

# Resource Efficiency and Circular Economy Approaches towards an Inclusive and Sustainable Urbanization in Asia and the Pacific

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# Coverage

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2. **Urbanization, and Environmental and Socio-economic Issues**
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4. **Objectives and Expected Accomplishments of this Workshop**

# ESCAP-Regional Arm of the United Nation

- The regional development arm of the United Nations for the Asia-Pacific region -1 of the 5 regional commissions of the United Nations
- 62 Governments - 58 within the region, i.e., from Turkey in the west to Kiribati in the east, and from the Russian Federation in the north to New Zealand in the south
- The largest United Nations body/Commission serving the Asia-Pacific region (in terms of population and land area) with 500 staff (about 180-P staff)
- Established in 1947 with its headquarters in Bangkok, Thailand since 1949, ESCAP seeks to overcome some of the region's greatest challenges of poverty reduction and implementation of IADG, especially the **2030 Agenda for Sustainable Development and its 17 sustainable development goals**



# Sustainable Development Goals of 2030 Agenda (2016-2030)

The 2030 Agenda for Sustainable Development comprises **17 Sustainable Development Goals (SDGs)** across a range of sectors, supported by 169 targets and 232 indicators to guide and assess implementation.



# **Urbanization, environmental and socio-economic issues**

# Urbanization and Environmental Situation

- ▶ **Asia-Pacific region** - home to over half of urban population (2.23 b) in 2018; projected to 3.2b (about 2/3<sup>rd</sup> of total) in 2050; estimated 3.6m people arrive in Asia-Pacific's cities every month;
- ▶ **Significant contribution of cities on gross domestic product (GDP)**
  - ▶ China's urban area - 74% of national GDP, and 85% of GHGs emissions (25% of global emissions);
  - ▶ Shanghai - GDP per capita of US\$17548 (i.e., double of national figure) and GHG emissions per capita of 12 tCO<sub>2</sub>e (60% >national average);
  - ▶ Bangkok - home to 13% of total population and GHGs emissions per capita of 12tCO<sub>2</sub>e (national average: 3.9 tCO<sub>2</sub>e per capita);
- ▶ **Urban areas in the region** - high per capita consumption of resources, high material use intensity, social inequalities, and production of large amounts of solid and liquid wastes in addition to air pollutants inc GHGs.



# Waste Generation in Asian Cities

1.3 billion tonnes of  
municipal waste  
generated each year

Worldwide (WB, 2012)

0.28 billion tonnes  
each year

Asian cities

Will generate 1.8 billion  
tonnes annually in 2025

60-70% organic  
waste

High per capita waste  
generation

Source: UNEP/AIT/ISWA, 2017. Asia Waste Management Outlook

# Waste Disposal trend in the region

- ▶ Waste management - challenging and highly inefficient
- ▶ Waste resources largely end up in **landfills and oceans**. For example,
  - ▶ 55% of solid waste in Eastern Asia, 59% in South-East Asia, and 74% for South-Central Asia are disposed in landfills.
  - ▶ Out of largest 50 dumpsites worldwide, at least 17 are in the region.
  - ▶ Out of 8.3 billion tonnes of **plastic** produced globally over the past decades
    - only 9% has been recycled
    - 79% has accumulated in landfills or the natural environment
    - 13 million ton enters oceans annually
    - **Asia-Pacific region has large share on it.**
  - ▶ Less than 30% of the municipal wastewater generated in India, or less than 10% of that generated waste in Viet Nam is treated before disposal.
  - ▶ About 85% wastewater generated in developing Asia-Pacific -directly discharged to the natural eco-system.



# Recognizing the value of informal economy

- ▶ Cities - home of many people, experience multidimensional poverty; over 430 million people or 27% of the region's urban population live in slums/informal settlements;
- ▶ Many of them - engaged in the **informal economy** that provides various social and environmental benefits, such as
  - ▶ recovery and recycling of waste, affordable transportation and inputs to manufacturing processes etc.
- ▶ They have little formal recognition of their positive contributions and low access to basic urban services and opportunities for socio-economic development.
- ▶ Most of the urban economic processes are linear and non-participative.
- ▶ To address these emerging challenges, **resource efficiency and circular economy** approaches would provide solutions.

# Resource Efficiency and Circular Economy

# Resource Efficiency

- ▶ means using earth's limited resources in a sustainable manner while minimizing impacts on the environment and increasing social and economic benefits of a product;
- ▶ RE allows to create more with less and to deliver greater value with less input;
- ▶ RE promote careful and planned use of all natural resources. For example,
- ▶ RE engage users to make services more resource efficient and to reduce material/energy use in service use cycle,
- ▶ It identifies opportunities to improve efficiencies, reduce waste, and enhance economic outcomes;
- ▶ ESCAP projects have promoted resource efficiency in managing municipal wastes.

