marketplace between companies to trade secondary materials to use as a feedstock to their production processes, with the sole objective to reduce the end-of-life cycle of their raw materials in a “Cradle to Grave” point of view.

Recommendations to promote recycling markets:

- Develop blended funding entities
- Develop end-of-life incentive policies
- Create conditions to encourage investments
- Set strong environmental standards with transparent monitoring

**Does tax incentives within the supply chain of producers promote recycling?**

Tax incentives play a big role in circular economy. It can be a driver but it is also a penalty to promote the use of secondary feedstock and remanufacturing processes.

**What type of collection systems might work?**

- We think to make sure we really invest in
- We need to balance the upstream factors

**What do you do to effectively achieve the 12$^{th}$ SDG?**

There is not a single action to promote this objective worldwide because of the various differences between industries and economies. However, one thing that can be done is to create a Global Value Framework to analyze and verify environmental impact as it has been done with GHG.

**Session 4:“Best Practices On Circular Economy: Chinese Experience ”**
**-Mr. Li Jinhui,** Basel Convention Regional Centre for Asia and the Pacific /Tsinghua University

This workshop is the link between circular economy and waste.

*Challenges:*

Solid waste in China is consisted of industrial waste, urban mine and rural waste.

Hazardous waste-generation and disposal: big amount, more types, and various sources. The cases related to solid waste are “dangerous”

China is the largest plastic consumption and waste generating economy in the world. Also the largest importer of plastic waste. In 2017, the amount of waste plastics recycled in China was 16.93 million tons.

*Policy, law and regulation on circular economy*

The notice of the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issued the Measures for the Evaluation

and Examination of the Objectives of Ecological Civilization Construction (No.45 of the Office Word [2016]),

In December 12, 2016, The State Development and Reform Commission, the State Statistical Bureau, the Ministry of Environmental Protection Organization Department of the CPC Central Committee issued “the Green Development Index System” and “the Examination Objectives System for the Construction of Ecological Civilization”

In 2013, the 27th UNEP Governing Council adopted a resolution to promote the concept of ecological civilization in China, marking the international community's recognition and support of the concept of ecological civilization in China.

1. The Circular Economy Promotion Law , implemented since January 1, 2009.
2. The Cleaner Production Promotion Law. adopted in June 29, 2002 and implemented since January 1, 2003. Revised in February 29, 2012, effective from July 1, 2012.
3. The National development and Reform Commission et al. issued Circular Development Leading Action, April 21, 2017.
4. The Law of the on the Prevention and Control of Environmental Pollution by Solid Waste

In 2016, the world’s new energy vehicles sales were about 862 thousand units, with an increase of 58%.

- Policy, law and regulation on domestic wastes
- Many cities have already regulative policies in terms of waste generation and management but the quantity of production might overshadow said policies. One solution is to elaborate a plan that works as an industrial park so that there is an effective and more sustainable way to recollect and recycle wastes within communities. This will further reduce the transportation and waste disposal costs and air pollution will be reduced because of the reduced distances traveled by recollection transports and disposal transports.
- Thanks to the implementation of a circular economy framework within various industries in China, 109 enterprises have obtained licenses of e-waste treatment that are qualified for the e-waste funding. This framework focuses in using sub products from production processes of one company in a manufacturing process on another company.
- Another dimension to further enhance the application of a circular economy framework is to improve the efficiency in the recycling rate. There have been improvements in the usage of water volumes in certain industries.
- One of the most ambitious program that China is planning is to create a “No Waste Society” this needs the support of the government to create an adequate environment to make this possible.
- **Estimate of what % municipal solid waste is being recycled?**
- There is not official data for that but there are many organisms working together to calculate and analyze this data.
- **What % of waste reduction/recycling is necessary to be considered as a “No waste Society”**

- This concept comes from an economic point of view but in order to achieve a certain degree of “No Waste” there needs to be an improvement in efficiency and to start working on city level projects to help achieve this.
- **Are there any incentives to use reused materials or incentives for the recovery of materials considered as wastes?**
- Yes, there are some incentives applied on certain cities. This means that there are local level policies for recycling plastics. There is no funding mechanism to support these types of policies on a national level.

**Session 5**:**Sustainable Packaging Coalition –Leading voice on sustainable packaging with a membership that encompasses the entire supply chain**

-**Ms. Nina Goodrich**, Director, Sustainable Packaging Coalition

Single Use Plastics, bans applied to replace the money lost from the Brexit.

Agreement:
Role of the Women included

Best in Class Goals: Coca-Cola, McDonalds, PepsiCo, Unilever, Walmart

We need to embrace the momentum created by single use plastics and leverage it to tackle the larger problem of developing system-based solutions for all packaging. We can’t get distracted by single substrate solutions.

Landfill and ocean are the worst place to dispose the plastics.

