

Marek Haliniak
National School of Public Administration,
Warsaw, Poland
Lesław Michnowski
Member of the Committee for Future Studies "Poland 2000 Plus",
Polish Academy of Sciences.

Sustainable Development Policymaking – Challenges and Opportunities

1. Introduction

The present crisis is making it clear how ineffective the methods applied so far in achieving world society's sustainable development (SD) have really been, not least in their efforts to integrate economic and social development plus environmental protection, as well as to achieve an ecosocially desirable transformation of models of consumption and production¹.

For better SD policymaking we propose to introduce, in addition to the above "three pillars", a more exact definition of the notion of sustainable development. Sustainable development is such a kind of development of world/local society that is characterized by a lack of ecosocially costly crises and/or collapses, and a necessity to rebuild its form of life² on the ruins of the old forms of life³ (Fig. 1⁴).

¹ The Johannesburg Declaration on Sustainable Development, 4 September 2002, pp. 5, 11. Also European Union have based EU Sustainable Development Strategy (EU SDS) renewed in 2006 year on above "three pillars" principle and stated: *The EU SDS forms the overall framework within which the Lisbon Strategy, with its renewed focus on growth and jobs, provides the motor of a more dynamic economy*, See: EU SDS 2006: <http://register.consilium.europa.eu/pdf/en/06/st10/st10117.en06.pdf> .

² Forms of life (life-forms, forms of living): social relations, axiology (dominant values), economics, technology, diet, medicine, infrastructure, etc.

³ It is the task formulated in: Capra, Fritjof, (1982), *The Turning Point: Science, Society, and the Rising Culture*, Simon and Schuster..

⁴ It is impossible to integrate the said three pillars of development without ICT for dynamic monitoring and computer simulation projecting the new - SD supporting - forms of life. See *inter alia*: Forrester, Jay. W.:

- (1995), *Counterintuitive Behavior of Social Systems*:

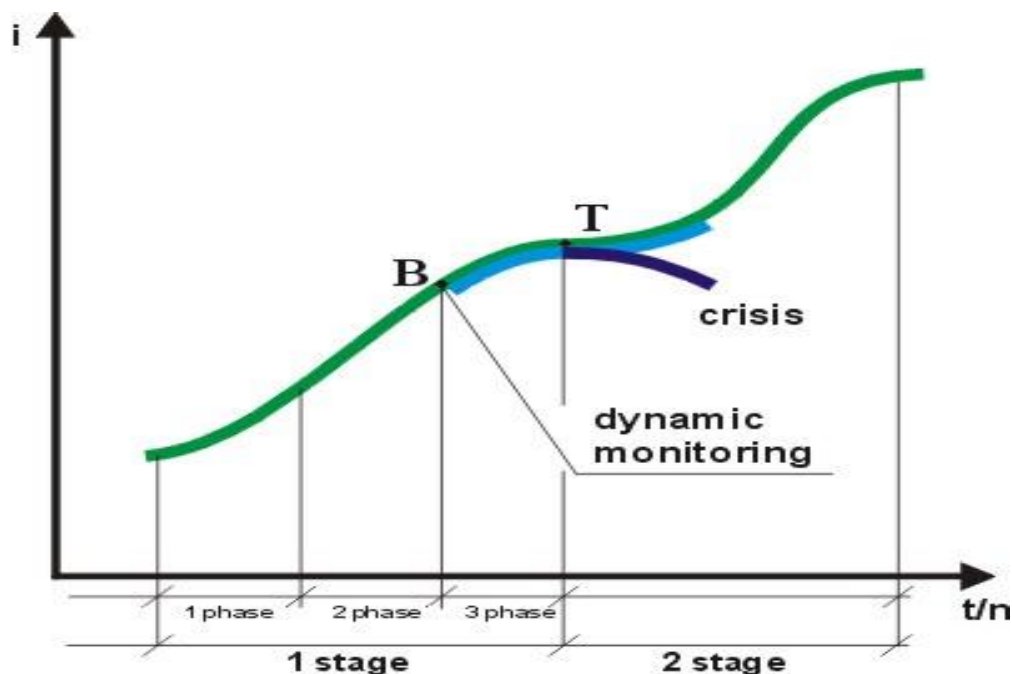
<http://sysdyn.clexchange.org/sdep/Roadmaps/RM1/D-4468-2.pdf> , and.

- (1998) *Designing the Future*, D-4726:

<http://sysdyn.clexchange.org/sdep/papers/Designif.pdf> .

Dynamic monitoring predicts - by means of computer simulation (System Dynamics – Jay W. Forrester) – the quality and future of monitored society life-process, on condition that no intervention in it will be undertaken.

