

New Designs for Modeling Sustainable Capacity Development: Concepts, Methods and Contexts

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Korea

Oct 8-13, 2006
23rd FIG Congress, Munich

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Backgrounds

- Research on CD is extensive, but most of them remain abstract level and hardly apply to practical uses of specific developmental or sector objectives (e.g. human well-being)
- What does CD's concept support SD ?
- What does Sustainable CD (SCD) mean ?
- Could existing CD's model and framework extended to SCD
- Could SCD meet international concerns & demands ?

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I. Int'l Perspectives of Capacity Development (CD)

UN Definition of Capacity Development (CD)

What is Capacity ?

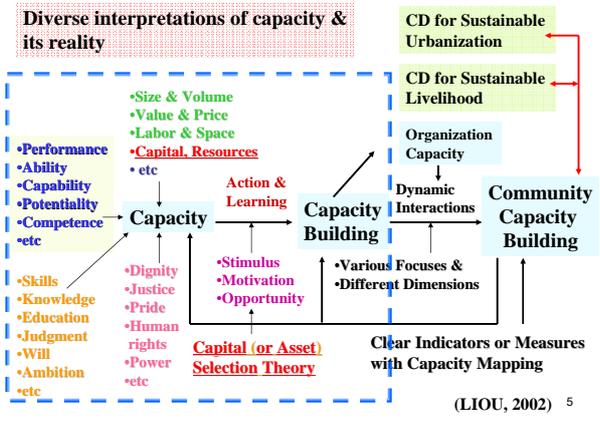
- Ability of individuals, institutions, and societies to perform functions, solve problems, and set and achieve objectives in a sustainable manner (UNDP, 2006)

Capacity Development (CD)

- CD is the process through which the abilities to do so are obtained, strengthened, adapted and maintained over time (UNDP, 2006)
- Capacity Assessment is an analysis of the state of current capacities against desired future capacities (UNDP, 2006)

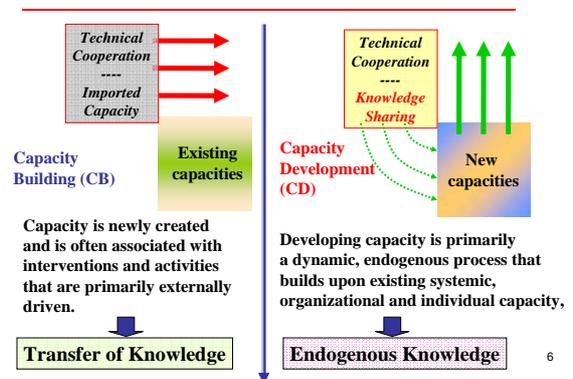
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Diverse interpretations of capacity & its reality