Most of the plastics do not float: 94% that are in the ocean are missing. Only 1% of the plastics are floating.

The pieces of plastics in the ocean are like the microorganisms.

Let’s not clean the ocean, let’s focus on land.

- The challenge: If we only design for recycling but no one buys the material, then it is not recyclable.
- Creating demand: Create additional monetary value of the materials.

Recyclability claim in the US is a market claim.

We need to focus on all materials: Mixed paper remains at an average low of $1.56 per ton, down from $71 per ton one year ago.

Two key drivers for recyclability: carbon footprint and recyclability.

Should we be limiting material options or expanding recovery solutions? Not all the materials can be eliminated. Flexible packaging will continue to increase at the expense of traditional packaging. New recycling solutions will be required.

What is circularity for plastics?

Plastics have a limited number of cycles before they degrade:

—Heat histories, Environmental damage, Impurities

Circularity for plastics: Chemical Recycling can complement mechanical recycling and process the materials that can't be mechanically recycled.

Sustainable Packaging coalition: NGO, 250 members: packaging converter, brand owner, material manufacturer.

- Sourcing: Certified, recycled and bio-based
- Material health
- Optimization: Can be measured multiple ways (weight, damage reduction, shelf-life, carbon, water etc.)
- Recovery

How2Recycle: 133 members.

- Members represent $295 billion in sales in North America.
- 67% of people assume that packaging ISN'T recyclable if they don't see a claim on the package.
- 82% Of people learn from How2Recycle.
- How2Recycle distinguishes between lookalike packages
- Since last October, How2Recycle has made over 18,000 specific design recommendations to its members to improve packaging recyclability.
- They are working for Design for Recycled Content Guide
- They are material neutral but are against biodegraded additives

Q&A

What is your perspective about the position of the governments in this theme?

- It has to be about the local situation about waste

What is the future solution?

- The companies have a huge roll to play

Do you see opportunities with local governments?

**Session 6: Panel - Success story of post-consumption waste collection and recycling in Mexico**

- Mr. Jorge Treviño, Director of ECOCE, Mexico
- Mr. Jaime Cámara, CEO at PetStar, Mexico

- Mr. Jorge Treviño, Director of ECOCE, Mexico

There were two problems involving the topics of packaging and waste:

- Visual Dispersion
- The space used and the cost of collection, transport and treatment of this waste

In initial years, the actions to mitigate the waste generation were not enough. There was an increased pressure from governments against PETE containers. ECOCE analyzed many models to recollect and give the proper management to solid wastes.

Nowadays there is something called a Shared Producer Responsibility where everyone inside a community is taken into account to share a responsibility in waste management because you are either a producer or a consumer, everyone produces waste.

ECOCE represents 29 industrial groups, more than 150 goods factories, 8 containers material and more than 400 brands. This means that it doesn't matter if there are two rival companies sitting in the same table, them both are working for the same goal. Thanks to this collaboration the collection of PETE in Mexico, has been the highest in the last 6 years with 58% of PETE collected, above Canada, United States, and at par with the European Union.

PETE recycling industry has enabled job generation, a new domestic market, less quantities of waste, certainty of consumption and welfare. Also, thanks to the participation to both producers and consumers it has been considered as a form of Circular Economy for the PETE plastic.

Taking into account that most of the PET disposed comes from the community, ECOCE has created various programs to incentivize the continuous participation from all members of the communities. There are also government synergies where government officials participate in cleaning activities in various Mexican beaches.

ECOCE believes that they can have a mutual endorsement with the Ellen Macarthur Foundation to promote the New Plastics Economy and to start promoting it within the Latin American community.

- Mr. Jaime Cámara, CEO at PetStar, Mexico

Sustainability Global Challenges:

- In 2012 became part of the Mexican Coca-Cola Industry
- In 2016 "The New Plastics Economy": was a call for action. The proposal is to move from the linear economy to the circular economy
- In 2017 "Catalyzing action". The proposal: 30% redesign, reuse, recycling
- In 2018 "The Commitment of Global Companies": World Without Waste

What happen with plastics isn´t the most important? What are the unexpected consequences of our actions?

PETSTAR approach to the Challenges:

- Inclusive recovery
- Collection processes
- Recycling processes
- Customers market
- Circular Economy
- Zero plastic leakage
- Sustainability: social, environmental, economic value
- Philosophy of excellence
- Mission, vision, values

1,000 direct jobs and 24,000 indirect jobs

CEDIC: project for the pickers' children

Economic value is about the valorization of the products

Museum:

- Open policy to visits
- Promote information on how to dispose the bottles

Panel (Moderator: José Ramón Martínez)

Jaime, we know that before ECOCE you have your own company for collection.

- We started collected bottles in 2005, the volatility of the market made it unviable

Jorge, in your opinion what was the biggest challenge to put all industries together despite the fact that most of them are competitors?

