

**Central Civil Defense and Disaster Management Institute,
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소방방재청 중앙민방위방재교육원

Venue: Asia Climate Change Education Center

A Desirable Approach to Establishment of Climate Change Policy

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I . Some Issues Related to Climate Change

1. Cause of Climate Change

- o Natural cause: interglacial period
- o Human-induced cause: emission of greenhouse gas
 - industrialization since the 18th century
 - improved material affluence and convenience in everyday life
 - but based on the sacrifice of nature → environmental problems (side-effect) → threatening human existence
 - crisis of environment → crisis of humans
- o humans
 - the beneficiaries and victims of industrialization
 - committed a self-contradiction



o environmental problems

- local one: water/soil pollution, etc.
- global one: climate change, ozone depletion, etc.
- globalization of environmental problems

o climate change

- one of the most global environmental problem
- in terms of its seriousness and impact on nature/
society/humans

2. United Nations' Point of View

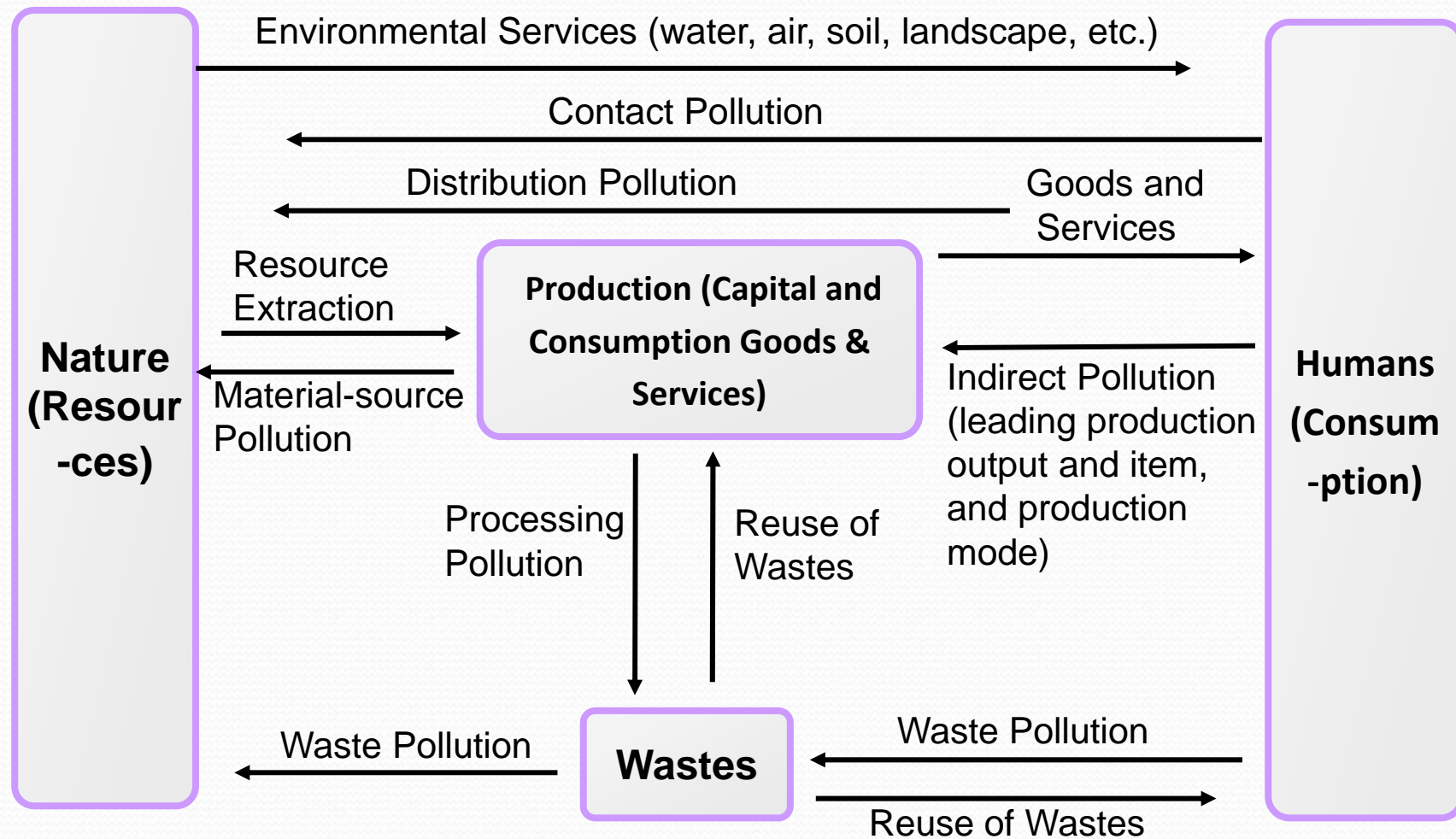
o Causes

- Natural factor: 20%
- Human-induced factor: 80%

o Impact of greenhouse gas

- CO₂: 80% (66% - 98%)
- Responsibility
 - Most developed countries: 70%
 - Developed/developing countries: 30%

3. The Mechanism of Human-induced Greenhouse Gases Being Emitted



4. The Major Sources of Greenhouse Gas Emission

- o Resource extraction (Enterprise)
- o Production of goods and service (Enterprise)
- o Distribution of goods and service (Enterprise, Citizen)
- o Consumption (Citizen)

