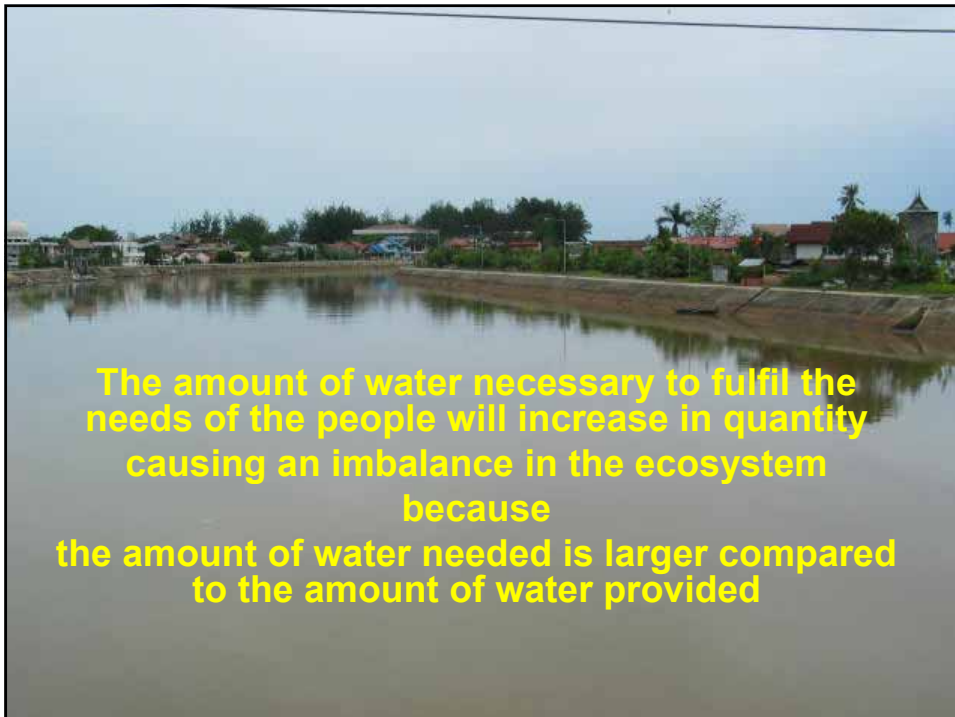




# Water Management Pollution Policy in Indonesia

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Quantity .....

The decrease in water availability in Indonesia is caused by the increase for the mentioned activities;

- agriculture,
- domestic
- Industry

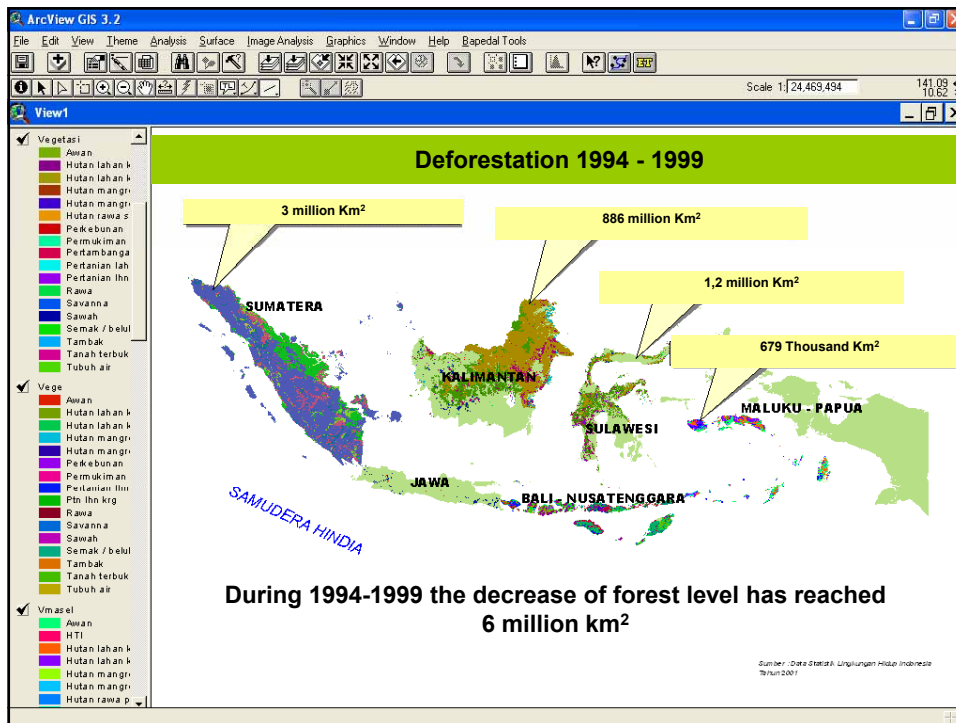
And also because of the continuing degradation in water catchments and containment areas in several provinces.

Quality...

Meanwhile the decrease in water quality are commonly caused by over pollution from;

- industrial activities
- house holds
- farms

The uncontrolled urbanization adds the problem of the ever deteriorating water quality in city-state areas.



