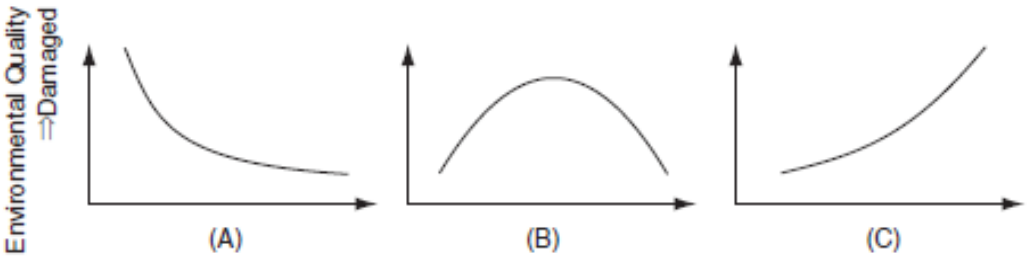
2009/10/07

Shunji MATSUOKA

Sustainable Development and International Development Cooperation, Memo 2
Concept of SD

1． Development and Environment

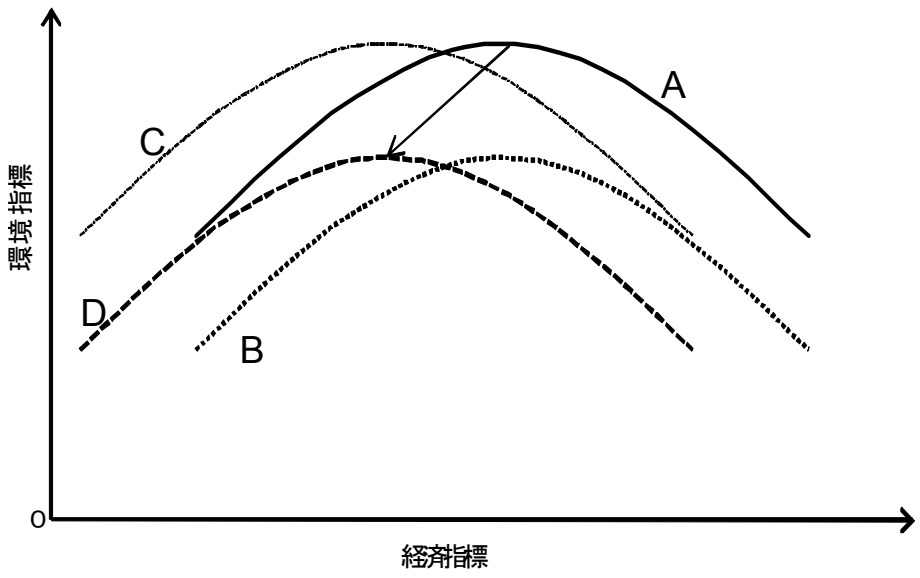
Figure 2 Economic Growth and Environmental Issues



(A) Poverty-related issues: access to safe drinking water and sanitation
(B) Industrial pollution-related issues: SOx,PM_{10}
(C) Consumption-related issues: municipal waster,CO_2

Sources: Bai and Imura [2000]

EKC: Environmental Kuznets Curve



２． What's SD?

UNCHE 1972: UN Conference on the Human Environment, (Stockholm Conference)

1) Improvement of Environment quality for present and future generation

2) Harmonization between environment and development

IUCN (International Union for Conservation Union) (1980), *World Conservation Strategy*

IUCN (1982), *World Charter for Nature*

1987 Brundtland Commission, WCED (the World Commission on Environment and Development), (1987), *Our Common Future*, Oxford UP

"Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

■The concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and

■The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (WCED 1987, p.43)

World's poor: Essential needs: food, clothing, shelter, and jobs

Environment's ability: carrying capacity, environmental capacity

UNCED 1992: UN Conference on Environment and Development (Environmental Summit or Rio Summit)

1) Sustainable Development, 2) Poverty alleviation in developing countries,

3) Technology and social institutions

2000 United Nations Millennium Summit, MDGs

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a Global Partnership for Development

2002 Johannesburg Summit: WSSD

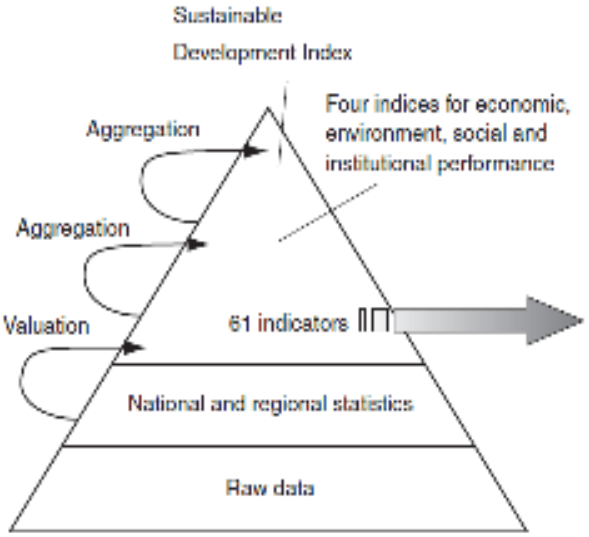
1) Rio+10, 2) Implementation of SD, 3) Promotion of partnership initiatives

