COMMUNITY INITIATIVES IN SOLID WASTE REDUCTION, SUKUNAN VILLAGE,SLEMAN,YOGYAKARTA,INDONESIA
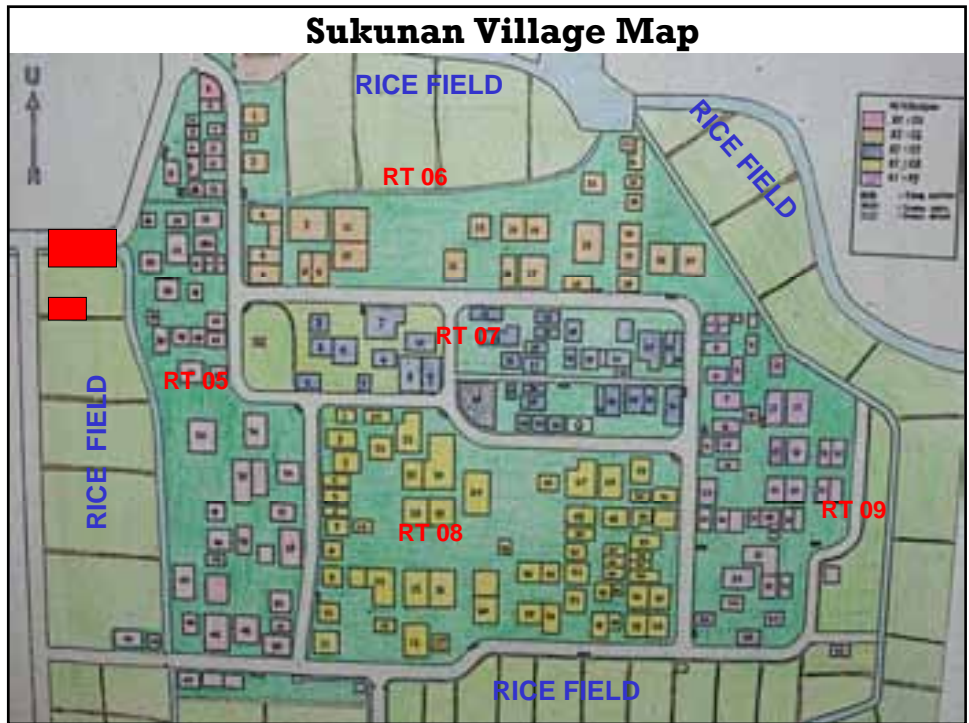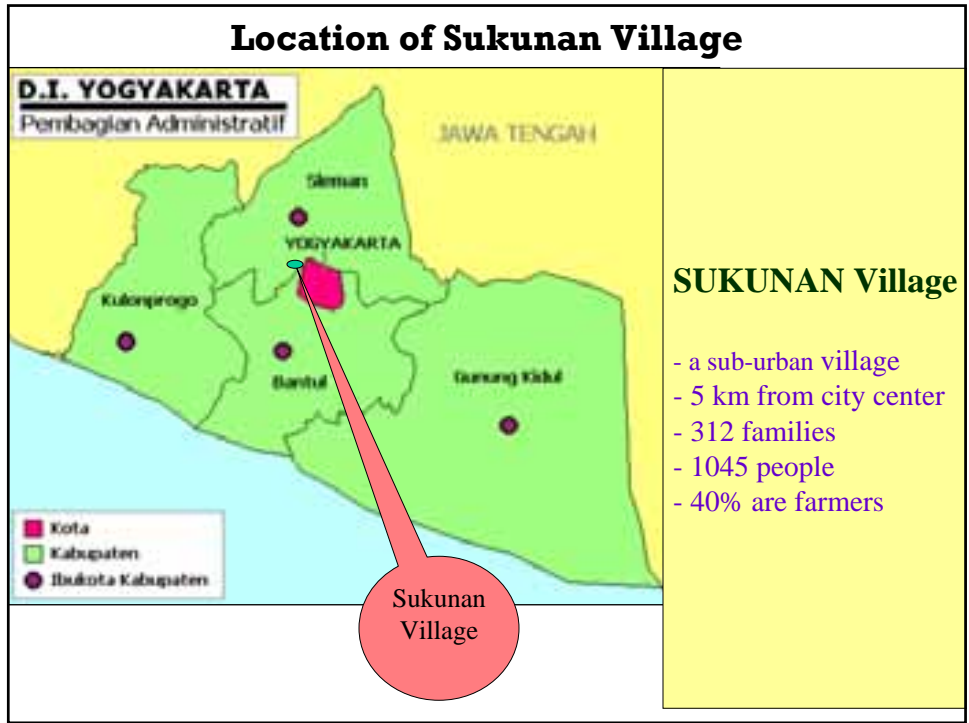
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Location of Sukunan Village