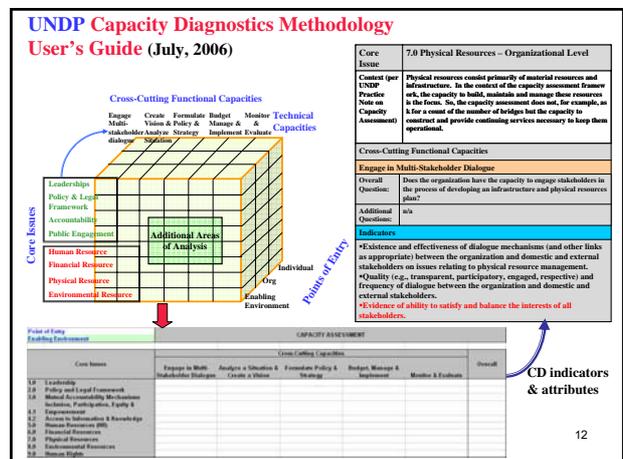
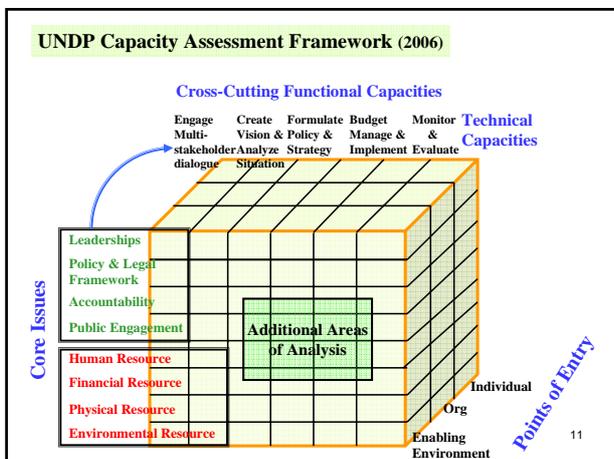
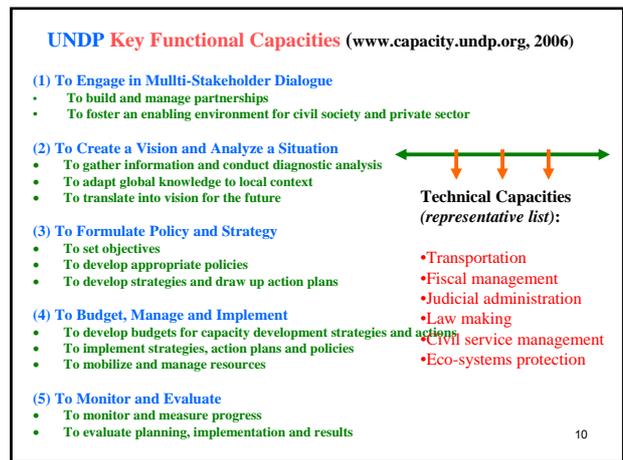
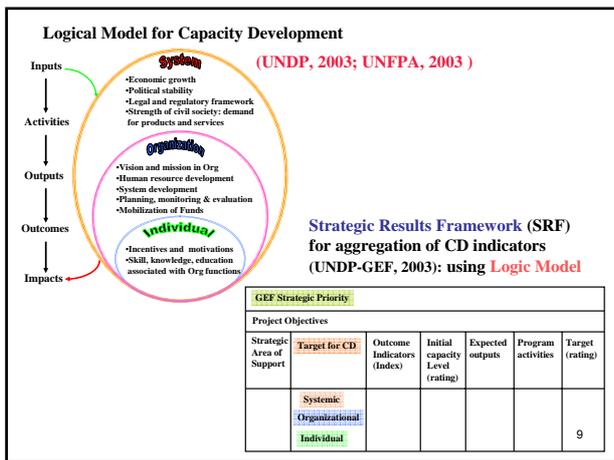
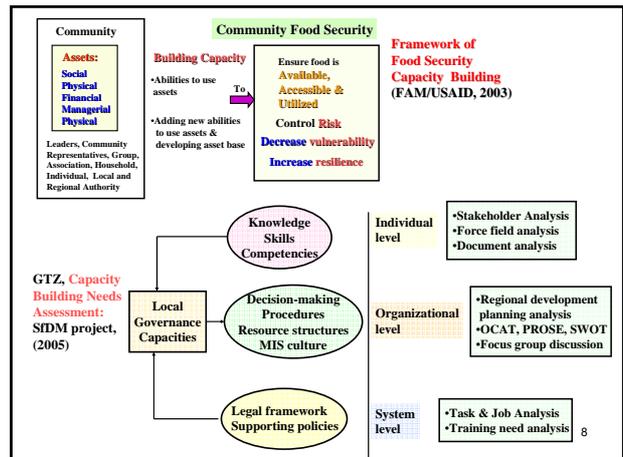
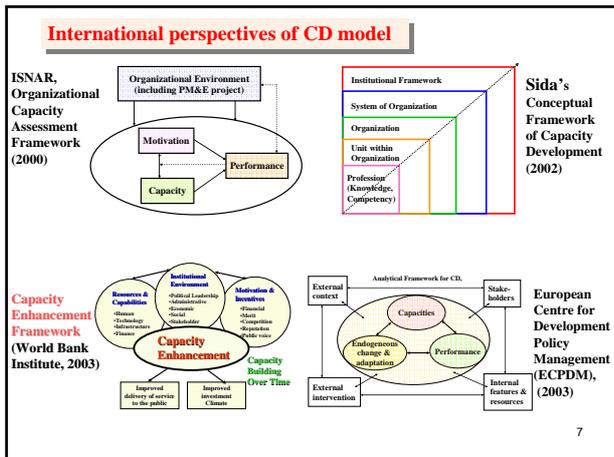


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Characteristics of CB and CD (UNDP, 2003)



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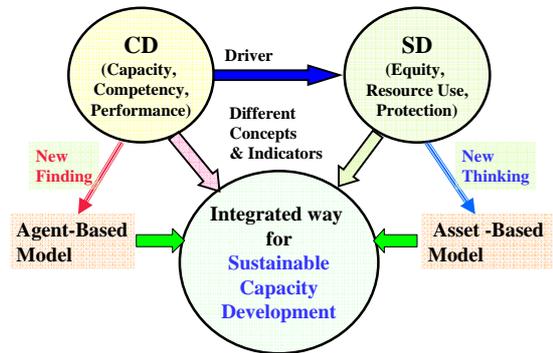


CD's Roles and Challenges in SD

- CD is considered as a driver for SD, but no attempts to define their mechanisms
- Different concept and indicators between CD and SD
- Monitoring and evaluation of CD is based on logic model (very static) that hardly simulate interactions of capacity among three level
- How could CD be measured in space over time ?

