

**GOVERNANCE FOR  
SUSTAINABLE DEVELOPMENT/  
持続可能な開発のためのガバナンス**

**Nay Htun**

**State University of New York, Stony Brook**

**2011 ISAP FIRST KEYNOTE SESSION**

**YOKOHAMA, JAPAN**

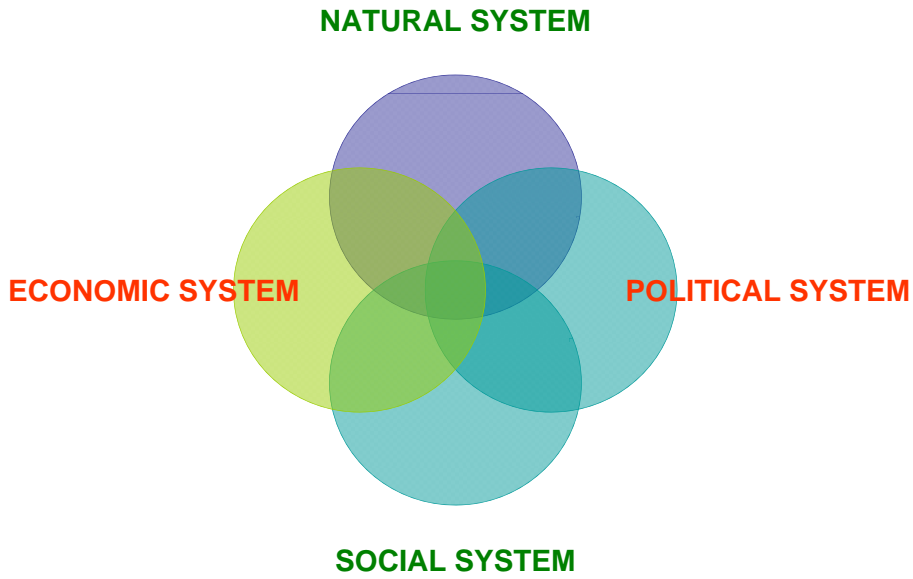
**26 -27 JULY 2011**

---

**OVERVIEW OF CHALLENGES/  
課題の概観**

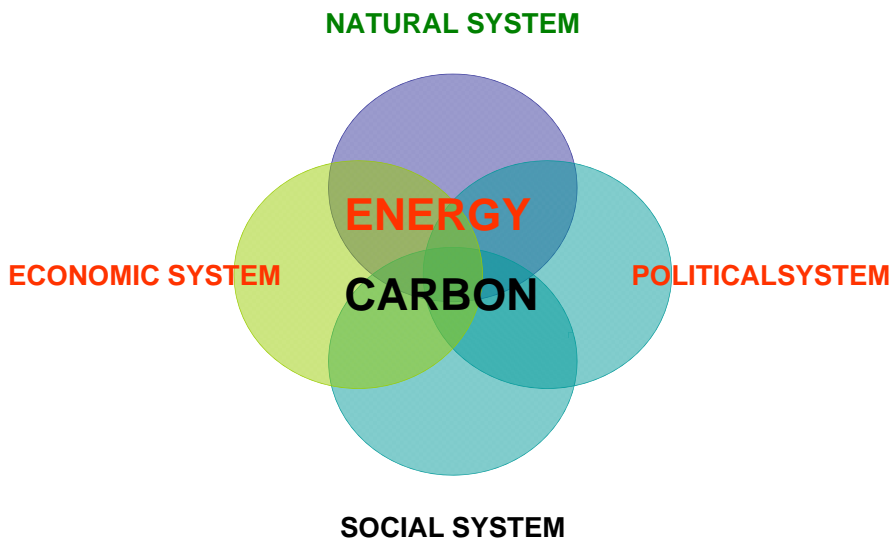
# CHALLENGES/課題

SECTORS / SILOS → SYSTEMS → SYSTEMIC



# CARBON/炭素

SYSTEMIC DRIVER



# CONTINUING FOSSIL FUELS DEPENDENCY

## 化石燃料依存の継続

### *CURRENT*

- COAL
- GAS
- PETROLEUM

### *EMERGING*

- TAR SAND
- SHALE
- METHANE HYDRATE

## EMERGING TRENDS/

新たな動向

**EMERGING TREND/新たな動向**  
**TRANSITION TO LOW-CARBON/**  
**低炭素への移行**

- **LOW-CARBON SOCIETY.** *2008 G8 Tohoku Summit*
- **ACTION FOR A LOW-CARBON AND  
EQUITABLE FUTURE- THE FIERCE  
URGENCY OF NOW** *Nobel Laureate Symposium,  
London April 2009*

