

**Development and Implementation of  
SEA in Korea**

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**Introduction**

- Environmental Assessment in Korea**
- Prior Environmental Review System(PERS)**
- Constraints on Current PERS System in Korea**
- Policy Direction for Implementation of the SEA**
- Amendment of the Law**
- Implementation of PERS & EIA**

## Environment Assessment in Korea

### □ Environmental Impact Assessment(EIA) and Prior Environmental Review System(PERS)

|                           | EIA  | PERS   |
|---------------------------|--|--|
| Time of Introduction      | • 1977   | • 1993   |
| Legal Basis               | • Act on the Assessment of impacts of works on Environment, Traffic, Disasters, etc.   | • Frame work Act on Environmental Policy   |
| Subjects to be Assessment | • 17 Fields 63 Projects  | • 48 Administrative Plans  |
| Time of Execution         | • Before approval or confirmation of the project   | • Before approval or confirmation of the plan or program   |
| Item to be Assessed       | <ul style="list-style-type: none"> <li>• Natural Environment</li> <li>- Geology, Flora &amp; Fauna, Hydrology</li> <li>• Living Environment</li> <li>- Land use, Air &amp; water Quality, Soil, Solid waste, etc.</li> <li>• Socio-Economic Environment</li> <li>- Population, Residence, Traffic, Cultural Asset, etc.</li> </ul> | <ul style="list-style-type: none"> <li>• Natural Environment</li> <li>- Geology, Flora &amp; Fauna, Hydrology</li> <li>• Living Environment</li> <li>- Land use, Air &amp; water Quality, Soil, Solid waste, etc.</li> <li>• Socio-Economic Environment</li> <li>- Population, Residence, Traffic, Cultural Asset, etc.</li> </ul> |

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## Prior Environmental Review System(PERS)

### □ Historical Background of PERS

#### Directive of the Prime Minister(1994)

- Established the regulatory basis for enforcement of PERS
- Stipulated consultation with the Minister of Environment(MOE) in determination of administrative plans and development projects affecting the environment

#### Framework Act on Environment Policy(FAEP) (1999, 2004)

- Stated types of administrative plans requiring PERS – 48 plans and programs
- Prescribed the methods to prepare documents necessary for examining environmental impacts
- Prescribed the legal formalities for consultation

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## Constraints on Current PERS System in Korea (Background of SEA Implementation)

### □ Insufficient Target Areas for the PERS

⇒ Difficulties in systematical environmental assessment

For PERS, Many administrative plans are excluded from the list of PPPs requiring PERS

- Only 48 out of 130 administrative plans affecting development projects are subjects for PERS
- Difficult to consider environmental issues at the early stage of PPP-making
- Difficult to formulate an ESSD system through EA

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### □ Execution Timing of the PERS

Carried out after the framework for administrative and development plans has been determined

⇒ PERS proceeded after many strategic decisions have already been made

- Hard to cancel or change plan/project based on the results of PERS
- Hard to reflect the PERS results to the planning process due to inappropriate execution timing
- Too late to compare alternatives fundamentally
- Generally insignificant factors are considered when comparing alternatives

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**□ Insufficient for Building Social Consensus**

**PERS : Ministerial Consultation**

- Range of Participation is limited to the relating Agencies & Experts
- Public(General Public, Stakeholders, and Etc.) Participation Procedure is not included in PERS

