“ENVIRONMENT EDUCATION IN INDONESIA

Deputy for Public Participation and Environmental Communication
Ministry of Environment, Republic of Indonesia
Taipei, 14 -16 April 2014
INDONESIA

POPULATION: 244,775,796 (2012)
POPULATION GROWTH: 1,49%

ISLAND: 17,508,600
INHABITED

MAINLAND: 1,910,000 KM²

OCEAN: 6,279,000 KM²

BEACH LENGTH: 95,181 KM

ETHNIC GROUP: 1,340

LOCAL LANGUAGE: 546

ECONOMIC GROUP: 6,3%
World population including Indonesia is continues to increase every year, and will always continue to increase in line with the development of its era.
NATURAL RESOURCES

COMPARE WITH WORLD
1.3 % island (17,058 islands)
76 % Coral reefs of the world (CTI)
10 ..% forest of the world
9 % Butterfly (1600 Sp from 17500 butterflies)
10 % Flowers
17 % birds
16 % reptiles
25 % fish (22,000 sp)

Coral 95,000 km2,
mangroves 8 million Ha,
½ Changing function,
in good condition 2.4 million Ha,
around 1.6 million ha in critical condition,
45 sp largest in the world
ENVIRONMENTAL CONDITION

Forest : Deforestation 300 million/ha/year

BIODIVERSITY :
160 critical species,
175 endangered species,
465 vulnerable type,
20 types of threatened (largely dependent of conservation efforts)

coastal & marine:
71% of 4.29 million ha damaged mangrove;
critical coral reefs 14%, only 7% still on a good condition

Jakarta garbage
6,000 tones / day
65% organic, 11% plastic,
10% paper,
3% fabric and rubber
2% glasses
4% others

60-80% pollution from household activities

51% household waste
17% Commercial
16% market
15% of industrial
1% roads and surrounding
Development of Natural Resources and Environment is directed to improve PEOPLE'S WELFARE

ENVIRONMENTAL CONDITION

- environmental degradation and decreasing area carrying capacity
- environmental pollution case tend to increase
- Worsening air quality in the big cities
- Water pollution levels and groundwater contamination in big cities who threatens the standards
- loss of ecological functions in the river due to sewage contamination
- soil contamination as a result industrial and domestic waste

ENVIRONMENTAL AFFECTING

- rapid growth population
- development of science and technology which is not environmental friendly
- ethical and behavioral that did not in favor of natural conservation
- low level of public awareness
- weak of law enforcement
## LEGAL BASIS OF ENVIRONMENTAL EDUCATION

<table>
<thead>
<tr>
<th>Act Number</th>
<th>Year</th>
<th>Article</th>
<th>Paragraph</th>
<th>Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945 CONSTITUTION</td>
<td></td>
<td>ARTICLE 28H PARAGRAPH (1)</td>
<td></td>
<td>EVERYONE HAS THE RIGHT PHYSICAL AND SPIRITUAL PROSPERITY, RESIDING ENVIRONMENT AND OBTAIN A GOOD AND WELLNESS AS WELL AS ENTITLED TO OBTAIN HEALTH SERVICE</td>
</tr>
<tr>
<td>ACT NUMBER 20 YEAR OF 2003 ON NATIONAL EDUCATION SYSTEM</td>
<td></td>
<td>ARTICLE 3</td>
<td></td>
<td>EDUCATION AIMED AT DEVELOPING POTENTIAL LEARNERS TO BE HUMAN FAITHFUL AND FEAR TO THE GOD ALMIGHTY, NOBLE CHARACTER, HEALTHY, KNOWLEDGEABLE, SKILLED, CREATIVE, AND BEING INDEPENDENT DEMOCRATIC CITIZENSHIP AS WELL AS RESPONSIBLE</td>
</tr>
<tr>
<td>ACT NUMBER 32 YEAR OF 2009 REGARDING ENVIRONMENTAL CONTROL AND MANAGEMENT</td>
<td></td>
<td>ARTICLE 63 PARAGRAPH (1) POINT W, ARTICLE (2) POINT Q, PARAGRAPH (3) POINT N, ARTICLE 65 PARAGRAPH (2),</td>
<td></td>
<td>IN ENVIRONMENTAL PROTECTION AND MANAGEMENT, NATIONAL GOVERNMENT / PROVINCIAL / REGENCY ARE IN CHARGE AND DULY AUTHORIZED TO GIVE EDUCATION, TRAINING, GUIDANCE, AND AWARDS Eveyone shall obtain entitled environmental education, information access, access participation, and access to justice in environmental rights to meet a good and wellness &quot;</td>
</tr>
</tbody>
</table>
MOE
- Formulating policies, guidance and environmental education program
- Developing and establishing outline of the contents of environmental education
- Promoting, monitoring, analyzing and evaluating the implementation of environmental education policy in central and local level

