

Expanding the implementation of community-based solid waste management: Key Factors and Challenges in the Green and Clean Program in Indonesia

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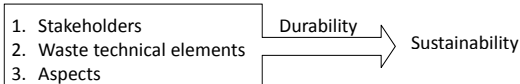
Community Participation

- Community participation in Solid Waste Management (SWM): What general citizens can do to assist the SWM
- Various degrees :
 - individual and collective
 - active participation
 - community management** → Responsibility, authority, control

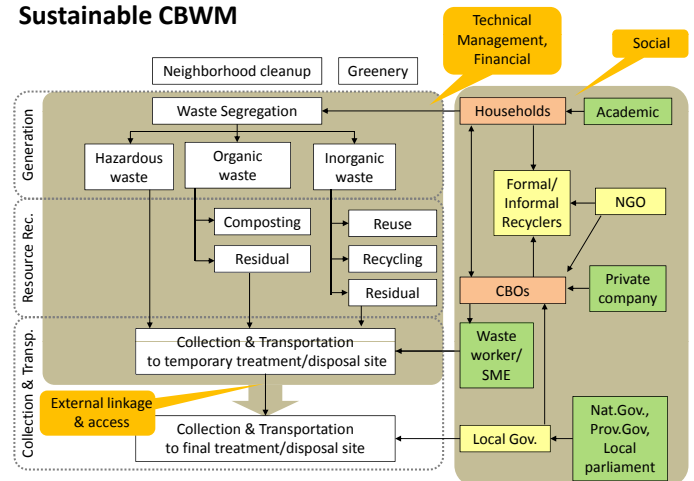
Community-based waste management (CBWM)

An activity to manage waste at community level, with full involvement of the community members in decision-making and implementation

Waste management: integrated and sustainable system



Sustainable CBWM



Scaling Up / Expansion

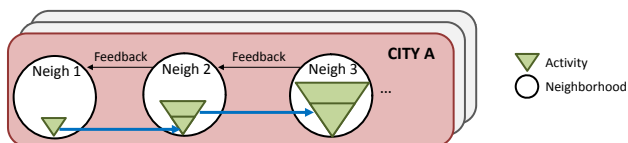
Scaling up

Process to multiply certain activities/approach to increase its impact

- Technology
- Knowledge

Concerns:

- Population and area coverage
- Effectiveness
- Efficiency
- Sustainability
- Equity



Pilot Project → Intra-city scaling up (city-wide) → Inter-city scaling up (nation-wide)

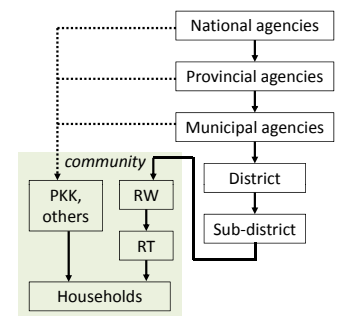
SWM National Policy in Indonesia

Waste Law No.18/2008

1. Maximize waste reduction, especially at source
2. Enhance role of public (community) and private sector as partners

Goal of CBWM:

Reducing waste going to disposal sites



SWM in Surabaya

General information

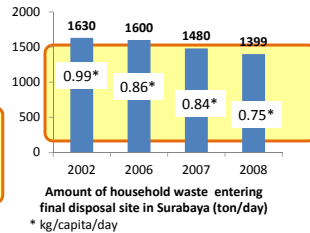
- Trading port since early 14th century
- Advanced in environmental management
- Long experience in community-based programs
- Mayor change in 2001
→ 73.7 % resident satisfaction rate



Area : 326.3 km², Population : 2.7 million (2010)
District/Sub-district : 31/163
RW / RT : 1,389/9,124, Households: 768,932

Waste generation (2008)