Dynamic monitoring delivers warning forecasting, i.e. long-term early-warning information about negative consequences of previous socio-economic activity and environment change.



Denotes: i – a level of societal quality as well as its information level
(*sensu* N. Wiener and L. Michnowski⁵)

Fig. 1 Sustainable Development

Notwithstanding all the declarations putting the three pillars of sustainable development on an equal footing, the last decade has witnessed continuing *de facto* recognition of the primacy of economic growth founded upon the competitiveness of

⁵ Wiener, Norbert, (1961), *Cybernetyka i społeczeństwo* (Cybernetics and Society), Warszawa, and (1971), *Cybernetyka, czyli sterowanie i komunikacja w zwierze i maszynie* (Cybernetics or control and communication in the animal and the machine), PWN, Warszawa.

Information is conceptualised in three ways:

- 1) in contrast with entropy, as a conceptual measure of quality, including the organization of society, among other things;
- 2) as real information contained in the structure of society-environment system, i.e. every factor that contributes to life or to that system's more sustainable and efficient functioning;
- 3) as reflection information, i.e. information that adequately reflects changed static and dynamic of above system (past and future - data, knowledge, prognoses, etc.)

For more on this *inter alia* see: Michnowski, Lesław (2006), *Spółeczeństwo przyszłości a trwały rozwój. Cybernetyczne spojrzenie na przyszłość świata (VISION OF A SUSTAINABLE DEVELOPMENT SOCIETY – THE FUTURE OF THE WORLD FROM THE CYBERNETICIST PERSPECTIVE)*, Komitet Prognoz "Polska 2000 Plus" przy Prezydium Polskiej Akademii Nauk (The Committee for Future Studies "Poland 2000 Plus", Polish Academy of Sciences), Warszawa, pp. 254, and (2007), *Eco-Humanism and Popular System Dynamics as Preconditions for Sustainable Development, Solidarity, Sustainability, and Non-Violence (SSNV) Research Newsletter*, Vol. 3, No. 11, November 2007:

<http://pelicanweb.org/solisustv03n11michnowski.htm> ..

enterprises on the free market, with a role for the state that is as limited as possible. Only now is there a recognition of the true worth of the public sector in ensuring balance between the above three SD pillars – to the extent that administration is now in fact tasked with a much greater involvement – in steering development than was the case previously⁶.

Among the explanations for the ineffectiveness of the previous approach is a low level of information-based awareness on the part of politicians in particular, and public administration in general. There is thus an urgent need to raise the quality of the transfer of both systemic/cybernetic and adequate philosophical knowledge, most especially in line with General Information Theory (after N. Wiener) and systems analysis⁷.

Let us recall some important properties of information:

“information is the key to (sustainability) transformation. When information flows are changed, any system will behave differently” (Meadows 2004).

“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” (Utsumi 2005)⁸.

“Society becomes frustrated as repeated attacks on deficiencies in social systems lead only to worse symptoms. (...) Because dynamic behavior of social systems is not understood, government programs often cause exactly the reverse of desired results. The field of system dynamics (computer simulations) now can explain how such contrary results happen. (...) Orderly processes in creating human judgment and intuition lead people to wrong decisions when faced with complex and highly interacting systems.” (Forrester 1995).

⁶ After the G20 London Summit, Gordon Brown (the host of this Summit) said: "The old Washington consensus is over," see: Volkery, Carsten, (2009). London G-20 Summit, Industrial Nations Celebrate-Trillion Dollar Compromise *Spiegel on Line International*, 04/03/2009:

<http://www.spiegel.de/international/world/0,1518,617185,00.html>

It means, that instead of the “one invisible hand” of the neoliberal free market, we need for post-crisis recovery and sustainable development “two hands” - also one of the wise governance aided by computer-simulation methods. (Forrester 1995).

⁷ Among the studies drawing attention to the need for shapers of sustainable development policy to apply the methodology of systems analysis, as well as a conceptual model, is: Haliniak, Marek, *Filozofia polityki ekologicznej (Philosophy of Sustainable Development Policy)*, EPISTEME 80(2008), Wszechnica Mazurska, Olecko 2008.. See, *inter alia*: Sage, Andrew, P. (1977), *Methodology for large-scale systems*, NY, p. 8. In accordance with A.P. Sage, for proper policymaking we need systemic/cybernetic and adequate philosophical knowledge in the form of the conceptual model of reality, as well as access to information that reflects statics and dynamics of reality and computer simulation methods for converting this information into knowledge about the complex consequences of created policy. We also need a proper valuing system for measurement valuation of policy projects and effects. See Fig. 2.

