



## The 18<sup>th</sup> International Conference on Waste Management and Technology (2023 Global Waste Forum)

May 20-23, 2023 Sanya, Hainna, China

Pollution reduction and carbon reduction are promoted in a coordinated manners

# **CONFERENCE MANUAL**

## All participating organizations

#### Host

- Tsinghua University
- The People's Government of Sanya City
- Department of Ecology and Environment of Hainan Province
- China Association of Environmental Protection Industry

#### Organizer

- Basel Convention Regional Centre for Asia and the Pacific
- Sanya Ecology and Environment Bureau
- Institute of Pollution Control Technology on Solid Waste, Chinese Research Academy of Environmental Sciences
- The Society of Solid Waste of Chinese Society for Environmental Sciences
- Circular Economy Branch, Chinese Society for Environmental Sciences
- China Association of Environmental Protection Industry Solid Waste Treatment and Utilization Division
- Sanya Federation of Academicans
- Stockholm Convention Regional Centre for Capacity-building and the Transfer of Technology in Asia and the Pacific
- Environment Management Professional Committee, Society of Management Sciences of China
- Hainan University

#### Supporter

- United Nations Environment Programme China Office
- United Nations Centre for Regional Development (UNCRD)
- Center for Environmental Education and Communications of Ministry of Ecology and Environment
- IPLA-a SDG partnership
- Ellen MacArthur Foundation
- Jiangxi Green Recycling Co., Ltd.
- Greennovo Environmental Technology Co., Ltd
- Qingdao Standard Hengli Environmental Technology Research Institute Co., Ltd.
- Shaanxi Anxin CRT Recycling Processing Application Co., Ltd.
- Shenzhen Lvhuan Renewable Resources Development Co., Ltd.
- Zhejiang Weidun Environmental Technology Co., Ltd.
- Zhefu Holding Group Co.,Ltd.
- Bruker (Beijing) Scientific Technology Co., Ltd.
- Guangxi Environmental Protection Industry Investment Group Co., Ltd.
- Huzhou Chengtai Fluoroplastic Environmental Protection Recycling Co. Ltd.
- Pujin Environmental Engineering (Hainan) Co.,Ltd.
- MDPI(Beijing) Science & Technology Service Ltd. Co.
- Circular Economy, Tshinghua University Press
- Frontiers of Environmental Science & Engineering
- Energy Foundation
- Sanya Envireonmental Investment Group Co.,Ltd.

## CONFERENCE ORGANIZATION

CONFERENCE CHAIRMAN			
Mr. Jinhui Li			
	Scientific committe	ee of the conference	
Chairman	Jiming Hao		
Co-Chairman	Seeram Ramakrishna		
	Anupam Khajuria	Daniel C.W. Tsang	Esward Chen
	Helmut Rechberger	Johannes Sauer	Oladele A. Ogunseitan
	Paul Ekins	Stefan Salhofer	Thomas H. Christensen
	Yong Sik Ok	Shenxu Pao	Dezhen Chen
	Hong Chen	Weiqiang Chen	Xiangping Chen
	Yang Chen	Longpeng Cui	Xiangzheng Deng
	Faqin Dong	Lian Duo	Suehuai Gau
Members	Yong Geng	Pinjing He	Haobo Hou
(Order by surname alphabet)	Jingping Hu	Minghong Huang	Qifei Huang
	Guangming Li	Rundong Li	Xiujin Li
	Zhang Lin	Jinghao Liu	Xiaoming Liu
	Lei Shen	Zhi Sun	Tang Lin
	Fei Wang	Weixiang Wu	Xiaoli Xi
	He Xu	Guoren Xu	Dongbei Yue
	Fushen Zhang	Hua Zhang	Huiyan Zhang
	Xiaodong Zhang	Zhangsheng Zhang	Qingliang Zhao
	Chuncai Zhou		

Organizing Committee			
Chairman	Jinhui Ll		
CONFERENCE CHAIRMAN			
Chairman	Jiming Hao		
	Anupam Khajuria	Shunichi Honda	Guanyi Chen
	Mengjun Chen	Chen Yang	Chen Yuan
	Longpeng Cui	Shan Guijuan	Liang Dong
Sub-forum convener	Qingyin Dong	Huabo Duan	Lizhe Duan
(Order by surname alphabet)	Tingyu Fan	Huan Li	Kang Liu
	Tingting Shen	Lu Sun	Yifei Sun
	Yunan Sun	Xiaofang Xu	Ming Zhao
	Zeng Xianlai		

## Conference agenda

Agenda in brief		
Date	Conference content	Time
	Registration and check-in	10:00-22:00
20 May	Protection Industry Solid Waste Treatment and Utilization Division	9:00-18:00
	Technology visit Route 1 Circular economy industrial park- GuangDa Environmental Energy (Sanya) Co Ltd Route 2 West Island: Zero plastic and eco-plastic construction Route 3Zero waste scenic spot visit	13:00-18:00
21 May	Plenary Meeting	9:00-18:00
	Plenary Meeting	9:00-18:00
22 May	Parallel session in English	9:00-18:00
	Thematic sub-forums	9:00-18:00
23 May	Plenary Meeting	9:00-18:00
	Thematic sub-forums	9:00-18:00

## **Plenary Agenda**

Sunday, 21 May 2023

#### 9:00-12:10 a.m

Opening Ceremony ZOOM meeting ID:996 8434 4017, Password:235001

Chaired by Prof. Jinhui LI Executive Director of Basel Convention Regional Centre for Asia and the Pacific, Professor of School of Environment, Tsinghua University, Distinguished Professor of the "Yangtze River Scholars Award Program" of the Ministry of Education, Chairmen of ICWMT18

> Mr. Zixin WEI, Sanya Municipal Party Committee Standing Committee Member and Deputy Mayor of the Municipal Government

> Mrs. Xinfang ZHANG, Department of Ecology and Environment of Hainan Province

Mr. Zhiqiang ZHOU, Ministry of Ecology and Environment of the People's Republic of China

Chengzhan GUO, Secretary of the Party Committee and President of the China Environmental Protection Industry Association

Prof. Jiming HAO, Academician of the Chinese Academy of Engineering, Professor of Tsinghua University, Chairman of ICWMT 18 Scientific Committee

Academician Forum: construction of zero waste city and carbon reduction, pollution control, increasing green and growth

Chaired by Hualin ZHAO former Chairman of the Supervisory Board of State-owned Key Large Enterprises of the State-owned Assets Supervision and Administration Commission of the State Council

	Prof. Xiangwan DU (online)	
9:40-10:10	Academician and former deputy director of the Chinese	TBD
5.40-10.10	Academy of Engineering, advisor for the National Expert	
	Committee on Climate Change	

9:00-9:40

10:10-10:40	Prof. Xiangeng ZHAO Academician and former deputy of the Chinese Academy of Engineering	Reflections on the Standardization of "Zero Waste City" Construction under the Dual Carbon Goals	
Chaired by Prof.	. Xiaohu DAI Professor and Dean of Environme Tongji University	ntal Science and Engineering Department of	
10:40-11:10	Prof. Li-an HOU Academician of the Chinese Academy of Engineering, Professor of the Chinese People's Liberation Army Rocket Force Engineering University	TBD	
11:10-11:40	Prof. Qi Wang Academician of the Chinese Academy of Engineering, professor of the Institute of Polymer Science and Engineering and the State Key Laboratory of Polymer Materials Engineering at Sichuan University	Waste Plastic Pollution Prevention and Control in Relation to Carbon Neutrality	
11:40-12:10	Prof. Liyuan CHAI (Online) Academician of the Chinese Academy of Engineering, Professor of the School of Metallurgy and Environment, Central South University	The Story of Arsenic	
	14:00-18:00 p.m		
Academician Forum: construction of zero waste city and carbon reduction, pollution control, increasing green and growth			
Chaired by Prof. Yong GENG Chair Professor and Dean of Environment Department, Shanghai Jiao Tong University			

14:00-14:30	Prof. Seeram Ramakrishna National University of Singapore, Academician of Royal Academy of Engineering (FRENG), Singapore Academy of Engineering, and Indian National Academy of Engineering	Materials Circular Economy Strategies for Lowering the Emissions and Pollution	
14:30-15:00	Prof. Thomas H. Christensen (online) Technical University of Denmark, Academician of the Royal Danish Academy of Sciences	The Future Role of Carbon Capture, Utilization and Storage in Waste Management	
	Keynote Report		
Chaired b	Chaired by Prof. Guanyi CHEN Professor and Vice President, Tianjin University of Commerce		
15:00-15:25	Mr. Xingbao GAO Department of Solid Waste and Chemicals, Ministry of Ecology and Environment of the People's Republic of China	Progress and Promotion Plan of "Zero Waste City" Construction	
15:25-15:50	Prof. Xiaohu DAI Professor and Dean of Environmental Science and Engineering Department of Tongji University	"South China Sea Experience - Blue Model" for "Zero-waste City" Construction	
15:50-16:15	Prof. Yong GENG Chair Professor and Dean of Environment Department, Shanghai Jiao Tong University	Toward Carbon Peak and Carbon Neutrality-Sustainable Resource Management	
Chaired by Jianxin YANG Researcher at the Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences.			

