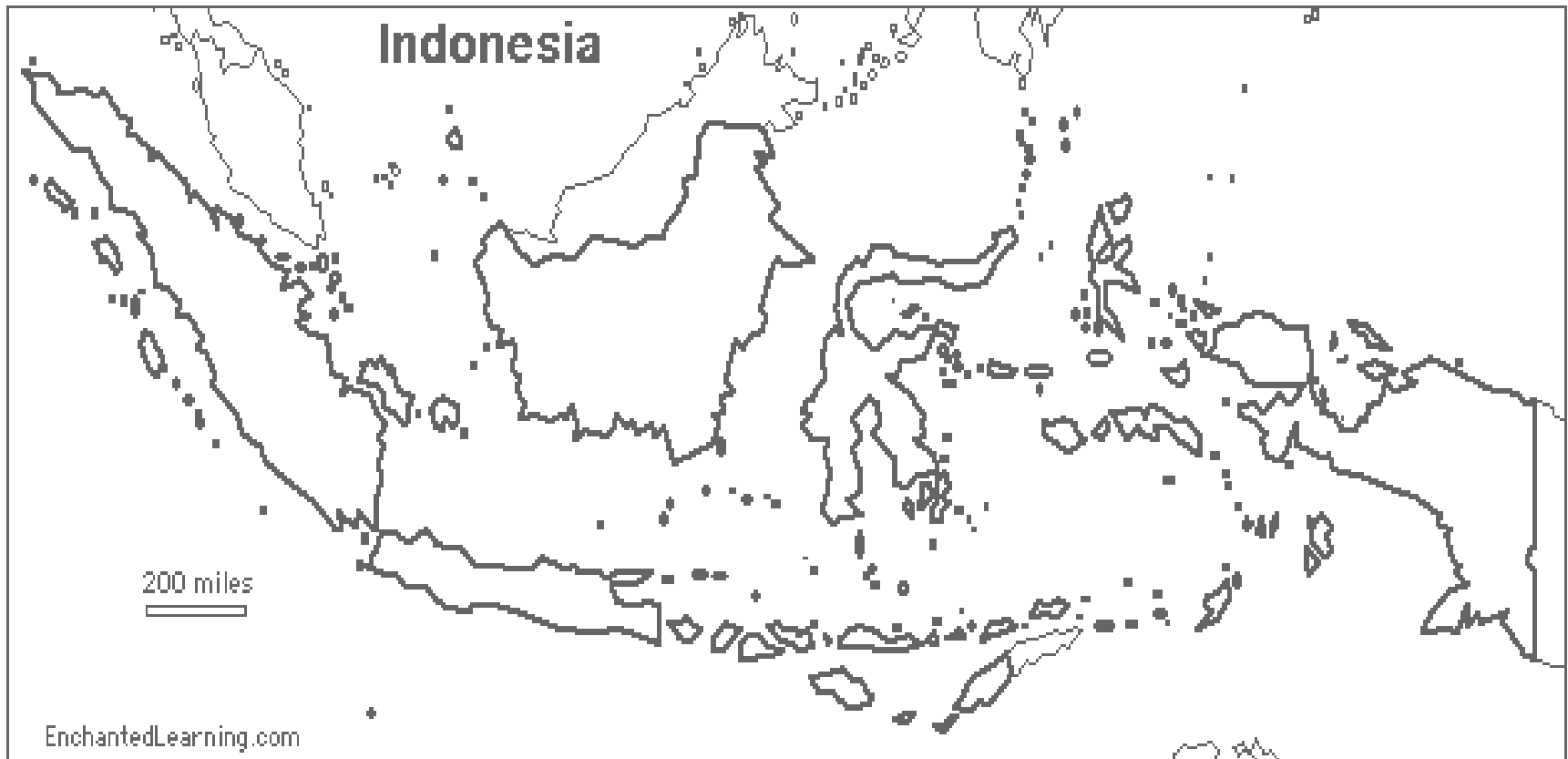




3R Implementation in Indonesia

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Background



- **Population** +220 million ; **HDI = 0.697** -> Medium Human Development
- **GDP per capita** +US\$ 1000,- (PPP = US\$ 3400,-)
- **33 Provinces** with 450 cities/regencies
- **Big Archipelago Country:** 17.508 islands with 1.9 million miles square.