## Land Degradation

The increase in land usage for non-agricultural (housing, industry, etc.) purposes have risen in these areas:

- Sumatera at 270 thousand km<sup>2</sup>
- Jawa at 222 thousand km<sup>2</sup>



Inside the Jakarta, Bogor, Tangerang dan Bekasi (JABOTABEK). The amount of minor water containment areas has changed

218

1990

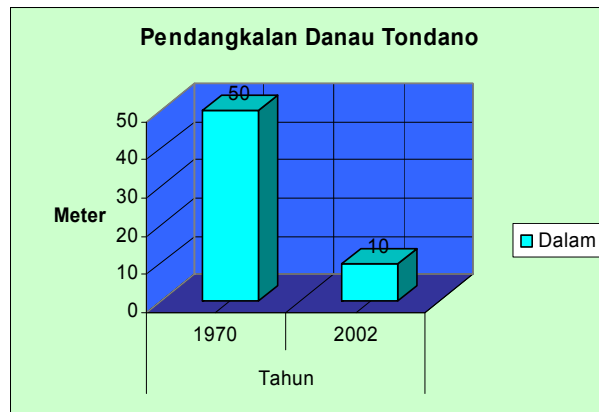


50 - 100

2002

\* The data from the Indonesia's 2001 Environmental statistics

## Degradation – Lake Tondano



## Water Pollution – Large Industries

In the year 2004 there are around 9600 middle-to-heavy industries that potentially can pollute surface water and underground water reservoirs

Another example of the growing industrial waste levels that enters the Siak River in the Riau province, which one of the cause is the operation of 25 middle-to-heavy industries.

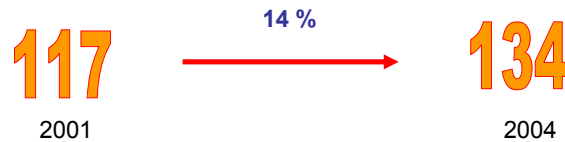


The amount decreases around 3% compared to the number of middle-to-heavy industries in 2001

## Water Pollution – Small Industries

Small-scale industries also contribute to the pollution inside the rivers water, putting in mind the weakness in its capital and spread, it's a small chance for them to be equipped with a waste water treatment

The amount of small-scale industries with the potential to pollute surface water and underground water reservoirs.



## Water Pollution – Household Waste



- In metropolitan cities like Jakarta, Surabaya and Medan, the decrease in the river water quality is also affected by the liquid waste from households. According to the 2004 census data from BPS, nationally there are still 22% of households that does not poses proper toileting, which in turn can potentially pollute public waters, 59% is located on Java Island alone
- The pollution of Jakarta's underground water reservoirs are mainly caused by the *Coliform* and *Fecal Coli* bacteria. The condition is most likely because around 55% of the household in Jakarta possesses an underground water reservoir whose distance to the nearest waste disposal unit have a distance of less then 10 m

In the year 1999 the amount of buildings that is constructed on the river bed has increased approximately 38% compared to the situation in the year 1996. The increasing numbers is an indication of the raising level of pollution from household wastes into the river.



The amount of liquid domestic waste that entered the rivers inside the Jakarta area is estimated around 67,3 million m<sup>3</sup> a year

### Water pollution – Fertilizer & Pesticide

The use of chemical fertilizers and pesticides on the agricultural sector are also potential pollutants, especially on surface.

In the year 2004, the use of non-organic fertilizers and pesticide for the agricultural sector reaches an amount of 1,5 million kg and 109 thousand kg respectively.

Residue from the fertilizers and pesticide will mostly end up in the river water

## Management Natural Resources Policy

The strategy on managing water resources should be aimed for conservation, or if possible, the increase of an areas support ability from the availability of water resources.

This effort must be done by paying attention to waters multifunction ability, which is the ecological, economical, and social function.

For that water management must be integrated, cross sectored, while considering the projection on the growth of people for every sector, and the sectors development plan.

In the year 1999, the government have started to reform a number of laws that are connected with water resources management.

## Management Natural Resources Policy

In accordance with the proposed laws connected with the water resource management, The State Ministry of Environment (TSME) have given a few matters that are severely stressed upon, some of them are:

The principal of a continuous, efficient, area supported, cautious usage, and a commitment to increasing access to clean water sources for the mass.

The Clarity between the level of authority among the central government and the local governance.

The guarantee upon the right of a citizen of the country for an availability of clean water sources, to receive information, to partake in making a decision, and also paying attention to needs of the people from a local area and local initiative





## TSME Strategic Program

Besides the policies already stated before, at 2002 The State Ministry of Environment have positioned several strategically placed programs that are connected with continuous water management, some of them are

Pollution Control Evaluation and Rating (PROPER) and Clean River Program (PROKASIH)

### PROKASIH

- Between 2003 until 2006, 249 licensed companies that are distributed on 7 provinces have signed an enclosed contract to participate in PROKASIH
- Up until the year 2005, 25 companies have been acknowledge to have completely followed the rules that are enclosed in the contract
- Besides the manufacturing industry, up until the year 2006, 56 agro-industries that are distributed on four provinces have also participated in PROKASIH.
- The monitored results on the year 2006 have showed that from 49 industries, 65% from the amount mentioned have showed that they have a good performance, whereas the water quality for the BOD parameter is under the limit.





