

# UNDP-UNEP Poverty- Environment Initiative Africa



## FROM ENVIRONMENTAL INDICATORS TO COMBINED POVERTY & ENVIRONMENT INDICATORS

Nairobi, Kenya 2-4 July 2013

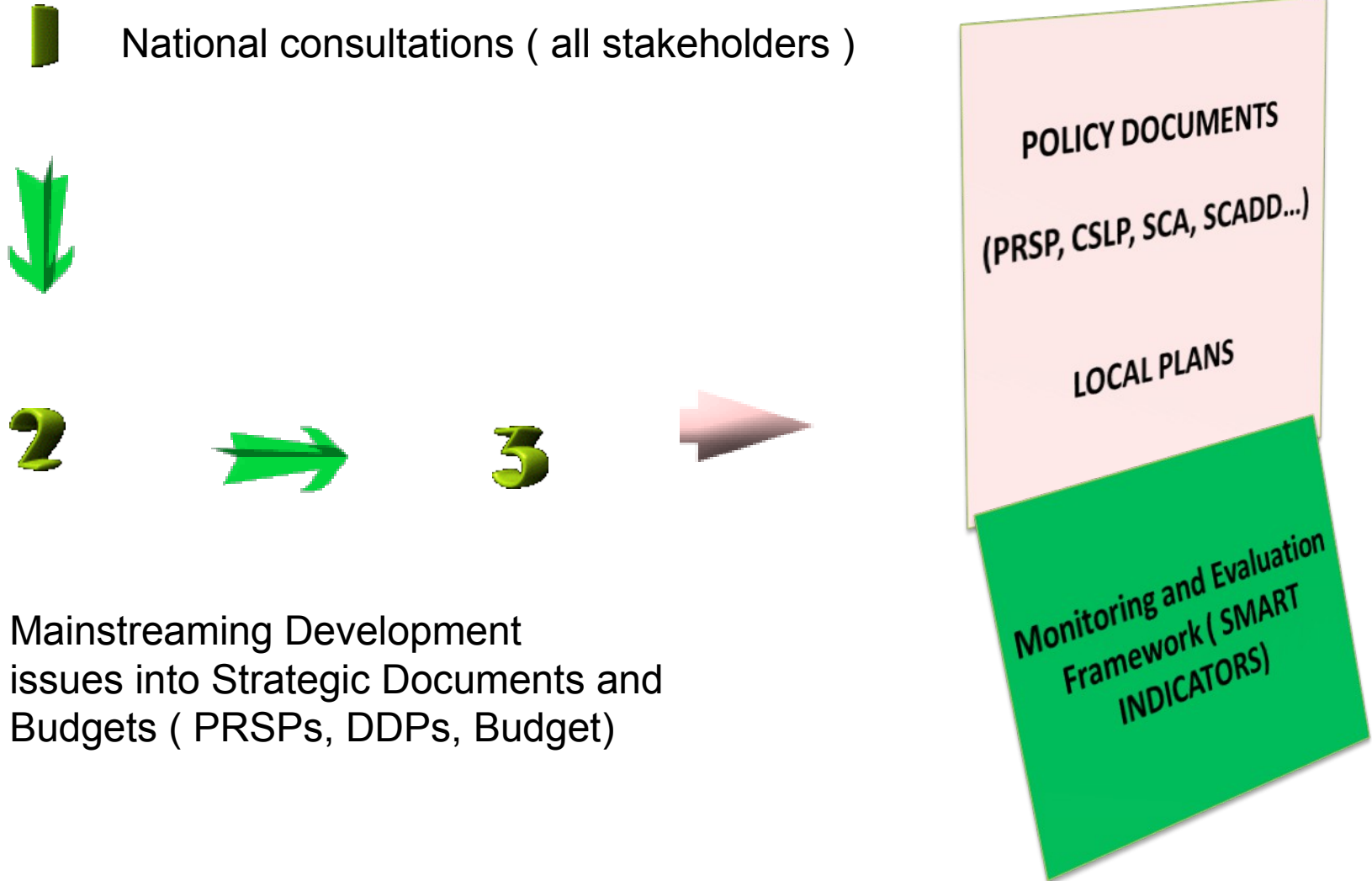
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Poverty and Environment Initiative, Africa  
Nairobi, Kenya



Overview:

