



## Data checking

- ❖ Network data
- ❖ Generator dynamic data

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## System analysis

- ❖ Power flow and voltage
  - ❑ Overload and extraordinary voltage
- ❖ Fault current
  - ❑ Over fault current
- ❖ Stability
  - ❑ Stable operation of power generators

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## Tools

- ❖ PSS/e
  - ❑ Generally used for this study
- ❖ IMPACT (developed by TEPCO)
  - ❑ Used for data arrangement
  - ❑ Special analysis

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## End of Session

**Thank you for your attention!**

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## Financial / Economic analysis

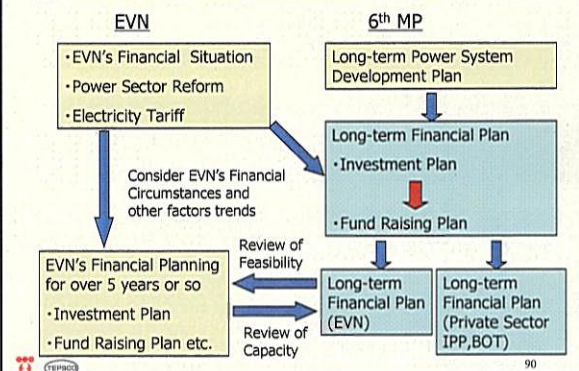


1. Approach
2. Purpose
3. Study Flow
  - (1) Data collection
  - (2) Review and analysis of data
  - (3) Research on financial sources
  - (4) Preparation of financial plan

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## Approach



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**Purpose**

**Preparation of financial plan of 6th M/P**

- ✦ Long-term Investment Plan
- ✦ Fund Raising Plan

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**Study Flow**

- ✦ Review of implementation of 5<sup>th</sup> master plan
- ↓
- ✦ Data collection
- ↓
- ✦ Financial analysis
- ↓
- ✦ Research on circumstances of financial sources
- ↓
- ✦ Preparation of financial plan of 6<sup>th</sup> M/P

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**Study Flow (Data collection)**

- ✦ EVN's financial data
- ✦ EVN's financial planning data
- ✦ Trend of power sector reform
- ✦ Tend of electricity tariff

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**Study Flow (Review of data)**

- ✦ Analysis of current financial situation (EVN)
- ✦ Analysis of financial plan (EVN)
- ✦ Review of power sector reform
- ✦ Review of electricity tariff

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**Study Flow**  
*(Research on circumstances of financial sources)*

- ✦ Identify Policies pertaining to the ways of fund raising with C/P
- ✦ Confirm the conditions of refund with Ministry of Finance
- ✦ Confirm financing policy of Commercial Bank of Vietnam

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**Study Flow**  
*(Preparation of financial plan of 6<sup>th</sup> M/P)*

- ✦ Development of investment plan
- ↕ Consistency
- ✦ Development of fund raising plan

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**End of Session**  
*Thank you for your attention!*

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*The Study  
on National Power Development Plan  
for the Period of 2006-2015,  
Perspective up to 2025 in Vietnam*



**EXPERT on the  
ENVIRONMENT and  
SOCIAL CONSIDERATION**

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
**Socio-environment Consideration**

**CONTENTS**



1. *Objective of Socio-environment Consideration Study*
2. *Introducing of SEA!*
3. *What is SEA?*
4. *What is EIA?*
5. *Study Flow*
6. *Implementation of First Site Investigation*


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**Objective of Socio-environment Consideration Study**

- ◆ **Enhancing the preparation of PHP 6<sup>th</sup>**  
\*to meet growing power demand  
\*to ensure stable power supply  
\*to optimize power development plan
- ◆ **Fitting to Environmental Policy, law and Regulations**
- ◆ **Balancing Area Differences**  
\*Northern, Middle and Southern Area

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**Introducing of SEA!**


**A global analysis**  
Socio-environmental Consideration has close relation to

- ◆ Power generation development plan
- ◆ Power network development plan
- ◆ Power demand forecast
- ◆ Economic/financial analysis
- ◆ Energy policy

