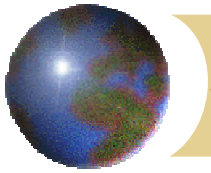
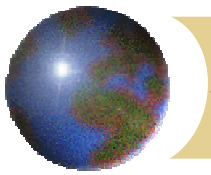


Policy Mix for Promoting Green Logistics

Kenji Nagamatsu
Senior Representative
Japan International Transport Institute
November 17, 2004

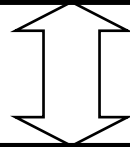


- **Policies for Conserving the Environment**
- **Characteristics of Logistics**
- **Policy Mix for Promoting Green Logistics**

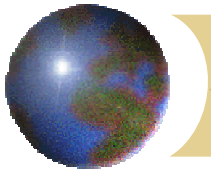


The Nature of Environmental Problems

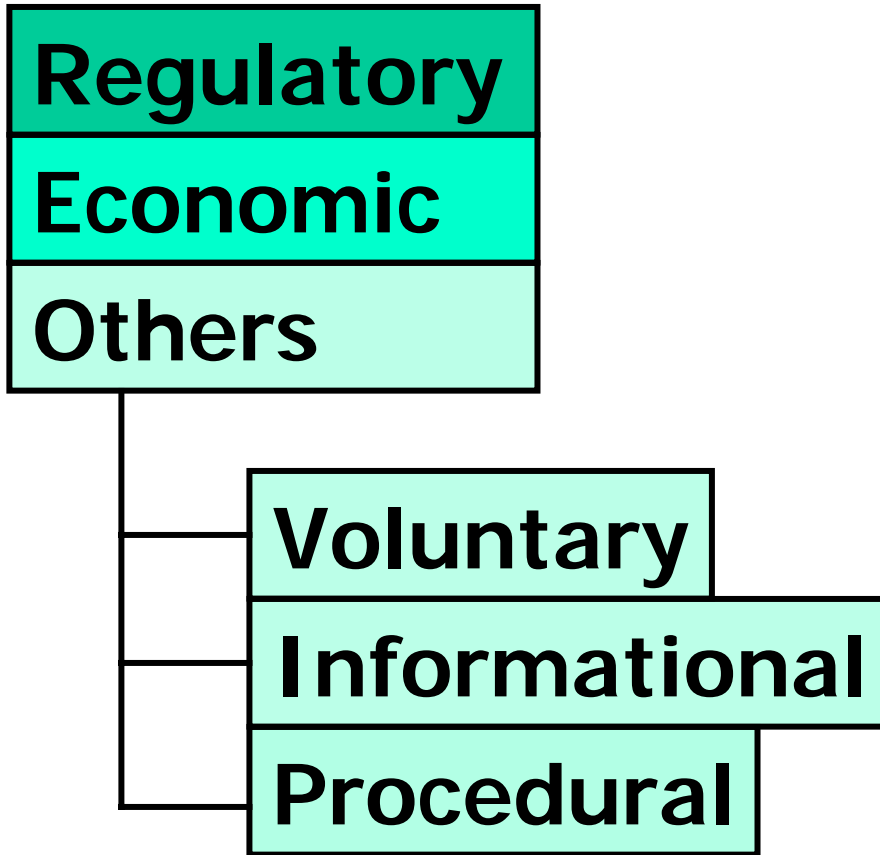
- Problems caused by specific activities
- Need for direct countermeasures for national minimum

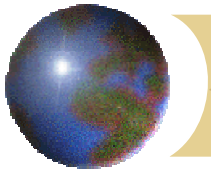


- Problems caused by wide-ranging activities
- Need to change various entities' activities

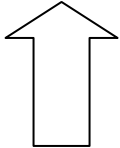


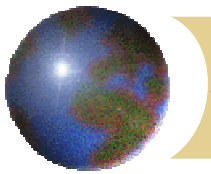
Policies



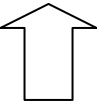


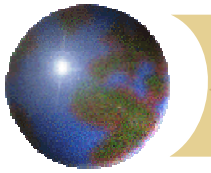
Regulatory

| | |
|-----------------|---|
| Summary | Accomplishing environmental standards or targets  Utilization of control methods based on laws and regulations |
| Examples | <ul style="list-style-type: none">● Total air pollutants control● Mandatory emissions regulations |
| Merits | Effective in controlling pollutants |
| Issues | Economic efficiency difficult to achieve |



