Strategic Partnerships with Multilingual Functionality
for Globalization and Localization

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Abstract

Rapid expansion of the Internet infrastructure and its user base has heightened awareness of global inequalities worldwide and institutional obstacles to the diffusion of knowledge. The convergence of enhanced globalization, world-wide connectivity, and knowledge-networking is creating new opportunities for reducing barriers toward sustainability This paper highlights a three-pronged strategy to help shape new parameters for sustainable environment and development. Implemented via the Global System for Sustainable Development (please see **http://gssd.mit.edu**), this strategy is anchored in (a) knowledge meta-networking (b) strategic partnering and (c) multilingual e-functionality. The full version of this paper can be found on the World-Wide Web at http://web.mit.edu/polisci/nchoucri/ist99.html.

1. Introduction

This paper highlights a three-pronged strategy to help shape new parameters for sustainable environment and development based on large-scale knowledge-networking, international strategic partnerships, and implementation of multilingual search functionalities. Knowledge (meta)networks refer to networking among networks of organized systems of discrete actors endowed with knowledge producing capacity combined through common organizing principles; the actors retain their autonomy; the combination increases the value of capacities to the actors; and the knowledge networks expand the overall knowledge base. Access to interactive knowledge networking enables stakeholder communities to express their preferences and make explicit inputs into decision. So too, knowledge meta-networking generates new possibilities for empowerment of individuals as well as unprecedented modes of interaction across multiple voices that have previously not been heard (We introduce the term "CyberPartnership" in this context).

2. GSSD as a Global Application

The Global System for Sustainable Development (GSSD) – an initiative devoted to understanding, and responding to, the challenges of sustainable development—is characterized by distributed knowledge management and sharing, evolving multilingual Internet uses, and the internationalization of collaborative site locations. The system's architecture rests on principles of diversity, complexity, globalization and localization. Adopting a meta-networking strategy, GSSD provides networking facilities across stakeholder communities to help identify innovative

approaches, enabling technologies, as well as new institutional, financial and regulatory mechanisms for meeting sustainability challenges that confront everyone, everywhere.

New expansion of GSSD functionality includes a multiple language interface and workflow, which currently includes Arabic, Chinese, English, French and Spanish. As an a knowledge-based decision-support tool, the GSSD seeks to: (1) Render evolving knowledge relevant to sustainability-- in all its forms -- more accessible to agents of change for public policy, business strategy, and creative decision-making; (2) Enable access to cutting-edge analysis, innovative technologies, and multidisciplinary knowledge by providing tools to identify options available in technologies, policies, and strategies; and (3) Enhance capacities for knowledge access and informed decision-making by strengthening both globalization and localization venues though multilingual e-functionality. GSSD offers a platform in which the knowledge-holdings in any supported language can be cross-indexed and then made available to users without a heavy translation cost.