↓

**SEA**

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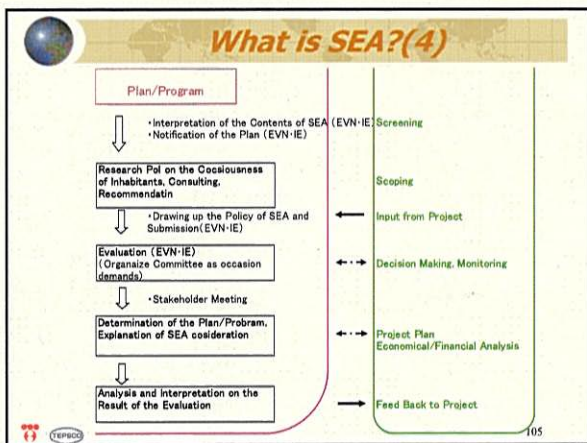
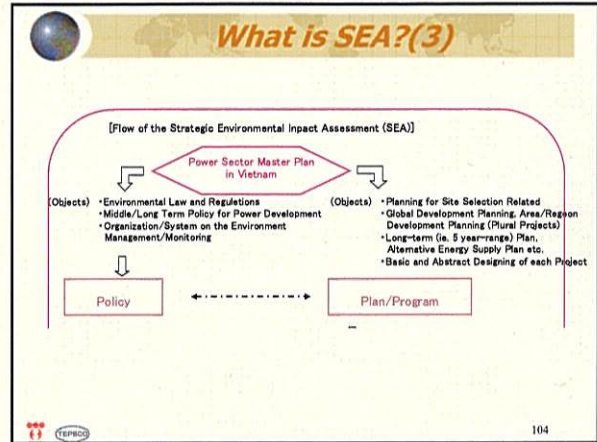
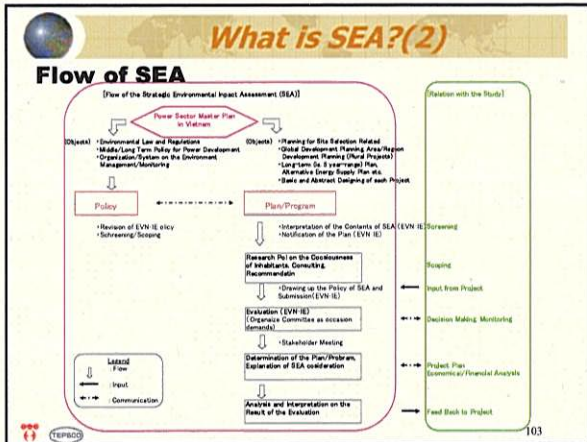
**What is SEA?(1)**

**SEA consists of three Aspects:**

- ◆ Policy
- ◆ Plan
- ◆ Program

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### What is EIA?(1)

## Environment Impact Assessment (EIA)

### Environment Impact

- ◆ Social environment impact
- ◆ Natural environment impact
- ◆ Pollution

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- ### What is EIA?(2)
- #### Social environment impact
- Inhabitants
    - Ethnic minorities,
    - The weak, gender
  - Cultural heritage:
    - World heritage, cultural assets
  - Scenery:
  - Human life:
    - Agriculture, fishery, water utility (irrigation), others
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- ### What is EIA?(3)
- #### Natural environment impact
- Ecosystem
    - Flora/Fauna,
    - Bio diversity
  - Topography/Geology
  - Protected area/Park
  - Meteorology/Climate change
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## What is EIA?(4)

**Pollution**

- Air pollution
- Water pollution
- Soil contamination
- Noise
- Vibration
- Land subsidence
- Bad smell

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## Study Flow

**SEA(Plan/Program)**

1. Research Poll on the Consciousness of Inhabitants, Consulting, Recommendation
- ↓
2. Evaluation (EVN/IE)
- ↓
3. Determination of the Plan/Program, Explanation of SEA consideration
- ↓
4. Analysis and Interpretation on the Result of Evaluation

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## Implementation of First Site Investigation

1. Review of existing data
2. Data collection
3. Selection of local sub-contractor
4. Execution of investigation on inhabitants' consciousness and poll

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## End of Session

*Thank you for your attention!*

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## The Study on National Power Development Plan for the Period of 2006-2015, Perspective up to 2025 in Vietnam

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## JICA ENVIRONMENT AND SOCIAL CONSIDERATION GUIDE LINE

**CONTENTS**

1. CONCEPT
2. OBJECTIVE
3. DEFINITION
4. BASIC POLICY
5. ITEM
6. POINT

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**Concept**

- ◆ "Environmental and Social Consideration" shall be executed maintaining
  - participation of stakeholder and
  - transparency of decision making procedure based on
    - \*the respect of basic human right and
    - \*principle of democratic government system,
- opening the information to public and securing enough effect.
- ◆ Government organizations related shall be required responsibility for explanation.
- ◆ At the same time, other stakeholders are also required responsibility for announcing earnestly.