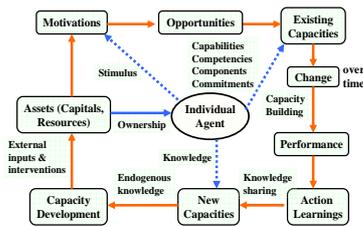
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II. New Design for CD and SD



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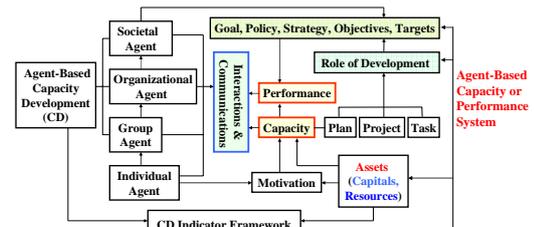
Capacity Development Process



- Agent is used to describe different natures of people, things, associations, organizations and societies that have goal-oriented properties
- CD considered as endogenous course of actions & long-term process of knowledge learning based on existing capacities and assets (capitals, resources)
- Agent understands discourse of his capacity and how to cope with CD changes over time

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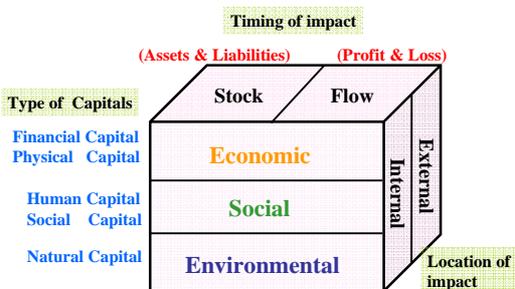
Agent-Based Model for Capacity Development



- Agent capacity that links goals and behaviors (goal-oriented entity)
- Dynamic simulation of capacity's (e.g. knowledge) transfer among agents
- Effective representation of diverse types of capacities, motivations, attributes and properties of agents
- Full supports for existing CD models through agent's **Interaction and Communication Method**

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Sustainability Accounting in Triple Bottom Line

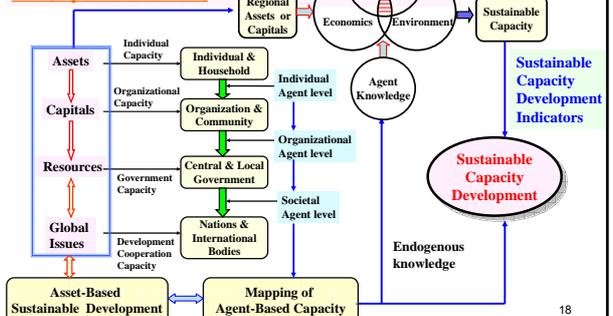


Sustainability Integrated Guideline for Management (SIGMA) Project, (BSI, Forum for the Future, 2003, UK)

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Framework of Sustainable Capacity Development

(Defined as sustainable capacity for agent's ability to perform their functions, ensure better quality of life and, achieve CD through sustainable use of assets, capitals and resources)



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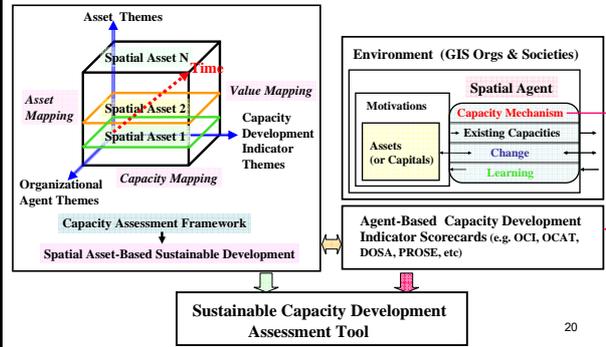
III. Spatial Asset Mapping for Measuring SCD

- An asset becomes capital when it is invested. Capitals are considered to be stocks of assets.
- Asset Mapping is a process to identify the strengths of individual, community, and society, and records these strengths in a **Asset Map Database as a tool for Community Capacity Building**
- Capacity = Asset (or Capital)+ Agent (Use, Business, Application, etc) based on **Asset (or Capital) Selection Theory with Simulation of Capital Flow**
- Spatial Asset Mapping is composed of Asset Mapping, Value Mapping and Capacity Mapping that provide full support for CD and SCD

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Measuring Sustainable Capacity Development

4D Spatial Asset Mapping



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Comparison between UN model and Research model

	UN Model	Research Model
Definitional Capacity Measures	Ability of Individual, Organization & Society	Asset (Capital)-Based with Selection Theory
CD Methodology	Logical Model	Agent-Based Model
CD Indicators	SMART (Specific, Measurable, Attainable, Relevant, Timebound)	Capacity of Assets and Agent's Ability
Capacity Assessment	Points of Entry, Core Issues Functional Capacity	Asset, Value, Capacity (Mapping)
Applicability	Static & Limited	Dynamic & Practical
Support for SD	Unidentified	Full support
Connection with GIS	No Linkage	Spatial Agent
Support for SCD	No Linkage	4D Spatial Asset Mapping with ABM ²¹

Contributions and Applications

- **New thinking of CD: Agent-Based Model**
- **New creations of SCD**
- **An integrated measuring tool for SCD: 4D spatial asset mapping**
- **Sustainable Livelihood: Poverty reduction. Asset development (UNDP, World Bank, etc)**
- **Sustainable Community Development & Community Capacity Building (UNHABITAT, UNEP, etc)**
- **Contribution to Int'l CD Research Groups: UNEP, UNDP, UNHABITAT, (DTIE), UNDP-GEF, World Bank, FAO, UNEP-UNCTAD (CBTF)**
- **New findings for Asset-Based Spatial Economy**

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More talks and interests with tea and coffee breaks



Thank you for your participation and attentions

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