Conceptual Framework - Slices
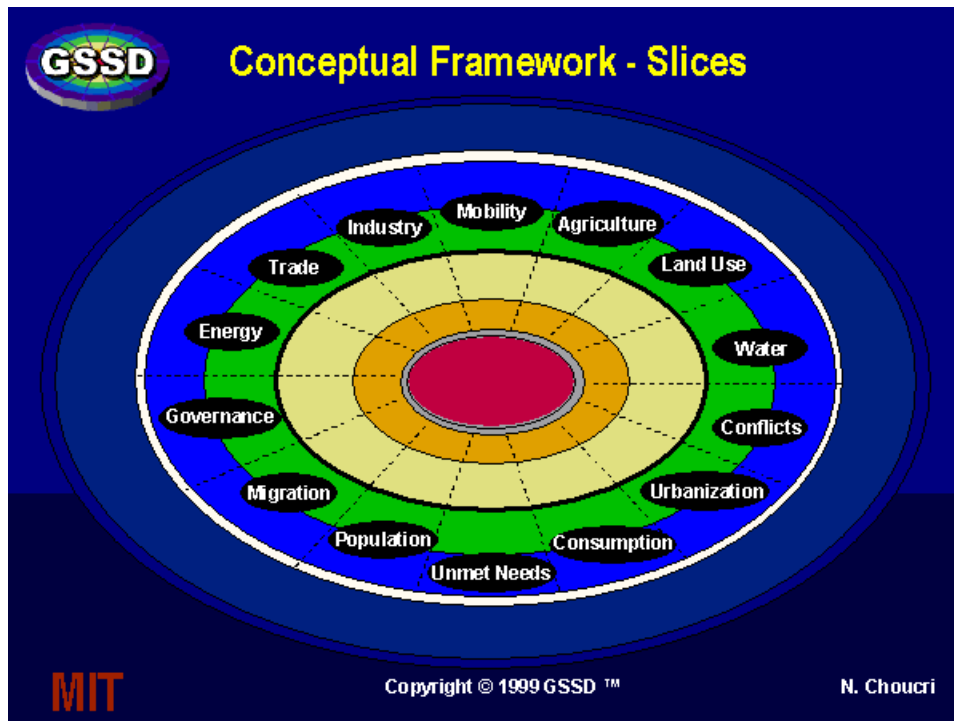
The GSSD knowledge-base consists of over 250 institutional Internet holdings, representing close to 3000 indexed and cross-referenced Internet sites. It is an evolving knowledge base that covers a comprehensive range of sustainability-related resources. Multilingual search functionality enhances access to, and diffusion, of the knowledge content. The conceptual framework is shown below (knowledge content: ring) and (Subject content: slice).
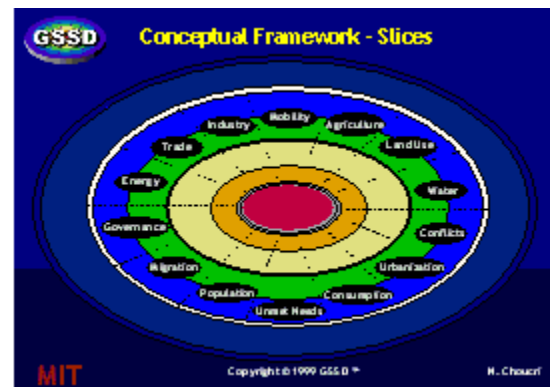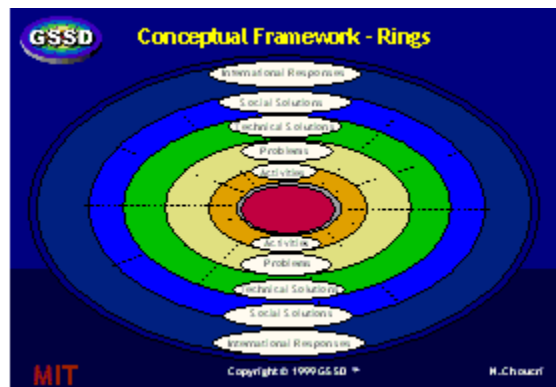
3. Multilingual Search Functionality

Such functionality enables: (1) *Improved access to information,* reducing difficulties facing non-English speakers by allowing them to find specific information on the Internet through our use of abstracts. Each site included in the GSSD knowledge base is abstracted, and that abstract is, in turn, translated into each of GSSD's supported languages. These are then available for e-searches through the system's five search modes. (2) *Strategic use of resources,* given that GSSD's abstracts allow the user to know in advance of translation where the most fruitful information is

housed thus improving access significantly. (3) *Expansion of knowledge base,* since the absence of a platform for non-English content has hurt the ability of many groups to make their own data available widely and reduced the amount of local knowledge found on the WWW.

4. The Power of Strategic Partnering

Strategic partnering makes dual outcomes possible: globalization of knowledge via greater diffusion, and localization of knowledge via representation of distinct local technical and linguistic features. In practice, partnering is undertaken through several modes: (a) mirror siting the GSSD system, (b) distributed knowledge inputs and content provision, and (c) translation base to enable multilingual functionality. Current CyberPartners are located in China (ACCA21-Ministry of Science and Technology), Middle East (American University in Lebanon and ArabDev, Cairo), France (Ecole des Mines, St. Etienne), and Latin America (tentative sites). The institutional needs of the strategic partners can be addressed effectively through only the most modest deployments of resources, and can thus yield significant gains in Internet-based empowerment.