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**OBJECTIVE:**

**The object of the "Environmental and Social Consideration Guide Line" is**

- ◆ to instruct the government of cooperating country for carrying out appropriate environmental and social consideration, and
- ◆ to secure appropriate execution of cooperation and confirmation on the environmental and social consideration indicating requirement for the government of cooperating country.

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**DEFINITION(1):**

- (1) Environment and Social consideration means to consider impacts on the **air, water, soil, nature as ecology and biology, involuntary settlement, respects for human rights of aborigines and other social aspects.**
- (2) Environment and Social consideration means to propose the plan to study, to forecast and to assess the impact on the environment and / or local society, that will be caused or will be in danger, and to avoid or to mitigate the impact.
- (3) Environment and Social consideration means to assess and evaluate the environmental and social impacts based on the system of each country and to analyze alternative and to draw up appropriate plan on the mitigation and monitoring.

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**DEFINITION(2):**

- (4) **Strategic Environment Assessment (SEA)** means the environment assessment for upper stage decision making comparing to the environment assessment for the project executing stage.
- (5) **Screening** means to judge the necessity of the execution of environmental and social assessment putting the base on the character of the project and local feature. The Guide Line categorize cooperation project into 'A', 'B' and 'C'. In the case of impact is estimated considerably serious, ranked 'A', when the impact is estimated rather smaller to 'A', ranked 'B' and 'C' is put when the impact will be minimum or almost nothing.
- (6) **Scoping** means to decide alternatives, scope of evaluation items which are important or to be estimated important, and study method.

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**DEFINITION(3):**

- (7) Stake holder means person, organization and/or group (included illegal residents) and NGO that will be influenced impact.
- (8) Initial Environmental Examination (IEE) is environment study on the stage to carry out analyze on the alternatives, forecasting and assessment of environment impact, mitigation method, monitoring plan etc. based on the easily accessible information as existing data and simple site survey.

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**BASIC POLICY:**

- Point 1: to take into consideration covering impact widely
- Point 2: to realize environment and social consideration in the early stage.
- Point 3: to carry out follow up after finishing the project.
- Point 4: to fulfill informed consent before beginning the project.
- Point 5: to require participation of stake holder.
- Point 6: to publish information.
- Point 7: to enforce JICA's executing system.

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### ITEM(1):

The environmental and social consideration includes following items,

- ♦ Human health and Safety and Natural environment (include crossing the border and global environment),  
*through air, water, soil, waste, accident, water usage, climate change, and flora and fauna*
- ♦ Movement of population like as involuntary settlement,

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### ITEM(2):

- Local economy influence on employment and livelihood,
- Land usage and local resources utilization,
- Social organization as capital for social relation and local decision making organization etc.,
- Existing social infrastructure and social services,



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### ITEM (3);

- ♦ The social weak group as poverty or minority,
- ♦ Fairness in distribution of benefit and impact, and development process,
- ♦ Gender,
- ♦ Children's rights,
- ♦ Cultural heritage/assets,
- ♦ Local opposition of interests,
- ♦ Infection as HIV/AIDS etc.



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### POINT:

#### Pollution

- I Impact does not mean only direct and instant but derivative, secondary and accumulative in the rational range.
- I In case the mechanism is unclear, include preventive treatment,
- I Categorization "A", "B" and "C".  
"A": Impact grade is serious or undesirable,  
"B": Impact grade is less than case "A",  
"C": Impact is minimum or considerably nothing

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### End of Session

**Thank you for your attention!**

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### Important issues to be considered

- ♦ The demand areas are bipolarized in the north and in the south, and the distance is as far as 1500km
- ♦ A difference of the power source composition between the north and the south due to uneven distribution of the primary energy resources
- ♦ Different demand profiles between the north and the south due to difference of economy and climate
- ♦ Drastic decline of hydroelectric power supply capacity during flood seasons in the north for the flood control
- ♦ Changing daily load curve in line with the economic development
- ♦ International electric power exchange
- ♦ Environmental and social considerations



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