16:15-16:40	Prof. Beidou XI (online) Vice President, Chinese Academy of Environmental Sciences	Consideration on the synergistic effect of pollution and carbon emission reduction and high-quality development	
16:40-17:05	Prof. Guanyi CHEN Professor and Vice President, Tianjin University of Commerce	Reflections on the Potential of Waste Biomass Energy Utilization and the Development of Pyrolysis Gasification Technology under the Dual Carbon Goals	
17:05-17:30	Prof. Guangming LI Tongji University	Carbon Flow in Treatment Process of Organic Solid Wastes	
17:30-17:55	Prof. He XU Institute of Ecological Civilization, Nankai University	Facilitate the development of circular economy to assist in pollution control and carbon reduction	
	Monday, May.22 2023 ZOOM meeting ID:996 8434 4017, Password:235001		
	9:00-12:00 a.m		
	Focus Topic: Hazardous Waste Manageme	ent and Risk Prevention	
Chaired by Ming ZHAO Associate Professor at the School of Environment, Tsinghua University.			
Chaired b	y Ming ZHAO Associate Professor at the Schoo	ol of Environment, Tsinghua University.	
Chaired b 9:00-9:25	y Ming ZHAO Associate Professor at the Schoo Prof. Qifei HUANG Institute of Solids, Chinese Academy of Environmental Sciences	ol of Environment, Tsinghua University. Hazardous Waste Identification Management	

9:50-10:15	Prof. Fei WANG Institute for Thermal Power Engineering of the Energy Engineering Departmen, Zhejiang University	Progress in Intelligent Operation and Pollution Control Technology of Incineration of Hazardous Wastes
10:15-10:40	Prof. Baoping XIN Director of the Research Office of Solid Waste Resource Technology, School of Materials, Beijing Institute of Technology	The Construction, Problems and Development Direction of the Theoretical System of Recycling of Heavy Hazardous Waste
	Focus Topic: E-waste Recycling and Asso	ciated Pollution Control
Chaired by P	u LU Associate researcher of Basel Conventior	n Regional Centre for Asia and the Pacific
10:40-11:05	Prof. Zheng CHEN Professor Jacobs School of Engineering, University of California San Diego	Low-cost and sustainable recycling of lithium-ion batteries
11:05-11:30	Prof. Zhi SUN Institute of Process Engineering, Chinese Academy of Sciences	Perspective for Recycling of Critical Energy Metals
11:30-11:55	Prof. Jingping HU Laboratory Centre of School of Environmental Science and Engineering, Huazhong University of Science and Technology	Research on Enhanced Leaching and High-Value Utilization of Cathode Materials of Waste Lithium-Ion Batteries
11:55-12:20	Prof. Xiangping CHEN Shaanxi University of Science and Technology	Problems and Countermeasures in the Process of Recycling and Recycling of Waste Lithium Batteries Under the Dual- Carbon Background

#### 14:00-18:30 p.m

Focus Topic: Integrated Utilization of Industrial Solid Waste

Chaired by Guanyou LU, Professor-level Senior Engineer at the China Academy of Building Research.

14:00-14:25	Prof. Haobo HOU Institute of Resources and Environmental Technology, Wuhan University (Zhaoqing)	Green and Efficient Comprehensive Utilization of Bulk Solid Waste
14:25-14:50	Prof. Dongyun DU Professor/Vice President, South-central University for Nationalities	Resource Treatment and Utilization of Electrolytic Manganese Slag
14:50-15:15	Prof. Xiaoming LIU School of Metallurgical and Ecological Engineering, University of Science and Technology Beijing	The Integrated Application of Red Mud and Other Industrial Solid Wastes in Cementitious Material
15:15-15:40	Prof. Jianguo DAI Department of Civil and Environmental Engineering, The Hong Kong Polytechnic University	Production of Artificial Geopolymer Aggregates based on Urban Solid Wastes
15:40-16:05	Prof. Yanjun HU Professor/Director Zhejiang University, Technology	Characteristics and combustion performance of composite fuels from industrial organic solid wastes
Focus Topic: Construction Technology and Mode Innovation of "Zero-Waste City"		
Chaired by Prof. Yanjun HU Professor/Director Zhejiang University, Technology		
16:05-16:30	Ms. Xin YANG Deputy director general, Sanya Municipal Bureau of Ecological Environment	The Work and Achievements of Zero- Waste City Construction in Sanya
		1

16:30-16:55	Mr.Zhong WEN Deputy director general, Shenzhen Municipal Bureau of Ecological Environment	An Introduction to the Zero-Waste City Construction in Shenzhen
16:55-17:20	Prof. Fenfen ZHU School of Environment, Renmin University of China	Sustainable Zero-Waste Cities-Exploring Technical Routes
17:20-17:45	Prof. Longpeng CUI SINOPEC Research Institute of Petroleum Processing (RIPP) Co., Ltd.	Innovation in Solid Waste Synergy Technology and Demonstration of Industrial Symbiosis Practice under the construction of the first "Zero-Waste Group" in China
17:45-18:10	Prof. Guanyou LU China Building Technology Center	The Core Idea and Technical Guide of "Zero-Waste Construction Site" Construction
Monday, May.22 2023, Parallel Meeting		
	9:00-12:00 a.m	
Ch	aired by Dr. Anupam Khajuria United Nations C	entre for Regional Development
9:00-9:25	Prof. Edward Chen Chinese American Society of Environmental Protection and Safety	Solid Waste Classification and Disposal Technology
9:25-9:50	Prof. Saleem H. Ali Geography and Spatial Science, University of Delaware, USA	Multiple Pathways of Waste Reduction and Decarbonization in Mining
9:50-10:15	Prof. Oladele Ogunseitan University of California, Irvine, Felllow of American for the advancement of science	Electronic Waste and Planetary Health: Synergistic Strategies for Mitigating Toxic Pollutants and Carbon Emissions

10:15-10:40	Prof. Suehuai Gau Department of Water Resources and Environmental Engineering, Tamkang University	Recovery of Municipal Solid Waste Incinerator Fly
10:40-11:05	Prof. Daniel C.W. Tsang Civil and Environmental Engineering, Hong Kong Polytechnic University, Hong Kong	Incineration Fly Ash Stabilization/ Solidification Using Low-Carbon Binders
11:05-11:30	Prof. Minoru FUJII National Institute for Environmental Studies, Japan	Promotion of Carbon Neutral Material Industries Through Highly Efficient Use of Resources
11:30-12:00	Prof. Seung-Whee Rhee Kyonggi University, Republic of Korea	Management Strategy on Marine Plastic Waste in Korea
	14:00-18:00 p.m	1
Chaired by Craig W. Boljkovac Senior Advisor at the Basel Convention Regional Center for the Asia-Pacific region		
14:00-14:25	Dr. Anupam Khajuria United Nations Centre for Regional Development	Waste into Value ~ Implications of Circular Economy and UN SDGs
14:25-14:50	Prof. Sadhan K. Ghosh Jadavpur University, India	Synergy of Reduction of Pollution & Carbon Footprints Through Coprocessing of Wastes
14:50-15:15	Prof. Marco Ritzkowski Hamburg University of Technology, Germany	Climate Neutral Landfills due to in Situ Aeration
15:15-15:40	Eirik Lindebjerg World Wide Fund for Nature	Analysis of international policy trends on marine plastic management
15:40-16:05	Dr Dongnan JIA, Ellen MacArthur Foundation	Towards a Circular Economy for Plastics: Global Progress and Opportunities and Recommendations for China

16:05-16:30	Prof. Stefan Salhofer University of Natural Resources and Life Sciences Vienna,Austria	Textiles as a Waste Stream		
16:30-16:55	Prof. Rainer Stegmann, Technical University of Hamburg, Germany	Waste Minimization a Social and Technological Challenge		
16:55-17:20	Prof. Poul Ekins, School of Resource and Environmental Policy, University of London	Waste Management: Whose Responsibility?		
	Tuesday, May.23 2023 ZOOM meeting ID:996 8434 4017, Password:235001			
	9:00-12:00 a.m			
	Focus Topic: Household Refuse Classification	n and Disposal Technology		
Chaired by Prof. Yang CHEN Professor of University of Chinese Academy of Sciences/National Environmental Protection Engineering Technology Center for Mercury Pollution Prevention and Control				
9:00-9:25	Prof. Jianguo LIU Professor/Director, Division of Solid Waste Management, School of Environment, Tsinghua University	Analysis and prospect of China's domestic waste classification and treatment industry development policy		
9:25-9:50	Prof. Weixiang WU Institute of Environmental Pollution Control, Zhejiang University	Technological Barriers of Msw Source Separation, Reduction and Utilization in China		
9:50-10:15	Prof. Li-an DUO School of Life Sciences, Tianjin Normal University	Pollution Remediation of Municipal Solid Waste (Msw)Compost and Its Application in Greening System		
10:15-10:40	Prof. Fushen ZHANG Solid Waste Treatment and Recycling Department at Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences	Recycling Waste Plastics for Plant Growing Substrate Synthesis		

Chaired by Prof. Jianguo LIU Professor/Director, Division of Solid Waste Management, School of
Environment, Tsinghua University

10:40-11:05	Prof. Zongguo WEN School of Environment, Tsinghua University	Engineering of urban multi-source solid waste collaborative disposal park and carbon reduction and pollution reduction analysis		
11:05-11:30 Academy of Sciences/National Environmental Protection Engineering Municipal Solid Waste Ind		Research on The Pretreatment of Municipal Solid Waste Incineration Fly Ash and Its Utilization of Building Materials		
11:30-11:55	Prof. Guohua JING Professor of Huaqiao University	High-efficiency and low-energy consumption carbon capture technology for carbon neutrality goals		
11:55-12:20	Prof. Shihan ZHANG Professor of Zhejiang University of Technology	Design and mechanism exploration of novel CO2 adsorption materials		
	14:00-18:00 p.m	1		
Fo	Focus Topic: Biomass Waste Treatment and Utilization as Resources and Energy			
Chaired by	Chaired by Prof. Xiaodong ZHANG School of Mechanical and Energy Engineering, Jimei University			
14:00-14:25	Prof. Zengqiang ZHANG Northwest Agriculture & Forestry University	Opportunities and Challenges of Composting of Perishable Refuse		
14:25-14:50	Prof. Qingliang ZHAO Harbin Institute of Technology	Biogas Production from High-Solid Anaerobic Digestion of Kitchen Wastes		