⁸ See: Utsumi, Yoshio (2005). *STATEMENT BY MR. YOSHIO UTSUMI SECRETARYGENERAL OF THE INTERNATIONAL TELECOMMUNICATION UNION, SECOND PHASE OF THE WSIS, 16-18 NOVEMBER 2005, TUNIS.*

Therefore we ought to base Sustainable Development Policymaking on Sage's model, as presented below (Fig. 2)

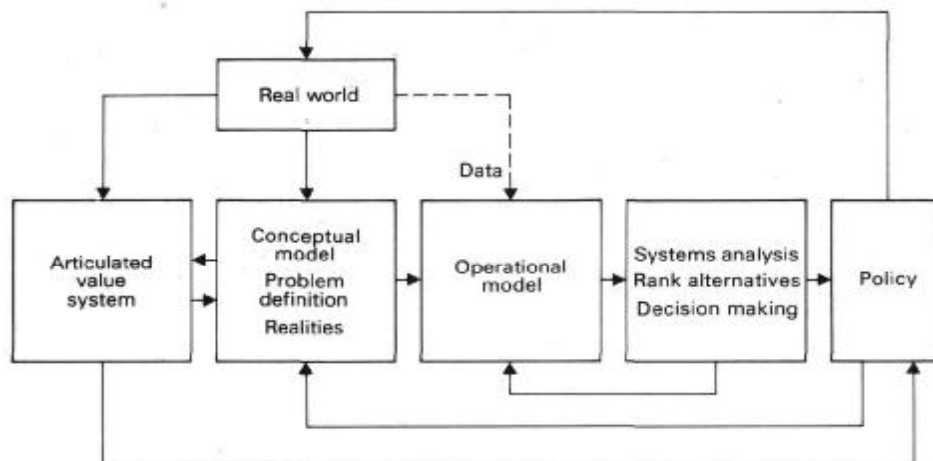


Figure 1.5-2 Systems engineering-based policy formulation process.

Source: A. P. Sage, Methodology for large scale systems, New York 1977

Fig. 2

Sustainable development policy ought to be founded upon a capacity to anticipate upcoming threats – to the extent that these may actually be averted by countermeasures that certainly offer protection, but also actually serve to stimulate development in an alternative direction⁹. To achieve this, skill in the shaping of long-range sustainable development strategies will need to be developed¹⁰. In turn,

⁹ See, *inter alia* Michnowski, Lesław (2004), *HOW TO AVOID THE GLOBAL CATASTROPHE? The Information Basis for Sustainable Development Policy and Economy*, in materials from the Conference on: *Collegiality - a harmony that achieves consensus on the issues*, as organized in Oxford, UK, by the System Dynamics Society, July 25–29 2004: <http://www.psl.org.pl/kte/howtoavoid.pdf>

¹⁰ The need to design a vision for the society of the future in an effort to avert global crisis was *inter alia* noted in:

Meadows, Donella H., Meadows, Dennis L., Randers, Jorgen, (1993), *Beyond the Limits, Global Collapse or a Sustainable Future*, Earthscan, London;

Meadows, Donella H., Randers, Jorgen, Meadows, Dennis L., (2004), *Limits to Growth, The 30-Year Update*, Chelsea Green Publishing Company, Vermont.

For a description of a vision-supported method of shaping a long-term sustainable development strategy, see:

Michnowski, Lesław, 2003, ANALIZA ZMIENNOŚCI W KSZTALTOWANIU STRATEGII TRWAŁEGO ROZWOJU (Change analysis in shaping sustainable development strategy), [in:] *Filozoficzne i społeczne uwarunkowania zrównowoczonego rozwoju*, (ed. Artur Pawłowski), *Monografie Komitetu Inżynierii Środowiska Polskiej Akademii Nauk*, (A monograph of the Environmental Engineering Committee of the Polish Academy of Sciences).vol. 16, Lublin:

<http://www.psl.org.pl/kte/analizazmiennosci.pdf> .

See also: Nadler, Gerald. 1967, *Work Systems Design: the IDEALS concept*, Illinois.

stimulated development should both favour and be favoured by increased informational efficiency¹¹, as well as efficiency in innovation, plus a higher level of proneness to embrace that innovation, among communities at both local and global level.