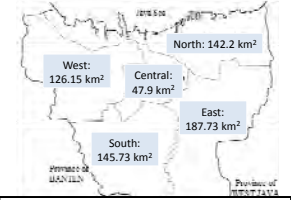
- Total : 2,185 ton/day, 0.75 kg/capita/day
- Household waste: 79.2%
- Community management: 533 ton/day (25%)
- Waste composition: 72% organic (UPF-ITS, 2006)
- SWM Priority programs: **3R programs** to reduce waste at source
- SWM Budget: 11.1 million USD (4%)
3R programs : 148,700 USD (>1%)



SWM in Jakarta

General information

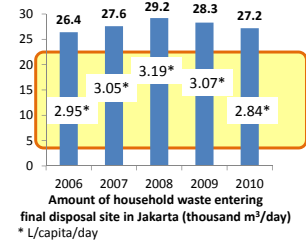
- Special administrative structure: decision making is on provincial level
- Sectoral priority: public transportation, flood management, housing, infrastructure



Area : 661.5 km², Population : 9.2 million (2009)
Municipality: 5; District/Sub-district: 44/267
RW / RT : 2,692 / 30,094, Households: 2,292,281

Waste generation (2010)

- Total : 8,646 ton/day , 0.9 kg/capita/day
- Household waste: 52.97%
- Community management: 485 ton/day (0.5%)
- Waste composition: 55.4 % organic, 37.8% inorganic waste (Cleansing Dept, 2009)
- SWM program: 3R program (not priority)
- SWM budget: 68.3 million USD (0.03%)
3R program: 46,400 USD (0.07%)



The Green and Clean (GC) Program

Started in Surabaya in 2002

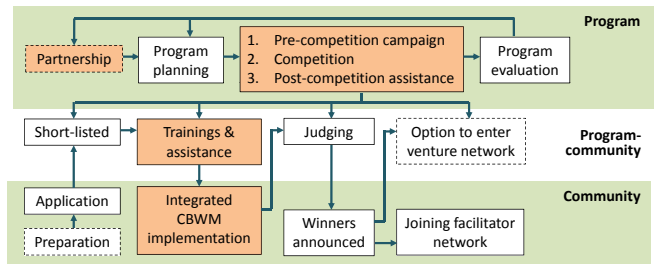
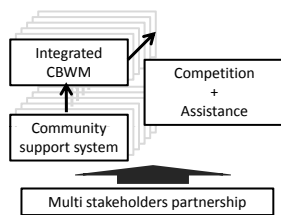
- Unilever's CSR program
- Unilever Peduli Foundation (UPF) in 2002

Goal:

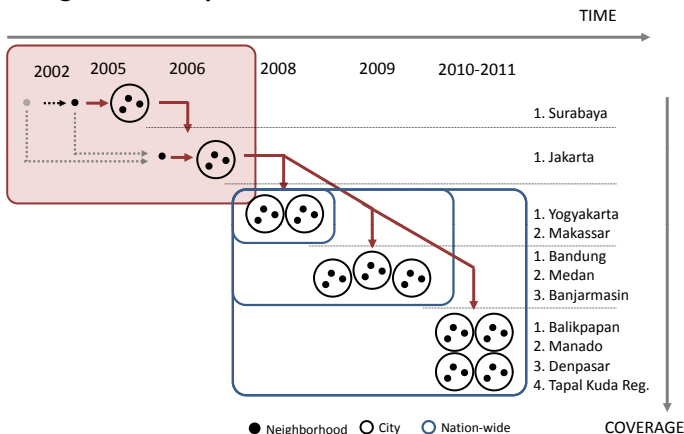
Contributing to reduction of waste going to disposal site through community involvement

Program components:

- Encouraging integrated CBWM
- Creating community support system: cadres and facilitators
- Competition + Assistance
- Multi-stakeholder partnership