14:50-15:15	Prof. Dezhen CHEN Institute of Thermal Energy and Environmental Engineering, Tongji University	Pyrolysis-based Industrial Wastes Disposal and Resources Recovery		
15:15-15:40	5:15-15:40 Prof. Xiujin LI Beijing University of Chemical Technology Reutilization of Digestat			
(	Chaired by Prof. Qingliang ZHAO Professor of Harbin Institute of Technology			
15:40-16:05	Prof. Lin TANG College of Environmental Science and Engineering, Hunan University	The Research on the Anaerobic Microbial Degradation of Pollutants Enhanced by Biochar from Organic Solid Waste		
16:05-16:30	Prof. Yifei SUN Beihang University	High-quality energy conversion of biomass waste pyrolysis tar		
16:30-16:55	Prof. Xiaodong ZHANG School of Mechanical and Energy Engineering, Jimei University	Pyrolysis and Carbonization Characteristics of Seafood Wastes		
16:55- 17:10	Dr. Li Ying School of Environmental and Safety Engineering, North University of China.	"Circular Economy" Facilitates Waste Management and Promotes Pollution Reduction and Carbon Emission Reduction		
	Closing Ceremony			
16:55-17:20	Summary			

## Sub-forum agenda

No.	Sub-forum name	Organization	presenter	Time
1	Zero-waste city construction and Solid Waste Industry InnovationChina Association of Environmental ProtectionDevelopment Forum with Fifth General Meeting of the Commissioners in China Association of EnvironmentalIndustry Solid WasteXiaofang XUChina Association of Environmental Protection Industry Solid WasteTreatment and UtilizationXiaofang XUTreatment and Utilization DivisionDivisionDivisionXiaofang XU		Xiaofang XU	20 May
2	Integrated Pollution Prevention & Control of Industrial Solid Waste and EOD Practice	Anhui University of Science and Technology	Tingyu FAN	20 May
3	Zero-waste City Construction Management and Practice Forum	The Ministry of Ecology and Environment guide to	Xiaofang XU	22 May
4	The Role of Circular Economy in Supporting Business to Achieve Dual Carbon GoalsTsinghua University/Basel Convention Regional Centre for Asia and the PacificTingting SHEN		22 May	
5	Resource Engineering Forum on Carbon Neutrality of Multi-source Solid WasteThe Hong Kong Polytechnic UniversityKang LIU		Kang LIU	22 May
6	The 3 <sup>th</sup> Integrated Pollution Prevention & Control of Industrial Solid Waste and Industrial Symbiosis Forum	Sinopec Research Institute of Petroleum Processing Co., Ltd.	Longpeng CUI	22 May
7	Innovation and Development of Solid and Hazardous Waste Disposal and Resource Utilization Technology System	Lazardous Waste Disposal and source Utilization Technology Academy of Sciences		22 May morning
8	8 Hainan Province Zero-waste Island under the vision of carbon neutrality Centre for Asia and the Pacific		Lizhe DUAN	22 May morning
9	Power Battery Recycling and Synergistic Efficiency Seminar	Tsinghua University/Basel Convention Regional Centre for Asia and the Pacific	Qingyin DONG	22 May morning
10	Towards the Future Solid Waste and EnvironmentYoung Scholars Forum	Tianjin University of Commerce	Guanyu CHEN & Yunan Sun	22 May morning
11	The Main Path and Promotion Strategy for Zero-waste City Construction in Great Bay Area	Huazhong University of Science and Technology & Shenzhen University	Huabo DUAN & Huan LI	22 May fternoon

12	Global Circular Economy Forum	Tsinghua University	Xianlai ZENG	23 May morning
13	E-waste Pollution Control and Recycling	Southwest University of Science and Technology	Mengjun CHEN	22 May fternoon
14	Forum on Plastic Waste and POPs in Asia Pacific Region	Tsinghua University/Basel Convention Regional Centre for Asia and the Pacific	Qingyin DONG & Yuan CHEN	22-23 May
15	The 4 <sup>th</sup> Zero-waste City High Level Forum	Tsinghua University/Basel Convention Regional Centre for Asia and the Pacific	Guijuan SHAN	23 May morning
16	The 3 <sup>rd</sup> Interdisciplinary Frontier Academic Seminar on Material Cycle and Carbon Neutrality	Tsinghua University	Xianlai ZENG	23 May morning
17	Student Forum	United Nations Environment Programme, Basel Convention Regional Centre for Asia and the Pacific	Shunichi Honda	23 May morning
18	Biomass Waste Treatment and Energy	Beihang University	Yifei SUN	23 May fternoon
19	Advances in multi-technological treatment of organic solid waste for value-added product	Tsinghua University	Ming ZHAO	23 May fternoon
20	Special Session of UNCRD on International Partnership for Expanding Waste Management Services of Local Authorities (IPLA)— a SDG Partnership towards the 2030 Agenda for Sustainable Development Goals	United Nations Centre for Regional Development (UNCRD)	Anupam Khajuria	23 May fternoon
21	Social-industrial system innovations towards a circular and net-zero society: transnational knowledge network	City University of Hong Kong & Xi'an Jiaotong University	Dong LIANG & Sun LU	23 May fternoon

Sub-forum 1: Zero-waste city construction and Solid Waste Industry Innovation Development Forum with Fifth General Meeting of the Commissioners in China Association of Environmental Protection Industry Solid Waste Treatment and Utilization Division

Time:	20 May
Sub-forum convener:	Xiaofang Xu
Organization:	China Association of Environmental Protection Industry Solid Waste Treatment and Utilization Division

Sub-forum 2: Integrated Pollution Prevention & Control of Industrial Solid Waste and EOD Practice			
Sub-forum conv	Time: 20 May vener: Tingyu FAN		
Organiz	ation: Anhui University of Science and Tech	nology	
Time	Integrated Pollution Prevention & Control of Industrial Solid Waste and EOD Practice		
8:20-8:35	Welcome and Opening		
9:25-9:50	Session I: Synergistic technologies of coal-based solid wastes		
8:40-9:00	Microbial utilization technology and ecological effect of solid waste on coal measures in western mining area	Yinli BI, Professor, Deputy Dean, College of Geology and Environment, Xi'an University of Science and Technology	
9:00-9:20	Basic theory and key technology of multi- source coal-based solid waste for green separated-strata grouting and backfilling	Ke YANG, Professor, Dean, School of Ming Engineering, Anhui University of Science & Technology	
9:20-9:40	Reconstruction technique of reclamation soil using coal gangue filling in high phreatic water level mining area	Liangji XU, Professor, Dean, AUST HEFEI Institute for Advanced Research	

9:40-10:00	40-10:00 Eco-environmental risk assessment of mine waste and contaminated mine sites Processing Co., Ltd.		
10:00-10:10	Break	< time	
10:10-10:30	Product research and industrialization practice of bulk coal-based solid waste recycling	Jun YAO, Senior Engineer, Huainan Dongchen Group Co., Ltd	
10:30-10:50	0:50 Research and development of polymer grouting material prepared from multi- source coal based solid waste Gingping WANG, Professor, Dep Dean, School of Materials Science Technology, Anhui University of Science Technology		
10:50-11:10	Utilization of industrial magnetic solid waste and its application in environment protection Jianjun LI, Professor, Head of Dep School of Materials Science a Technology, Anhui University of Sc Technology		
11:10-11:30	Design and application of functional materials for environmental treatment based on fly ash Xianglong WAN, Associate Profes School of Materials Science ar Technology, Anhui University of Science Technology		
Economical utilization of aluminum-bearing 11:30-11:50 resources with high-silica content for School of Materials Scient		Hongyang WANG, Associate Professor, School of Materials Science and Technology, Anhui University of Science & Technology	
11:50-14:00	Lunch Time		
	Session II: Waste eco-environmental risk prevention and control & Mine EOD practice		
14:00-14:20	Study on the efficiency of ecological treatment of heavy metals in sludge based on constructed wetland	Dayong XU, Professor, Deputy Dean, School of Chemical and Environmental Engineering, Anhui Polytechnic University	

14:20-14:40	The influence of mucus and biochar on the heavy metals behavior in sewage sludge	Xingming WANG, Associate Professor, Head of Department, School of Earth and Environment, Anhui University of Science & Technology	
14:40-15:00	Research and application of in-situ risk control technology for mining and metallurgical waste residue	Yiming GAI, Senior Engineering, Beijing GeoEnviron Engineering & Technology, Inc.	
15:00-15:20	Practice of ecological layering and micro- topography reconstruction of abandoned open-pit coal mine waste soil in arid areas of Xinjiang	Li MA, Associated Professor,	
15:20-15:40	EOD practice in coal mining area- evaluation and comprehensive management of water ecological environment in Lianghuai coal mining subsidence area	Tingyu FAN, Professor, Deputy Director, School of Earth and Environment, Anhui University of Science & Technology	
15:40-16:00	Production and discharge characteristics, temporal and spatial distribution, resource and environmental attributes of multi- source organic solid wastes in core cities of Chaohu lake basin	Shiwen ZHANG, Professor, Deputy Dean, School of Earth and Environment, Anhui University of Science & Technology	
16:00-16:20	Resource utilization of coal-based solid waste and application of soil pollution remediation	Hongbiao CUI, Associate Professor, School of Earth and Environment, Anhui University of Science & Technology	
16:20-16:40	Branch forum summary		
16:40-19:40	Graduate forum		