**WHY**

**THE TRANSITION TO LOW-  
CARBON?/なぜ低炭素への移行か？**

## **“Saving the planet cannot wait.”/地球救済は待てない**

**Each year of delay before moving onto the emission path of stabilizing CO2 at 450ppm and limiting rise in global temperature to 2C would add approx. US\$500 billion to the global investment cost of US\$10.5 trillion for the period 2010-2030.**

*International Energy Agency. Nov 2009 World Energy Outlook.*

**“Human actions have resulted in warming and acidification of the oceans and are now causing increased hypoxia”**

**The speed these stressors are occurring combined with unprecedented overexploitation, pollution and habitat loss, could make the next globally significant extinction event in the ocean, if no immediate actions are taken.**

**The occurrence of multiple high intensity stressors has been a pre—requisite for all the five global extinction events of the past 600 million years.**

*International Earth System Expert Workshop on Ocean Stresses and Impacts IPSO, IUCN, WCPA Workshop Summary Report, June 2011*

**Social cost of carbon is as high as \$893 per ton in 2010 and \$1550 in 2050.**

**Well above the US government's \$21 estimate, a key policy – making factor in regulations & standards setting.**

*“Climate Risks and Carbon Prices :Revising the Social Costs of Carbon.*

*F.Ackerman and E Stanton, SEI / Tufts University / Economics for Equity & Environment.*

*[www.e3network.org](http://www.e3network.org)*

**MANKIND'S GREATEST  
CHALLENGE/**

**人類最大の課題**

# **CARBON REVOLUTION/炭素革命**

## **Mankind's Greatest Challenge/人類最大の課題**

- **BY 2050 TEN FOLD INCREASE IN ECONOMIC OUTPUT FOR EVERY TONNE OF GREENHOUSE GASES EMITTED**
  - **EVERY TONNE OF CO2 EMITTED, GDP NEED TO INCREASE FROM CURRENT US\$740 TO US\$7,300**
  - **US LABOUR PRODUCTIVITY INCREASED TEN FOLD BETWEEN 1830 AND 1955.**
  - **INCREASING CARBON PRODUCTIVITY TEN FOLD IN LESS THAN 50 YRS WILL BE ONE OF MANKIND'S GREATEST CHALLENGE.**
  - **HISTORY AND ECONOMICS GIVE CONFIDENCE CAN BE DONE**
  - **COSTS "MANAGABLE" AT ABOUT 0.6 TO 1.4 % OF GLOBAL GDP BY 2030.**
- *McKinsey Global Institute Report June 2008*
  - *Cost estimates comparable with Stern's Review*

### **PRIORITIES FOR STRENGTHENING ENVIRONMENT & S.D GOVERNANCE/環境と持続可能な開発のためのガバナンスを強化するための優先事項**

#### ***Paradigm change towards a low-carbon society/低炭素社会に向けたパラダイムの変化***

- **Robust cost and benefit studies at the national level, in particular new jobs; catalyzing sustained and resilient economic growth; improved health.**
- **Mobilize increased use of ICT for social and behavioral transformations**
- **Incentives for green technologies.**
- **Establish linkages with sustainability, resilience, adaptation, mitigation, security.**
- **Human resource development to meet the challenges and opportunities of today and for tomorrow.**

**PARADIGM CHANGE IMPERATIVE**



**GOVERNANCE**

**Systems & Systemic Transformations**

**SUSTAINABILITY**

**RESILIENCE**



**SURVIVAL**