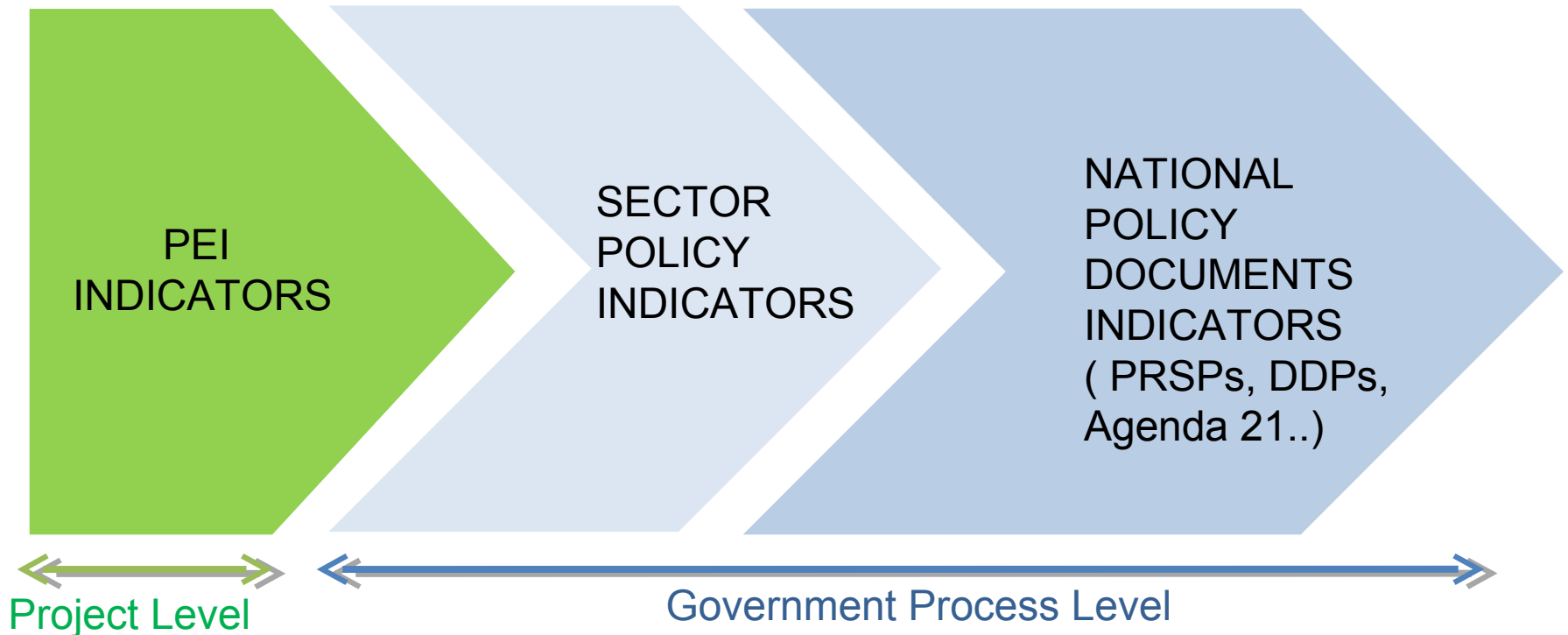
National processes in formulating National Strategies and related M&E Systems

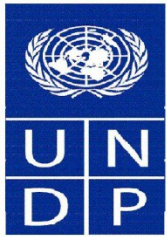


# POVERTY AND ENVIRONMENT INITIATIVE



HOW PEI INDICATORS COULD IMPROVE  
SECTOR AND POLICY M&E FRAMEWORK ?





# POVERTY AND ENVIRONMENT INITIATIVE AFRICA



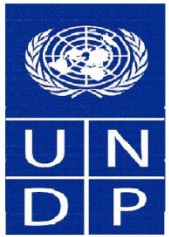
## ENVIRONMENTAL INDICATORS FOR DECISION MAKING

### METHODOLOGY

- Review of national policy and strategic responses to specific sectors ( fishery, water, sanitation, mining, energy, livestock, oil...)
- Cross sector thematic areas priorities: water, sanitation, forest , desertification, fishery, energy, biodiversity, pollution....
- Diagnostic of existing Information and M&E systems
  
- More than 100 environmental indicators for thematic areas
- 25 indicators for important issues
  - (i)State Indicator (E) measuring the state of Environment
  - (ii)Indicator of pressure (P) measuring the evolution of the environment
  - (iii)Indicators of responses (R) for specific responses

Quality of indicators should be linked to environmental objectives  
(Very high, high and normal).