Sub-forum 3: Zero-waste city construction management and practice forum		
Time:	22 May	
Sub-forum convener:	Xiaofang XU	
Organization:	Tsinghua University/BCRC	

#### Sub-forum 4: The Role of Circular Economy in Supporting Business to Achieve Dual **Carbon Goals** Time: 22 May Sub-forum convener: **Tingting SHEN** Organization: Ellen MacArthur Foundation **Opening Remarks** Yisong, Guan 09:00 - 09:10 Chief Representative, Ellen MacArthur Foundation (UK) Beijing **Representative Office** Towards a Circular Economy: Global Trends and Actions (Video) 09:10 - 09:20 Jocelyn Blériot Executive Lead, International Institutions & Governments, Ellen MacArthur Foundation The Policy and mechanism Path for Circular Economy to Support Carbon goals The Potential of Circular Economy to Support China Achieving Carbon Neutrality Goals Zongguo Wen, 09:20 - 09:50 Professor, School of Environment, Tsinghua University; Director, Circular Economy Industry Research Center **Circular Economy and Carbon Reduction Practices of Business** Tredns of the Green Sustainable Beauty Market, and Consumer Insignts Shengnan, Tang Partner, Yan An Tang/Yanyan Information Technology(Shanghai) Co. Ltd 09:50 - 10:35 Oatly's Path to Sustainability & Packaging Strategy and Practice Chloe Lin Leader of Sustainability, Greater China, Ouli(Shangai)Beverages Co.Ltd

	Low-carbon Life, Oriental Exploration of Sustainable Ecological Aesthetics Xuesong Liu President, Beijing Zero Waste and Recycling Industry Promotion Association BOTTLOOP, Founder&CEO
10:35 - 10:50	Tea break
The Role of Gre	en Finance and ESG in Promoting the Development of Circular Economy in Business
10:50 - 11:05	Circular Finance Promotes Business Transformation and Helps Tackle Climate Change Huishan Lian Operations Officer, International Finance Corporation
Package Governance and ESG Management11:05 - 11:20Hua lang Partner, SynTao-Sustainability Solutions	
The Developm	Round Table Discussion: ent of Circular Economy to realizing Dual Carbon Goals: Opportunities, Challenges, and Actions
11:20 - 12:20	Molly Jia (Moderator) Project manager, New Plastics Economy, Ellen MacArthur Foundation (UK) Beijing Representative Office Ruishan Li Manager, Enterprise Management Department, Advance Denim Luona Cai Co-founder, Circular Pie Sean Wu Chairman of the Board, Deartree
	Alex Hu Packaging&Sustainability Director, HALION
12:20 - 12:30	Closing remarks Yisong Guan Chief Representative, Ellen MacArthur Foundation (UK) Beijing Representative Office

Sub-forum 5: Resource Engineering Forum on Carbon Neutrality of Multi-source Solid Waste			
Time: 22 May   Sub-forum convener: Kang LIU   Organization: The Hong Kong Polytechnic University			
Time	Report title	Presenter	
8:50-9:00	Introduction	Kang liu	
9:00-9:30	Designing low-carbon cement for stabilization/solidification of MSWI fly ash	Lei Wang	
9:30-10:00	Structural changes of C-S-H gel in Portland cement affecting by supplementary cementitious materials	Xiaohong Zhu	
10:00-10:30	Paradigm shift of metal recovery from waste electronic wastes	Dong Xia	
10:30-11:00	Incorporation of selenium and iodine in cementitious minerals for radioactive waste treatment and disposal	Binlin Guo	
11:00-11:30	Mechanistic insights into conductive materials for promoting digestate dewaterability during anaerobic co-digestion of food waste and sewage sludge	Jialin Liang	
8:50-9:00	Break		
13:30-14:00	Independent/co-thermal treatment of MSWI fly ash and aluminum ash and its utilization in the preparation of low-carbon sulfoaluminate cement	Jingwei Li	
14:00-14:30	Sustainable application of biochar in cement-based materials	Linag Chen	
14:30-15:00	Modification of urban sludge using calcium-containing industrial solid waste as landfill cover material: water infiltration characteristics and micro-mechanisms	Qiewei Dong	

15:00-15:30	Recovery of high value-added carboxylic acids from domestic organic waste through regulation of mixed microbiome fermentation	Xiang Li
15:30-16:00	Influence of dissolved organic matter and heavy metals on the utilization of soil-like material mined from different types of MSW landfills	Zhiyong Han
16:00-16:30	Food delivery waste in Wuhan, China: Patterns, drivers, and implications.	Hui Zhang
16:30-17:00	Summary	

# Sub-forum 6: The 3<sup>th</sup> Integrated Pollution Prevention & Control of Industrial Solid Waste and Industrial Symbiosis Forum

	Time:	22 May	
Sub-forum convener:		Longpeng CUI	
Organiz	ation:	Sinopec Research Institute of Petrole	eum Processing Co., Ltd.
Integrated Pollution Prevention & Control of Industrial Solid Waste and Industrial Symbiosis			
Time		Presentation Title Speakers	
8:30-8:35		Welcome and opening	
Session I: Integrated pollution prevention & Control of Industrial solid wastes			
8:35-8:55	polluti syner waste	Research and application of integrated pollution prevention technology for synergistic disposal of industrial solid wastes-case of co-gasification of refinery organic wastesBeidou XI, Professor, Vice President of Chinese Research Academy of Environmental Sciences	
8:55-9:15	of ind	arch and engineering practice ustrial solid waste collaborative nent and resource utilization	Wanzhong KANG, Professor, Chief Expert of Sinopec, SINOPEC Ningbo Engineering Company Limited

9:15-9:35	Synergistic practice and thinking of Sinopec's pollution reduction and carbon reduction	Wanzhong KANG, Professor, Chief Expert of Sinopec, SINOPEC Ningbo Engineering Company Limited
9:35-9:55	Reduction and recycling technology on refining activated sludge & oil sludge	Bing QIN, Professor, Senior Expert of Sinopec, SINOPEC Research Institute of Petroleum Processing Co., Ltd.
9:55-10:15	Research and development progress of chemical recovery technology of waste plastics in Sinopec	Run XU, Senior engineer, Acting director of 27th Research Dept., SINOPEC Research Institute of Petroleum Processing Co., Ltd.
S	ession II: Industrial waste synergy & Symbio	otic intelligent management
10:20-10:40	Coal chemical industry solid wastes of environmental risk management and the idea of drafting pollution controlling standards	Xiangguo HUANG, Professor, Director of Environmental Risk Institute,Shenyang Academy of Environmental Sciences
10:40-11:00	Analysis on the Utilization and Disposal Mode Innovation and Industrial Development of Industrial Solid Waste in Shanxi Province	Li WEI, Senior Engineer/Deputy Secretary General□
11:00-11:20	Innovation and application cases of "Zero- waste Park" intelligent management platform	Yuyan SONG, Senior Engineer, Director, TEDA ECO CERTER / Secretariat of Green Development Alliance of National Economic Development Zone
11:20-11:40	Intelligent chemical industry park system development based on aerospace technology for the construction of Zero- waste Park	Guangyu ZHANG, Senior Engineer, Deputy General Manager, Zhejiang Aerospace HENGJIA Data Technology Co., Ltd.
11:40-12:00	Development of life-cycle management database for Sinopec's coal (waste) gasification solid waste	Yanfang LIU, Associate professor, SINOPEC Research Institute of Petroleum Processing Co., Ltd.
12:00-14:00	Lunch break	

Session III: Synergistic technologies of industrial solid wastes		
14:00-14:20	New materials for improving degraded soil synthesized from coal-based solid waste and its utilization practice	Shuhua MA, Professor, The Institute of Process Engineering (IPE) of Chinese Academy of Sciences (CAS)
14:20-14:40	Environmental mineralogy properties of mining and metallurgical solid waste and its application in the field of heavy metal pollution control	Xinglan CUI, Professor, Youyan Resources and Environment Technology Research Institute (Beijing) Co., Ltd
14:40-15:00	Industrial Solid Waste Treatment and Comprehensive Utilization of Green Mine	Aiping ZHANG, Professor, Southwest Jiaotong University
15:00-15:20	Research on environmental safety prevention and control and evaluation technology of large-volume solid waste building materials products	Meichao ZHAO, Professor, Research Institute of Shenyang Academy of Environmental Sciences
15:20-15:40	Study on synergistic mechanism of residual carbon/mineral in preparation of coal gasification fine slag-based adsorbent	Zekai MIAO, associate professor, Ningxia University
Session IV: Synergistic technologies of multi-source wastes		
15:45-16:05	Green and Efficient Utilization Technology of Spent Hydrogenation Catalyst in Refinery	Dawei HU, Professor, Deputy director of 15th Research Dept., SINOPEC Research Institute of Petroleum Processing Co., Ltd.
16:05-16:25	Green and efficient leaching- biodegradation coupling remediation technology for oily soil and sludge in oil field	Jianlin JIANG, Senior engineer, SINOPEC Research Institute of Petroleum Processing Co., Ltd.
16:25-16:45	Demonstration the source reduction and of hazardous waste FCC catalyst and utilization as a resource	Yan CHEN, Associate Professor, SINOPEC Research Institute of Petroleum Processing Co., Ltd.