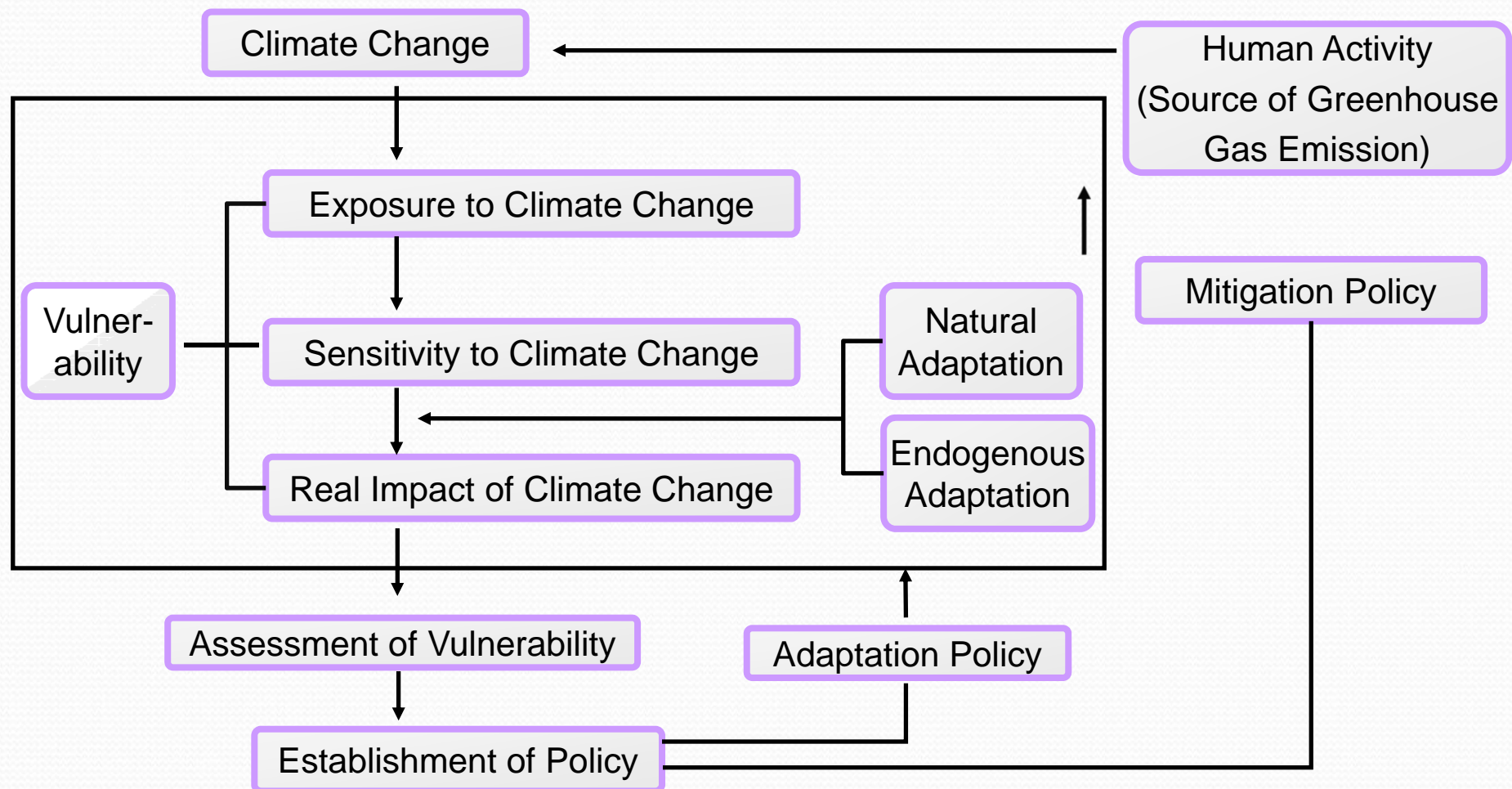
5. Agents Responding to Climate Change

- o Central/Local government: climate change policy
- o Enterprise: green management (Saving resources and energy, eco-efficiency)
- o Environmental organization: environmental movement
(pressure group, educator)
- o Citizen: environmentally friendly behavior in everyday life
- o United Nations: United Nations Framework Convention on Climate Change (UNFCCC)

II . A Desirable Approach by Government

1. Identifying the Vulnerability to Climate Change
2. Forming the Components of Policy
3. Introduction of Governance System
in Decision-Making Process
4. Analyzing Policy Effectiveness

1. Identifying the Vulnerability to Climate Change





o Adaptation policy

- focuses on how to adapt to the changed/changing climate leaving the existing social system as it is
- focuses on removal of only boils on our body without change in the existing physical constitution
- technological approach
- short-term strategy
- would be effective against delay in the destruction of earth, but less effective for saving earth



o Mitigation policy

- focuses on how to re-structure the existing social system which is structured in a way to maximize affluence and convenience as the major causes of current climate change
- focuses on change in the existing physical constitution of our body to a new one that boil does not come out
- social system approach
- long-term strategy
- would be effective against saving earth, but with a lot of current socio-economic cost

o the two categories of policies should be launched together with capacity building being promoted



2. Forming the Components of Policy

- o Target: selection of prior vulnerable sectors
- o Goal: how much to reduce by the sector selected
- o Means: what means to adopt for achieving the goal
 - * Examples: whether
 - to reduce energy use
 - to increase energy efficiency
 - to supply new and renewable energy
 - and/or to change the existing energy market