CASE  
OF  
MAURITANIA  
2009



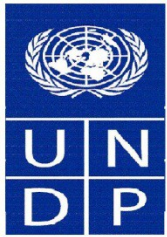
# POVERTY AND ENVIRONMENT INITIATIVE AFRICA



## Selected Environmental Indicators

| Problems          | Indicators  | Type | Relevance | Sector                              |
|-------------------|---|------|-----------|-------------------------------------|
| Forestry          | <ul style="list-style-type: none"> <li>• Number ha</li> <li>• Productivity</li> <li>• % of degraded forests</li> <li>• Deforestation rate</li> <li>• Quantity of forest products</li> </ul> | P    | ++        | Environment                         |
| Marine resources  | <ul style="list-style-type: none"> <li>• Inventory of marine resources</li> </ul>   | E    | +         | Fishery                             |
| Energy Production | <ul style="list-style-type: none"> <li>• Annual Production</li> <li>• % Renewable energy</li> </ul>   | P    | +++       | Energy                              |
| Water pollution   | <ul style="list-style-type: none"> <li>• Quantity of chemicals and pesticides</li> <li>• Presence of chemicals in water</li> </ul>  | P    | +++       | Water<br>Agriculture<br>Environment |
| Water reserve     | <ul style="list-style-type: none"> <li>• Volume of water available ( surface water and ground water)</li> </ul>   | E    | +         | Water                               |

CASE  
OF  
MAURITANIA



# POVERTY AND ENVIRONMENT INITIATIVE AFRICA



## EXPERIENCE OF COMBINED POVERTY ENVIRONMENT INDICATORS

CASE  
OF  
MAURITANIA  
2010-2011

### Type of Indicators

1. Indicators of pressure
2. Indicators of State
3. Indicators of behavior : use of NR
4. Indicators of Risk ( floods, droughts, Tsunami... forestfire)
5. Indicators of Impact related to poverty and environment
6. Combined indicators of impact: pressure + State + behavior

# POVERTY AND ENVIRONMENT INITIATIVE AFRICA

## Selected Poverty and Environment Indicators

| Resource | Indicator of pressure   | Indicator of state  | Indicator of behavior  | Indicator of impact                                 | Indicator of monitoring  | Indicator of Risks  |                                       |
|----------|---|---|--|---|--|---|---------------------------------------|
| Forest   | Annual Capacity of Reproduction /Annual consumption                             | Number of m3 Available per inhabitant                                     | Part of energy consumption from the total energy consumption         | Employment and Income                               | F1= $Ef1 \times Pf1 \times (1 - Cf1)$<br>F2q= $Ef1 \times Pf1 \times (1 - Cf2q)$ | Areas lost because of desertification                       |                                       |
|          |   |   |  | Part of the income from the business                |  |   | Part of jobs from the sector          |
| Water    | Water availability per year)/consumption per inhabitant, livestock and industry | Availability of water ( surface and ground water) Nb of m3 per inhabitant | Part of households consumptions/Total consumption                    | Employment and Income                               | E1= $Ee1 \times Pe1 \times (1 - Ce1)$  | areas with potential risk of pollutions                     |                                       |
|          |   |   |  | Part of the income related to water use             | for industry, livestock and  |   | E2= $Ee1 \times Pe1 \times (1 - Ce2)$ |
|          |   |   |  | Health and nutrition:                               | Prevalence rate for water diseases   |   | E3= $Ee1 \times Pe1 \times (1 - Ce3)$ |
|          |   |   |  | Education : time to collect water by women and kids | E4= $Ee1 \times Pe1 \times (1 - Ce4)$  |   |                                       |
| Air      | Number of cars/population<br>Number of polluting industries                     | Co2 and SO2 presence in the atmosphere                                    | Part of urban population/Total population                            | Health  | A1= $(1 - Ea1) \times Pa1 \times (1 - Ca1)$                                      | Number and surface of threatened areas because of pollution |                                       |
|          |   |   | Part of the population living close to mining areas                  | Prevalence of diseases / Income                     | A2= $(1 - Ea2) \times Pa1 \times (1 - Ca1)$                                      |   |                                       |
|          |   |   | Part of the population living close to mining areas industrial areas | Diseases close to Mining and industrial areas       | A3= $(1 - Ea1) \times Pa2 \times (1 - Ca2)$                                      |   |                                       |
|          |   |   |  | A4= $(1 - Ea2) \times Pa2 \times (1 - Ca2)$         |  |   |                                       |