16:45-17:05	Research on synergistic chemical looping gasification of sludge/steel slag for rich hydrogen synthesis gas production	Quxiu DAI, lecturer, Kunming University of Science and Technology
17:05-17:25	Study on supercritical/subcritical hydrothermal treatment of organic wastes	Jili HOU, Associate professor, SINOPEC Research Institute of Petroleum Processing Co., Ltd.
17:25-17:45	High-efficiency CO2 sequestration through direct aqueous carbonation of alkaline solid wastes	Zhiqiang WANG, Associate Professor, SINOPEC Research Institute of Petroleum Processing Co., Ltd.
17:45-17:50	Breach forum summary	·

## Sub-forum 7: Innovation and development of solid and hazardous waste disposal and resource utilization technology system

Time:	22 May morning	
Sub-forum convener:	Yang CHEN	

Organization: College of Resources and Environment, Chinese Academy of Sciences

Time	Report title	Presenter
9:00-9:30	Layout of major hazardous waste disposal projects in the 14th Five- Year Plan and consideration of the development of hazardous waste industry	Liang Chen
9:30-10:00	The path and practice of solid and hazardous waste recycling under the background of Double Carbon	Yang Chen
10:00-10:30	The key points of the central environmental protection inspector's standardized inspection of solid hazard disposal and resource utilization	Yingdeng Peng
10:30-11:00	Risk prevention and control technology and standard system in the whole process of hazardous waste disposal	Gang Chen
11:00-11:30	Technological progress and industrial application practice of co- processing and recycling of solid and hazardous waste	Hao Cui

Sub-forum 8: Hainan province zero-waste island construction seminar		
Time: 23 May morning		
Organiz	ation: College of Resources and Environment, Chinese Academy of Sciences	
Time	Report	
15:00-15:05	Director Liu Xin introduces the project status and attending experts	
15:05-15:10	Speech by the leaders of the Hainan Provincial Department of Ecology and Environment	
15:10-15:15	Speech by Academician Hao Jiming	
15:15-16:00	Report of the research project on "Zero waste Island" construction in Hainan Province under the vision of carbon neutrality (Phase 1) by Professor Li Jinhui	
16:00-16:50	Expert discussion, forming a review form for the final meeting	
16:50-17:00	Break	
17:00-17:20	Presentation title: Research on Carbon Emission Reduction Benefits of Solid Waste Resource Utilization.	
17:20-17:40	Presentation title: Collaborative Technologies and Management Systems for Carbon Reduction and Pollution Control of Municipal Solid Waste. Assistant Researcher Zhang Nini, School of Environment, Tsinghua University.	
17:40-18:00	Discussion on carbon reduction and pollution control of solid waste.	

Sub-forum 9: Power battery recycling and synergistic efficiency seminar	
Time:	22 May morning
Sub-forum convener:	Qingyin DONG
Organization:	Tsinghua University/BCRC

Sub-forum 10: Towards the Future Solid Waste and EnvironmentYoung Scholars Forum		
	Time: 22 May morning	
Sub-forum convener: Guanyi Chen & Yunan Sun		
Organiz	ation: Tianjin University of Commerce	
Leading report		
Time	Report title	Presenter
9:10-9:25	Environmental Leakage of Marine Garbage and Integrated Land-Sea Pollution Control	Wenchao MA Changjiang Scholars Hainan University
9:25-9:40	Exploration of Decarbonization Technology for Solid Waste Incineration Flue Gas	Shihan ZHANG Excellent Scholars Zhejiang University of Technology
9:40-9:55	Research on Geopolymer Solidification of Heavy Metals in Solid Waste	Huijie HOU Excellent Scholars Huazhong University of Science and Technology
9:55-10:10	Exploration of Identification and Treatment Pathways for Complex Objects in Leachate from Municipal Solid Waste	Ziyan LOU Changjiang Scholars Shanghai Jiaotong University
10:10-10:25	Coupling Thermochemical and Anaerobic Digestion for Efficient Methane Production from Organic Solid Waste	Gang LUO Professor Fudan University
Youth scholar report		
10:25-10:35	Surface Sites of Carbon-Based Catalysts for Organic Solid Waste	Ning Li Tianjin University
10:35-10:45	Regulation Strategies and Applications in Water Treatment	Jinggang YAO Shandong Polytechinc University

10:45-10:55	Research and Application of Clean Energy Conversion Technology for Organic Solid	Dan ZHANG Henan Polytechinc University
10:55-11:05	Waste Based on Pyrolysis and Gasification	Fang LIU Agro-Environmental Protection Institute, Ministry of Agriculture and rural affair
11:05-11:15	Technology and Complete Equipment for Utilization of Organic Solid Waste Resources	Shuxiao WANG Guangzhou Institute of energy conversion, Chinese Academy of Science
11:15-11:25	Technological Models for Rural Toilet Fecal Treatment and Utilization	Aibin HU China University of Geosciences
11:25-11:35	Research on Migration, Conversion Pathways, and Control Methods of Phosphorus in Sludge Incineration Process	Qianqian GUO Zhejiang University of Technology
11:35-11:45	Urban Solid Waste Management for Efficient Energy in Utilization Waste Classification Models and Technologies	Junyu TAO Tianjin University of commerce
11:45-11:55	Research on Thermal Decomposition Characteristics of Discarded Photopolymerized Plastics	Yunan SUN Tianjin University of commerce
11:55-12:00	Summary	

# Sub-forum 11: The main path and promotion strategy for Zero-waste city construction in Great Bay Area

Time:	22 May afternoon
Sub-forum convener:	Huabo DUAN & Huan LI
Organization:	Huazhong University of Science and Technology & Shenzhen University

Time	Report title	Presenter		
Topic 1: Promotion Strategy for "Zero Waste City" Construction in the Greater Bay Area during the 14th Five- Year Plan Period (Host: Huabo DUAN)				
14:00-14:20	Construction Plan and Path for "Zero Waste City" in the Greater Bay Area during the 14th Five-Year Plan Period	Jianwei Du, Senior Engineer, Deputy Director South China Institute of Environmental Sciences		
14:20-14:40	Opportunities and Challenges of Resource Development and Utilization in Macao under the Concept of "Urban Minerals"	Qingbin SONG, Associate Professor Innovation and Engineering College, University of Macao		
14:40-15:00	Proposed Strategies for Promoting "Zero Waste City" in Shenzhen during the 14th Five-Year Plan Period	Guobin ZHANG, Senior Engineer Shenzhen Academy of Environmental Sciences		
15:00-15:20	Phase Achievements and Highlighted Models of "Zero Waste City" Construction in Foshan City	Huanhuan MA, Assistant Researcher Environmental Planning Institute, Ministry of Ecology and Environment.		
Topic 2: Management and Technology of "Zero Waste City" Construction in the Greater Bay Area (Host: Jianwei DU)				
15:30-15:50	Policy and Case Studies on Investment and Financing for "Zero Waste City" Construction	Jin CHEN, Assistant Researcher Environmental Planning Institute, Ministry of Ecology and Environment		
15:50-16:10	Management Practices and Explorations of Construction Waste in Shenzhen	Dr. Qin HUANG, Deputy Director Construction and Waste Management Office, Shenzhen Housing and Construction Bureau		
16:10-16:30	Optimization Strategy for Organic Waste Environmental Park Recycling - A Case Study of Yunan Environmental Park in Shenzhen	Qiyong XU, Associate Professor Peking University Shenzhen Graduate School		

16:30-16:50	Research on Waste Sorting and Management Strategies for Municipal Solid Waste in Shenzhen under the Background of Carbon Neutrality	Dr. Yingjun ZHOU Shenzhen Zhonghuan Bohong Environmental Technology Co., Ltd.
16:50-17:10	Separation and High-Value Utilization of Carbon and Nitrogen in Kitchen Waste	Huan LI, Associate Professor Tsinghua University Shenzhen International Graduate School
17:10-17:30	Construction of "Zero Waste City" and Pollution Reduction and Carbon Emission Reduction in the Greater Bay Area.	Huabo DUAN, Associate Professor School of Environment, Huazhong University of Science and Technology
17:30-17:40	Summary	Huabo DUAN

Sub-forum 12: Global Circular Economy Forum					
Sub-forum conv Organiz					
Time	Topics	Speakers	Chair		
14:00-14:30	The interconnected dynamics of resource cycles, labor and institutions	Prof. Steuer Benjamin Division of Environment and Sustainability, Hong Kong University of Science and Technology, Hongkong	Dr. Xianlai Zeng Tsinghua University, China Dr. Guochang Xu Tsinghua University, China		
14:30-15:00	Opportunities of circularity and eco- innovation for sustainable industrial growth in Pakistan	Prof. Zubair Ahmed Mehran University of Engineering and Technology, Jamshoro, Pakistan			
15:00-15:20	Circular economy in the frame of lithium- ion batteries recovery	Prof. Elza Bontempi INSTM and Chemistry for Technologies Laboratory, University of Brescia, Italy			

15:20-15:30	Break time		
15:30-16:00	Urban building metabolism and low- carbon transition of construction materials	Dr. Xiaofeng Gao Chongqing University, Chongqing University, China	Dr. Xianlai Zeng Tsinghua University, China Dr. Guochang Xu Tsinghua University, China
16:00-16:30	Sustainability in the Solar Photovoltaic Industry: The Urgency of a Circular Economy Approach	Dr. Moisés Gómez School of Environment, Tsinghua University, China	
16:30-17:00	UK household consumption and waste generation	Prof. Xiaoyu Yan Environment and Sustainability Institute, University of Exeter, UK	
17:00-17:30	Panel discussion: what is the major practice in your regional area? How about its experience?		

