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World - Grid Type, Continuously Under-development - System Dynamics for Sustainable Development of the World Society

Abstract

The main goal of United Nation is realization of sustainable development world society vision. Such society need to integrate social development with economic development and environmental protection. For this end it is necessary to enable sustained economic growth, internalizing externalities and decoupling the range of economic growth from the range of deficit natural resources depletion growth and degradation of environment.

*In order to achieve above UN Goal we have to build WORLD-WIDE,
COMMONLY ACCESSIBLE, SUSTAINABLE DEVELOPMENT-INFORMATION
SYSTEM*

for:

- *comprehensive monitoring,*
- *far-sighted forecasting, and*
- *measurable evaluation,*

of policy, economy, work, and other changes effects in life-conditions of human-beings and nature in general. This system ought to be built on the base of System Dynamics.

We propose research program, which allows to describe conditions of creation such big, grid type, multi stage builded, information system.

*This Summit (WSIS - LM) must be a summit of solutions. It must **push forward the outcome of the World Summit** held two months ago at the United Nations in New York. It must lead to information and communications technologies being used in new ways, which will bring **new benefits to all social classes.** (...) an "information society"? We mean one in which human capacity is expanded, built up, nourished and*

liberated, by giving people access to the tools and technologies they need (...) **The hurdle here is more political than financial.**

STATEMENT BY H. E.
MR. KOFI ANNAN
THE SECRETARY-
GENERAL OF THE
UNITED NATIONS
WSIS, Tunis, 16
November 2005

*(...) In the old world of finite natural resources-like oil, coal or iron ore-one country's exploitation of those resources meant there were less available for other countries. But in the **new world of infinite information resources**, one country's creation of wealth based on information can be shared by all. The value of information increases, the more it is shared.(...)"*

STATEMENT BY MR.
YOSHIO UTSUMI
SECRETARY-GENERAL
OF THE
INTERNATIONAL
TELECOMMUNICATION
UNION
WSIS, Tunis, 16
November 2005

"(...) information is the key to (sustainability - LM) transformation. (...) It means relevant, compelling, select, powerful, timely, accurate information flowing in new ways to new recipients, carrying new concept, suggesting new rules and goals (rules and goals that are themselves information). (...) When its information flows are changed, any system will behave differently".

(See: Tools for Transition to Sustainability, in: Meadows and alt,

Limits to Growth, the 30 -Years
Update,

1. In what way to avoid the global catastrophe – environmental, world war (for access to deficit resources and “clean” environment, Lester R. Brown, Eco-economy, Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble), and/or clash of civilizations?
2. To avoid the global catastrophe we ought to describe the essence of global crisis in the new way (Michnowski L., <http://www.psl.org.pl/kte/artlm.htm>).
3. Nowadays, we (humankind) live in quite new environmental situation: in the State of Change (Flux) and Risk (SCR), as a result of big scientific= technological and organizational progress .
4. In SCR the main cause of global ecosystem degradation is rapidly pacing moral degradation (out-datedness) of existing forms of life - not fitted to new rapidly emergence life conditions.
5. Therefore the global crisis is the result of (currently large inert, chaotic) world society lack of skill for farsightedness, flexibility, intellectual and material reserves creation.
6. To achieve such skill we have to use System Dynamics in such a way that allow the access to knowledge about future effects of human activity and other changes in environment.
7. We should also develop flexible (computer) automation in proper and commonly accessible way.
8. Also - change crisis generating, egoistic economy into sustainable development-economy, based on:
 - complex accounting of benefits and cost including natural and social (human) components (OECD),
 - common interest value system (G. H. Brundtland, Our Common Future).
9. It would allow to achieve the main UN Goals:
 - Universal Declaration of Human Rights (2005 World Summit Outcome, p. 120);
 - sustainable development of world society (“three pillars” – long-termly combining economic development with social development and environmental protection, 2005 World Summit Outcome, p. 48);
 - change shortsighted economic growth into sustained economic growth (2005 World Summit Outcome, p. 11);
 - change Pernicious Globalization into Inclusive Globalization - fair globalization (that allow full and productive employment and decent work for all – CIA Global Trends 2015, 2020, UN Millennium Report, 2005 World Summit Outcome, p 47);
 - elimination of “digital divide” (WSIS Tunis Outcome);