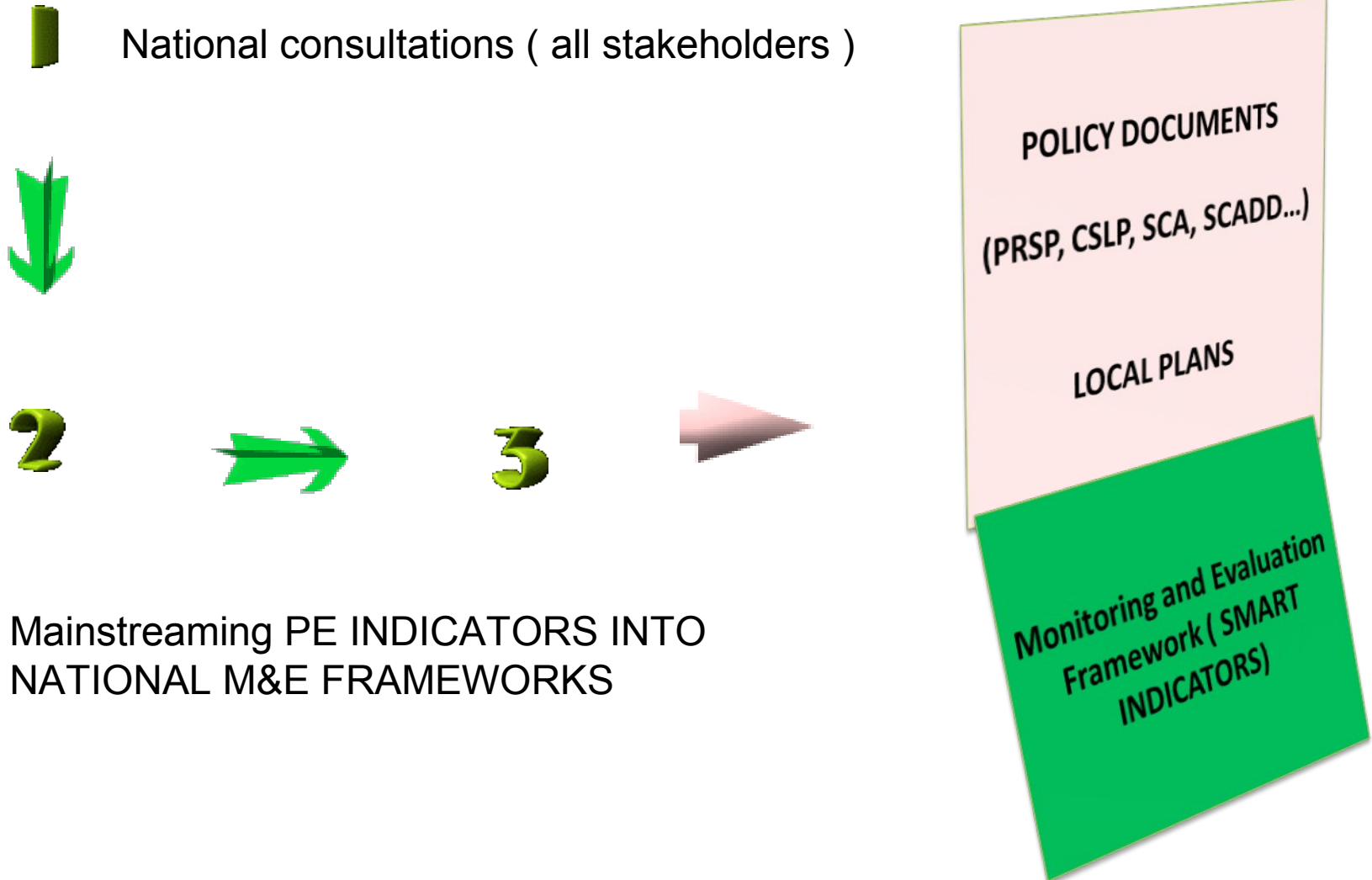
# POVERTY AND ENVIRONMENT INITIATIVE AFRICA

|         |  |   |  |  |   |   |
|---------|--|---|--|--|---|---|
| Soil    | <p>Agricultural Land Used /total land</p> <p>Land for fodder / total</p>     | <p>Agricultural productivity per inhabitant</p> <p>Animal production available per inhabitant</p> <p>Milk production per inhabitant</p> | <p>Part of agricultural land exploited with pesticides and chemicals</p> <p>Part of lands where pesticides are used</p> <p>Part of agricultural land used for fodder</p> | <p>Income and employment</p> <p>Part of the income because of agricultural activity</p> <p>Health and nutrition: Number of meal per day</p> <p>Education : Time spent in farms</p> <p>Number of women working</p> <p>Number of children working in farms</p> | <p>S1= <math>Es1 \times Ps1 \times (1 - Cs1)</math></p> <p>S2= <math>Es1 \times Ps1 \times (1 - Cs2)</math></p> <p>S3= <math>Es2 \times Ps2 \times (1 - Cs3)</math></p> <p>S4= <math>Es3 \times Ps2 \times (1 - Cs3)</math></p> | <p>Number and volume of pesticide banned and used</p> |
| Fishery | <p>Capacity of capture per year</p> <p>Capacity of reproduction per year</p> | <p>Annual availability of the global resource</p> <p>Availability of each specie/inhabitant )</p>                                       | <p>Part of fishery consumption/ total