➡ Causes Common Dispute in the EIA Process

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**● PERS vs SEA**

|                            | SEA   | PERS  |
|----------------------------|---|---|
| Subjects to be Assessed    | <ul style="list-style-type: none"> <li>• Includes Policy, Plan, Program</li> <li>• Adopt Screening process</li> </ul>                         | <ul style="list-style-type: none"> <li>• Includes only Plan and Program</li> <li>• Small size development projects</li> <li>• Subject for PERS are stated in the law</li> </ul>   |
| Timing for Execution       | <ul style="list-style-type: none"> <li>• PPP-making Process</li> </ul>  | <ul style="list-style-type: none"> <li>• Right before approval or confirmation of plan or program (At the stage when the strategic decisions have already been made)</li> </ul>   |
| Public Participation       | <ul style="list-style-type: none"> <li>• Generally, participation of general public, stakeholders are guaranteed</li> </ul>                   | <ul style="list-style-type: none"> <li>• Participation of general public, stakeholders are excluded</li> <li>• Participation of related agencies, PERS committee are guaranteed</li> </ul>  |
| Comparison of Alternatives | <ul style="list-style-type: none"> <li>• Various alternatives including no-action alternatives are compared</li> </ul>                        | <ul style="list-style-type: none"> <li>• Hard to compare alternatives fundamentally since PERS is proceeded after most of the strategic decisions have been made</li> </ul>   |
| Item to be Assessed        | <ul style="list-style-type: none"> <li>• Global sustainability</li> <li>• Natural resources</li> <li>• Local environmental quality</li> </ul> | <ul style="list-style-type: none"> <li>• Mainly natural resources and local environmental quality</li> <li>• ecology, hydrology, water &amp; air quality, waste management, land use plan, landscape, geology</li> <li>• Focusing on the local environment</li> </ul> |
| Major supervising agency   | <ul style="list-style-type: none"> <li>• Action-leading agent</li> <li>• Competent authority</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Environment authority (MOE)</li> </ul>   |

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## Policy Direction for Implementation of the SEA

### Increase the Range of Target Areas

→ Extend the list of plans and programmes subject to the PERS

### Adjust the Timing of PERS Execution

→ Implement PERS at the early stage of PPP-making process

### Consolidate the preparation of PERS report

→ Organize PERS committee for consultation  
: composed of various stakeholders

### Enhance the Public Participation Process

→ Guarantee the Participation of General Public &  
Stakeholders in the Stage of PERS

### 8 Differentiate the Role between PERS and EIA



## Amendment of the Law

Framework Act on Environment Policy (FAEP) has been amended to implement SEA

Major Improvement (FAEP Article 25, 26, etc.)

|                        | Before   | Improved  |
|------------------------|--|---|
| Subjects to assessment | •48 Administrative Plans and Programs                                    | •88 Administrative Plans and Programs   |
| Public Participation   | •No public participation<br>•Related Governmental Agency, PERS committee | •General public, Stakeholder, NGO, Civil Groups, Experts, Related Governmental agencies, etc.   |
| Time of Execution      | •Before confirmation or approval of the project                          | •Early stage of PPP-making process  |
| PERS committee         | •No committee  | •Lead agency should organize PERS committee composed of experts, NGOs, civil groups, residents, representatives from related agencies, etc. |

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**□ Subjects to be Assessed (Presidential decree annex 2, 3)**

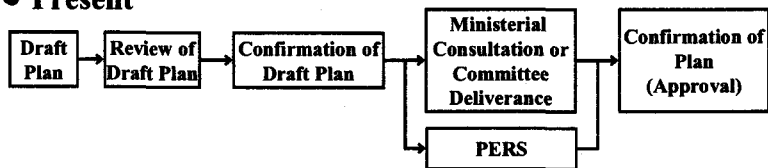
|                       |  |   |
|-----------------------|--|---|
| <p><b>Group 1</b></p> | <p>▪Administrative plans represent governmental (central/local) policy<br/>- long-term plans<br/>- plans affecting development projects indirectly</p> | <p>▪10 Laws 16 Plans<br/>(Present : 5 Plans)</p>  |
| <p><b>Group 2</b></p> | <p>▪Sectoral plans<br/>- short-term plans<br/>- plans affecting development projects directly</p>  | <p>▪48 Laws 72 Plans<br/>(Present : 43 Plans)</p> |

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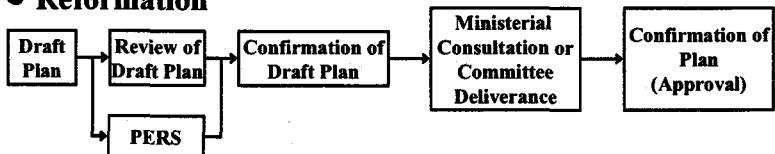
**□ Adjust the Timing of the PERS Execution**

**● Present**



\* Hard to Reflect the Results of PERS to the Plan

**● Reformation**



\* Easy to Reflect the Results of PERS to the Plan

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**□ Public Participation (Collection of Opinions)**