Sub-forum 13: E-waste pollution control and recycling			
	Time:	22 May afternoon	
Sub-fo	rum convener:	Mengjun CHEN	
	Organization:	Southwest University of Science and Technology	
No	Sub-forum		
No.		Report title	presenter
1	A rapid and green recycling method for valuable materials in waste LCD displays		Wuneng ZHU
2	Comprehensive recovery and mechanism research of valuable components from waste circuit smelting ash		De-an PAN
3	Current status and key technologies for reusing high-value components/ devices in electronic waste		Jiaqi HU

4	Directional separation and regulation of indium from waste LCD panels for recycling	Yuwen GUO
5	Expert discussion	Yubin GUO, Jianxin YANG, He XU, Keli YU
6	Management requirements and progress in environmental management of solid waste and dismantling of waste electrical appliances	Yi DENG
7	Research on recycling and disposal of waste servers	Heran ZHANG
8	Preliminary exploration of carbon emissions and emission reduction benefits evaluation method in the waste electrical and electronic products industry	Bin LU
9	A green deplating method for ABS electroplated plastics	Wenyu FAN
10	Pollution characteristics and mitigation measures of atmospheric particulate matter in electronic waste treatment workshops	Jie GUO
11	Preparation and application of environmental functional materials based on electrolytic manganese residue	Rongji LAN
12	Green and low-carbon recycling and comprehensive pollution control assessment of retired lithium batteries	Wenfang GAO
13	Technical research on copper recovery from waste mobile phone boards using alkaline slurry electrolysis.	Zhuyuan CHEN

Sub-forum 14: Forum on Plastic Waste and POPs in Asia Pacific Region				
	Time: 22-23 May			
Sub-forum conv	vener: Qinying DONG & Yuan CHEN			
Organiz	ation: Tsinghua University/BCRC			
Zoom meeti	ng ID: 997 5852 9060 Password: 112233			
	DAY 1: May 22 20	23		
Time	Topics	Speakers		
9:00-9:10	Opening remarks	Mr. BOLIKOVAC Craig, Senior Advisor, Basel Convention Regional Centre for Asia and the Pacific/BOLIKOVAC Craig		
	Session 1: NIPs and National Reports un	der POPs Convention		
9:10-10:10	Global NIP update/Integrated SC toolkit to improve the transmission of information under Articles 07 and 15	Ms. LIU Sifan, Programme Officer, Basel Convention Regional Centre for Asia and the Pacific		
9.10-10.10	National Monitoring framework and POPs analysis	Mr. MAI Feng, Technical Representative for General Manager, Jiangsu Kangda Testing Technology Co., Ltd, China		
	Information exchange and challenge: country report (1): Cambodia, Maldives			
10:10-10:50	NIP of SC in Cambodia	Ms. PHANN Daneth, Vice Chief Officer, Department of Hazardous Substances Management General Directorate of Environmental Protection Ministry of Environment, Cambodia		
	Current Status of the Maldives National Implementation Plan Update and POPs Management	Ms. NAFHA Abbas, Chemicals Management Officer, Ministry of Environment, Climate Change, and Technology, Maldives		
10:50-11:10	Coffee break			

	Information exchange and challenge: country report (2): Mongolia, Myanmar			
11:10-12:00	National Report of GMP2 On Persistent Organic Pollutants	Ms. PUREVSUREN Nyamsuren, Officer General of Environment Policy Coordination Department, Ministry of Environment and Tourism of Mongolia		
	Implementation on Stockholm Convention in Myanmar	Ms. EAINT Me Me, Deputy Staff Officer, Pollution Control Division, Environmental Conservation Department, Myanmar		
	Group discussion			
12:00-14:00	Lunch			
	Session 2: International and regional management on plastic and its waste			
	From Global Crisis to International Action: Progress in Plastic Pollution Prevention and Control	Ms. ZHAO Nana, Assisstant Director, Basel Convention Regional Centre for Asia and the Pacific		
14:00-15:30	Asia Pacific Regional Strategy on Single- use Plastics and its waste	Ms. DONG Mengqi, post-Doctor, School of Environment, Tsinghua University, China		
14.00-13.30	Progress of the Implementation of Plastic Prohibitions in Hainan Province of China	Mr. ZHU Jinhui, Director, Plastic Prohibition Office, Department of Ecology and Environment of Hainan Province, China		
	Evolution process of wase plastic trading and Prediction after CHINESE BAN	Ms. MA Wenchao, Professor, Hainan University, China		
15:30-15:50	Coffee break			
15:50-17:30	Analysis of regulations on transboundary movement of plastic waste and their implementation in Asia: project outcomes sharing with recommendations and good practices	Mr. DONG Qingyin, Associate Professor, School of Environment, Tsinghua University, China/ Basel Convention Regional Centre for Asia and the Pacific		
	Country Report on the Management of Plasti Laos, Sri Lanka, Myanmar, Mongolia	ics and Waste Plastics: Cambodia, Maldives,		

	Management of Plastic and Waste Plastics in Cambodia	Mr. RO Channarith, Vice Chief Officer Department of Hazardous Substances Management General Directorate of Environmental Protection Ministry of Environment, Cambodia		
	Management of Plastics and Waste Plastics in Maldives	Ms. FATHMATH Shafa-ath Ibrahim Nasih, Engineer, Waste Management and Pollution Control Department, Ministry of Environment, Climate Change and Technology, Maldives		
15:50-17:30	From Global Crisis to International Action: Progress in Plastic Pollution Prevention and Control	Ms. PUREVSUREN Nyamsuren, Officer General of Environment Policy Coordination Department, Ministry of Environment and Tourism of Mongolia		
	Management of Plastic Waste in Mongolia	Ms. KHIN San Hlaing, Assistant Director, Pollution Control Division, Environmental Conservation Department, Myanmar		
	Management of Plastics and Plastic Waste in Myanmar	Mr. GUNARATHNE Arachchige Don Nuwan, PhD (Griffith, Australia), Senior Lecturer, Department of Accounting, University of Sri Jayewardenepura, Nugegoda, Sri Lanka		
	Group discussion			
DAY 2: May 23 2023				
Session 3: Regional implementation and plastics technical guidelines under Basel Convention				
9:00-10:30	Progress in the Implementation of the adoption of the plastic waste amendments to Basel Convention in Asia and the Pacific	Mr. DONG Qingyin, Associate Professor, School of Environment, Tsinghua University, China/ Basel Convention Regional Centre for Asia and the Pacific		
	Study on plastic metabolism and waste plastic management in China	Ms. LIU Yijie, Assistant Professor, Strategic Consulting Center, Chinese Academy of Engineering		
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9:00-10:30	Evolution of plastic waste import and export management in Cambodia	Mr. SOPHAL Dyakanal, chief of Hazardous waste management office, Ministry of Environment, Cambodia/ SOPHAL Dyakanal	
10:30-10:50	Coffee break		
10:50-12:00	Introduction on Guidance on Management of Plastic Waste and Recycled Plastics	Ms. HAO Shuoshuo, Engineer, School of Environment, Tsinghua University, China/ Basel Convention Regional Centre for Asia and the Pacific	
	Discussion on the Guidance		
12:00-14:00	Lunch		
14:00-15:30	Discussion on the Guidance		
15:30-15:50	Coffee break		
S	Session 4: Plastic waste recycling technology de	evelopment and case sharing	
	Case sharing: Practice of reducing waste and plastic in the express logistics industry	Ms. REN Junshu, Director, Cainiao Public Affairs, China	
15:50-17:30	Case sharing: Bruker's latest fully automated analysis solution for microplastics analysis	Ms. XU Yuan, Manager, Bruker Corporation	
	The work of BCRC China in the management of plastic wastes and the construction of an international network of Zero-waste city	Mr. BOLIKOVAC Craig, Senior Advisor, Basel Convention Regional Centre for Asia and the Pacific/ BOLIKOVAC Craig	
17:20-17:30	Conclusion and summary	Mr. DONG Qingyin, Associate Professor, School of Environment, Tsinghua University, China/ Basel Convention Regional Centre for Asia and the Pacific	

Sub-forum 18	5: The 4th Zero-waste City High Level Forum					
Time: 23 May morning   Sub-forum convener: Guijuan SHAN   Organization: Tsinghua University/BCRC   Zoom meeting ID: 843 9702 5746 Password: 20230523						
Time	ng ID: 843 9702 5746 Password: 20230523 Content	Chair				
9:00-9: 05	Introduction of the Participants					
9:05-9:15	Opening Speech Mr. Jinhui Ll Professor/Executive Director, School of Environment, Tsinghua University/Basel Convention Regional Centre for Asia and the Pacific					
9:15-9:35	Integrated Solid Waste Management towards Zero Waste Mr. Shunichi Honda Programme Officer International Environmental Technology Centre, United Nations Environment Programme	Mr.Craig Boljkovac				
9:35-9:55	The Current Status and Opportunity of the Zero-waste city Construction in Cambodia Mr. Dyakanal SOPHAL Chief of Hazardous Waste Management Bureau, General Directorate of Environmental Protection, Ministry of Environment, Cambodia					
9:55-10:10	Current Status and Challenges of zero-waste city construction in Sihanoukville Province, Cambodia TBD Preah Sihanouk Provincial Hall, Cambodia					
10:10-10:25	Current Situation of Solid Waste Management in Yangon Mr. Bawi Kyone Deputy Director, Urban Environmental Conservation and Cleansing Department Yangon City Development Committee, Myanmar					