consumption</p> <p>Part of household consumption</p>   | <p>Employment-Income :</p> <p>Employment from the sector / Employment Artisanal fishery/ Industrial Fishery</p> <p>Health nutrition : Number of meals with fish per week</p> <p>Education : Number of children working in the sector</p>                     | <p>H1= <math>Eh1 \times Ph1 \times (1 - Ch1)</math></p> <p>H2i= <math>E2ixPh2ix(1 - Ch2)</math></p>   | <p>AREAS THREATENED BY POTENTIAL POLLUTION</p>        |



# POVERTY AND ENVIRONMENT INITIATIVE AFRICA

PROVIDE THOSE INDICATORS WITHIN THE RIGHT TIMELINE

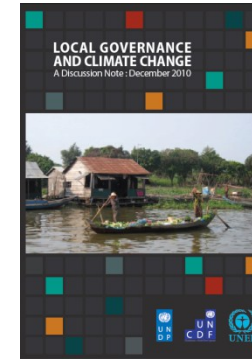
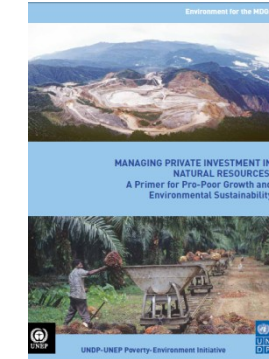
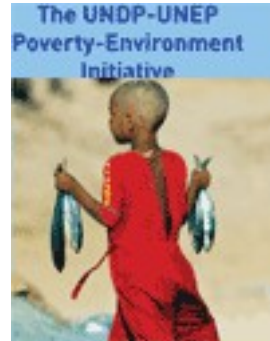
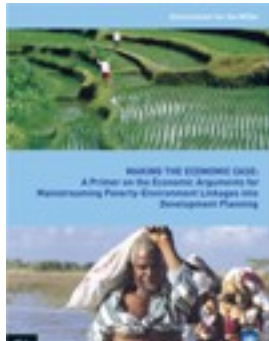
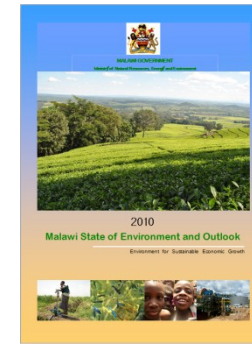
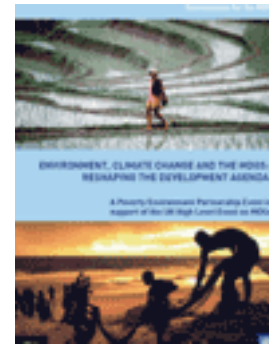
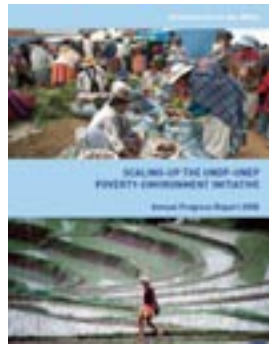


# POVERTY AND ENVIRONMENT INITIATIVE AFRICA

## CONCLUSIONS FROM OUR LESSON LEARNT TO IMPROVE M&E SYSTEMS

1. Improvement of M& E System with strong Indicators on P-E
2. Reduced Number of Indicators and simple to be monitored
3. Regular monitoring of the implementation of National Strategies
4. Regular and realistic track of development progress
5. Take action on time for reengineering development agenda to bring change

# THANKS FOR YOUR ATTENTION



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