Ministry of Education
- Establishing policies, guidelines and environmental education program
- Promoting, develop, integrate, establishing materials and facilities / infrastructure in the field of education as well as training of environment national education system
- Increase capacity of learners teachers and education staff, society, and education policy stakeholders in all level (central and regional)
- Monitoring and evaluation of environmental education

<table>
<thead>
<tr>
<th>a) Growing and develop knowledge, values, attitude, behavior, and insight, as well as environmental concerns of learners and communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Improving quality of human resources to perform sustainable development and environmental conservation functions.</td>
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</table>
ENVIRONMENT EDUCATION

• **DEFINITION :**
  
  Environment education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (UNESCO, Tbilisi Declaration, 1977).

• **FOCUS :**
  
  • Awareness and sensitivity, knowledge and understanding about the environment and environmental challenges
  • Attitude concern for the environment and help to maintain environmental quality
  • Skills to mitigate the environmental problems
  • Participation for exercising existing knowledge and environmental related programs.
## DEVELOPMENT OF EE IN INDONESIA

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977/1978</td>
<td>Guideline on Environment Teaching Program developed by Institute of Pedagogy, Jakarta was tested in 15 elementary schools in Indonesia</td>
</tr>
<tr>
<td>1979</td>
<td>Establishment of Environmental Studies Center (Pusat Studi Lingkungan or PSL) in both state and private Universities throughout Indonesia with support and coordination from Ministry of Development Surveillance and Environment which was founded on 1978. PSL initiated the development and implementation of training on Environmental Impact Assessment.</td>
</tr>
<tr>
<td>1984</td>
<td>Ministry of National Education decided to integrate issues of population and environment in every subjects of elementary and secondary schools</td>
</tr>
<tr>
<td>1989/1990-2007</td>
<td>Ministry carried out Population and Environment program and initiated School with Environment Cultured in 120 schools. In 2007, the project has developed SBL at 470 schools, 4 Institute on Education Quality Assurance and 2 Center of Development of Capacity Building for Teacher (P3G)</td>
</tr>
<tr>
<td>1996/1997</td>
<td>Establishment of Environmental Education Network, which has about 150 members both individually and institutionally that concern and care about environmental education. They actively involve in development and implementation of environmental education</td>
</tr>
<tr>
<td>1998-2000</td>
<td>Swiss Contact Project headquartered at VEDC (Vocational Education Development Center) Malang, East Java, developed environmental education at Vocational Schools through 6 P3G as well as carried out training for elementary, secondary and vocational school teachers</td>
</tr>
<tr>
<td>2006- now</td>
<td>Ministry of Environment launched Adiwiyata program,</td>
</tr>
</tbody>
</table>
ENVIRONMENT EDUCATION

FORMAL
1. ADIWIYATA PROGRAM
   Green school - Primary and Secondary Education
2. GREEN CAMPUS
   Higher Education
3. ECOPESANTREN
   (Islamic Boarding School)

248,896 SCHOOLS
3,061 UNIVERSITIES WITH 4.8 MILLION STUDENTS
24,209 ISLAMIC BOARDING SCHOOLS

Non FORMAL
GREEN SCOUT
(SAKA KALPATARU)