Enterprise

I. Micro, Small & Medium Enterprise

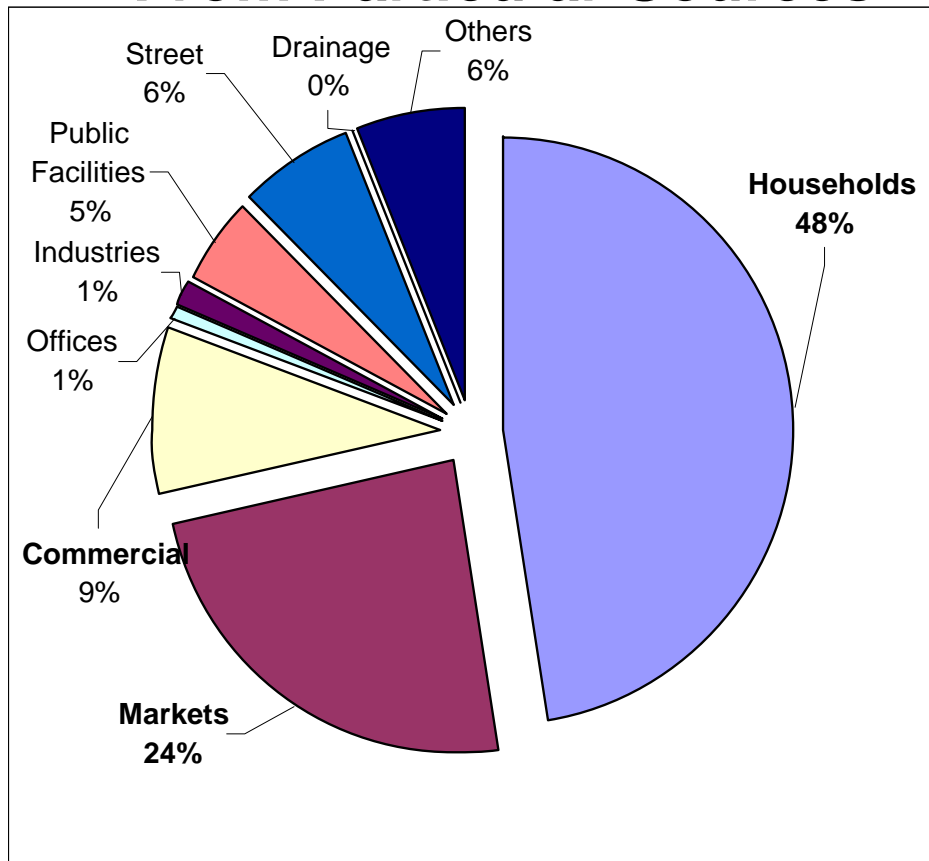
- The number of MSMEs in Indonesia is 41 million;
- 99% of which are micro and small enterprises.
- Micro enterprise is +/- 30 million units
 - it represents 99,4% employment [2003]
 - it contributes 56,7% of GNP (annual growth rate 2.4%) [2003]
 - it contributes 19,35% of export [2000]