３． Sustainability

3.1 Business: Triple Bottom Line: TBL, 3BL; economic, environmental, and societal sustainability (Elkington, J. 1994)

Three sustainability "pillars": Environment, Society and Economy, "institution" pillar

Figure 7 Aggregation between Environmental Indicators and Social Indicators (IISD-Dashhboad)



Social(30)	Environmenta (20)	Economic (34)	Institutional (8)
Poverty	CO2	GNP	SD strategy
Equity	Other GHG	ODFI	SD membership
Unemployment	CFCs	CAD	Internet
FM wages	Urban air	External debt	Telephones
Child weight	Crop land	ODA	R & Dexpenditure
Child mortality	Fertilizer	Materials	Disasters, human cost
Life expectancy	Pesticides	Energy use	Disasters, economic damage
Sanitation	Forest area	Renewable energy	SD indicator coverage
Safe water	Wood harvesting	Energy efficiency	
Health care	Desert & arid land	Municipal waste	
Child immunization	Aquifers	Hazardous waste	
Contraception	Phosphorus	Nuclear waste	
Primary school	Coastal population	Recycling	
Secondary school	Aqua culture	Car use	
Literacy	Wetlands		
Crowding	NOD		
Crime	Faecal coliform		
Population growth	Key ecosystem		
Urbanization	Mammals & birds		
	Protected area		

Source: IISD website

（２）Economics: VWS, WS, SS, VSS

VWS: Very Weak Sustainability

WS: Weak Sustainability

SS: Strong Sustainability

VSS: Very Strong Sustainability

（３）2000 Friibergh Workshop on Sustainability Science

Friibergh Workshop on Sustainability Science (23 scientists, Friibergh, Sweden, October 11-12, 2000)

Core 7 Questions of Sustainability Science

How can the dynamic interactions between nature and society --including lags and inertia--be better incorporated into emerging models and conceptualizations that integrate the Earth system, human development, and sustainability?

How are long-term trends in environment and development, including consumption and population, reshaping nature--society interactions in ways relevant to sustainability?

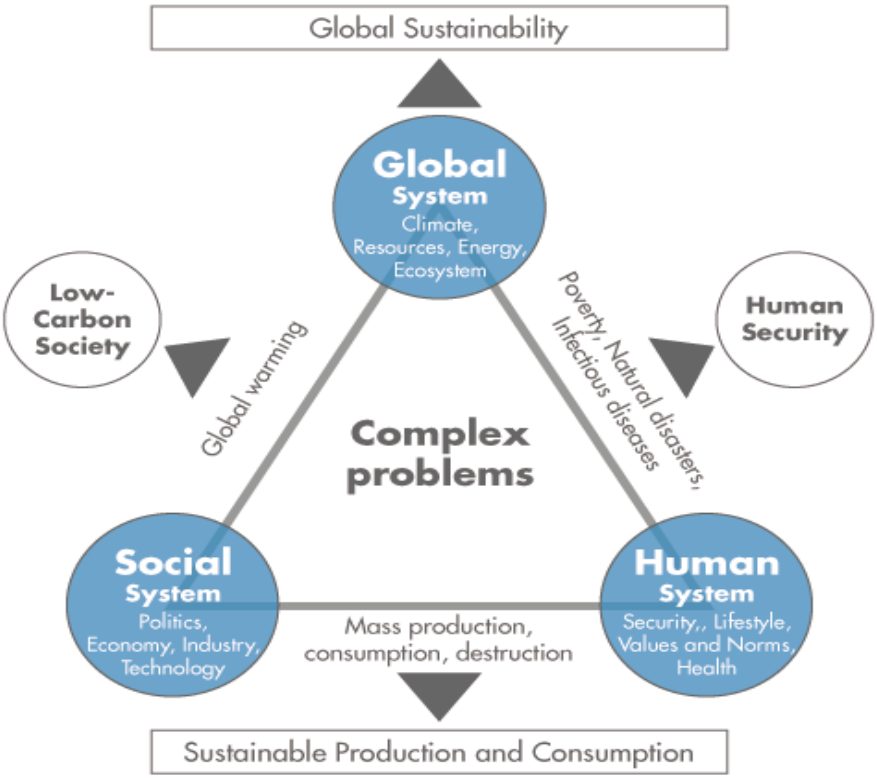
What determines the vulnerability or resilience of the nature-society system in particular kinds of places and for particular types of ecosystems and human livelihoods?

Can scientifically meaningful "limits" or "boundaries" be defined that would provide effective warning of conditions beyond which the nature-society systems incur a significantly increased risk of serious degradation?

What systems of incentive structures -- including markets, rules, norms, and scientific information -- can most effectively improve social capacity to guide interactions between nature and society toward more sustainable trajectories?

How can today's operational systems for monitoring and reporting on environmental and social conditions be integrated or extended to provide more useful guidance for efforts to navigate a transition toward sustainability?

How can today's relatively independent activities of research planning, monitoring, assessment, and decision support be better integrated into systems for adaptive management and societal learning?



IR3S

http://www.ir3s.u-tokyo.ac.jp/about_sus

４．References

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