21,000,000 MEMBERS

INFORMAL
1. EMPOWERING COMMUNITY AND RAISING PUBLIC PARTICIPATION THROUGH ACCESS INFORMATION, PARTICIPATION, JUSTICE
2. CAMPAIGN AND PUBLICATION

248,209 ISLAMIC BOARDING SCHOOLS
3,061 UNIVERSITIES WITH 4.8 MILLION STUDENTS
21,000,000 MEMBERS
ADIWIYATA PROGRAM

ADIWIYATA AIMS AT CREATING STUDENTS WHO ARE RESPONSIBLE IN SAVING AND CARING THE ENVIRONMENT THROUGH GOOD SCHOOL MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

1. EDUCATIVE PRINCIPLE
2. PARTICIPATIF PRINCIPLE
3. SUSTAINABLE PRINCIPLE

1. COACHING
2. EVALUATION
3. REWARDS

MINISTER GOVERNOOR MAJOR CITY/REGENCY

1. Elementary schools
2. Junior high schools
3. Senior high schools
4. Vocational schools

ACCREDITATION BY GOVERNMENT
COMPONENT AND MODEL of ADIWIYATA

- Development of School policies to be Environmentally Sound.
- Development of Environmental Based Curriculum.
- Development of Participation based Environmental Activities
- Development and or Management of School Supporting Facilities

Commitment School Management

ADIWIYATA MODEL

- School environment Clean and healthy
- Utilization of green open space (RTH)
- Efficiency energy (electrical, water, oil & gas)
- Waste Management (3R)
- Management Environment Sanitation
- Environmental Friendly Canteen
- Environmental Conservation
Basic Principle

• PARTICIPATIVE:
School Community Must Be Involved In The School Management Which Includes The Overall Process Of Planning, Implementation And Evaluation In Line With The Responsibility And Role.

• SUSTAINABLE:
All Activities Must Be Comprehensively Conducted In Well Planned And Continuous Way.
<table>
<thead>
<tr>
<th>Year</th>
<th>Proposed proposed schools by Provincial</th>
<th>Proposed Schools participants</th>
<th>Adiwiyata School Candidates</th>
<th>Adiwiyata Regency/City Awards</th>
<th>Adiwiyata National Awards</th>
<th>Adiwiyata Mandiri Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>5</td>
<td>156</td>
<td>10</td>
<td></td>
<td></td>
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<tr>
<td>2007</td>
<td>17</td>
<td>146</td>
<td>30</td>
<td>30</td>
<td></td>
<td></td>
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<tr>
<td>2008</td>
<td>24</td>
<td>248</td>
<td>30</td>
<td>30</td>
<td>10</td>
<td></td>
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<tr>
<td>2009</td>
<td>29</td>
<td>256</td>
<td>40</td>
<td>35</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>2010</td>
<td>31</td>
<td>276</td>
<td>37</td>
<td>67</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>2011</td>
<td>28</td>
<td>269</td>
<td>98</td>
<td></td>
<td>32</td>
<td>21</td>
</tr>
<tr>
<td>2012</td>
<td>2829</td>
<td>367</td>
<td></td>
<td>200</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>3333</td>
<td>840</td>
<td></td>
<td>463</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6296</td>
<td>2558</td>
<td>235</td>
<td>172</td>
<td>767</td>
<td>243</td>
</tr>
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</table>
To implement education programs for sustainable development

With criteria's:

- natural resource management
- energy
- air
- infrastructure and land
- office
- transportation
- waste management
- education and research
- environmental education curriculum
- researchs on environmental issues
- contribution to the community

- Development program
  - Documents including planning, implementation and evaluation
  - Internal ranking system
  - awards

- number of higher education: 3,061 universities with number of students 4.8 million
Green Campus

- Energy, water saving
- Infrastructure
- Green Open Space
- Transportation
- Wastes treatments
- Offices and Classes

- Providing pedestrian
- Providing bicycles and Parking Areas for bicycles
- Cultivation of endangered trees in surrounding campus
- Fish Restocking in campus Lake
Activities on Environment Day