II. Big Enterprise

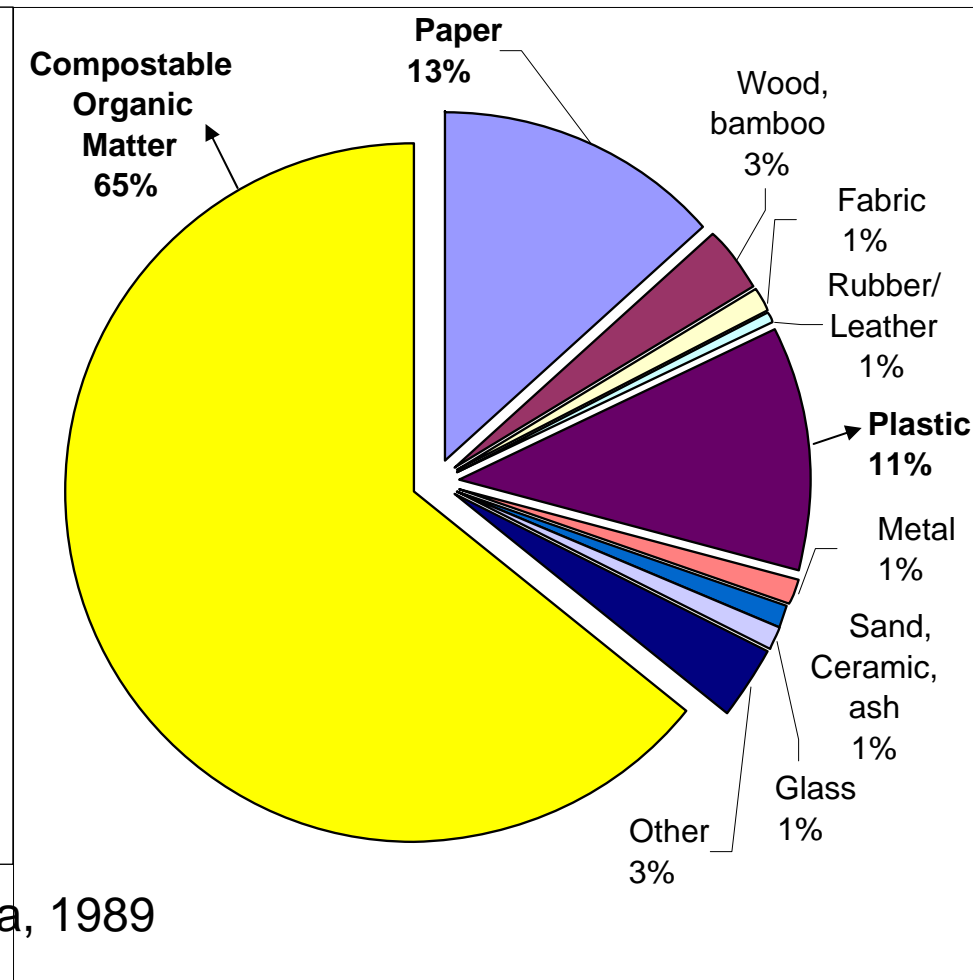
- The number of Big Enterprise which potentially have high impact to environment : **8000 industries**;
- It's only 30 big enterprise which comply to environmental standard and have implemented the 3R principles.

