RESOURCE EFFICIENCY IN URUMQI (CHINA)

ACTION BRIEF

CODE: URU-ABXX

TOPICS:
RESOURCES
CAPACITIES

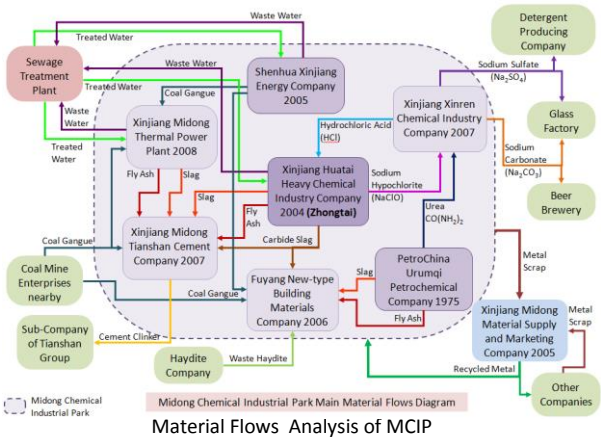
PROMOTING CIRCULAR ECONOMY AND MATERIAL EFFICIENCY IN URUMQI

CHALLENGE

A national circular economy law named *The Circular Economy Promotion Law* came into effect on 1st of January 2009, making circular economy a national strategy of economic and social development in China. One of the key concepts of circular economy is material efficiency, which need to be effectively implemented in municipal areas, especially in industrial parks (IPs), where the highest potential exists. Urumqi, the capital of Xinjiang Uygur Autonomous Region, set an ambitious goal to promote its material efficiency. Under the 12th Five-Year Plan of Urumqi (2011-2015), the target for the comprehensive utilization rate of industrial solid waste (or recycling rate) was set at 85% by 2015, which is 17% higher than it was in 2010. In the last decade, this indicator has remained at almost the same level and has never exceeded 69%. Under such circumstances, in order to accomplish such an ambitious goal, innovative methods and management approaches which could effectively promote circular economy and material efficiency in Urumqi are urgently needed.

ACTION

Midong Chemical Industrial Park (MCIP), which is the largest IP in western China, was selected as the pilot area in which to implement a material flow analysis method used to promote material efficiency. Capacity building regarding circular economy was carried out at the Xinjiang University of Finance and Economics (XJUFE), which is one of the most famous universities in Xinjiang in the field of circular economy. In order to better understand the material flows of the enterprises within MCIP, around 50 key enterprises in MCIP were interviewed on several occasions using different methods, including site visits, round table discussions and a questionnaire survey. A German delegation made up of experts from government agencies, scientific institutes and enterprises visited Urumqi in 2011, interviewing industrial sites and exchanging ideas with Chinese experts, thereby paving the way for further activities and future investment. In June 2012, a Chinese delegation mainly composed of representatives from the MCIP administrative committee and related enterprises visited Heidelberg. By visiting industrial areas and enterprises, know-how regarding how to promote material efficiency in German was transferred. In March 2012, scientists from IUWA provided two lectures in XJUFE on the topic of circular economy and industrial ecology and more than one hundred teachers and students participated. The network between IUWA and XJUFE was established by formal and informal meetings and a teacher from XJUFE carried out a one year post-doctoral study regarding circular economy in Heidelberg which will help to further promote material efficiency in Urumqi.



Material Flows Analysis of MCIP

Lectures given by German experts in XJUFE

RESULTS

STATE OF IMPLEMENTATION:

- More than 20 enterprises in Urumqi were interviewed by German experts with site visits.
- More than 50 enterprises in Urumqi were interviewed by questionnaires designed by German experts.
- Material flow analysis of MCIP was carried out, which provide useful information for improving material efficiency in MCIP.
- Training of university teachers and students was implemented with lectures given by Germany experts and more than one hundred teachers and students participate.

LOCAL USERS / TARGET GROUPS:

- Midong Chemical Industrial Park (MCIP), Xinjiang Academy of Environmental Protection Science (XAEPS), Xinjiang University of Finance and Economics (XJUFE), enterprises, students and teachers.

IMPACTS:

- Enterprises within MCIP provided valuable production and waste data and has demonstrated readiness to optimize their material flows.
- MCIP is willing to carry out circular transformation to promote material efficiency and planning to apply for a national pilot project.
- Teachers and students got more knowledge about circular economy and industrial ecology.
- Chinese partners are ready to apply for new cooperation opportunity together with IUWA to further promoting circular economy and material efficiency in Urumqi.

MULTIPLICATION:

- An IP circular transformation plan made by XAEPS (a key partner of IUWA) for Urumqi Economic and Development Zone (UEDZ) which is one of the national industrial park in China, has been approved by the central government.
- A new project focusing on promoting circular economy in Xinjiang thermal power industry, which financed by Xinjiang Development and Reform Commission, was started in June 2012.
- A new project application focusing on improving material efficiency of municipal solid waste was submitted.

LONG-TERM CONSOLIDATION:

- Other industrial parks could take the successful experience from MCIP and carry out material flow analysis to study options for further facilitate material efficiency.
- The sustainable development of Urumqi city will be enhanced by facilitating material efficiency of industrial parks.
- The Chinese government will provide more subsidies to support circular economy related scientific researches and demonstration projects in pilot areas.

CONTACT

Project: RECAST Urumqi - Meeting the Resource Efficiency Challenge in a Climate Sensitive Dryland Megacity Environment - Urumqi as a Model City for Central Asia
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