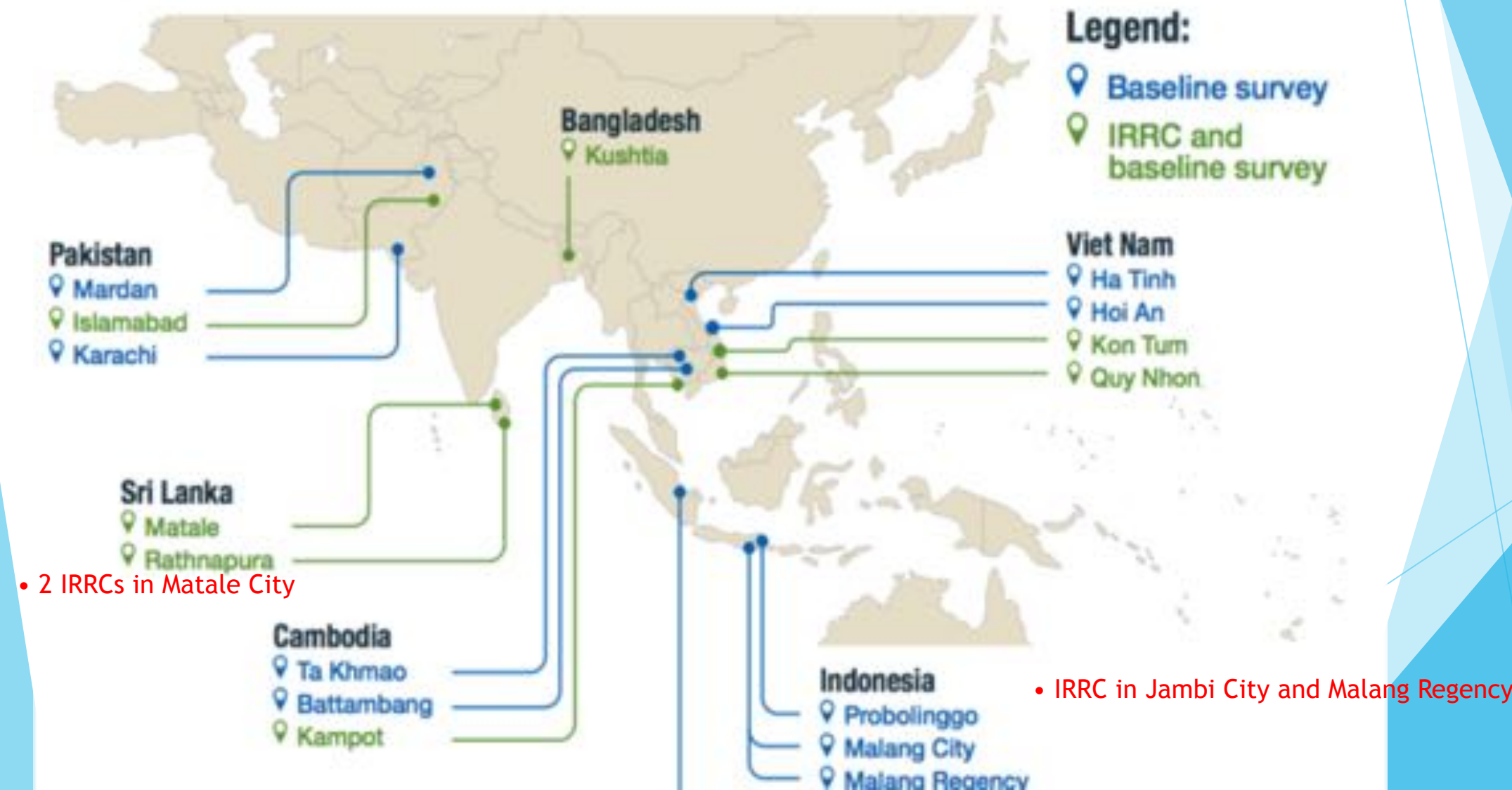


## ESCAP Work on improving Urban Resource Efficiency

- ▶ ESCAP launched '**Pro-poor and Sustainable Solid Waste Management in Secondary Cities and Small Towns in Asia-Pacific**' [2009 - 2018]
- ▶ **Purpose:** develop a replicable model for up-scaling pro-poor and sustainable solid waste management in secondary cities and small towns that improves incomes and working conditions of informal sector waste pickers and addresses climate change mitigation and adaptation.
- ▶ **Major Accomplishments**
  - ▶ Assessed solid waste management practices in 17 cities through baseline surveys; Conducted 8 case studies;
  - ▶ Established and supported Integrated Resource Recovery Centres (IRRCs in 10 cities of 6 countries);
  - ▶ Shared IRRCs model, challenges, benefits experiences and learnings, and developed human resource through workshops and trainings, regional and global partner events;
  - ▶ Contributed in formulating 3R and resource efficiency related national policies and strategies through country partners;
  - ▶ Published reports and manuals on solid waste assessment, NAMA design, partnerships, valuing waste, sustainable development co-benefits, IRRC, business plan etc (<http://www.unescap.org/waste-to-resource/reports-guidelines>);

