Driving Factors of Water Supply

Ecosystem management

Land use change

Climate change

Water recycle

Long distance Water transfer

Purification of sea water

Rain water harvest

Artificial rainfall

Dam construction and low leakage

Driving Factors of Water demand

Ecosystem use

Agricultural production

Industrial use

Domestic use

Water right

Virtual water

Users' association **&New Commons**

Water Demand

Supply

Water

Regulation factors

Water trade

Water policy

Social and economic management

Technology improvement

National Report (UNU Press) (2012)

Satoyama and Resilience

Satoyama-Satoumi Ecosystems and Human Well-Being

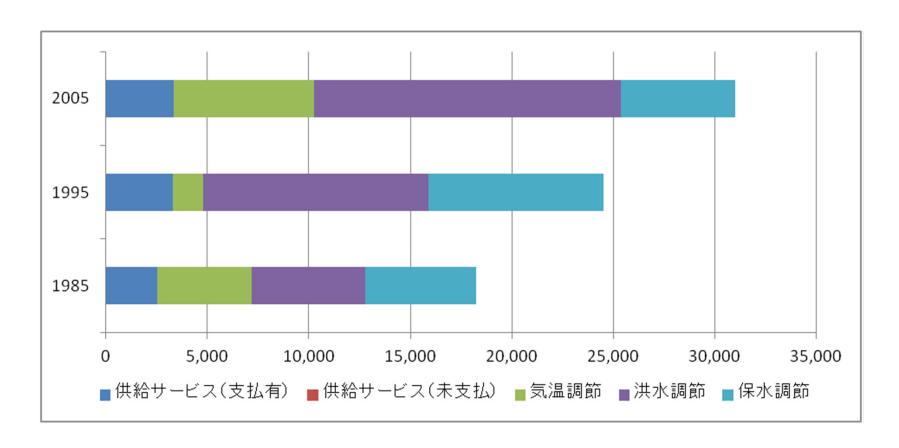
Socio-Ecological Production Landscapes of Japan



Edited by Anantha Kumar Duraiappah Koji Nakamura Kazuhiko Takeuchi Masataka Watanabe Maiko Nishi

- •Satoyama: landscapes comprise a mosaic of different ecosystem types including secondary forests, agricultural lands, irrigation ponds, along with human settlements.
- •40% of Japan's total land.
- Production of food, fuel wood, timber and water
- Management of water use in paddy field is bases for traditional commons.
- Degradation of Satoyama due to globalization, trade, import of food and timber from abroad resulted decay in traditional commons.
- •New commons based on multi-user participation in larger scale of catchment from forest to coastal seas are proposed for better water management
- •Regulating services have much higher economic values than provisional services .
- •Stewardship payment to regulating services increase resilience to climate change and as a result increase in productivity of paddy field.

Economical values of ecosystem services provided by water (\$10milion/year)



Production capital is included but effect of supply chain is not included.