1. Campaign on energy safe awareness
2. Campaign on taking environmentally friendly transportation (Bike to schools)
3. 3R Campaign (Reduce, Reuse, Recycle)
Educations and Researches

- INTEGRATION OF ENVIRONMENTAL ASPECTS INTO CURRICULUM
- Community Services
- Environmental Researches
3. ECO PESANTREN
(Islamic boarding school)

- ISLAMIC EDUCATIONAL INSTITUTIONS THAT HAVE A CONCERN FOR ENVIRONMENT AND DOING VARIOUS ACTIVITIES FOR CONSERVATION OF NATURAL RESOURCES AND ENVIRONMENT

PURPOSES:
- increasing awareness that the essential guide to islamic teachings in friendly environment behave
- shaping character of environmental santri patronage
- boarding area making clean, wellness and lovely
- making as a islamic boarding centers of excellence, moeslem students for environmental education as well as surrounding residents

PROGRAMS:
- policy development on environment friendly islamic boarding school
- islamic scholars vision development environment
- extra-curricular activities based islamic thinking
- facilities and infrastructure development and management to support environment friendly cottage boarding school
- efficiency of the use of energy and natural resources
ECOPESANTREN PROGRAM

To Integrate Environmental Perspective As Well As Consequently Implement Islamic Values In Managing Environmental Issues, Both In The Domain Of Pesantren And In Its Surroundings.

• Indonesia is the biggest moslem country
• Indonesia has 24,209 pesantren that consist of tens to thousands santri/students in each pesantren
• Pesantren has several instruments to implement environmental education
GREEN SCOUT (SAKA KALPATARU)
Launched: 1st December 2013

• PURPOSES
  ➢ Environmental mainstreaming in green scout activities.
  ➢ Broaden knowledge and skills for the scouts in the field of environment, which is reflected in technical skill requirement
  ➢ 3 technical skill requirement on Saka kalpataru: 3R, climate change and biodiversity

• TARGET
  Establishment of Saka-Kalpataru in all provinces and district (Sub organization) wherein minimum 40 people are members (with preferred ages 16-25 years) per throughout the regencies / cities in Indonesia (or 21720 people), for the short term program

• ACHIEVEMENTS
  – some ministries has been involved such as the Ministry of Forestry, Ministry of Health and Ministry of Agriculture
  – Green Scout was formed in 9 provinces with 66 branches
  – official guide is available
SAKA KALPATARU ACTIVITIES

- Socialization in 9 provinces
- Environmental action movement
- Exhibition
- Green camping
- Train for Trainer (SAKA TOT), etc.
SOME ADIWIYATA SCHOOLS
ACTIVITIES AND INNOVATIONS

1. 3R PROGRAM
2. COMPOSTING AND LIQUID FERTILIZER
3. WISE WATER USAGE
4. WISE ENERGY USAGE
5. WASTE COOKING OIL PRODUCTION
6. NATURAL AIR CONDITIONER
7. SCHOOL POLICY ON REDUCING AIR POLLUTION
8. HEALTHY LIFE CULTURE AND HEALTHY CANTEEN
9. STUDENTS GROUP ON GREEN AND HEALTHY ENVIRONMENT CARE
10. BIOPORES
11. TREES PLANTING (SCHOOLS MINI GARDENING, BIODIVERSITY PARK)
12. GREEN ROOF
13. GOOD DRAINAGE
14. CARBON FOOTPRINT CALCULATION
ADIWIYATA AWARDS
ASEAN ECO SCHOOL AWARD 2012, KUALA LUMPUR

- SD TUNJUNG SEKAR MALANG
- SMP MUHAMMADIYAH 1 YOGYAKARTA
Encourage students to use water dispensers to reduce plastic waste from bottled beverage
Bank of rubbish
waste sorting
recycle paper
Composting

Solid Waste Treatment

Liquid fertilizer
WATER AND ENERGY

Wise water usage

SMK Wikrama Bogor
### Electricity Emission

<table>
<thead>
<tr>
<th>No</th>
<th>Unit</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td>1</td>
<td>kWh</td>
<td>1081</td>
<td>1215</td>
<td>780.55</td>
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</table>