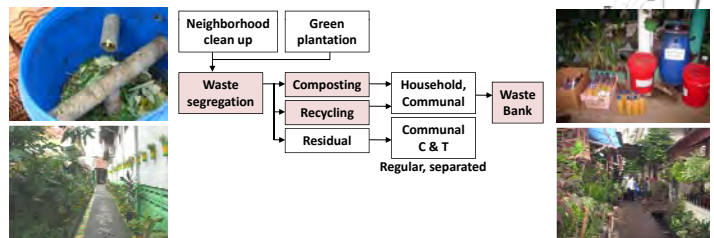
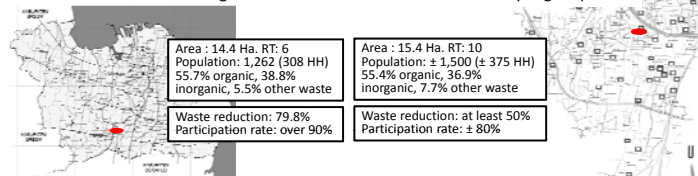
Program Development in 2002-2011

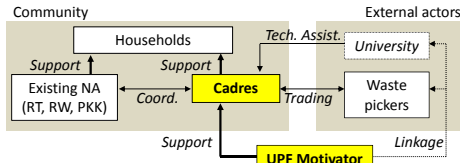


Pilot Project

SURABAYA: RW 03 Jambangan

JAKARTA: RW 03 Mampang Prapatan





Actors	Roles
Households	CBWM implementation
Existing NA	Supporting CBWM (funding, motivating community members)
Cadres	<ul style="list-style-type: none"> CBWM implementation, giving example, creating culture to comply Internal information dissemination, facilitation, Bridging internal-external relation
UPF motivators	Motivating cadres, technical & non-technical trainings, linking external resources to community
University	Research on composting techniques, technical trainings
Waste pickers	Trading of recyclables

Goal

To find an innovative CBWM model at neighborhood level

Process

- Approach community
- Choose cadre
- Trainings
- CBWM implementation by cadre
- Information dissemination to households
- CBWM implementation by interested households

Key element of scaling up

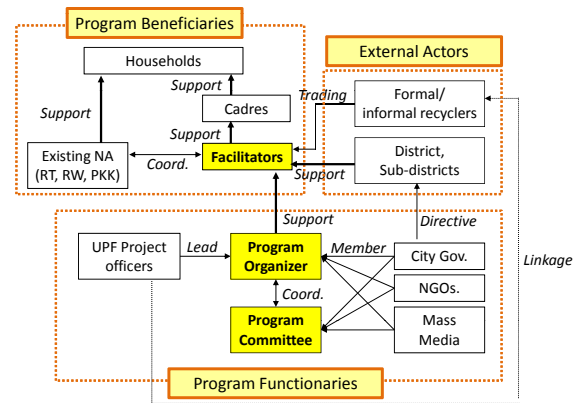
- Innovation
Improved recycling and related activities
- Strategy
Inter-personal communication within community members
- Organization
Introduction of cadre to support households activities

City-wide scaling-up

SURABAYA

JAKARTA

- | | |
|--|--|
| <p>2005</p> <ul style="list-style-type: none"> Partnership Competition <p>2007</p> <ul style="list-style-type: none"> Activity expansion : Trashion Facilitators <p>2008</p> <p>Motivators</p> <p>2009</p> <p>Activity expansion</p> <ul style="list-style-type: none"> Home-industry network, Waste Bank cooperatives Facilitator forums, facilitator network, sister-districts Program spin-offs: Green Office, Green School <p>2010</p> <ul style="list-style-type: none"> City government : lead program implementation, full program financing UPF : advisory role, spin-offs | <ul style="list-style-type: none"> Approaching sub-district gov. Partnership with media & NGO Competition Partnership with municipal gov. Activity expansion : Trashion Facilitators Motivators Competition in two-levels <p>Activity expansion</p> <ul style="list-style-type: none"> Home-industry network, Waste Bank cooperatives Facilitator forums, facilitator network, sister-districts <p>Program spin-offs: Green Office, Green School</p> |
|--|--|