Domestic Waste Composition

Waste Composition From Particular Sources



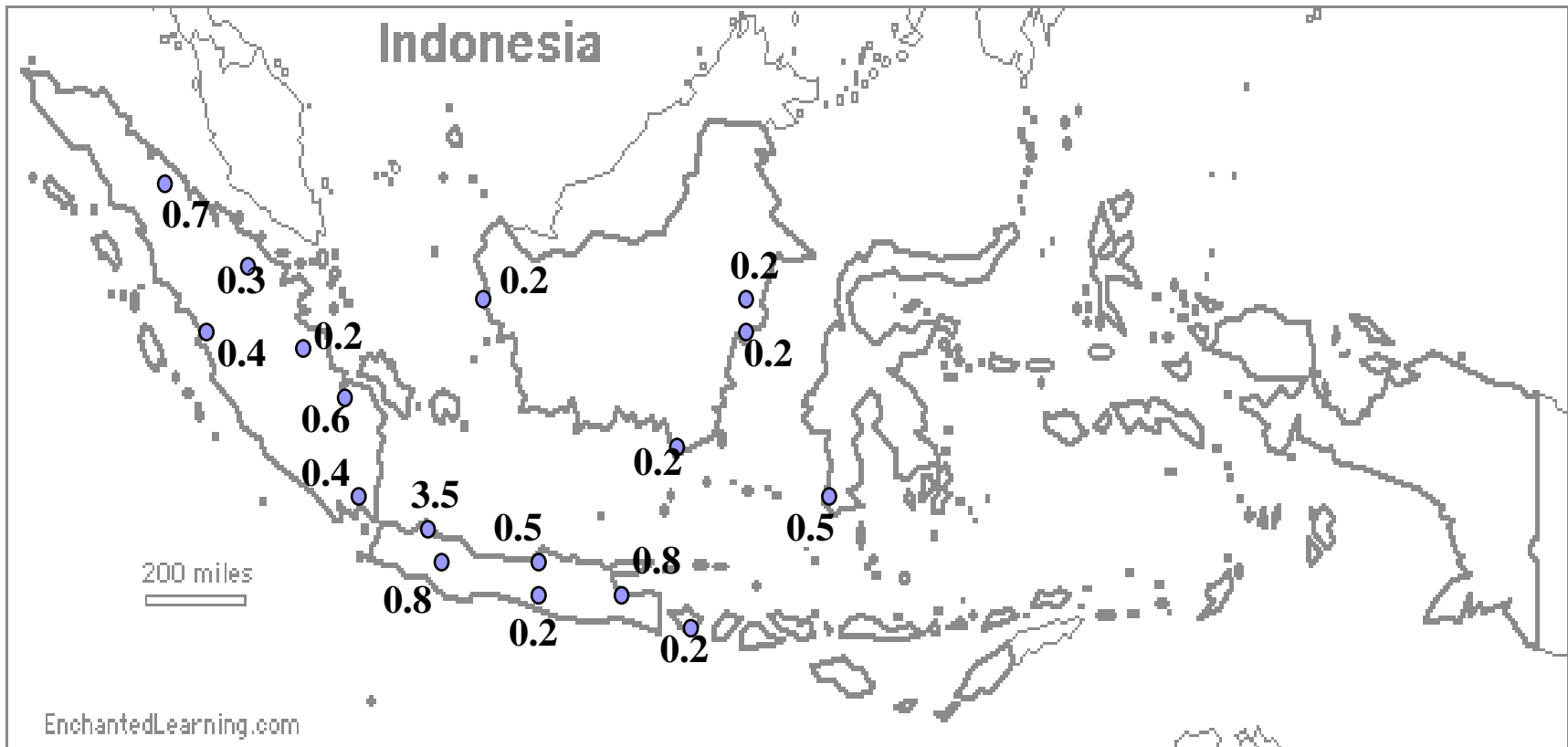
Waste Composition



Source: Ministry of Public Work, Indonesia, 1989

Major Cities in Indonesia

Generate **10 million** tons of domestic solid waste/year



- Domestic Waste Increase 2-4% per year
- End of Pipe Approach → Open Dumping
- Domestic Waste → Local Government Authority

Waste Problems

- Only a few local governments have Solid Waste Strategy
- Lack of awareness (NIMBY)
- Limited budget for handling domestic solid waste, which causes:
 - Lack of investment
 - Lack of operational and maintenance
 - Barrier for increasing quality and quantity in sanitary services
 - Inhibit for Local government to develop a proper final disposal
- Lack of compliance
 - Annual Growth Rate 5-7 % per year
 - Almost all MSMEs have not waste treatment plant
 - It's only +/- 20% of big industries comply with the regulations

What have been done ??

- ADIPURA : Clean And Green Cities Program (1986)
- PROKASIH : Clean River Program (1989)
- LANGIT BIRU : Blue Sky Program (1993)
- PROPER : Environmental Performance Rating For Big Enterprise (1993)
- SOFT LOAN For MSMEs (1990)
- CLEANER PRODUCTION (1995) → ICPC (2004)
- ECO LABEL (2004)
- ECO TOURISM (2004)
- COMPOSTING SUBSIDY PROGRAM (2004)
- DOMESTIC SOLID WASTE MANAGEMENT ACT (Draft) : → 3R & EPR (2006)
- TO REVISE ENVIRONMENTAL MANAGEMENT ACT No 23/1997 : End of Pipe → 3R principle (2006)

Baseline & Target

Domestic Solid Waste Management Towards 3R

Baseline (source: Statistics Agency, 2001)

- ❖ Collected, 40.09%
- ❖ Buried, 7.54%
- ❖ **Treating (Composting and Recycle) 1.61%**
- ❖ Open Burning 35.49%
- ❖ Others (Indefinite, mostly throwing to the environment) 15.27%

Progress (up to 2005)