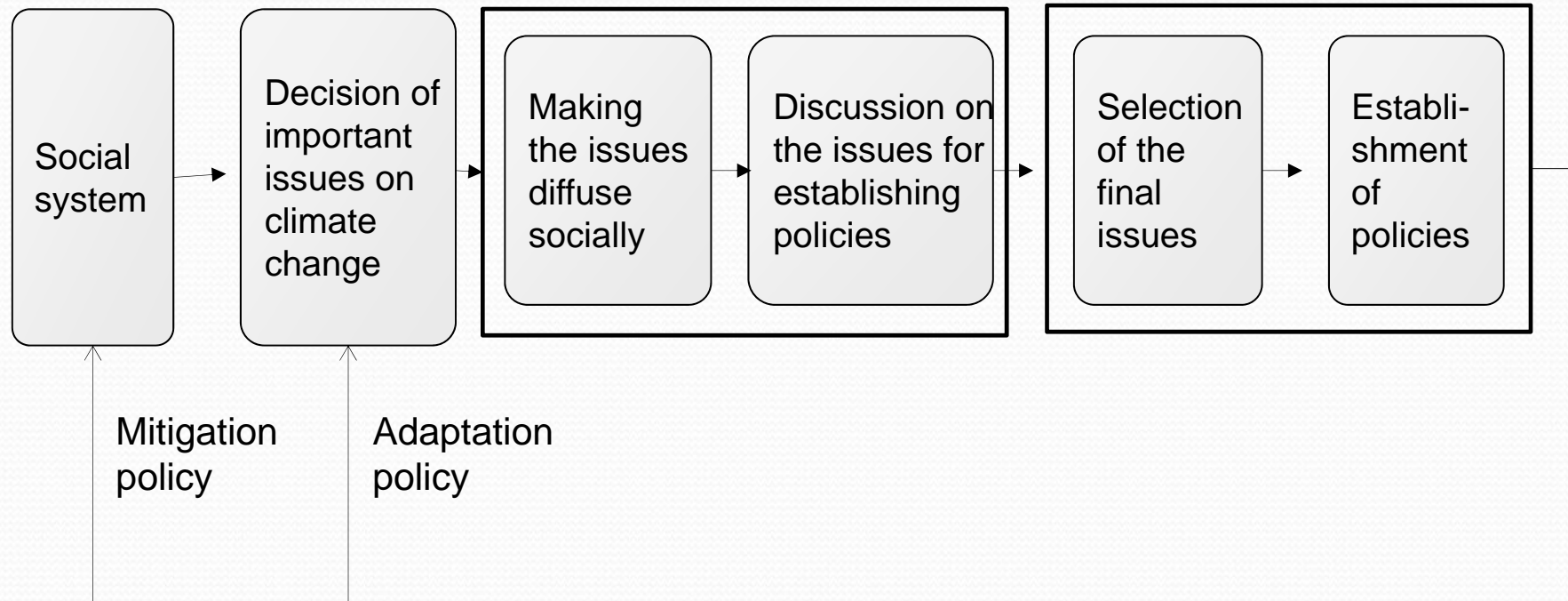
3. Adopting Governance System in Decision-Making Process


Source of climate change

Awareness of the issues on climate change

Diffusion of the issues on climate change

Formalization of the issues on climate change



- 
- o Purpose: Internalization of conflict
 - o Participants in governance system
 - Experts
 - Civil organizations
 - Residents
 - Stakeholders
 - o Decision of what stage of decision-making process to invite the participants
 - Decision of important issues on climate change
 - Discussion on the issues for establishing policies
 - Selection of the final issues
 - Establishment of policies

4. Analyzing Policy Effectiveness

(1) Efficiency analysis of financial investment

o Definition: reduction volume of greenhouse gas emission compared to financial investment

