



**Asia-Pacific  
Economic Cooperation**

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**2019/SOM1/CD/020a**

Agenda Item: 4c

## **Best Practices on Circular Economy: Redefining Growth From Waste to Worth Meeting Highlights**

Purpose: Information

Submitted by: Mexico



**22<sup>nd</sup> Chemical Dialogue  
Santiago, Chile  
24 February 2019**

The background of the top section is a vibrant green with wavy, layered patterns. In the center, there is a dark green silhouette of a city skyline. Key features include a tall monument with an eagle on top (resembling the Aztec Sun Stone), a large domed building, and various other architectural structures. The text is overlaid on this background.

# Best practices on Circular Economy:

**“Redefining growth - from waste to worth”**

**October**  
**16 -17 / 2018**  
**Mexico City, Mexico**

Highlights  
October 16<sup>th</sup>



Coca-Cola FEMSA, Mexico's Ministry of Economy and APEC's Committee, in representation of ABAC organized the Workshop **"Best Practices of Circular Economy: Redifining growth – from waste to worth"** which was held in Mexico City the 16<sup>th</sup> and 17<sup>th</sup> of October.





Mr. José Ramón Martínez, representative of ABAC Mexico and Ms. María Cristina Hernández, Mexico's SOM, share with the participants an introduction and opening remarks.





Ms. Chever Voltmer from Ocean Conservancy, talked about “The Challenge of Post Consumption Waste in the world -From pollution to business opportunities”.

She proposed that the solution of the plastic problem can be solved with the following activities: supporting smart policy funding innovation, developing on the ground solutions, building partnerships, and building shared priorities and goals.

Ms. Dolores Barrientos from the United Nations Environment Programme, shared some statistics about the use and management of plastics.

She said that with the Circular Economy Model, there is a shared responsibility between the producers and consumers.





Mr. Mathy Stanislaus from the World Resource Institute, presented “The circular economy -concept how to be implemented for post-consumption waste”.

He shared 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.

Mr. Li Jinhui from the Basel Convention Regional Centre for Asia and the Pacific /Tsinghua University/Ministry of Ecology and Environment of People’s Republic of China , spoke about the “Best Practices On Circular Economy: Chinese Experience ”

Dr. Li said that as a result of the implementation of a circular economy framework within various industries in China, 109 enterprises have obtained licenses of E-waste treatment. Also, another dimension to further enhance the application of a circular economy framework is to improve the resource efficiency in the recycling rate and to become a no waste society.





Ms. Nina Goodrich from the Sustainable Packaging Coalition – Leading voice on sustainable packaging with a membership that encompasses the entire supply chain, affirmed that 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. Also, she shared the success of the Sustainable Packaging Coalition and How2Recycle.



Mr. Jorge Treviño from ECOCE and Mr. Jaime Cámara from PetStar participated in the panel “Success story of post-consumption waste collection and recycling in Mexico” where José Ramón Martínez was the moderator.

Mr. Jorge Treviño talked about the creation of the recycling industry in Mexico, and the benefits of the Shared Producer Responsibility. Mr. Jaime Cámara spoke about the sustainability global challenges, the PetStar (food grade recycling plant) approach to the challenges and their social and educational projects. Then, both answered questions of the participants, to clarify how they can replicate these models.







Ms. Judith Achar from the Mitz Foundation spoke about the “SME development and inclusion in the waste management system in Mexico”.

She shared the success of Mitz, an NGO that is helping women that live below the minimum welfare line to produce fashion and consumer items made leftovers of different companies. Their main objective is to create a win-win situation between the producer companies and the women throughout the communities in Mexico.

# Highlights

## October 17<sup>th</sup>



The participants went to IMER “Mexican Recycling Industry”, they learned about the process and technology to produce a food grade resin, and about the transfer centers to produce better quality bales.





At IMER Dr. Joseph Pickard from The Institute of Scrap and Recycling Industries spoke about the “Increase use of recyclable materials in manufacturing”.

Mr. Dario Ochoa from ABAC Mexico lead the Workshop "How to implement a circular economy project focused on post-consumption waste in APEC Economies". At the end, all the Economies shared their insights and learnings.