- other MDG (2005 World Summit Outcome, p. 17);
 - elimination socio-economic bases of terrorism and/or world war for access to deficit resources.
10. For change currently crisis-generating egoistic economy into sustainable development-economy - we ought to build information possibility for internalizing externalities (not only natural, but also human – OECD, Club of Rome), and base policy and economy on common interest principle.
 11. It would allow to eliminate unemployment by stimulating popular developmental creative activity on wisdom (ecohumanistic intellectual evolution) principle.
 12. Ecohumanism is a partnership-based co-operation for the common good of all people (rich and poor, from countries highly developed and behind in development), their descendants, and natural environment - commonly supported by science and high technology.
 13. Creation of information bases of sustainable development-policy and sustainable development-economy is especially necessary for:
 - DECOUPLING (the range of economic growth from the range of deficit natural resources depletion growth and degradation of environment);
 - COUPLING (the economic growth with social development (including popular quality of life growth);
 - substitute intellectual evolution (pre-selection in virtual reality) mechanisms for social-Darwinism ones.
 14. Precondition of such change in policy and economy means the big international task of building (in multi stage way, based on G. Nadler method, continuously under development) a commonly accessible, world-wide - net (and grid) type - system of:
 - comprehensive (complex) monitoring,
 - far-sighted forecasting, and
 - measurable evaluation,
 of effects of policy, economy, work and other changes in the life conditions of human-beings and nature in general. This system ought to be build on System Dynamics principle.
 15. This task ought to be preceded by international research, which will describe conditions for, and facilitate creation of the (above mentioned) **WORLD-WIDE SUSTAINABLE DEVELOPMENT-INFORMATION SYSTEM**. It allows to get answer in what way to start building of such follow-up of Tunis outcome.
 16. Effects of above research would be presented during at least two international conferences (for example organized by SDS)

Conference I: Information efficiency and warning forecasting as preconditions of sustainable development-policy and sustainable development-economy (2007).

Main tasks:

1. How to get politicians and societies access to knowledge about complex (and future) effects of current policy?
2. How to combine existing forecasting systems and projects (i.a. Meadows's-Forrester, T. Utsumi, GEOSS) in World-wide SD-Information System.
3. How to get access to data and knowledge that are necessary for warning forecasting?
4. How to transform national and regional statistical offices (e.g. EUROSTAT) into offices for statistic and warning forecasting?

Conference II: *Computer simulation methods for sustainable development-economy (2009)*.

Main tasks:

1. How to build information bases of sustainable development-economy?
2. How to make possible complex accounting of benefits and cost of socio-economic activity (including natural and social - human components)?
3. How to make possible dividing effects of social process of work proportionally to ecosocially usefulness of individual and/or collective work?

17. The first goal of above initiative ought to be achieving 2005 World Summit Outcome (p. 56 f): *to establish of a **worldwide early warning system**, including WSIS Tunis Outcome (Agenda for the Information Society, p. 91 c): **working expeditiously towards the establishment of standards-based monitoring and worldwide early-warning systems linked to national and regional networks and facilitating emergency disaster response all over the world.***

18. We ought to treat Meadows's – Forrester (Limits to Growth, Beyond the Limits, ..., Limits to Growth, The 30-Year Update) warning forecasting, as well as Global Earth Observation System of Systems, as elements of global early warning system. .

Justification of above conclusions, inter alia, see:

- *How to Create Sustainable Development Global Information Society?*, Poster for "Global Dialogue 2004" - <http://www.psl.org.pl/kte/postergd.pdf> ;
- *How to avoid the global catastrophe? The information basis for sustainable development policy and economy*, in proceedings of the XX International Conference System Dynamics Society: Collegiality a harmony that achieves consensus on the issues, July 25 - 29, 2004, Oxford, UK - <http://www.psl.org.pl/kte/howtoavoid.pdf> ;
- *World Warning Forecasting for Sustainable Development* - POSTER presentation on the XX International Conference System Dynamics Society, July 28 - August 1, 2002, Palermo, ITALY - <http://www.psl.org.pl/kte/posterp.htm> ;

- *World Integrated Warning Forecasting System Based on System Dynamics Principles as a Basic Factor in Sustainable Development* , in proceedings of the XX International Conference System Dynamics Society: Organizational Change Dynamics - Understanding Systems, Managing Transformation, July 28 - August 1, 2002, Palermo, ITALY - <http://www.psl.org.pl/kte/740Michnowski.pdf> .