### Fuel Emission

<table>
<thead>
<tr>
<th>No</th>
<th>Unit</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Elpiji 3 kg</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Elpiji 12 kg</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Solar 820 lt</td>
<td>820 lt</td>
<td>838 lt</td>
<td>815 lt</td>
</tr>
<tr>
<td>4</td>
<td>Pertamax</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Premium 280 lt</td>
<td>280 lt</td>
<td>290 lt</td>
<td>265 lt</td>
</tr>
<tr>
<td>6</td>
<td>Minyak tanah</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>BBG</td>
<td>-</td>
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### Paper Emission

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<th>Unit</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec*</th>
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<tbody>
<tr>
<td>1</td>
<td>rim</td>
<td>30</td>
<td>30</td>
<td>35</td>
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</tbody>
</table>

*Extra activity: Final Examination

### Carbon Footprint Calculator online:
[http://kalkulator.dnpi.go.id/apps/dnpi/cgi-bin/dw.cgi?b=dnpi_emisi_kantor/asis.1](http://kalkulator.dnpi.go.id/apps/dnpi/cgi-bin/dw.cgi?b=dnpi_emisi_kantor/asis.1)

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**Total Emission**

<table>
<thead>
<tr>
<th>Emission</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Electricity</td>
<td>9469.56</td>
<td>10643.40</td>
<td>6837.62</td>
</tr>
<tr>
<td>2 Fuel</td>
<td>34371.84</td>
<td>35178.36</td>
<td>33732.30</td>
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<tr>
<td>3 Paper</td>
<td>40824.00</td>
<td>40824.00</td>
<td>47628.00</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>84665.40</strong></td>
<td><strong>86645.76</strong></td>
<td><strong>88197.92</strong></td>
</tr>
</tbody>
</table>
GREEN ROOF

Utilization of roof top for gardening, teaching, and training in environmental practices, as well as air refreshing resources
Students group on green and healthy environment care
SCHOOLS COOPERATION AND INOVATION

8° Eco Youth ke-8 in Jakarta, 30 March 2014

PT Toyota Indonesia yang kembali menyelenggarakan Toyota Eco Youth ke-8 tahun ini. Toyota sebagai korporasi internasional telah mengimplementasikan prinsip triple P yaitu “profit, people, planet” melalui program Corporate Social Responsibility (CSR) dengan pengembangan pendidikan lingkungan hidup

SCHOOLS PARTNERSHIPS WITH PERTAMINA OIL COMPANY
OPPORTUNITIES

Adiwiyata green schools program has increased schools communities awareness to:

• Save energy through minimize electricity
• Reduce air pollution
• Reuse materials (Manage or turn rubbish into useful materials)
• Safe the environment
• Reduce production of rubbish
• Clean, green, and cool school
• Conducive learning
• Positive Image toward the school
• Comparative Learning Spot
WAY FORWARD OF EE IN INDONESIA

- to improve environment education policy, guidelines on implementation of environmental education and to develop environmental education curriculum
- to develop guidelines on environmental education materials
- to enhance and upscale the program (quantity and quality)
- focus on guiding and assisting local government, which will done periodically
- to develop incentive system with transparent and measureable evaluation system that involve local government, ngo, press, and community
- to develop model adiwiyata school in every provinces as well as in municipality,
- to develop model green campus in 5 eco region.
- to develop gradual evaluation system
- to provide demonstration kit of environmental education
- to produce guide book on environmental education
- to develop technical assistance team and evaluation team at provincial and municipal level
- develop network and sister school
THANK YOU
TERIMA KASIH
XIE XIE

For more information:
Deputy for Public participation and Environmental Education
Building B, 5th floor Jl DI Pandjaitan kav 24 Kebon Nanas Jakarta Indonesia
Phone/fax: +62 21 8580023
Email: ilyasasaad@gmail.com
Web: www.menlh.go.id