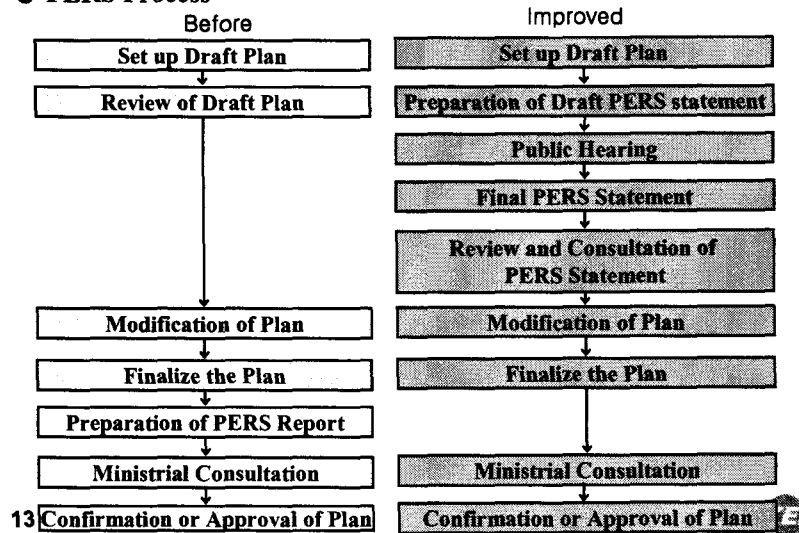
(FAEP article 26-3)

|                                       | Group 1   | Group2   |
|---------------------------------------|---|--|
| <b>Range of Public Participation</b>  | <ul style="list-style-type: none"> <li>▪ Experts, Related agency, PERS Committee, Representative of Civil Group, and NGO</li> </ul> | <ul style="list-style-type: none"> <li>▪ General public, Stakeholders, Experts, Related agency, Civil Groups, NGO, PERS Committee</li> </ul> |
| <b>Methods for Opinion Collection</b> | <ul style="list-style-type: none"> <li>▪ Committee</li> </ul>   | <ul style="list-style-type: none"> <li>▪ Public Hearing</li> <li>▪ Explanatory Hearing</li> <li>▪ Survey</li> </ul>                          |

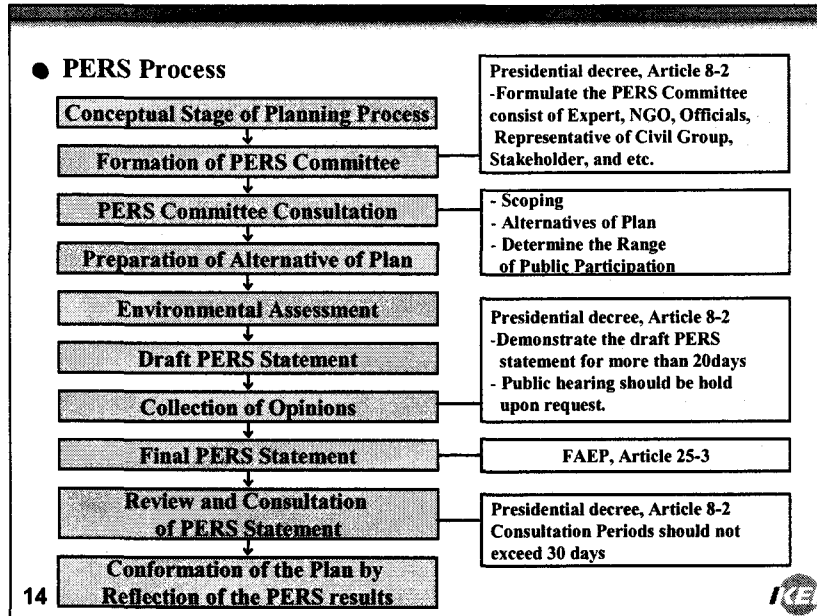
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**● PERS Process**