Systems analysis¹² would see the current financial and economic crisis as but one element in a wider crisis of world civilisation as a whole. The latter crisis would in turn be thought to reflect:

- 1 – the short-sightedness and egoism of policymakers,
- 2 – a shortfall in knowledge when it comes to the highly complex (including temporally and spatially long-range) effects of our utilisation, management and other modification of the environment¹³,

In line with the above is the backcasting method propagated *i.a.* in the EU. See: Michnowski L., (2008). *Odnowiona Strategia Trwałego Rozwoju Unii Europejskiej - warunek powstrzymania degradacji polskiego społeczeństwa (Renewed EU Sustainable Development Strategy: what does it mean for Poland?)*. „*Problemy ekorozwoju - Problems of sustainable development*” vol. 3, No 2: – <http://ekorozwoj.pol.lublin.pl/no6/i.pdf> .

The world society sustainable development strategy ought to have a 50-year range, see: Desai, Nitin (2002). *OPENING ADDRESS TO THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT*.

See also: EU SDS 2006.

¹¹ Informational efficiency expresses a ratio used in action in the name of the sustainable development of world society as regards the amount of information already in existence or capable of being obtained (*i.a.* thanks to knowledge already possessed by human beings, albeit still often egotistical and even used in such a way as to promote crisis).

¹² Among other places, the method and results of systems analysis regarding the nature of the global crisis, plus means of overcoming it, are presented in:

Michnowski, Lesław:

- (1994), *Kryzys globalny a przywracanie zdolności rozwoju (Global crisis and developmental recovery)*, Aneks 1, w: Pajestka J., *O orientację na przyszłość w reformach polskich*, Megatrendy cywilizacyjne a proces transformacji systemowej, Komitet Prognoz "Polska w XXI wieku" przy Prezydium PAN, Dom Wydawniczy ELIPSA, Warsaw;

- (1995), *Jak żyć?, Ekorozwoj albo ...*, (How to live?, Ecodevelopment or...), Wyd.

“Ekonomia i Środowisko”, Białystok 1995 –

<http://www.psl.org.pl/kte/books.htm> .

- (2006), *Spoleczeństwo przyszłości a trwały rozwój*, op.cit.

- (2007), *Eco-Humanism and Popular System Dynamics as Preconditions for Sustainable Development*, Solidarity, Sustainability, and Non-Violence (SSNV) Research Newsletter, Vol. 3, No. 11, November 2007 –

<http://pelicanweb.org/solisustv03n11michnowski.html> .

- (2008), *Ecohumanism as a Developmental Crossing*, [in:] *Transformative Pathways, Attainable Utopia*, Edited by Sangeeta Sharma, Pramod K. Sharma, Prateeksha Publications, Jaipur, India:

<http://www.psl.org.pl/kte/Indie.pdf>

- (2009), *Ecohumanism as a Developmental Crossing (with Supplement)*, The PelicanWeb's Journal of Sustainable Development, Research Digest on Integral Human Development, Spirituality, Solidarity, Sustainability, Democracy, Technology, Nonviolence, Vol. 5, No. 10, October 2009:

<http://pelicanweb.org/solisustv05n10page2michnowski2.html> .

The above analysis was done with the help of the conceptual (*sensu* A.P. Sage) model, the name of which is: *System of Life*.

3 – a lack of linkage between the accessibility of material/intellectual goods and the ecosocial value of socioeconomic activity.

So if this crisis for civilisation is to be overcome, we will have to put in place the educational and scientific/technical capabilities supporting far-sighted management in the common interest of all people and of nature itself¹⁴. And to that, it is vitally important to build – best of all under UN auspices – the information-based foundations of a genuinely sustainable development policy and economy¹⁵. Equally urgent will be the effort to make sure that information culture is given a more tangible form and made universally available – in particular to politicians and public administration personnel, along with an awareness that, the higher the level of information, the lower the costs of achieving sustainable development goals¹⁶.

2. THE NATURE OF THE GLOBAL CRISIS

The global crisis facing civilisation will be addressed much more effectively if we reject the thesis that a UN-based strategy for the sustainable development of world society is somehow an oxymoron. We should rather recognise that "there are

System of Life (SoL): it is a complex system - in an axiomatic way built by L. Michnowski - a model of different life-systems (other type complex systems), especially human societies and other systems: man (human) – technology. It reflects common static and dynamic properties of these systems.

¹³ When we use the word: "environment", it means the social and natural environment. According to J. W. Forrester – the creator of computer simulation methods – the effectiveness of a current policy depends on politicians and strategists being assisted by such methods. See:
Forrester, Jay W., (1995), *Counterintuitive behavior of social systems*, op. cit.

¹⁴ Attention is drawn to the need to move away from egoism in favour of pursuit of the common interest as an axiological/value basis underpinning sustainable development of the world society/community in:
G. H. Brundtland, Report *Our Common Future*, chapter II: EQUITY AND THE COMMON INTEREST.