YOGYAKARTA
PROVINCE

Location of Sukunan Village

SUKUNAN Village

- a sub-urban village
- 5 km from city center
- 312 families
- 1045 people
- 40% are farmers

Sukunan Village Map

Welcome to Sukunan
the eco-tourism village

**Background of
Sukunan Waste Management Program**

I have been living in Sukunan since 1997
First, we met waste problem, Sukunan has not gotten
the waste management service from local Government and
I don't have vacant land for keeping my waste

Solid waste from households entered Sukunan rice fields in 2000
→ the first waste problem for community

Inorganic Waste destroyed rice plants .

Rubbish was found anywhere.

All types of waste (included hazardous waste) were disposed into soil

More than 90% of Sukunan people burnt all their garbage

Social conflicts was often arose from Waste

Local Government didn't have capability to treat garbage from all areas. Sleman District just could handle 22% of Sleman area.

Looked for Problem Solving

Observation to Yogyakarta landfill

Many scavengers work in Landfill Disposal Site of Yogyakarta. They are collecting & separating rubbish. Almost all garbage is picked up & sold

The scavengers picked and separated garbage into some types: paper, plastic, bottle, cans, metal. Then, he sold to recyclable waste traders (buyer)

BALADA SEONGGOK SAMPAH
karya Iswanto - Ronadeva

Aku lahir karena kamu, aku ada juga karena kamu,
Setiap hari engkau hasilkan aku, setiap hari pula engkau campakkan aku

Betapa malang nasibku jadi seonggok sampah; selalu dijauhi, dihina dan disia-siakan.
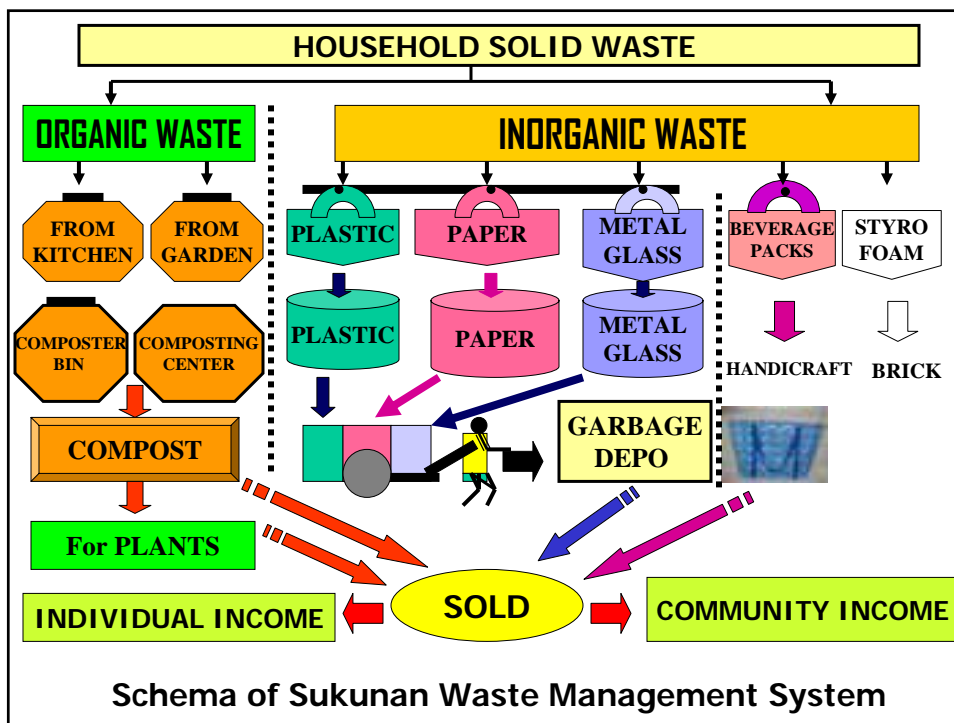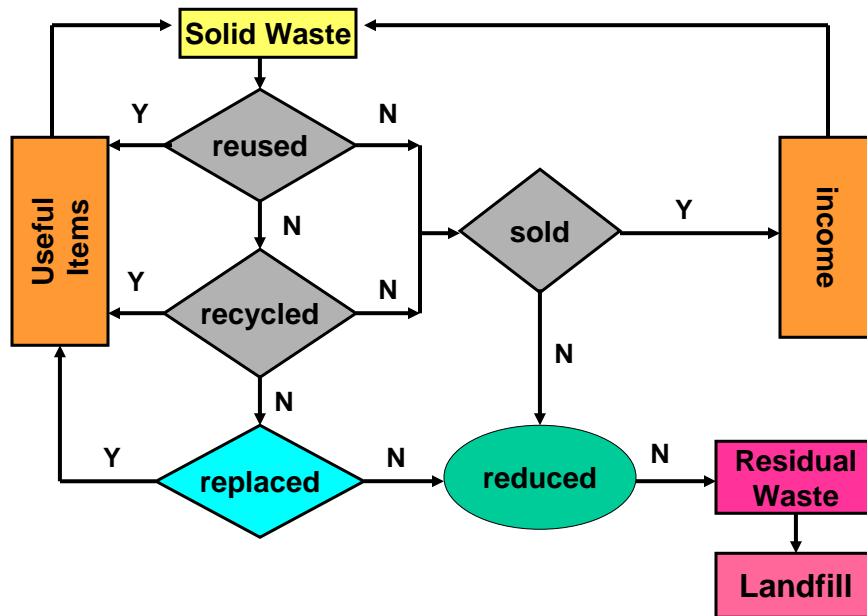Betapa sedih ditakdirkan jadi setumpuk sampah; dianggap biang bencana dan musibah