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**● Comparison of EIA and PERS**

|                                 | EIA  | PERS (Until May, 2006)   | PERS (From June 1st, 2006)  |
|---------------------------------|--|--|---|
| <b>law</b>                      | Act on Assessment of Impacts on Environment, Traffic, Disaster                       | Framework Act on Environmental Policy(FAEP) and other legislation  | Framework Act on Environmental Policy   |
| <b>subjects</b>                 | 17 areas 63 unit projects<br>- road, railroad, land developments, power plants, etc. | 48 plans and programs and 22 development projects<br>- 17 plans and programs under FAEP<br>- 31 plans and programs under other legislation<br>- 22 development projects under FAEP | 88 plans, programs and projects related to the projects subject to EIA<br>- 16 high level plans<br>- 86 low level plans<br>- 72 development projects under FAEP |
| <b>Preparation of EA report</b> | developer  | responsible authority or developer   | responsible authority or developer w/ the consultation of PERS committee  |
| <b>alternatives</b>             | single alternative   | single alternative   | multiple alternatives   |

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● Comparison of EIA and PERS (cont.)

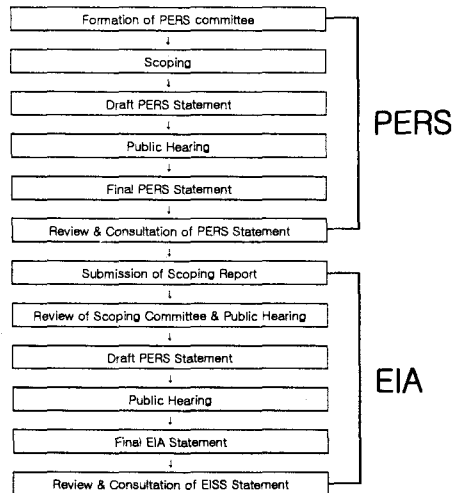
|                         | EIA   | PERS<br>(Until May, 2006)  | PERS<br>(From June 1st, 2006)   |
|-------------------------|---|--|---|
| <b>consultation</b>     | residents and stakeholders in addition to experts                                       | individual experts and expert groups   | residents and stakeholders in addition to experts   |
| <b>execution timing</b> | before the action plan or development plan is approved                                  | before the plan or project is approved   | when the plan starts to be prepared (public consultation: before authorities consultation and committee decision)   |
| <b>assessment</b>       | 23 criteria in natural environment, living environment, economic and social environment | <ul style="list-style-type: none"> <li>· objectives and contents of the plan</li> <li>· environmental baseline and relevant plans</li> <li>· environmental objectives</li> <li>· alternatives</li> </ul> | <ul style="list-style-type: none"> <li>· objectives and contents of the plan</li> <li>· alternatives</li> <li>· scoping</li> <li>· correspondence to relevant plans</li> <li>· environmental effects</li> <li>· mitigation measure</li> </ul> |
| <b>scope</b>            |   | microscopic assessment focused on the location   | macroscopic and detailed assessment<br>review of relevant plans and policy  |

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Implementation of PERS & EIA

□ Procedure

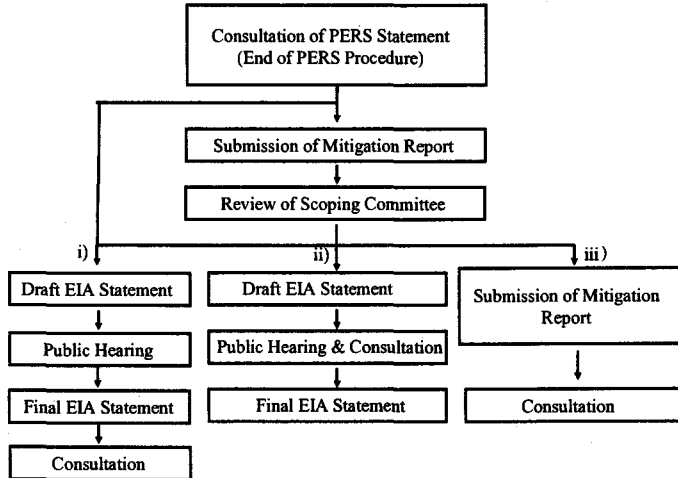


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## □ Simplification of Procedures

### ● Overview



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## □ Simplification of Procedures

### ● Criterion

i) Draft EIS → Public Hearing → Final EIS → Consultation

In the case of,

- Specific land use plan are not available in the PERS stage
- Environmental impact assessments are required based on the design data in the EIA stage

ii) Draft EIS → Public Hearing & Consultation → Final EIS

In the case of,

- Specific land use plan are available in the PERS stage
- Basic environmental impact assessment based on design data was carried out in the PERS stage
- Supplement mitigation measures are required based on the design data in the EIA stage

iii) Mitigation report → Consultation

In the case of,

- Specific land use plan are available in the PERS stage
- Further EIA and mitigation measures are not required in the EIA stage