¹⁵ Among the sources postulating adaptation of the UN to the requirements of global society's sustainable development, as well as the attendant building of the informational bases to sustainable development policy and the sustainable economy is:

Polska Inicjatywa na rzecz Trwałego Rozwoju Świata (The Polish Initiative for a Sustainable Development of the World Society), an approach to the President of the Republic of Poland, made in 1997 and signed by 165 outstanding figures in the worlds of science, culture, faith and politics: <http://www.psl.org.pl/kte/polinicj.htm>, as well as:

Appeal to the Leaders of the UN and G20, To Overcome the Global Crisis (Towards Sustainable Development Policy and Economy),:

<http://www.psl.org.pl/kte/ung20footnotes.htm>, *inter alia* published in "Europe's World", 3/9/2009:

<http://tinyurl.com/preview.php?num=mlhynz> , and

The Club of Rome, European Support Centre:

<http://clubofrome.at/news/newsflash68.html> .

¹⁶ A justification of the need for a contemporary information culture can *inter alia* be found in: Michnowski, Lesław, Społeczeństwo powszechnej kultury informacyjnej jako warunek przetrwania i ekorozwoju (A common information culture society as a condition for survival and sustainable development), "Nauka Polska", 1990, no. 6.

no limits when it comes to the wise management of growth and the sustainable development of humankind". To this end, it will be necessary to consider why UN sustainable development policy to date has been ineffective, and then to devise methods for its revitalisation.

It is clear by definition that counteracting any kind of crisis in a society, socio-economic- or ecosocial- system will require us to identify the dynamics to its manifestations, determine its causes and hence recognize its nature/essence. A vision can then be laid out for a new structure of the system that can firmly restore development. After that, we may turn to devising methods of making this new sustainable development system a reality, stage by stage and step by step¹⁷.

By applying such a backcasting methodology we can achieve:

- the gradual elimination of whatever it was that held implementation back;
- a relatively tangible evaluation of the consequences if we carry out the tasks the different stages of the modernisation process involve.

The above approach is also helpful and necessary as work is done to adjust the adopted strategy in line with new life-conditions¹⁸ and needs arising.

The current financial and economic crisis, the upcoming social crisis (relating to pensions and high unemployment)¹⁹, and of course the demographic, environmental, energy, raw-materials, food and health crises (not least influenza pandemics) – are all clear manifestations of a global crisis whose symptoms were recognised by dynamic monitoring – i.e. by means of computer simulation methods - as long ago as 1970, thanks to the Club of Rome (see Fig. 3).

¹⁷ It would be the backcasting method of anti-crisis and sustainable development strategy creation.

¹⁸ Conditions for life (life-conditions): state of the socio-economic and natural environment, including natural resources accessibility, natural environment quality, intellectual-, scientific-technological- and war- potential level, etc.

For backcasting to serve as a basis for action to overcome the crisis, a vision of society in the aftermath of that crisis (upon which sustainable development strategy will be based) should be devised, with account taken of the logic behind sustainable development.

See, *inter alia*:

Mlchnowski, Leslaw, (2009), *Ecohumanism as a Developmental Crossing*, op.cit.

¹⁹ The ever-more visible components of global crisis are *i.a.* drawn attention to in: Ban Ki-moon, 2009, THE SECRETARY-GENERAL -- REMARKS AT THE UNITED NATIONS CONFERENCE ON THE WORLD FINANCIAL AND ECONOMIC CRISIS AND ITS IMPACT ON DEVELOPMENT New York, 24 June 2009:

http://www.un.org/ga/econcrisissummit/statements/sg_opening_en.pdf .