*Full photograph album*

Roadmaps from each Economy

# Malaysia





# Construction of a Roadmap

Elements	Recommendations	Current Situation Yes / No	Actions to fill gaps
<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- Incorporate the design into regulation</li> <li>- Strengthen the implementation of regulation</li> <li>- strengthen the enforcement</li> </ul>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- the regulation for industrial/commercial/institutional waste just been introduced</li> <li>- Strengthen the implementation of regulation</li> <li>- strengthen the enforcement</li> </ul>
<b>Recycling</b>			
Collection Systems	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- strengthen the enforcement of Key Performance Index (KPI) of concessionnaire company.</li> <li>- to review the collection and public cleansing scheme (focusing on rural area)</li> </ul>
Recycling Systems	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- not enough recycling centre</li> <li>- to prepare holistic mapping of recycling systems</li> </ul>
<b>Other Material Uses</b> Waste to Energy Composting	<ul style="list-style-type: none"> <li>- Existence of composting / waste to energy alternatives for materials that feasibility of recycling is low.</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- To fully utilize the existing facilities for composting</li> <li>- WTE still in construction</li> </ul>

You can add some additional suggestions taken from the experts during the workshop to reinforce the circular economy elements

# Viet Nam



# Construction of a Roadmap

Elements	Recommendations	Current Situation Yes / No	Actions to fill gaps
<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- Incorporate the design into regulation</li> <li>- Strengthen the implementation of regulation</li> <li>- strengthen the enforcement</li> </ul>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- the regulation for industrial/commercial/institutional waste just been introduced</li> <li>- Strengthen the implementation of regulation</li> <li>- strengthen the enforcement</li> </ul>
<b>Recycling</b>			
Collection Systems	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- strengthen the enforcement of Key Performance Index (KPI) of concessionnaire company.</li> <li>- to review the collection and public cleansing scheme (focusing on rural area)</li> </ul>
Recycling Systems	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- not enough recycling centre</li> <li>- to prepare holistic mapping of recycling systems</li> </ul>
<b>Other Material Uses</b> Waste to Energy Composting	<ul style="list-style-type: none"> <li>- Existence of composting / waste to energy alternatives for materials that feasibility of recycling is low.</li> </ul>	- YES	<ul style="list-style-type: none"> <li>- To fully utilize the existing facilities for composting</li> <li>- WTE still in construction</li> </ul>

You can add some additional suggestions taken from the experts during the workshop to reinforce the circular economy elements



# Indonesia



# Construction of a Roadmap

Elements	Recommendations	Current Situation Yes / No	Actions to fill gaps
<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- Yes</li> <li>- Yes</li> </ul>	<ul style="list-style-type: none"> <li>- SNI recycle PET (SNI 8424 2017) this standard sets quality and recycles PEY resin as a raw material for general and food packaging</li> <li>- Minister of Home Affairs Regulation No. 33 2010 Waste Management Guidelines: article 20 Gov give incentive to institution, business entities, and individuals to do the best innovation in waste management, reporting on violation of prohibition, and reduction of waste generation</li> <li>- Law No 18 2008 about solid waste management article 4 solid waste management aims to improve public health and environmental quality and make waste as a resource</li> <li>- SNI <u>19-7030-2004</u> Composting and domestic organic solid waste specification; SNI 19-2454-2002 Management, Technique, and Procedure of Urban Solid Waste</li> </ul>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	<ul style="list-style-type: none"> <li>- <u>Yes</u></li> <li>- <u>Yes</u></li> </ul>	<ul style="list-style-type: none"> <li>- Minister of Environment Decree No. 127 Year 2002 (corporate performance rating program) Indonesia has a program called PROPER that gives rating to companies that has complied all of the environmental regulation such as waste management for manufacturing standard, efficient use of resource through 4R (reduce, reuse, recycle, and recovery) – highest rating is green</li> <li>- Similar program with the above but with the highest rating which is gold – consistently showing the environmental excellency</li> </ul>
<b>Recycling</b>			

# Peru





# Construction of a Roadmap

Current regulation in Peru (December 2017) has prioritize the principles of circular economy, valorization of materials. extended product responsibility, shared responsibility, and protection of environment and public health.