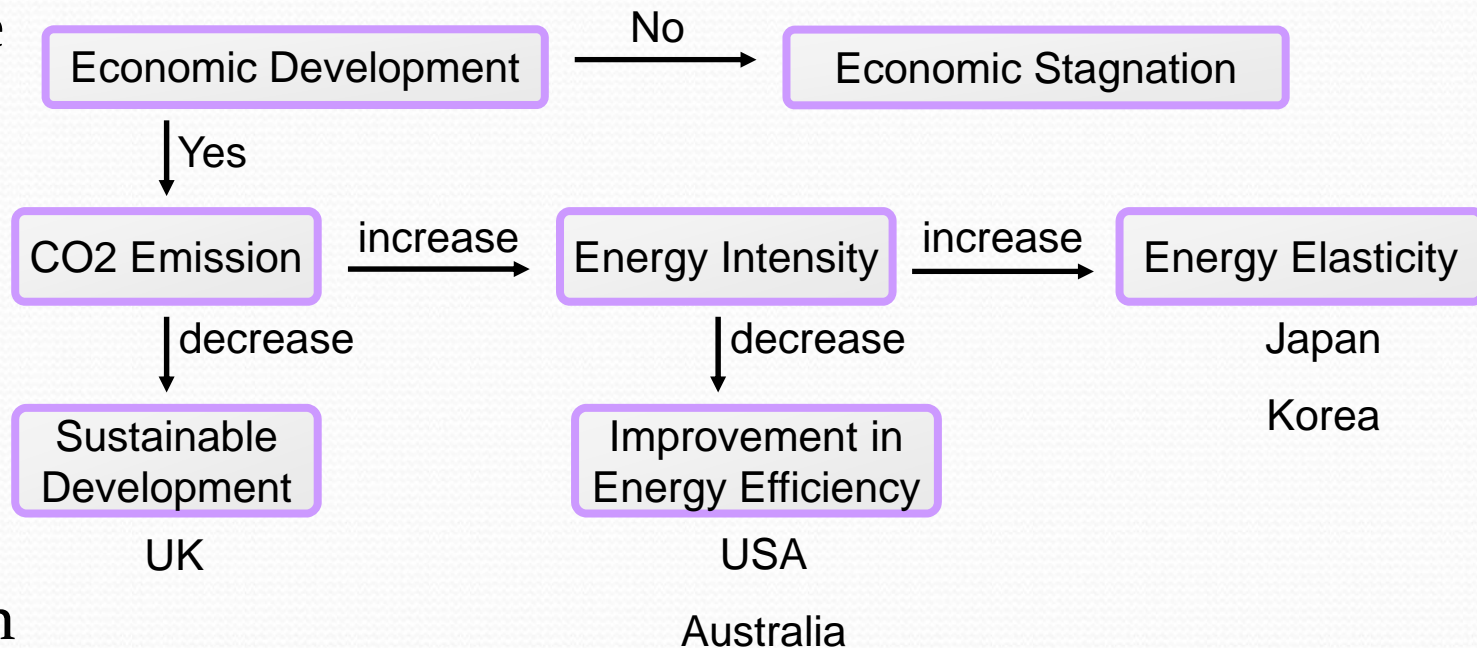
o Examples

Policy Implemented	Budget (million in USD)	Reduction Quantity (ton)	Budget for Reducing 1 ton (USD)
Afforestation (6,500ha)	93	38,350	2,430
Supply of Clean Energy	104	227,372	460
Substitute of Traffic Signal with LED	3	9,735	310
Substitute of 50,000 Cars with Electric Ones	1,500	191,100	7,849

o Function: a guide for the decision of policy priority

(2) Effectiveness analysis of all policies as a whole
o Need to examine whether the policies launched are effective or not on a regular-period base

o Example



o Function

- a guide for identifying
- what way the policies launched should be modified and/or supplemented

III. Overcoming the Constraints (Capacity Building)

1. Internal Capacity Building

- o increase in financial capacity
- o development of advanced technology
- o construction of cooperative network with
 - business enterprises: voluntary green management
 - civil organizations: environmental movement
 - mass media: public advertisement
 - citizens: environmentally friendly behavior
- o internal governance system in the process of decision-making
- o change in current socio-economic system to a new one
 - economy: production/distribution/market system
 - citizens: lifestyle (purchase/consumption behavior)
 - cultural ethos: consumerism → environmentalism



2. External Capacity Building

o climate change

- a global environmental problem
- arisen from both internal and external source of greenhouse gas emission

o establishment of cooperative network with other domestic local/central governments and/or overseas countries

o sharing mutual understanding on

- seriousness of climate change
- necessity of collaborative response to climate change
- effectiveness of collaborative response to climate change, etc



o information exchange

- the state of climate change
- data related to climate change
- data/information/education program necessary for climate change education, etc

o collaborative activities

- mutual personnel exchange of administrative/professional staffs
- collaborative research
- holding professional academic conferences on a joint base, etc

Many thanks for your kind listening