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**Simplification of Procedures**

● **Documentation**

i) Draft EIS

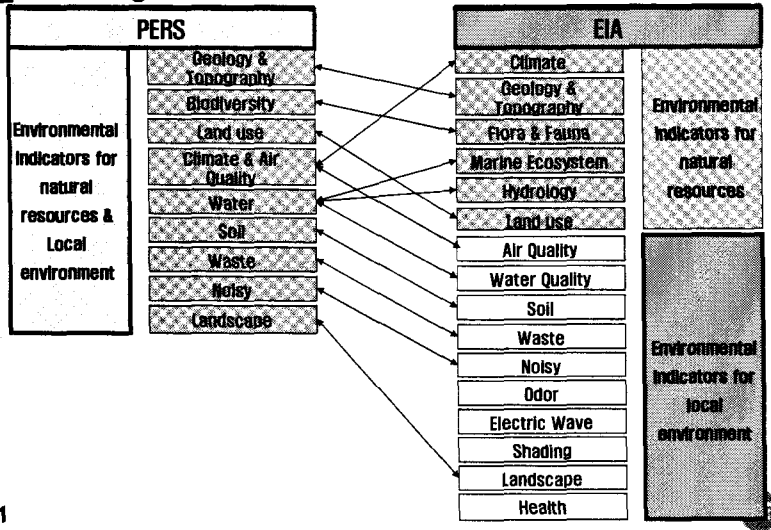
- Purpose of the Draft EIS : Public hearing
- Contents : Introduction, Baseline Environment, Scope of the Work, Prediction & Evaluation of the Impacts, Mitigation Measures

ii) Mitigation Report

- Purpose of the Mitigation Report : Execution of mitigation measures to minimize environmental effects
- Contents : Introduction, Evaluation of the Impacts, Mitigation Measures



**Assessing Items for PERS and EIA**



## □ Assessing Methods of PERS and EIA

| Indicators                 | PERS   | EIA  |
|----------------------------|--|--|
| <b>Geology, topography</b> | <ul style="list-style-type: none"> <li>o Description of geology &amp; topography necessary to preserve</li> <li>o Characterization of geology &amp; topography</li> <li>o Affected area and measures</li> </ul>  | <ul style="list-style-type: none"> <li>o Loss prevention and use of surficial soil or fertile soil</li> <li>o Restoration or use plan of borrow pit</li> <li>o Estimation &amp; measures due to soil loss and sedimentation</li> <li>o Conservation of excessively stant area</li> </ul>   |
| <b>Flora, Fauna</b>        | <ul style="list-style-type: none"> <li>o Identification of species distribution, species diversity, and conservation measures</li> <li>o Establishment of conservation measures 8th grade of degree of green naturality</li> <li>o Establishment of conservation measures in 1st grade of ecological degree of naturality</li> </ul> | <ul style="list-style-type: none"> <li>o Change estimation and measures of flora and fauna</li> <li>o Estimation and measures due to hot water discharge</li> <li>o Consideration of breeding season, habitat of migrant birds and so on</li> <li>o Effects and estimation due to habitat destruction of flora and fauna</li> <li>o Measures of natural vegetation conservation and share of green zone</li> </ul> |
| <b>Hydrology</b>           | <ul style="list-style-type: none"> <li>o Status of water resource use and water supply plan</li> <li>o Effect and measure of quantity on river network</li> </ul>  | <ul style="list-style-type: none"> <li>o Effects and measures of river bed and watershed</li> <li>o Estimation and measures of river maintenance flow</li> </ul>   |