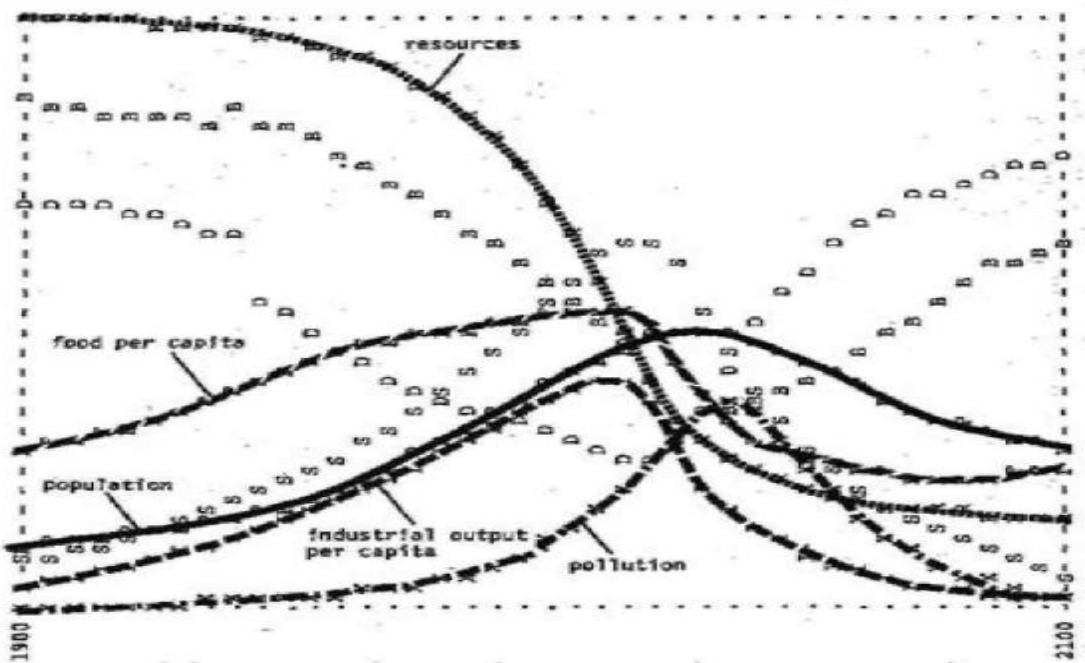
Giles, Chris, 2009, OECD warns on pensions crisis, "*Financial Times*", June 23 2009:

<http://www.ft.com/cms/s/0/4301d326-5feb-11de-a09b-00144feabdc0.html>

The global food crisis, 2008, "*Financial Times*", April 13 2008 – Internet.

International Labour Organization, 2009, RECOVERING FROM THE CRISIS: A GLOBAL JOBS PACT, June 19, 2009:

http://www.ilo.org/public/libdoc/ilo/2009/109B09_101_engl.pdf .



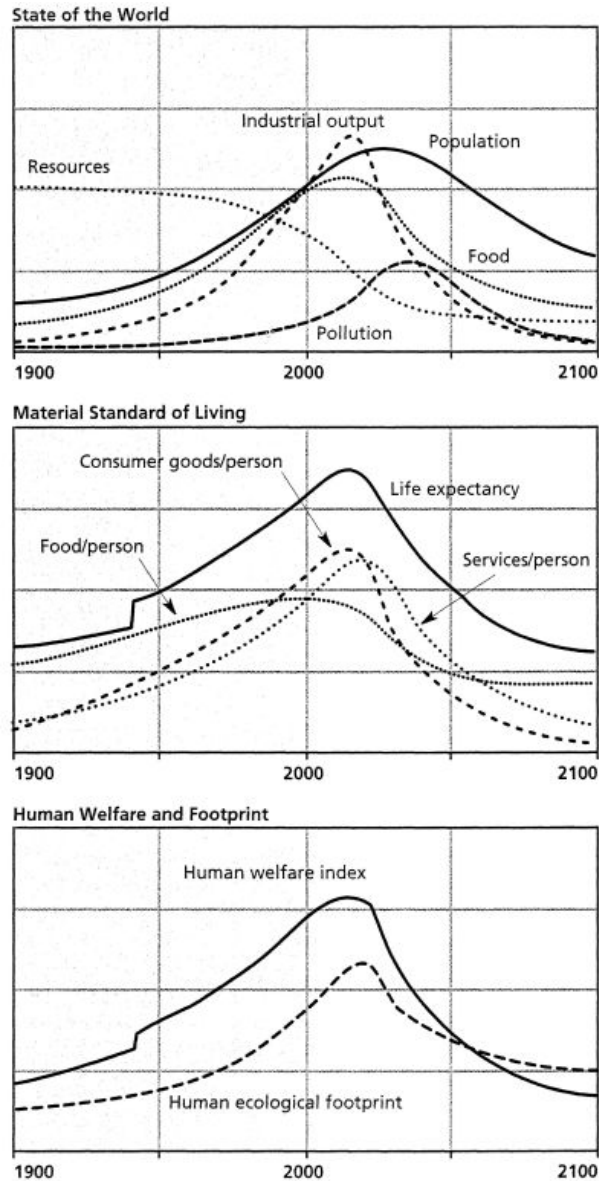
Source: Meadows, *et al.*, *Limits to Growth*, New York 1972.