- The big challenge is to speak truthfully because people tend to ignore the actual situations and try to believe that there are magical solutions. The truth is that you need a lot of money to make a change, and this often creates problems to the bottler companies and the producers of these materials. There are a lot of ideas but all of these ideas need money to become reality. It is also a great idea to include the Government in these types of solutions because they often are responsible to facilitate and prepare the panorama to apply new solutions.

Jaime, based on your experience. what do you think it works better? Recycling vs. regulations

- Banning is complex, has many unknown environmental costs
- We have to redesign, rethink and find alternatives were the producers comply with the commitment to reduce the recycled content and the government needs to promote the use of recycled content

Jorge, could you tell us why is so different to migrate from a producer responsibility to a shared responsibility?

- It is important to understand that everyone produces waste. However, it is often known that people like to point all the responsibility to the producer companies and that is not true. We are trying to change this educational issue, but it takes time. We try to give the people certain incentives to promote this educational shift in our communities so that the consumer gets involved in this process.

Jorge, collection is a cost. Can you talk about the cost of the social programs?

- ECOCE is working with an annual budget, with that finance the social programs
- At the begging the collection was subsided
- Now we have communication campaigns and different programs, synergies with the governments
- All of the budget came from a monthly "amount" of the companies

Jaime, from the economy aspect. What is better produce PET food grade or cloth

- In Mexico we choose bottle to bottle, because it is more circular
- At the end, the importance is to taken away from the environment

How does the “price of the resin” works?

- At the beginning we were just collectors, with depended from the external market

How do we can replicate it? What are the key elements?

- A few years ago, the technology was not developed. Today, the technology is there.
- The key is to compromise the companies and actors.
- One option is to look for the circular solution (bottle to bottle), but also is a solution the linear (cloth). You need to find what part of the value chain is weaker.

## Session 7. Ms. Judith Achar, Mitz Foundation, Mexico

### SME development and inclusion in the waste management system in Mexico

Mitz is an NGO that is helping women that live below the minimum welfare line to produce fashion and consumer items made of recycled waste from companies like Coca-Cola Femsa. They are trying to create an economic model with the main objective to create a win-win situation between the producer companies and the women throughout the communities in Mexico.

This helps to further delay the end-of-life of the products produced by companies like Coca-Cola and give them a second non-conventional life. Mitz produces items such as: handbags, purses, keychains and many more.

Mitz relies and promotes the fact that artisan production fosters economically viable communities and preserves culture that is essential for healthy and sustainable development. To support these types of activities companies are indirectly supporting concepts like gender equality, and inclusive economic development worldwide policies.

**What were the steps taken to create this enterprise?**

The first step was to observe what were the opportunities that companies needed that could be represented by these types of activities. Also many companies have very complete Social Responsible plans so they could also apply them with the women communities that are working with us. It is also important that when the women that work with us have an onboarding with the companies that are produced by all of these companies. This is the most direct form of relation between the artisans and the enterprises.

**How do you recommend for our guests to apply these activities in their economies, what else can they do?**

First there has to be passion in what they are doing and to compromise alongside the women so that they can flourish in their economies and most importantly to make her an economically viable person because, sometimes, they are the only source of income in their families.

## Session 8. Mr. Joseph C. Pickard, Institute of Scrap Recycling Industries. (IIRC)

## Recycling specifications and standards in circular economy

The mission of the IIRC is to promote safe, economically sustainable and environmentally responsible recycling through networking, advocacy and education, to serve as a guideline in the discussions between buyers and sellers of recycled material and scrap products worldwide.

Economic impact of the scrap recycling industry: The scrap recycling industry creates and supports jobs at the same time as it has a positive impact on the environment.

Economic benefits: The junk industry generate prosperous jobs. People and companies that buy, process and market support 534.506 well-paid jobs in the U.S. and generate $116.9 trillion annual economic activity.

Environmental benefits: The recycling industry is fundamental in environmental protection, resource conservation and sustainable development. When recycling reduces the need to extract new ore and cut more trees, there is a significant energy saving compared to the use of virgin materials, reducing greenhouse gas emissions; And it reduces the impact that is sent to Earth, saving him for better use.

Commercial Recycling Benefits: The net export of scrap from the U.S. has made a positive contribution to U.S. exports for trade, which amounts to more than 235 trillion.

## Workshop "How to implement a circular economy project focused on post-consumer waste in the APEC economies"

ABAC Mexico, Darío Ochoa

- Explained what the workshop consisted of and advised the participants.
- The representatives of the economies shared the results of the exercise in which they applied some of the elements learned in the series of conferences presented the previous day, to the specific case of their economy.

## Conclusions and closing

Mexico´s SOM, María Cristina Hernández Zermeño and José Ramón Martínez, on behalf of ABAC Mexico, concluded the event and reiterated Mexico's willingness to continue supporting the work carried out within the framework of APEC in terms of circular economy.