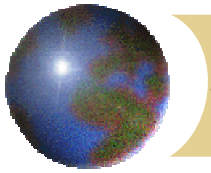
Economic

| | |
|-----------------|--|
| Summary | Inducing each entity to act for environmental conservation  Economic incentives |
| Examples | Environmental taxes; emissions trading; subsidies for energy-efficient equipment |
| Merits | Utilization of market mechanisms |
| Issues | <ul style="list-style-type: none">● Results can be uncertain● National consensus required when considering additional economic burdens |

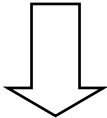


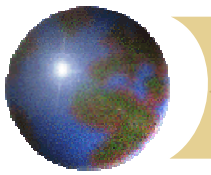
Voluntary

| | |
|-----------------|--|
| Summary | Conserving the environment through voluntary efforts to achieve certain goals |
| Examples | Environmental action planning by businesses |
| Merits | Utilization of businesses' innovative measures |
| Issues | <ul style="list-style-type: none">● Results are uncertain● Publicizing of results and monitoring by third parties necessary |



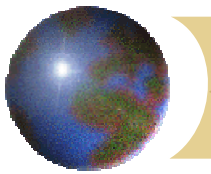
Informational

| | |
|-----------------|--|
| Summary | Publicizing a wide range of environmental information  Stakeholders evaluate and select environmentally-friendly companies |
| Examples | Environmental reporting, labeling and accounting; LCA |
| Merits | Possible for both the economy and environment mutually thrive |
| Issues | <ul style="list-style-type: none">● Information accuracy● SMEs may have difficulty in implementing. |