Salah sendiri engkau buang aku ke kali, hingga aku kirimkan banjir bertubi-tubi,
Salah sendiri engkau bakar aku sembarangan, hingga aku tebarkan racun pencemaran,

Salah sendiri engkau buang aku di tepi jalan, hingga aku munculkan kekumuhan,
Salah sendiri engkau buang aku di sembarang tempat, hingga aku sebarkan lalat dan bau menyengat

Tidak mampukah wahai engkau manusia? Mengelola aku dengan sebaik-baiknya,
Tidak sadarkan wahai engkau manusia? Ada mutiara dalam seonggok sampah.

Looked for appropriate composting method

My wife made handicrafts from "some beverage packs" to reduce waste

The Basic Idea of Sukunan's Waste Management System

Solid Waste

reused — Y → **Useful Items**
reused — N

recycled — Y → **Useful Items**
recycled — N

sold — Y → **income**
sold — N

replaced — Y → **Useful Items**
replaced — N

reduced — N → **Residual Waste** → **Landfill**

Schema of Sukunan Waste Management System

HOUSEHOLD SOLID WASTE

ORGANIC WASTE

- FROM KITCHEN
- FROM GARDEN
- COMPOSTER BIN
- COMPOSTING CENTER

COMPOST → For PLANTS

INORGANIC WASTE

- PLASTIC
- PAPER
- METAL GLASS
- BEVERAGE PACKS → HANDICRAFT
- STYRO FOAM → BRICK

PLASTIC / PAPER / METAL GLASS

GARBAGE DEPO

SOLD

INDIVIDUAL INCOME   **COMMUNITY INCOME**

We must manage our solid waste environmental friendly

**Begin from small and begin from now
to reduce the waste**

**Community Empowerment Process
to Implement
the Sukunan Waste Management System**

Steps

I. Propose the idea to solve waste problems to community

II. Build a village vision to support the waste management system.

III. Build community commitment to implement the system

IV. Establish the waste management team

V. Make rules for implementation of the system

VI. Socialize the system to all villagers

VII. Educate and train community about: 1) waste separation method, 2) compost making, 2) handicrafts making from rubbish, 3) Three R action (reduction, reusing, recycling), etc.

VIII. Prepare facilities for system implementation

IX. Implement the system

X. Monitor, evaluate and record

XI. Report the results to community and solve problems

XII. Develop and spread the system to other areas

Proposing ideas and building the commitment

Establishing Waste Management Team

Socialization the system to women

Socialization to Youth

Socialization to Children

Training how to make compost to children

Training how to recycle paper to children

Training how to separate the waste to children by playing game

Educating how to separate the waste to each household (door to door)

Socialization by song

The Sukunan Song
created by Iswanto

Marilah mari wahai warga Sukunan

Kita jaga kebersihan lingkungan

Jangan lupa kita harus memisahkan

Sampah plastik, kertas, kaca dan logam

Kita harus jaga kesehatan

Buang sampah jangan sembarangan

Bakar sampah jangan dilakukan

Sampah-sampah ayo kita kumpulkan

Agar lingkungan bersih dan nyaman

Kampung Sukunan sehat dan nyaman

Socialization by mural

Training
how to make handicrafts

Bins preparation by the Community

The Sukunan youths were painting bins

Placing three bins per collecting point (on 22 sites)