10:25-10:35	Discussion (Representatives from the following cities will join:Climate Change and Environmental Sustainability Department, Quezon City, the Philippines; Provincial Engineering Office,Pangainan Province, Philippines;Department of City Environment and Natural Resources Office, City of San Fernando La Union, Philippines)	Mr.Craig Boljkovac Senior Advisor, Basel Convention Regional Centre for Asia and the Pacific
10:35-10:50	Municipal Solid Waste Management in Mogolia TBD Department of Environment and Natural Resource Management, Ministry of Environment and Tourism of Mongolia	
10:50-11:05	Segregation of Solid Waste in Colombo Municipal Council Area Mr. L.B. Kumudu Lal Chief Distinct Engineer	
11:05-11:25	Zero-waste City Construction Practice Path of Ningbo Mr. Wenbiao TANG Director, Soil and Solid Waste Department of Ningbo Ecological Environment Bureau	Ms. SHAN Guijuan Associate Researcher,
11:25-11:45	The Progress and Outlook of Zero-waste City Construction in Qingdao Qingdao Ecological Environment Bureau	Tsinghua University / Basel Convention Regional Centre for Asia and the Pacific
11:45-11:55	Discussion (Representatives from the following cities will join:Climate Change and Environmental Sustainability Department, Quezon City, the Philippines; Provincial Engineering Office,Pangainan Province, Philippines;Department of City Environment and Natural Resources Office, City of San Fernando La Union, Philippines)	
11:55-12:00	Summary Mr.Craig Boljkovac Senior Advisor, Basel Convention Regional Centre for Asia and the Pacific	

Sub-forum 16: The 3rd interdisciplinary frontier academic seminar on material cycle and carbon neutrality						
	Time: 22 May morning					
Sub-forum conv	vener: Xianlai ZE	NG				
Organiz	ation: Tsinghua l	Jniversity				
Time	Presenter	Institute	Report title	Host		
13:00-13:25	Yong Geng	Shanghai jiaotong University	Resource management coping with carbon neutrality			
13:25-13:50	Bin Chen	Beijing Normal University	TBD			
13:50-14:15	Zhaohua Wang	Beijing Institute of Technology	Circular economy enables target of carbon neutrality to achieve science management reality problem	Jinhui Li		
14:15-14:40	Minjuan Zhao	Northwest A&F University	Carbon reduction and sequestration in agriculture: potentials, targets and pathways analysis			
14:40-15:05 He Xu		Nankai University	Solid waste resuscitation from accounting of carbon emission reduction benefits			
Break (5min)						
15:10-15:35Ming XuTsinghua UniversityCircular economy and carbon neutralityHe Xu			He Xu			

15:35-16:00	Zengwei Zeng Nanjing University		Key problem in material cycle research	
16:00-16:25	Xianlau ZENG	Tsinghua University	Humanmade material cycle	-
16:25-16:50	Xiaoling Zhang	City University of Hong Kong	Municipal Solid Waste (MSW) Management in the context of carbon neutrality—a novel paradigm	He Xu
16:50-17:15 Weiqiang Environme		Institute of Urban Environment, Chinese Academy of Science	Frontier thinking of material cycle research in digital generation	
		Break (5	min)	
17:20-17:45	Minpeng Chen	Renmin university of China	Chinese agriculture non-co2 greenhouse gas emission pathways in carbon neutrality background	
17:45-18:10	Huabo Duan	Huazhong University of Science and Technology	Recycle delivery package for carbon reduction result assessment	
18:10-18:35	Liang Dong	City University of Hong Kong	Carbon neutrality and regional ecological industry development: comprehensive evaluation analysis method and frontier policy	Xianlau ZENG
18:35-19:00	Sai Liang	Guangdong University of Technology	Social economy converts with reduction of waste and carbon	
19:00-19:25	Binqing Song	Macau University of Science and Technology	Spatial and temporal characteristics of building resource stocks- flows and implied carbon emissions	
15:10-15:35	Summary			

Sub-forum 17: Student Forum			
Time:	23 May morning		
Sub-forum convener:	Shunichi Honda		
Organization:	United Nations Environment Programme & BCRC		
Zoom meeting ID:	870 3005 6301 Password:997984		

Sub-forum	18: Biomass	Waste	Treatment	and Energy
		110000		

Time:	23 May morning
Sub-forum convener:	Yifei Sun

**Organization:** Beihang University

Time	Name	Title	Institute	Report title	Host
9:00-9:20	Huiyan ZHANG	Professor	Southeast University	Fundamentals and Technological Applications of Efficient Thermal Conversion of Organic Solid Waste	
9:20-9:40	Rui DAN	Researcher	Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences	Fundamental Research and Key Technology Expansion and Application of Thermal Decomposition and Quality Reconstruction of Solid Waste	Yifei SUN
9:40-10:00	Qingqing MEI	Researcher	Zhejiang University	Directed Preparation of High- Value Chemicals from Waste Lignin	_
10:00-10:20	Lei CHE	Senior Engineer with Professorship	Zhejiang Yikeou Environmental Protection Technology Co., Ltd.	Introduction to Engineering Case Studies of Pyrolysis Technology in Zero Waste City Construction.	

			/ /		
	Break				
10:40-11:00	Dan XIA	Associate Professor	Beihang University	Release and Transformation of Chlorinated Plasticizers/Flame Retardants during Thermal Treatment of Waste Plastics	
11:00-11:20	Lei ZHENG	Associate Professor	University of Science and Technology Beijing	Preparation of Biochar and Its Application in the Steel Industry	
11:20-11:40	Wei QIAO	Professor	China Agricultural University	Technical Analysis of Ammonia Nitrogen Reduction in Anaerobic Fermentation of Chicken Manure	Huiyan ZHANG
11:40-12:00	Weihong ZHAO	Professor	Hainan University	Study on Carbon and Nitrogen Environmental Emissions from Tourism and Migratory Bird Population in Hainan Island over the Past 20 Years.	

# Sub-forum 19: Advances in multi-technological treatment of organic solid waste for value-added product

Time: 23 May afternoon

Sub-forum convener: Ming ZHAO

Organization: Tsinghua University

Time	Report title	Presenter
14:00-14:30	Coupling Thermochemical Technology and Anaerobic Digestion for Efficient Conversion of Organic Wastes	Gang Luo Professor Fudan University

14:00-14:30	Coupling Thermochemical Technology and Anaerobic Digestion for Efficient Conversion of Organic Wastes	Gang Luo Professor Fudan University	
14:30-15:00	Key technologies for the research and development of solid waste-based ecological functional geotechnical engineering materials and the regulation of service performance	Haijun Lu Professor Wuhan Polytechnic University	
15:00- 15:30	Supplying C1 Building Blocks Into the Microbial Chain Elongation Biorefinery for Production of Multipurpose Carboxylic acids	David Strik Associate Professor Wageningen University	
15:30-15:40	Break		
15:40-16:10	Research on the technology of food waste upcycling via animal feed to address multiple sustainability objectives	Ting Chen Associate Professor Zhejiang gongshang university	
16:10-16:40	CO conversion to chemicals	Diana Sousa Professor Wageningen University	
16:40-17:10	Biomass Hydrothermal Liquefaction Bio-crude Production and Upgrading: The Effect of Zero-Valent Metals.	Linyu Tai Associate Researcher Hainan University	
17:10-17:40	Comparison and Challenges of Various Integration methods of Thermochemical and Biological Methods for Municipal Solid Waste		
17:40-18:00	Summary		

Sub-forum 20: Special Session of UNCRD on International Partnership for Expanding Waste Management Services of Local Authorities (IPLA)— a SDG Partnership towards the 2030 Agenda for Sustainable Development Goals

	Time: 23 May afternoon			
Sub-forum convener:		Anupam Khajuria		
Organization:		United Nations Centre for Regional Development(UNCRD)		
Zoom m	eeting ID:	873 1769 4225 Password:611025		
Time	Report title		Presenter	
Facilitato	or/Moderato	r Dr. Anupam Khajuria, United Nations Centr	e for Regional Development, Japan	
14:00-14:05	Prof. Jinhui Li, Basel Convention Regional Center for Asia and the Pacific (BCRC), Tsinghua University, Beijing, PR China.		Opening Remarks	
14:05 - 14:20	Mr. Dong Qingyin, Basel Convention Regional Center for Asia and the Pacific (BCRC), Tsinghua University, Beijing, PR China.		Policies and Opportunities of Circular Economy- Case of PR China	
14:20-14:35	Dr. Indu K Murthy, Centre for Study of Science, Technology and Policy, India.		Nature-based solutions towards circular economy	
14:35 - 14:50	Dr. Vella Atienza, University of the Philippines at Los Banos (UPLB), the Philippines.		Policies of 3R and Circular Economy on plastic waste management- Case of the Philippines	
14:50 - 15:05	Ms. Christina Scott, DigiLoop Ltd., United Kingdom.		Role of SMEs in the promotion of circular economy	
15:05 - 15:20	Dr. Sushma Pardeshi, CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), India.		Expanding plastic recycling technologies- Gaps and challenges for implementation of true circular economy	