Fig. 3 Model of the World - Standard run

Since the self-same crises still emerged, one after another, there must clearly have been a practical lack of effectiveness with the methods actually applied in making world society sustainable²⁰.

The above statement can be confirmed by Meadows's next dynamic monitoring of the situation the world system faced in 2000 – Fig. 4.

²⁰ Among those noting the ineffectiveness of the anti-crisis methods employed post-1970 are: Meadows *et al.*, *Beyond the Limits, Global Collapse or a Sustainable Future*, op.cit, and Meadows *et al.* *Limits to Growth, The 30-Years Update*, op.cit.– see: Fig. 4.



Source: Meadows *et al*, *Limits to Growth The 30-Year Update*, New York 2004

Fig. 4 : Scenario 1: A Reference Point

Let us move beyond criticism of methods applied so far to combat the crisis²¹. In any given society, a crisis as generally conceived (as opposed to a state of development) manifests itself in a surplus of destructive over constructive effects of activity. So it can be said to be present where a society destroys, consumes or loses more of a possessed good that keeps it going than it is able to obtain, create or establish from scratch through the work it does. However, the destruction, exhaustion or loss referred to must be of a dual nature, for one form of it will be physical, the other moral.

Where physical destruction is involved, the negative impacts may be counteracted if a good lost can be recreated in a previous form. In contrast, moral

²¹ This is a major recommendation from G. Nadler (as cited above), which favours the kind of cooperation of all social forces threatened by global catastrophe that would provide for the crisis to be overcome.

devaluation²² or moral obsolescence, reflecting changed conditioning at the heart of a society's existence, represents a state of the socio-natural environment that is changing steadily and irreversibly. As this kind of process embraces the state of the environment, the latter reflects the impact that the given society – among other things – exerts on it. The faster the changes in the environment, the greater the moral obsolescence of what were previously correct forms of a society's existence (be this in social relations, axiology, economics, technics or whatever), and also the greater the amount of cognitive and innovative work that society will need if it is to come up with new forms of life equal to the task of eliminating negative environmental impacts. Together with these new ways of living, the rate of environmental change just grows and there is a further intensification of the moral devaluation affecting previous ways of living, and so on²³.

At a certain level of social development (at the same time implying helplessness on the part of society and very rapid environmental change), the dominant and self-propelling destructive factor becomes moral obsolescence. If a society fails to appreciate this by adjusting the way it lives to such qualitatively new conditioning, *inter alia* by learning how to anticipate further changes in that conditioning, and then take the necessary measures, then it not only faces a crisis (of what might be called "over-development"²⁴) that impairs people's quality of life, but it in fact also risks total collapse. Recognised years ago, the global crisis for civilisation is – we feel – of just such a moral character.

Therefore the moral obsolescence growing rapidly with indispensable scientific and technological progress is the main factor behind the global civilisational crisis.

The aforementioned forecasts warning of the exhaustion of natural resources, destruction of the environment and the "population explosion" did after all reflect a moral decline into a primitive Socio-Darwinist form by which people lived alongside one another. Exhaustion of resources is not the result of an absolute shortfall, or even of a lack of capacity to raise the effectiveness of our intellectual and ethical potential. Rather, it mainly results from the Neo-Liberal doctrine referred to in the introduction, whereby the role of the state is to be weakened in the name of the paradigm that has domination by the free market and competitiveness as the solution to all development-related problems.

²² If the ways of living that have been arrived at thus far and are regarded as undestroyed physically and at least formally effective lose their capacity to sustain life in the new circumstances/life-conditions (e.g. of a given society), then to continue pursuing them would have to be seen as nothing less than immoral.

²³ Fuller justification of the basic thesis that the main cause of the global civilisational crisis is the lack of opportunity (in the face of Social Darwinist-type relations in society) to eliminate the negative consequences of moral degradation ways of living have already experienced, see *inter alia*: *Spółeczeństwo przeszłości a trwały rozwój*, as cited above.

²⁴ The concept of "overdevelopment" is here applied rather differently than in: Benedict XVI, *ENCYKLIKA CARITAS IN VERITATE*, 2009, p. 29. I have it as a result, not only of moral underdevelopment – as a lack of adequate axiology, but also in relation to education on the one hand and science and technology on the other, these favouring shortsightedness of policy, and limited flexibility as regards methods of operating.

3. THE CRITICAL IMPORTANCE OF A CIVILISATIONAL CHANGE

Counteraction of the global civilisational crisis requires a civilisational change that makes it possible to reject the egoism of Social Darwinism in favour of Eco-humanism.

Eco-humanism denotes 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 the natural environment - COMMONLY SUPPORTED BY SCIENCE AND HIGH TECHNOLOGY AS WELL AS INFORMATION CULTURE.