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<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	NO	<p>Government need to develop design standards and certifications for packing materials.</p> <p>New regulations includes ecodesign but is not developed</p>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	NO	<p>Ministry of Industry and Ministry of environment need to promote certifications for waste management.</p> <p>New regulations includes eco-labeling but is not developed</p>
<b>Recycling</b>			
Collection Systems	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	<p>YES</p> <p>Actually, Peru has segregation systems in few local governments. Also has informal systems (municipal waste)</p>	<p>Government must help in the formalization of recyclers and incorporate them into the value chain</p>
Recycling Systems	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	<p>YES</p> <p>Pilot program called “RECICLAME” Initiative between the Ministry of Environment, private sector and local governments , in order to increase the recycling of plastic, cardboard and glass, in the municipal and no municipal areas.</p>	<p>Evaluate the feasibility to implement a collective waste management system</p> <p>More agreements between Government, Private Sector and to set incremental collection goals for key materials.</p>
<b>Other Material Uses</b> Waste to energy Composting	<ul style="list-style-type: none"> <li>- Existence of composting / waste to energy alternatives for materials that feasibility of recycling is low.</li> </ul>	<p>YES</p> <p>Pilot program between the Ministry of Environment, Ministry of Industry and private sector, about co-processing of tires out of use to generate energy in cement companies for the manufacture of clinker</p>	

# Thailand



# Construction of a Roadmap

Elements	Recommendations	Current Situation Yes / No	Actions to fill gaps
<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- Yes</li> <li>- Yes</li> </ul>	
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- Yes</li> </ul>	
<b>Recycling</b>			
Collection Systems	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (Not effective)</li> <li>- Yes</li> <li>- No</li> <li>- Yes</li> <li>- No</li> </ul>	<ul style="list-style-type: none"> <li>- Encourage waste separation from the source (household/office etc.)</li> <li>- Provide enough funding for the local government to improve their infrastructures (trucks, bins) and manpower.</li> <li>- Regulate a better municipality law on waste collection system.</li> <li>- Implement a “pay as you throw” program</li> <li>- PPP model + local community</li> <li>- Reinforce at local level the segregation systems with focus on compostable /recyclable features.</li> </ul>
Recycling Systems	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- Yes</li> <li>- Yes</li> </ul>	<ul style="list-style-type: none"> <li>- Better and stricter law enforcement. Provide knowledge and technological support.</li> <li>- Government and Private sector should work together to set up a goal for each</li> </ul>



USA



# Construction of a Roadmap

Elements	Recommendations	Current Situation Yes / No	Actions to fill gaps
<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (APR, H2R, BPI)</li> <li>- Yes(Corporate and PAYT)</li> <li>- Yes (Corporate goals)</li> </ul>	<ul style="list-style-type: none"> <li>- More engagement between Stakeholders</li> <li>- More education on new technology that can enhance recyclability (re-pulpable coatings, approved labels, adhesives, sprayers) APEC could perhaps create this</li> <li>- Aspiration vs action, how will progress be measured</li> <li>- Claim validation</li> </ul>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (RIOS, ISO, FDA Food Contact))</li> <li>- Yes (city and corporate pilots)</li> </ul>	
<b>Recycling</b>			
<b>Collection Systems</b>	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (SS,Depots)</li> <li>- Yes (municipal, NGO, The recycling partnership))</li> <li>- Yes (Keep America Beautiful, Trade Associations, Cities)</li> <li>- No</li> <li>- Yes</li> </ul>	<ul style="list-style-type: none"> <li>- New Technology Investment for better sorting</li> <li>- Continued grants to reduce contamination</li> <li>- Collaboration</li> <li>- Oops tags, consumer waste audits of trash and recycling</li> </ul>

# Construction of a Roadmap

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Recycling Systems	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (addition of composting, film recycling pilots)</li> <li>- Yes (APR, corporate goals, market incentives when recycle is cheaper)</li> <li>- Yes (corporate and State California recycle content goals)</li> </ul>	<ul style="list-style-type: none"> <li>- Raw material suppliers are often not at the table</li> <li>- Education on how to incorporate PCR</li> </ul>
<b>Other Material Uses</b> Waste to Energy Composting Chemical Recycling	<ul style="list-style-type: none"> <li>- Existence of composting / energy to waste alternatives for materials that feasibility of recycling is low.</li> </ul>	<ul style="list-style-type: none"> <li>- Yes (composting initiatives)</li> <li>- Chemical Recycling</li> </ul>	<ul style="list-style-type: none"> <li>- Composting permitting</li> <li>- Chemical Recycling Permitting</li> <li>- Collection is an issue for composting and flexible films.</li> </ul>