Bins were ready. One set (3 bins) for 10 – 15 families

Bins utilization

One of the waste management rules

Campaign to Waste Reduction

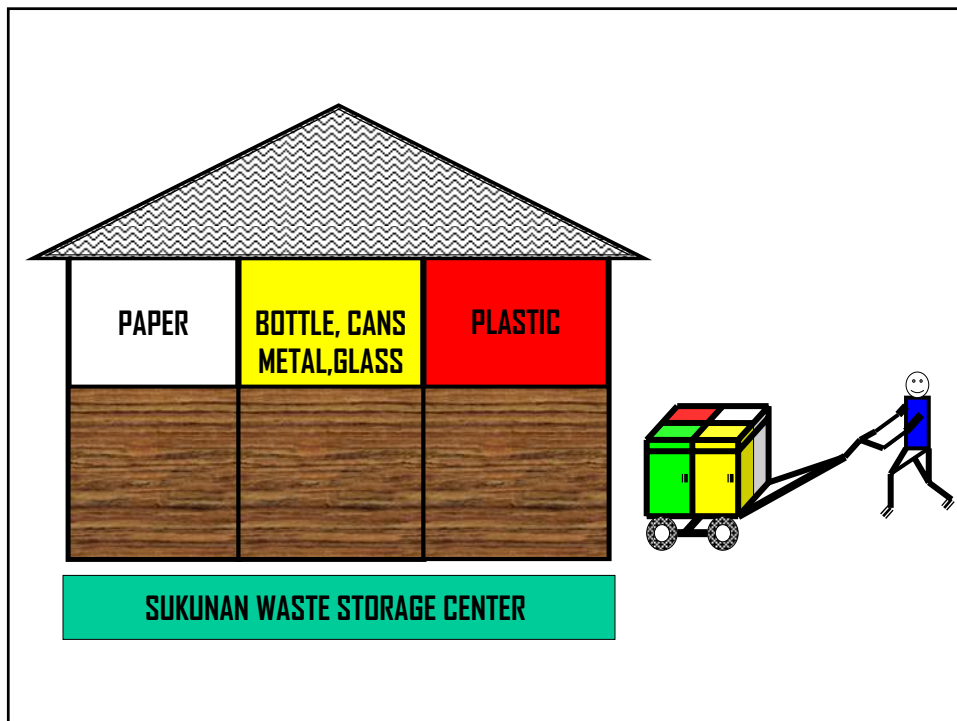| USE REUSABLE NAPKINS	BRING SHOPING BAGS	USE REUSABLE GOODS Such as : plate, cup, etc

Implementation of Rubbish Separation

Separate rubbish in each house
1) **PLASTIC,**
2) **PAPER,**
3) **BOTTLE, CANS, GLASS, METAL**

from houses to bins

from bins to the garbage storing site by a collector (weekly)