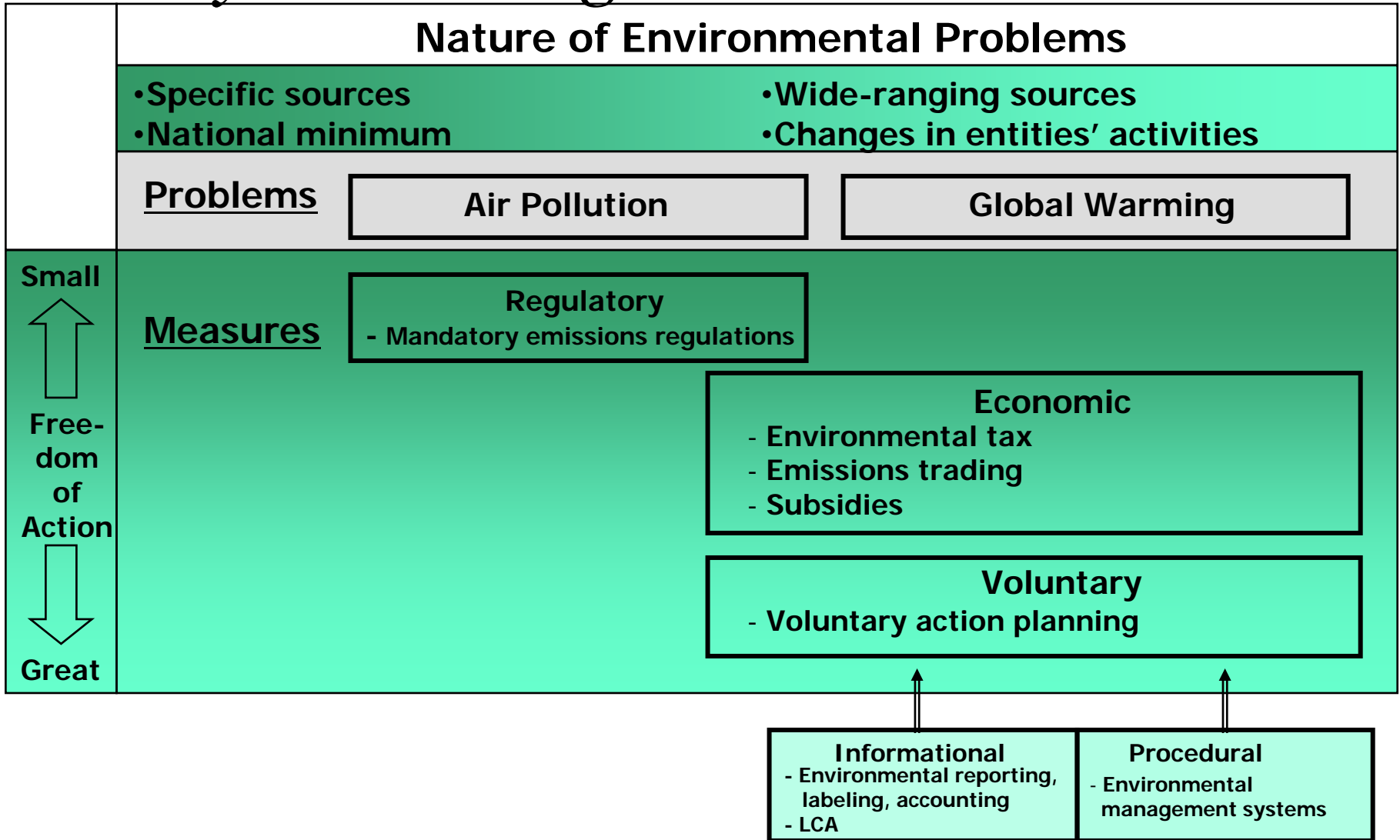


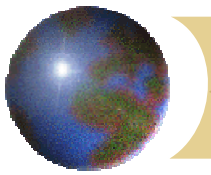
Procedural

| | |
|-----------------|--|
| Summary | Incorporating environmental considerations and criteria in each stage of decision making |
| Examples | Environmental management systems (ISO14001, etc.) |
| Merits | Effective in incorporation of environmental considerations |
| Issues | SMEs may have difficulty in implementing |



Policy Mix Image





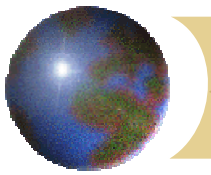
Characteristics of Logistics

- Relates to all stages of a product's life cycle:

- *Efficient logistics* ⇒ *reduce environmental burden*

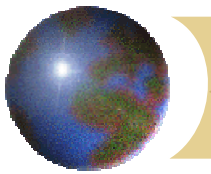
- Providers can provide more efficient logistics than shippers themselves:

- *Outsourcing logistics* ⇒ *reduce environmental burden*



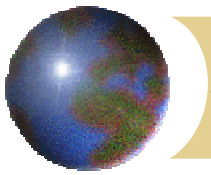
Characteristics of Logistics - continued

- Large part of logistics originating in B to B transactions:
 - *Shippers/logistics providers partnerships crucial*
 - *Shippers, not consumers, responsible for evaluation of logistics providers' environmental friendliness*
- Large portion of logistics providers are SMEs:
 - *Provide them assistance*

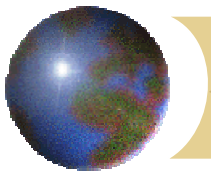


Policy Mix for Green Logistics

| | Examples | Points to Consider |
|-------------------|--|--|
| Regulatory | <ul style="list-style-type: none">● Mandatory emissions regulation● Fuel economy regulation | <ul style="list-style-type: none">● Regulation of total CO2 emissions difficult and economically inefficient |
| Economic | <ul style="list-style-type: none">● Tax reform (automobile-related tax system, carbon tax)● Subsidies, tax incentives | <ul style="list-style-type: none">● Effectiveness and impact of tax reform?● Combining tax reform and subsidy expansion |



| | Examples | Points to Consider |
|----------------------|---|---|
| Voluntary | <ul style="list-style-type: none">● Voluntary action plans (Fuel conserving plans)● Evaluation measures | <ul style="list-style-type: none">● Partnerships: shippers and logistics providers |
| Informational | <ul style="list-style-type: none">● Environmental performance indicators● Environmental reporting● Publicizing good practices | <ul style="list-style-type: none">● Shippers responsible for evaluating logistics providers' performance● Assistance to SMEs |
| Procedural | <ul style="list-style-type: none">● Environmental management systems | <ul style="list-style-type: none">● Assistance to SMEs |



Conclusions

- Economic and voluntary measures should be promoted.
- Voluntary initiatives by businesses are particularly important.
- Strengthening of partnerships between shippers and logistics providers, and assistance to SMEs are important.
- Effectiveness of economic measures should be examined positively and carefully.