- ❖ Local Initiatives
- ❖ Campaign
- ❖ Compost Subsidy Project in 19 cities (Extraordinary achievement: Bandung 11%, Tasikmalaya >50%)
- ❖ **Increased 2% → Total 3R = 3%**

Next, to set a target:



10% 3R in 2010

National Policies to Implement the 3R

■ Vision and Strategies

□ Vision

- Promoting the 3R initiative for enhancing people welfare

□ Strategies

- Awareness Campaign, Education and Participation
- Promoting and Embracing Sectors and Local Governments
- Incentive approach: Award, Rating, Financial
- Capacity Building : MSMEs and Local Government
- R&D
- Law Enforcement

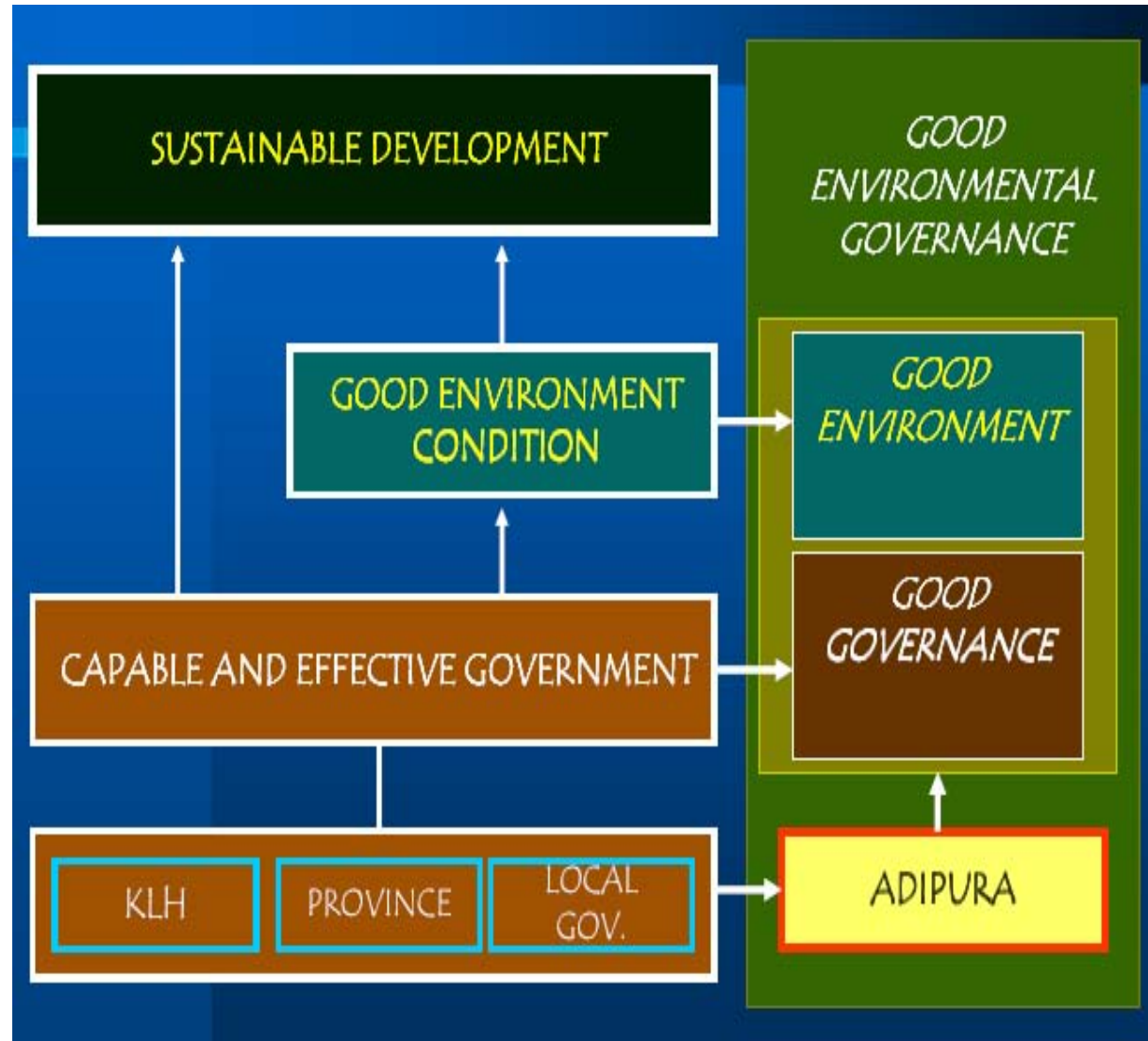
3R mainstreaming into Policies

- Strengthening cooperation with related stakeholders
 - *MoE and Ministry of Industry*
 - *MoE and Industries*
 - *MoE and Local Government*
 - *MoE and Community Group*
 - *MoE and University, etc*
- Go Organic Agriculture (Ministry of Agriculture)
- Green Energy (Presidential Decree, 2005)
- Local Vision and Initiatives
- Cleaner Production Policy (since 1995)
- Incentive Mechanism for Local Governments (ADIPURA)
- Incentive Mechanism for Industries (PROPER)
- Integrating National Policy into International Mechanism (CDM)