PICKING BY SACK

PAPER

BOTTLE, CANS METAL,GLASS

PLASTIC

SUKUNAN WASTE STORAGE CENTER

sale rubbish to the buyer

**<u>Implementation of
compost making
in each household</u>**

Clay pots for composting bin

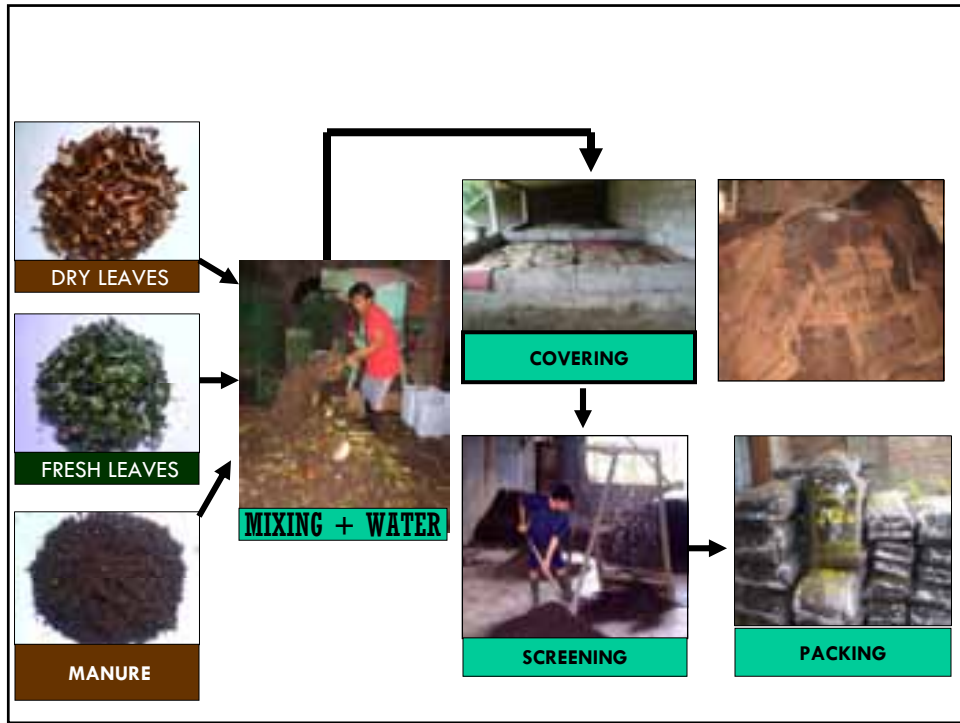**Sukunan's composting bin models**

Other Sukunan's Models

composting in garden

**compost making
from leaves and manure**

DRY LEAVES

FRESH LEAVES

MANURE

MIXING + WATER

COVERING

SCREENING

PACKING

USING THE COMPOST

Sukunan women make handicrafts from Rubbish

cleaning and setting process

Sewing process

The products

SUDDENLY ....May 27th , 2006, in the morning ....
Earthquake devastated Yogyakarta (included SUKUNAN)

Many Houses were ruined.............................
Needed materials to rebuild houses.............

The idea to use styrofoam waste as rebuilding material was emerged

Grinding the styrofoam into granule

Composition = 1 cement : 3 sands : 3 styrofoam + water

Styrofoam Bricks

Styrofoam Walls

Styrofoam pots

Many people from many places visit Sukunan:

- about 300 – 400 visitors/month
- more than 15,000 people have visited

From governments

From Women Groups

From other communities

From schools

From universities

From other countries

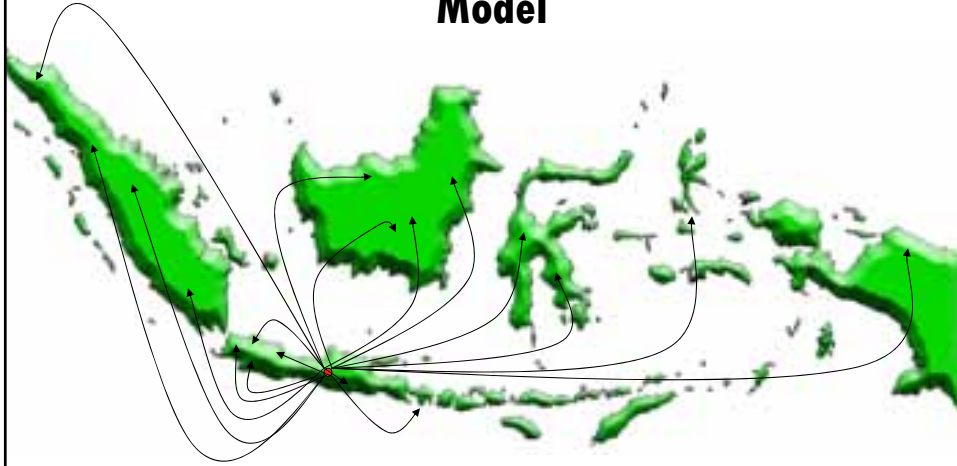**Selling many recycling products to visitors**

Selling the recycling products to visitors

Visitors can pick organic fruits by themselves

Disseminating the Sukunan Waste Management Model

from Sukunan to Indonesia
more than 100 villages in Yogyakarta Province has replicated the Sukunan Model

Awards for Sukunan

Sukunan got trophies, awards & rewards from
Environment Ministry RI & Women Empowerment Ministry RI, 2004

Invited by President of Republic of Indonesia (2004)

RESULTS OF THE SUKUNAN'S WASTE MANAGEMENT PROGRAM

- Rubbish Volume is Reduced
- Awareness & Knowledge are Improved
- Rubbish Separation Habit is Established
- Composting Habit is Established
- Rubbish Burning & Pollution are Reduced
- Dengue Fever Cases are Decreased

- Illegal Dumping Sites are Eliminated
- Economic Benefits for Community
- Economic Benefits for Village
- Benefits for Government
- Benefits for Private Company
- Sukunan Model is Replicated in other places

akhirnya.........

Daripada membuang sampah, lebih baik mendaur ulang

Daripada menebar amarah, lebih baik menabur kasih sayang

Kalau kita hasilkan sampah, lebih baik dimanfaatkan

Kalau ada yang salah-salah, mohon untuk dimaafkan