Decentralized Municipal Solid Waste Management: Challenges and Recommendations

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Worldwide Association of local governments that dates back 1913
The local government organization recognized by UN. Represent & defends local governments’ interest on the world stage

2004 – UCLG was established as a merger of IULA (1913), UTO (1960\textsuperscript{th}), and Metropolis (1980\textsuperscript{th})
Figures 2.1 and 2.2 Forms of state and decentralization, 1970-2016

Source: Regional Authority Index and different devolution indices. *Authors' elaboration*

Level of decentralization by country, 1970

- Devolution indices:
  - Centralized country
  - Low level of decentralization
  - Medium-low level of decentralization
  - Medium-high level of decentralization
  - High level of decentralization

Level of decentralization by country, 2016

- Devolution indices:
  - Centralized country
  - Low level of decentralization
  - Medium-low level of decentralization
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Promoting fair and sustainable societies characterized by solidarity and based on local democracy, self-government and decentralization.
ABOUT UCLG ASPAC

Asia and the Pacific is the largest regional section of UCLG, and it incorporates economically fast developing countries such as China, India, and Indonesia.

“To be the united voice and world advocate of local governments, promoting its values, objectives and interests, through cooperation between local governments, and within the wider international community.”
UCLG ASPAC Governing Body (2016 - 2018)
Role of UCLG ASPAC

Advocacy: Change the Perspective and MindSet of Local Governments
Role of UCLG ASPAC

Advocacy: Raise awareness on SDGs & Solid Waste Management

MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE.

CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT.

ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS.

11.6 by 2030, reduce the adverse per capita ENVIRONMENTAL IMPACT OF CITIES, including by paying special attention to AIR QUALITY, municipal and other WASTE MANAGEMENT.

Urban sanitation and solid waste management are essential to reducing coastal zone pollution, as is collaboration between municipalities and at regional level.

12.5 by 2030, substantially reduce waste generation through prevention, REDUCTION, RECYCLING, AND REUSE.
INDONESIA: NATIONAL SITUATIONS ON SWM

- Development of SW Technology
- Increasing of population
- Varied of Plastic Packaging
- INCREASING OF TYPE AND TOTAL AMOUNT OF SOLID WASTE IN INDONESIA
- SWM in the Cities are Not Optimal Yet
- Life Style
- Lack of Public Awareness
- Less Infrastructure
- Local Budgeting of SWM is Not Priority Yet

Source: MoEF Indonesia
- SWM is still focused on final disposal
- Implementation of 3R’s principle of SWM is low
- Lack of awareness

Source: MoEF Indonesia
WHO IS RESPONSIBLE FOR SWM IN INDONESIA

Act Number 18 Year 2008 on SWM

*Central Government provides national policies and Local Governments are responsible to manage solid waste well and in sustainable ways*

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**SOLID WASTE REDUCTION**
1. SOLID WASTE RESTRICTIONS
2. RECYCLE
3. REUSE

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**SOLID WASTE HANDLING**
1. SEGREGATION
2. COLLECTION
3. TRANSPORTATION
4. TREATMENT
5. FINAL PROSES (TPA)

Source: MoEF Indonesia
WASTE MANAGEMENT IN INDONESIA

Regulated by 2 regime of laws

- INDUSTRIAL WASTE BOTH SOLID AND LIQUID
- DOMESTIC WASTE WATER
- INDUSTRIAL HAZARDOUS WASTE

- HOUSEHOLD SOLID WASTE
- HOUSEHOLD-LIKE SOLID WASTE (FROM COMMERCIAL, MARKET, OFFICE, ETC.)
- SPECIFIC WASTE (HOUSEHOLD HAZARDOUS WASTE, DISASTER WASTE, CONSTRUCTION & DEMOLITION WASTE, ETC.)

Source: MoEF Indonesia
IRRCs – helping achieve Sustainable Development Goals
IRRC in Indonesia

- MOEF
- UNESCAP
- UCLG ASPAC
- Waste Concern
- Malang
- Jambi

- Execute project

- Coordination and Monitoring
Main benefits

• Positive environmental impact – waste treated ratio increased
• Reducing government budget on waste transportation – treatment of waste near waste sources, reduce waste volume transported to Final Disposal
• Increasing level of trust to government being able to deliver public services
• Reduction of water-borne diseases
• Low cost technology – easy to adopt and to replicate
Challenges

- Switch mindset from open dumping to waste treatment
- Encourage treatment from water sources
- Technical aspects – such as land conditions
- Weather aspect – heavy rains
- Manpower – Lack of skilled labors during the construction (Jambi)
- Involving several related agencies – posing challenges on coordination
- Government budget system and its limitation – administrative procedure, amount of budget available
- Availability of land for IRRC – local governments may not have an ideal land (land status, position, adequate size)
- Numbers of qualified and competent local contractors
Challenges

- Fluctuation on waste supply
- Creating market for compost products
- Business model for BEP financial calculation
- Encourage municipalities to prioritize waste management/treatment
- Identifying ideal scheme: budget sharing and PPP – ownership
Way forward

- National Workshop in Jambi to highlight IRRC potential and inspire cities to replicate IRRC models
- Replicate IRRC to committed cities and local governments
- Upscale IRRC, in cooperation with MOEF Indonesia, at national level
- Integrate IRRC in upcoming activities of UCLG ASPAC:
  - the sanitation advocacy in Nepal and Bangladesh including Faecal Sludge Management (FSM) and ‘IRRC adopted’ Faecal Sludge Treatment Plant (FTSP)
  - Dissemination of IRRC model through IUC SupportDesk
- Organise IRRC Seminar in conjunction with other events of UCLG ASPAC, ExBu Meeting in Pakistan in spring 2018
Recommendations for Policymakers

- Developing guideline to support for and apply regulations on waste management
- Developing system to ensure sustainability of IRRC operation (i.e. operators, social enterprises)
- Enforcing the compliance of policy and regulation
- Developing partnership scheme with private sectors as well as the economic incentives
- Setting indicators and measurements for target of waste reduction and waste handling (at source, transported to landfilled, untreated, increase waste to recycle and recover)
- Delivering better services to increase level of trust and involvement of communities
- Prioritizing waste management through leadership engagement, community empowerment, and stakeholders collaboration
THANK YOU!

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