# Chile



# Construction of a Roadmap

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<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- No</li> <li>- Yes</li> <li>- No</li> </ul>	<ul style="list-style-type: none"> <li>- Development a labeling of recyclability's standard</li> <li>- Development regulations covered by the law to set recycling targets for tires; a tires; packaging; engine batteries; lubrications oils; electronic devices and batteries.</li> </ul>
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	<ul style="list-style-type: none"> <li>- No</li> <li>- Yes</li> </ul>	<ul style="list-style-type: none"> <li>- Ministry of Economy Developing a voluntary pilot label zero-waste</li> </ul>
<b>Recycling</b>			
<b>Collection Systems</b>	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- Yes</li> <li>- No</li> <li>- Yes</li> <li>- No</li> </ul>	<ul style="list-style-type: none"> <li>- Development regulations covered by the law to set collection and recovery (recycling) targets for tires; packaging; engine batteries; lubrications oils; electronic devices and batteries.</li> </ul>
<b>Recycling Systems</b>	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- No</li> <li>- No</li> </ul>	<ul style="list-style-type: none"> <li>- We are including minimum recycling targets in the ERP regulation (explained before)</li> </ul>
<b>Other Material Uses</b> Energy to Waste Composting	<ul style="list-style-type: none"> <li>- Existence of composting / energy to waste alternatives for materials that feasibility of recycling is low.</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> </ul>	

China



# Construction of a Roadmap

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<b>Design</b>	<ul style="list-style-type: none"> <li>- Design Standards / Certifications (reusable, recyclable and compostable) for products/packaging.</li> <li>- Recyclability Initiatives/Incentives for Packaging/Materials</li> <li>- Recyclability Goals for packaging/products</li> </ul>		
<b>Production / Post Industrial Waste</b>	<ul style="list-style-type: none"> <li>- Standards / Certifications of waste management for manufacturing/operational facilities</li> <li>- Initiatives/goals to manage Post Industrial Waste (e.g Zero Waste)</li> </ul>	<ul style="list-style-type: none"> <li>- YES</li> <li>- NO</li> </ul>	<p>Specification and standards are priority to Chinese government, for regulating waste to qualified and verification products and materials. the pilot projects in cities for Zero Waste. Ministry of Ecology and Environment as the main line of leading the events and influence.at the same time, Ministry of Industry and Information Technology of China and China association of environmental protection industry(CAEPI) would associate with the working process and contribute the efforts.</p>
<b>Recycling</b>			
<b>Collection Systems</b>	<ul style="list-style-type: none"> <li>- Waste Sorting/Segregation systems</li> <li>- Initiatives for waste management education/awareness</li> <li>- Collective waste management models/systems</li> <li>- Value chain development program for waste collectors</li> <li>- Collection/Sorting waste goals</li> </ul>	<ul style="list-style-type: none"> <li>- YES</li> <li>- yes</li> <li>- no</li> <li>- no</li> <li>- no</li> </ul>	<ul style="list-style-type: none"> <li>- promote EPR ;policy formulation to encourage degraded substances and to lead the high grade and valuable recycles to qualified recycling industries.</li> <li>- sorting Collection Recycling</li> </ul>
<b>Recycling Systems</b>	<ul style="list-style-type: none"> <li>- Existence of recycling industry/transformation at local level</li> <li>- Incentives / Goals for Raw Material producers to increase content of Recycled Material</li> <li>- Recycled Content Goals for packaging/products</li> </ul>	<ul style="list-style-type: none"> <li>- Yes</li> <li>- no</li> </ul>	<ul style="list-style-type: none"> <li>- Reclying industries are high hierarchy among the markets. The cities and communities are demonstrations ,they use the collection transformation and operation mechanism.</li> <li>- Ministry of housing and urban-rural development of china and ministry of</li> </ul>