# PROPER

That basic principle of PROPER is to push a company's organization in managing the ecosystem, through a reputation based incentive,

for companies that possesses a good performance on ecosystem management will also get a good reputation,

for companies with a less then satisfactory performance on ecosystem management will also gain reputation, though it will not be a good reputation.

## Level Catagorize

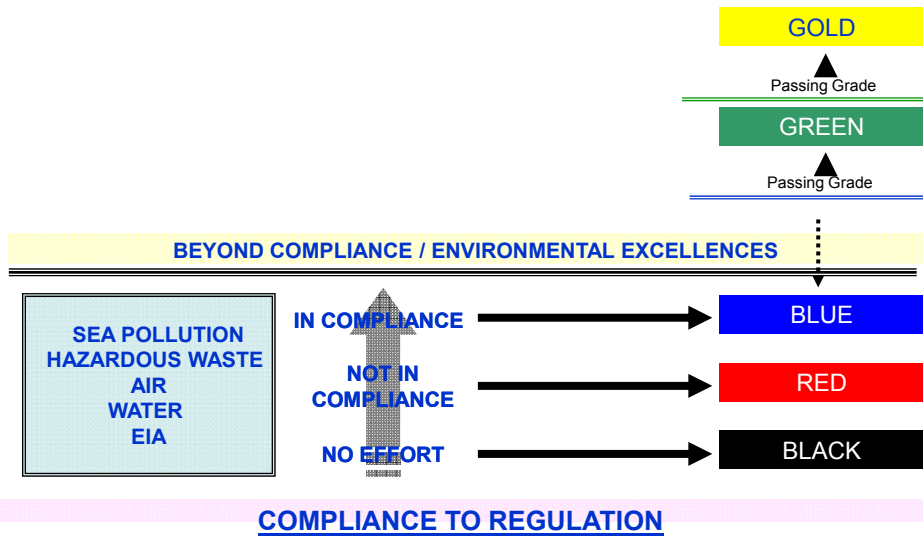
Technical  
Environmental  
Monitoring Data

Rating  
Color system

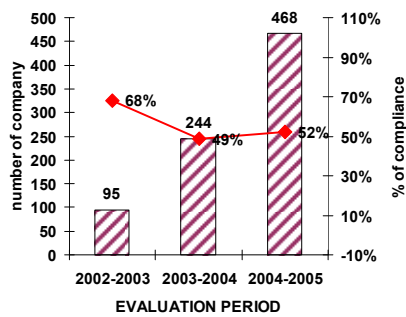
Public  
Information

COLOR	CRITERIA
<b>GOLD</b>	Display the best environmental excellences among similiar industries.
<b>GREEN</b>	Effective environmental management, implement energy efficiency, pollution prevention, resources conservations program and community development.
<b>BLUE</b>	Comply with regulation
<b>RED</b>	Makes some effort to control pollution, but it is not sufficient to achieve compliance.
<b>BLACK</b>	Makes no effort to control pollution, or causes serious environmental damage

# New Direction



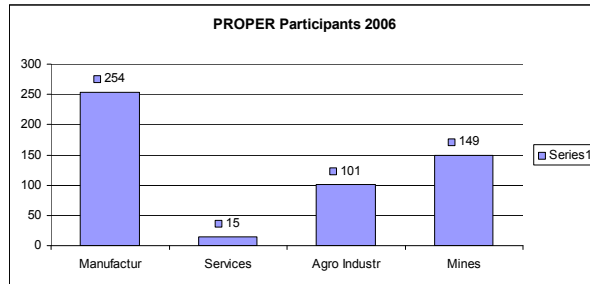
# Proper



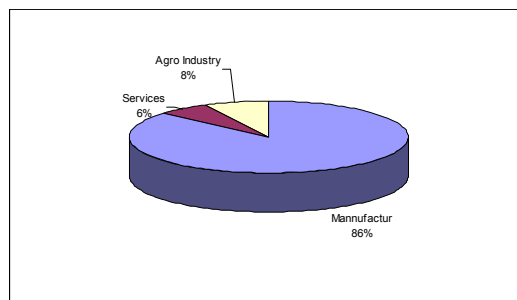
The percentage of company compliant decrease in 2003-2004 due to improvement of evaluation criteria, inspection procedure and the increasing number of companies joined in the program.

The compliance increase significantly in 2004-2005.

# PROPER 2006



## 199 Industries which complies



# Results

BEFORE



AFTER



## Problems

Because the participation of PROPER is voluntary in nature, the amount of companies which follows the program is relatively not significant enough compared to the amount of companies with the potential to ruin the ecosystem

## Keys to Success

- The execution of a strategic program like PROPER & PROKASIH will not achieve the desired results without any sort of serious reprimand and law enforcements
- All programs and can be effectively implemented especially if the community understands the necessity and participated actively.