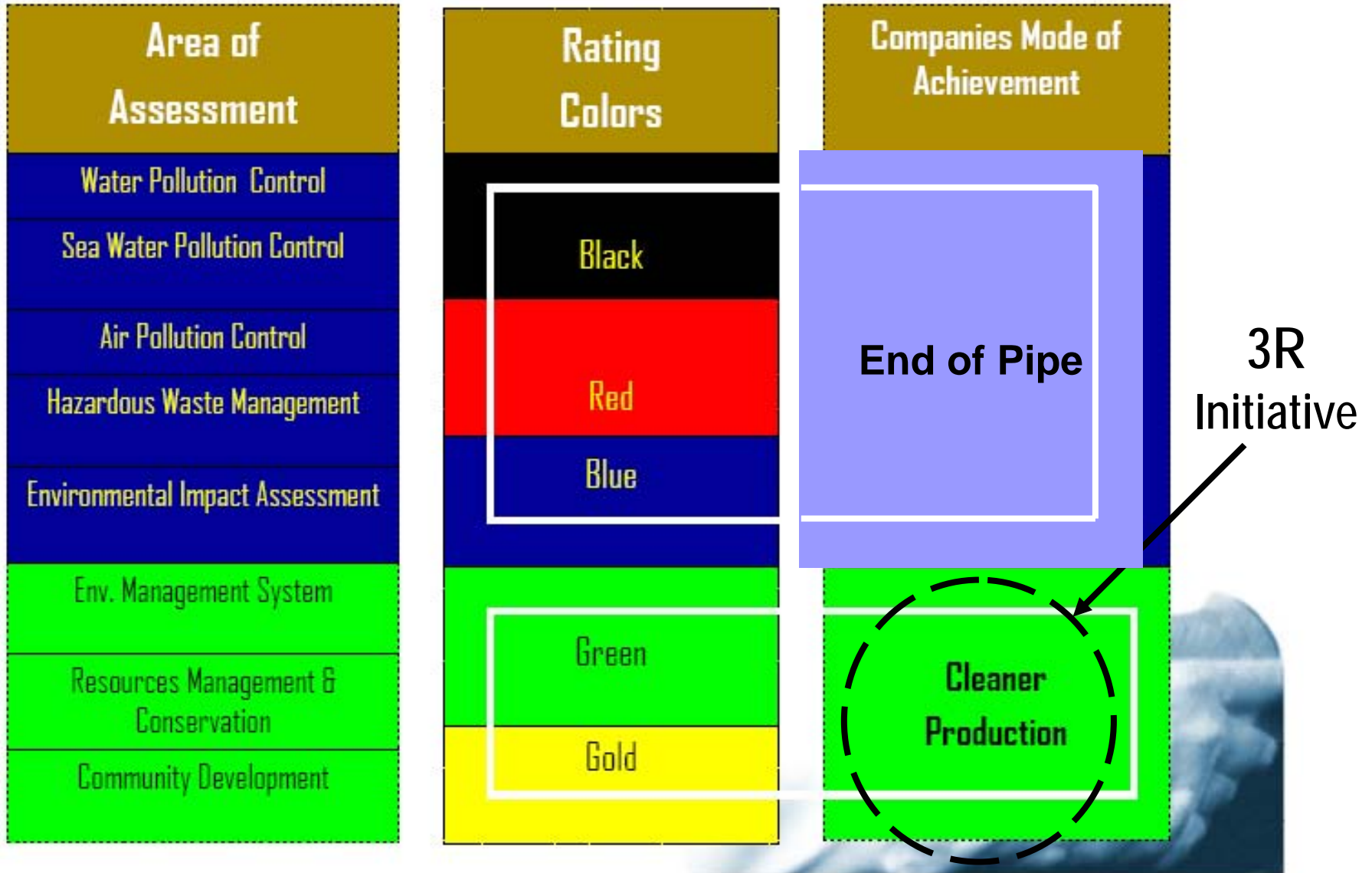
Program ADIPURA



Purpose:
to encourage local governments towards **Clean and Green Cities** through the implementation of good environmental governance (*Focus, accountability, Public Disclosure and Reward and Punishment*)



Program PROPER : *Environmental Performance Rating for industries*



The 3R Implementation on Agro-industries

- Slaughter House → compost, biogas & methane capture-electricity
- Fish Market → farm animal food
- Milk Industries → compost
- Sugar Plant → compost, bio-fuel
- Palm Industries → compost, bio-fuel, liquid fertilizer
- Forestry and Horticulture → bio-fuel

Reduction of barriers to the international flow

- **Recycled and remanufactured of waste**
 - Solid Waste Management Bill
- **Priority on waste minimization in country**
 - Through Policies and Programs development
- **International Cooperation** for monitoring of transboundary movements of recyclables/wastes & environmentally-sound management
 - Committed to Basel Convention

Cooperation between developed and developing countries

- Sharing of experiences & capacity building
 - ASEAN Cooperation, International Cooperation (NORAD, GTZ, JICA, CIDA, World Bank, ADB, etc.), GEF Composting Grant,
- MDGs as a basis for 3R → poverty, job & environment/health
 - Soft Loan for Small & Medium Enterprises, infrastructure provision
- The UN Marrakech Process → Sustainable Consumption & Production
 - Public Campaign (Green School), Promoting EPR, Environmental Forum, Provincial & Local Environmental Strategy.

Cooperation among Stakeholders

1. Main Strategy using incentive mechanism and Promoting champions on 3R initiatives at community level