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## □ Assessing Methods of PERS and EIA

| Indicators              | PERS   | EIA  |
|-------------------------|--|--|
| <b>Land use</b>         | <ul style="list-style-type: none"> <li>o Analysis &amp; evaluation of site selection considering near land use</li> </ul>  |  |
| <b>Air Quality</b>      | <ul style="list-style-type: none"> <li>o Investigation for sufficient distance from the project site to the impact area, and formation of buffer zone</li> <li>o Identification the relationship between wind velocity and pollutant dispersion</li> <li>o Mitigation measures</li> </ul>                                    | <ul style="list-style-type: none"> <li>o Identification emission source</li> <li>o Comparison of emission source and emission rate with national ambient levels</li> <li>o Identification of mitigation measures</li> <li>o Estimation effects of scattering dust at construction or operation</li> <li>o Review of fuel plan and heat supply process</li> </ul> |
| <b>Water</b>            | <ul style="list-style-type: none"> <li>o Analysis of relationship between water supply plan and water consumption</li> <li>o Relationship between master plan of sewer and wastewater treatment plan</li> <li>o Analysis &amp; measures of determining to meet the total water pollution load management standard</li> </ul> | <ul style="list-style-type: none"> <li>o Measure of wastewater treatment</li> <li>o Estimation of water quality and measure of water quality conservation</li> <li>o Mitigation measures of non-point source pollution</li> <li>o Measure of leachate treatment</li> <li>o Conservation measures of ground water quality and quantity</li> </ul>                 |
| <b>Noise, Vibration</b> | <ul style="list-style-type: none"> <li>o Estimation &amp; measures of mobile source (traffic, airplane and so on) noise levels</li> </ul>  | <ul style="list-style-type: none"> <li>o Identification &amp; measures of Noise source</li> <li>o Estimation &amp; mitigation measures of noise and vibration due to explosive use and so on</li> <li>o Layout plan on fixed source pollution (Factory, facilities and so on)</li> </ul>   |
| <b>Landscape</b>        | <ul style="list-style-type: none"> <li>o Use of the existing landscape and making plan considering the characteristics of land use are</li> </ul>  | <ul style="list-style-type: none"> <li>o Quantitative review and measures of effects due to change in main view points</li> </ul>  |

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## □ Assessing Methods of PERS and EIA

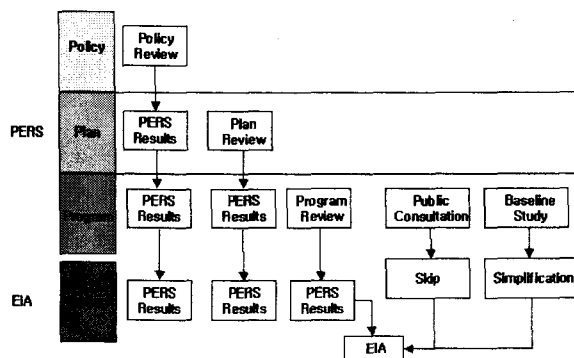
| Indicators          | PERS   | EIA  |
|---------------------|--|--|
| Population          | o Measures to densely in habitual district<br>o Environmental effects & measures to densely in habitual district |  |
| Housing             | o Connection plan of road network in residential area  | o Environmental effects estimation & measures of residential area  |
| Industry            | o Estimate the change in industrial structure  | o Estimation & measures to fishing right, farms, crop and so on  |
| Public Facilities   |  | o Effects & measures of capacity to public facilities  |
| Education           |  | o Effects & measures of capacity to education facilities   |
| Traffic             | o Analysis & measure of relationship between change of traffic volume and transportation plan                    | o Review of the suitability of site, and capacity for parking lots and transfer<br>o Selection and adequate lay out of line of trees |
| Cultural properties | o Effects & measures of cultural or historic sites in relation to the project                                    | o Identification of surficial geology in historic sites<br>o Protection measure of any historical or cultural resources etc.         |

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## □ Implementation of PERS & EIA

➔ Achieve systematical management of PERS and EIA



< Links between EIA & PERS >

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## □ Implementation of PERS& EIA(cont.)

|                 | PERS   | EIA   |
|-----------------|--|---|
| <b>subjects</b> | <ul style="list-style-type: none"> <li>plans and programs related to and closely connected to development projects</li> </ul>  | <ul style="list-style-type: none"> <li>development projects, development action plans, construction plans</li> </ul>                  |
| <b>contents</b> | <ul style="list-style-type: none"> <li>global sustainability, correspondence to national environmental policy, sustainability of the plan objectives, feasibility of the location</li> </ul> | <ul style="list-style-type: none"> <li>environmental impacts, mitigation measures, management plans after the construction</li> </ul> |

### < Differences between EIA & PERS >