15:20 - 15:35	Dr. Deeksha Krishna, Fiji National University, Fiji.	Promoting Sustainable Development Goals in Pacific: Mitigation and Adaptation against Climate Change and waste management	
15:35 - 15:50	Dr. Liu Xiao, Internationale Zusammenarbeit (GIZ) GmbH, PR China.	Waste management and low carbon transition in China: the IWM NAMA Project Practice	
15:50 – 16:05	Dr. Suchana Apple Chavanich, Chulalongkorn University, Thailand.	Waste management and circular economy- Case of Thailand	
16:05 - 16:25	Q&A		
16:25-16:30	Closing Remarks		

Sub-forum 21: Social-industrial system innovations towards a circular and net-zero society: transnational knowledge network				
Time:		23 May afternoon		
Sub-forum convener:		Liang Dong & Lu Sun		
Organization:		City University of Hong Kong, Xi'an Jiaotong University		
ТІМЕ	TITLE		SPEAKER	
PERSPECTIVES FROM GOVERNANCE & LAW IN INTERNATIONAL SOCIETY				
15:00-15:20	0-15:20 COMPOST GARDEN AS COMMON SPACE FOR LOW CARBON COMMUNITY		Dr Ling Han, Associate Professor, College of Environmental Sciences and Engineering, Peking University	
15:20-15:40	On regenerative economics		Dr. Filippos K. Zisopoulos, Erasmus University Rotterdam and Delft University of Technology	

PERSPECTIVES FROM CIRCULAR ECONOMY AND NET ZERO CITY				
15:40-16:00	Factor decomposition analysis and causal mechanism investigation on urban transport CO2 emissions in Chinese Mega cities: case study of Beijing, Shanghai, Shenzhen and Guangzhou	Dr. LUO Xiao, Associate Professor, Tongji University		
16:00-16:20	Forming an open market for unused heat utilization to support decarbonization in industries	Dr. DOU Yi, Assistant Professor, University of Tokyo		
PERSPECTIVES FROM BUSINESS, NGO & COMMUNITY				
16:20-16:40	CONTRIBUTION OF BAMBOO IN GLOBAL CARBON NET ZERO, THE LIMITATIONS AND THE WAY FORWARD	Mr Alex CHUI, Managing Director, Bamboo International (Group) Co. Ltd., Hong Kong SAR		
16:40-17:00	Environmental Education and Community Action Project in Sham Shui Po: Green Home: Eighteen Ways to Reduce Carbon and Waste	Ms LU Ruyi, NGO, New Home Association, Hong Kong SAR		

# **Support organization**

#### The Permanent Representation of the People's Republic of China to the United Nations Environment Program(UNEP)



The Permanent Representation of the People's Republic of China to the United Nations Environment Program (UNEP) is the diplomatic representation of the Chinese Government at the UNEP Representative Office in Nairobi, Kenya.

#### The United Nations Centre for Regional Development(UNCRD)



The United Nations Centre for Regional Development (UNCRD) was established in 1971 by an agreement between the United Nations and the Japanese government on June 18, 1971. UNCRD serves as a regional development and planning center, as well as a training and research center in related fields. UNCRD aims to provide services to developing countries and assist them in promoting their regional development and planning research, practical experimentation, education, and other related data analysis, communication, and cooperation between the countries and the regional organizations. The vision of UNCRD is to achieve safe, secure, equitable, and inclusive development for all people in a sustainable living environment in harmony with nature.

#### The publicity and Education Center of the Ministry of Ecology and Environment



Center was established in 1996 and is a public institution directly under the Ministry of Ecology and Environment, undertaking the technical support work of publicity and education on ecological and environmental protection as well as the daily management and training work. Center is a second-class public welfare institution and has five internal institutions, including editorial department of World Environment magazine, a social propaganda office (management office of the publicity and education base), an education office, a training office and a new-media office (institute of ecology environmental public relationship and strategic communication).

• The center is responsible for organizing and producing major environmental commemorative days and national ecological environmental protection social propaganda activities, as well as the public opening of ecological environmental protection facilities public propaganda materials.

• The center is also is also responsible for theoretical research and content design of ecological environmental education, providing technical support for creation of "green schools" by relevant ministries and local governments, promoting and popularizing natural education, and undertaking the planning and production of online ecological environmental education products.

• The center is responsible for training in the ecological environmental system and providing training for professional personnel in ecological environmental protection in developing countries. It is also responsible for the daily management of the party school of ministry of ecology and environment and undertakes various training courses.

• The center constructs an ecological environmental public participation and communication platform, including environmental social organizations, conducts research on ecological environmental public relations and strategic communication, undertakes technical support for collecting, analyzing, reporting and responding to ecological environmental social risks and public opinion and manages the operation of government new media, it also edits and publishes the World Environment magazine.

#### Basel Convention Regional Centre for Asia and the Pacific







Basel Convention Regional Centre for Asia and the Pacific (BCRC Beijing) is established in 1997 according to the decision of the third meeting of the Conference of the Parties to the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal. BCRC Beijing is one of the fourteen regional and coordinating centers (BCRCs) globally. In May 2009, BCRC Beijing has been endorsed as the Stockholm Convention Regional Centre for Capacity building and the Transfer of Technology by the fourth meeting of the Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants, and became one of sixteen Stockholm Convention regional and subregional centers. On May 20th 2011, approved by the State Council, Mr. Zhou Shengxian, Minister of Ministry of Environmental Protection of the People's Republic of China, on behalf of the Government of the People's Republic of China, and Ms. Katharina Kummer Peiry, the Executive Secretary of the Secretariat of the Basel Convention, signed Framework Agreement on the Establishment of a Basel Convention Regional Centre for Training and Technology Transfer for the Asia and Pacific Region (Framework Agreement). Framework Agreement provides the procedures of BCRC Beijing's independent operation, tax exemption, privileges and immensities.

With performing responsibilities for both Basel Convention and Stockholm Convention, and assisting developing countries and countries in transition to achieve the aims of the above two conventions, the core functions of BCRC Beijing include training, technology training, technology transfer, information, consulting, and awarenessraising. In November 2010, Ministry of Environmental Protection of the People's Republic of China and Tsinghua University jointly signed Cooperation Agreement on Developing National Hazardous Waste Management Training and Strategic Research (Cooperation Agreement). BCRC Beijing is responsible for the implementation of Cooperation Agreement, conducting national hazardous waste management training and research on hazardous waste management framework and policy, with the aim of improving China's hazardous waste management capacity and management framework research level.

#### Circular Economy journal (English version) by Tsinghua University Press



Circular Economy is an academic journal in the English language that is published by Tsinghua University Press and Elsevier, with Tsinghua University as the host institution. The first issue of the journal was published in March 2022 and is fully open access. The Chief Editor of the journal is Professor Jinhui LI, who works in the Environment Department of Tsinghua University. The focus of the journal is on waste minimization, reuse, resourcefulness, and recycling. This publication fills a gap in the field of international journals on circular economy in the English language located in China. Moreover, the journal provides a high-level academic exchange and sharing platform for domestic and foreign researchers working in circular economy and solid waste management. Through this journal, China will be able to enhance its international discourse in this field and promote its circular economy concept to the world.

#### Frontiers of Environmental Science & Engineering (FESE)



Frontiers of Environmental Science & Engineering (FESE) is a comprehensive English academic journal in the field of environmental science and engineering cosponsored by Tsinghua university, higher education press and China Academy of Engineering. It is distributed worldwide by the internationally renowned publisher Springer. The journal is edited by Academician Qu Juhui from Tsinghua University and Academician John C. Crittenden from Georgia Institute of Technology, and the editorial office is located in the School of Environment at Tsinghua University. FESE was officially launched in 2007 and has been indexed by SCI since the first issue in 2009. It is currently published bi-monthly. The journal accepts original and innovative review papers, research papers, opinions and comments, and brief reports in various branches of environmental science and engineering. It particularly emphasizes research results in rapidly developing interdisciplinary fields of environmental science and engineering. The journal is committed to disseminating a large number of excellent academic achievements that have emerged rapidly, providing an ideal platform for the international academic community to understand the development of China's environmental science and engineering discipline, and promoting communication and development of this discipline between China and the international academic community.

#### **Energy Foundation**



The energy foundation is a professional non-profit charity registered in the California, USA. Foundation dedicated to Chinese sustainable energy development from 1999. Foundation is legally registered as a representative office in Beijing, Beijing public security bureau issued registration certificate and the business supervisor is National development and reform commission. The vision of Energy Foundation is promoting China and worldwide prosperity through sustainable energy. The mission is to promote climate neutrality, achieve world leading air quality, enable the right can use for all people and achieve green economic growth in both China and world through energy transition and optimizing economic structures. Foundation conducted to build a professional foundation with strategy aim then as a donator, coordinator and suggester to efficiency driving mission completed.

Foundation donates 7 fields include electron, industry, transport, cities, environmental management, low carbon transition and strategic communications. Foundation through support relevant organization in China low-carbon development strategy, urbanization, coal transition, electrification, air quality and international cooperation. By the end of 2022, the energy foundation had funded organizations, including leading domestic and international policy research institutions NGOs such as National Centre of Strategic Research and international Cooperation to address Climate Change, the Environmental Planning Institute of Ministry of Ecology and Environment, the Chinese Academy of Science, Tsinghua University, Peking University, the China Environmental Protection Federation and China Association for the promotion of international civil society organization, 2022 institutions US \$81.36 Million in project funding, 413 new projects in this year and 67 agency staff.