 - Competition on 3R for Woman Group, Youth, and student
2. Encourage and creating conducive environment for 3R local Initiatives
 - Village : Rawajati, Banjarsari, Sukunan,etc
3. Public Private Partnership → Green Cities Green Communities, Energy Globe (CSR/CDP)
4. Education and Campaign
5. Information sharing on technologies and best practice

Promotion of Science and Technology

- Research and Development (University, Research Center, NGO)
- Indonesian Cleaner Production Center (MoE, Ministry of Industry, NGO, etc)
- CDM (MoE)

Clean Development Mechanism in Indonesia

- Potential Value: up to USD 1,2 billion
- 125 - 300 million ton Certified Emission Reduction (CERs) : 2008-2012
- Industries
 - Cement, Oil and gas, **Landfill Gas/ Waste to Energy**, Pulp and paper, Steel, Palm Oil, Electricity, Energy saving, Etc.
- Implementation: 6 Project Design Documents (PDDs) approved by DNA (*National Commission for Sustainable Development of Indonesia*)

Framework for The 3R Implementation

- Regulation
 - Draft of Domestic Solid Waste Management Act (3R & EPR),
 - Revision on Environmental Management Act No. 23/97 (End of pipe → 3R)
- Target 3R in 2010, 2015 and 2020
- Incentive mechanism (Funding Mechanism from central to local government, Composting Incentive Program - GEF)
- Public Participation
- Capacity Building (Local Government, MSMEs and Community)
- Development of 3R measurements
- Enhancing R & D

Is it need **NATIONAL STRATEGY** ??

- Absolutely yes;
- It's very important to enhance :
 - Coordination,
 - Synergize,
 - Efficient and effective,
 - Convergence.