**‘Pro-poor and Sustainable Solid Waste Management in Secondary Cities and Small Towns in Asia-Pacific’ [2009 – 2018]**

**Project Area** - 10 IRRCs in 6 countries



# ESCAP-GIZ-ICLEI Urban Nexus Project



2013

2014

2015

2016

2017

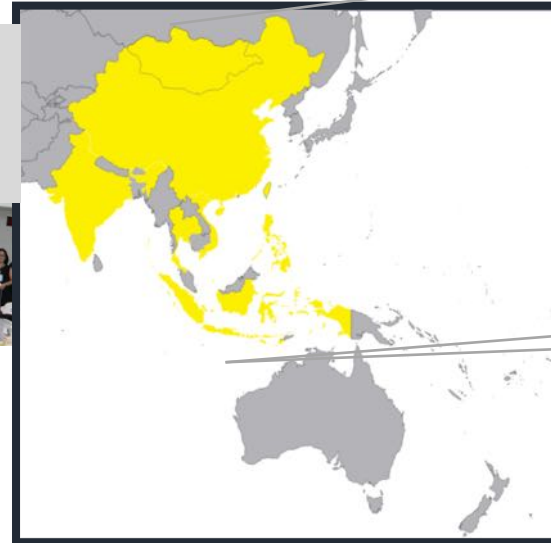
2018

Phase

Phase

## ESCAP PROJECT

Integrated Resources Management in Asian Cities: the Urban Nexus (water-energy-land/food)



## 7 TARGET COUNTRIES

(12 secondary cities)

China  
India  
Indonesia  
Mongolia  
Philippines  
Thailand  
Viet Nam

## ACTIVITIES TO DATE

- ✓ 7 regional workshops
- ✓ 5 national dialogues
- ✓ Various outreach global events
- ✓ Policy guideline & tools

DONOR



EXECUTING AGENCY



PARTNER





# Circular Economy

- ▶ An approach to enhance sustainability, inclusiveness, and resilience within cities;
- ▶ CE concept is based on the principles of designing out waste and pollution, keeping products and material in use, and regenerating natural systems for a clean, safe, and sustainable society;
- ▶ CE emphasizes the use of regenerative design principles that maximize effectiveness, performance, and recyclability of material goods within ecosystem capacities;
- ▶ CE implies a “**cradle to cradle**” approach and obtains minimal amount of natural resources efficiently for conversion into products for use and reuse for longer period, and **finally dispose unrecoverable resources in non-toxic form into the environment**;
- ▶ CE promotes resource efficiency and overcomes ‘business-as-usual’ approach of **take-make-disposal/use and throw**.



# Key Cross-cutting areas

Promoting Resource Efficiency and Circular Economy in Cities require to understand the key cross-cutting areas:

- a. Financial instruments for urban infrastructure and service provision
- b. Individuals, institutions and governance networks
- c. Innovative tools for mapping/measuring resource flows and technologies for resource efficiency
- d. Optimizing urban material flows and recovery
- e. Natural ecosystems/nature-based solutions.

These areas will be discussed in this workshop.

# Objectives and Expected Outcome of the Workshop

## Objectives

- ▶ Share sustainability lessons from ESCAP implemented project in enhancing urban resource efficiency through waste-to-resource approach;
- ▶ Identify linkages of various waste solutions, including IRRCs, to enhance urban resource efficiency, and promote broader circular economy policy approaches in the formal and informal sectors;
- ▶ Identify financing options for national and local governments;
- ▶ Recommend policy actions to scale-up and replicate appropriate models for urban resource efficiency, waste management, and circular economy;
- ▶ Provide substantive inputs to the 2019 *Future of Asian and Pacific Cities* report

## Expected outcomes

- ▶ Develop robust policy recommendations for adopting and scaling-up circular economy approaches, including zero-waste and waste-to-recovery solutions;
- ▶ Identify knowledge gaps and needs;
- ▶ Develop ideas and concepts, and strengthen and expand regional partnerships on resource efficiency and circular economy; and
- ▶ Define the thematic content for the 2019 *Future of Asian and Pacific Cities* report.

# Thank you very much!!

<http://www.unescap.org/our-work/environment-development/urban-development>