Actors	Roles
Activities at neighborhood level (program beneficiaries)	
Households	Same
Existing NA	Same
Cadres	Support to households
Facilitators	Internal management & facilitation, bridging internal-external relation
Activities at the GC Program level (program functionaries)	
NGO	Technical and non-technical trainings, member of program organizer
Media	Media coverage, program campaign & information dissemination, assessment in competition, member of program organizer
City Government	Funding, campaign, technical training, assessment in competition, member of program organizer
Other program partners	In-kinds, donation for cash award for facility provision
UPF project officers	Coordinator of program organizer (concept formulation, fund raising, sponsorship and program operation, funding, business skill training)
External actors	
Formal/ Informal Recyclers	Same
District, sub-district gov.	Supporting CBWM activity (funding, facility/material assistance, secondary waste collection & transportation)

Goal

To develop and expand the CBWM implementation throughout the city

Process

- Partnership
- Competition
- Creating facilitators, eliminating motivators
- Activity/program expansion (further activity development, program spin-offs)

Key element of scaling up

- Innovation
Same
- Strategy
Competition
- Organization
 - Program beneficiary: **facilitators**
 - Program functionary:
 - Program committee & organizer
 - UPF project officers (motivator)

Pilot Stage

Development of an innovative model is necessary before a consideration of scaling-up is put forwarded. The model should accommodate the technical elements of CBWM and a system to support community activities

City-wide Stage (Intra-city scaling up)

Strategy for scaling-up is necessary, along with organizational adjustment within the program beneficiary and functionaries

(Addition)

Nation-wide stage (Intra-city scaling up)

Dissemination of success story in the available forums that connect cities

Neighborhood level: CBWM impact

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Waste reduction: 79.8%
Participation rate: over 90%

JAKARTA

Waste reduction: at least 50%
Participation rate: ± 80%

Improvement :

- Management structure
- Role sharing
- Financial scheme (improvement of recycling & others)
- Strengthening relation to informal sector

Difficulties :

- Limited linkage to other actors,
- Distant location → Communication and interaction

City level

SURABAYA

JAKARTA

Area coverage

163 sub-districts (100%)
30% of total 9,124 RT

Area coverage

164 sub-districts (61%)
18.3 % of total 2,692 RW
10% of total 30,094 RT

Assistance coverage:

Facilitators : 420
Cadres : 28,744
Household : 37.4 % of total 768,932

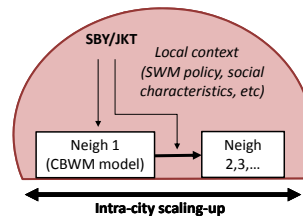
Assistance coverage:

Facilitators : 492
Cadres : 50,045
Household : 21.8 % of total 2.2 million

- Increased number of CBWM
- Government attention and involvement in CBWM

National level

- Coverage of 10 cities (out of 24 big cities in the country) + 1 region
- Unilever: increased CSR commitment, enhanced public image



- CBWM model & Imp. by the **program beneficiary**
- Program structure & implementation by the **program functionaries**
- The **context of the city** (sectoral, social contexts)

1. Design : of the CBWM model & the scaling-up program

- Utilization of appropriate technology (composting, recycling scheme)
- Adaptable and responsive model
- Targeted strategies & participatory approach

2. Institutional aspect:

- Establishment of support system at neighborhood level
- Attention to the larger institutional needs : expansion of the organizational structure, capacity building, resource allocation
- Linkage between actors (community-program partners-other actors)

3. Information dissemination:

- Effective communication pathway within / between program beneficiary and functionaries
- Information sharing + knowledge transfer

4. Policy aspect:

- Supportive policy climate at local level: basic policy, regulation, budget

5. Social participation aspect:

- Community capacity to demand and participate
- Vibrant community sector and the experience of public sector in community-based programs

CBWM scaling up: consecutive stages (pilot, intra-city, inter-city)

Important lesson in intra-city scaling up in the GC Program:

- An appropriate CBWM design → universal, but flexible
- A structured program design to support community activity
- Information dissemination, communication channels and forums
- Local context : policy, timing, social characteristics, etc
 - Outcome may be different → knowledge gap
 - Universal principles

Requires **interaction and close cooperation** between all stakeholders

Government (city, district, sub-district) + Private Sector + NGO + Community + Others

For scaling up, role of government is necessary in:

- Performing stewardship
- Creating enabling environment
- Providing resource