Though inevitably requiring much effort and a considerable amount of time, this kind of change should ultimately allow us to turn around the negative situation that human activity has generated, most especially as a result of humanity's moral devaluation. If it is to be achieved, the system by which the socioeconomic and natural foundations of our lives are steered will need to be made much more efficient, *i.a.* by building an effective "feedforward" component into the existing system of global policy development (which is forever trying to catch up with events). A qualitatively new control system is obviously involved here: one which uses feedforward to achieve foresight, and so allows for a far-reaching shaping of sustainable development policy based on knowledge of upcoming change in the factors that condition our lives, as well as of the likely consequences of pursuing different policies. This additional system would allow us to adjust the way we live in advance of the actual change foreseen. It goes without saying that "feedforward" will only emerge if the need for it is understood, *i.e.* if those in power come to appreciate the value of anticipatory control action in the interests of all humankind and of nature²⁵.

Eco-humanism is indispensable to the building of such a feedforward control system.

To overcome the global crisis for civilisation expressed in this way, we will need:

- to perfect our ability to foresee changes in the factors that condition our lives, in order that preventative action can be taken sufficiently in advance, and necessary adjustments made;
- to achieve much greater effectiveness and intensity of cognitive and innovative activity;
- to perfect skills in storing, transferring and creating new information effectively, as well as conferring flexibility and greater innovation-proneness upon the economy;
- to redevelop models of consumption and production to make them more ecosocially favourable;
- to bring about the above eco-humanist axiological change that makes universal joint action over development a real possibility, not least when it comes to access to necessary knowledge;
- to build up the educational, ethical and information-related foundations of sustainable development policy and the sustainable development economy²⁶;

²⁵ I justify this at greater length in: *Spoleczenstwo przyszlosci a trwaly rozwoj*, as cited above.

²⁶ If we are to live in conditions of ever-faster moral obsolescence of ways in which we have live previously – in line with the development of science and technology – it will be necessary

The fulfilment of these requirements to counteract the crisis will be possible if we:

- limit the unnecessary consumption of natural resources now in short supply (*i.a.* fuels);
- assure access to alternative sources of natural resources as those currently available are exhausted;
- master the shaping of the natural environment in line with both peoples' living requirements and the needs of the whole environment;
- stimulate action in the name of sustainable development by linking up the availability of material and intellectual goods on the one hand and the eco-social utility of objects in socio-economic life on the other²⁷.
- curb excessive growth of the human population - by installing popular intellectual (cognitive – innovative) creativity in place of natural/biological defensive creativity.

To put the above tasks into effect we especially need to:

- convert the global financial system into one that will support/aid the aforementioned eco-socially useful activity;
- build the information bases of sustainable development policy and the economy;
- create adequate, *inter alia* global, subsidiary governance institutions.

4. THE INFORMATION INFRASTRUCTURE UNDERPINNING SUSTAINABLE DEVELOPMENT

If the world community's capacity to develop (and keep global crisis at bay) is to be restored, there will have to be far-reaching streamlining of further globalisation, putting an end to the crisis-generating form the process has assumed so far, and introducing in its place a form that is sustainable, inclusive and just, and hence with a "human face"²⁸.

To this end, the UN needs to be made more efficient, *inter alia* through the creation of a Security Council-like **Global Economic/Development Council** that would function on the basis of subsidiarity and solidarity²⁹. Such a SD Global Council of an eco-humanist profile would be supported by:

for us to depart from education of the elite, in favour of training universal wisdom (as assisted by artificial intelligence).

²⁷ Among those noting the need for speculative capitalism to be rejected if the present crisis is to be brought to an end is Nicolas Sarkozy. See:

EU Leaders Vow to Coordinate Response to Finance Crisis, *Deutsche Welle*, 05.10.2008:

<http://www.dw-world.de/dw/article/0,2144,3690651,00.html> .

²⁸ The need to change methods of globalisation was noted, *inter alia*:

- at the 2005 World Summit Outcome;

- in the Opening Address by Chancellor Angela Merkel of Germany at the World Economic Forum in Davos on January 24, 2007

http://www.bundesregierung.de/nr_6566/Content/EN/Reden/2007/01/2007-01-24-rede-bkin-davos.html ;

- in A GLOBAL JOBS PACT, as cited above

- in the Outcome of the Conference on the World Financial and Economic Crisis and Its Impact on Development, 13 July 2009:

- in the *CARITAS IN VERITATE* Encyclical, op. cit.

²⁹ "Global Development Council" could seem to be a more appropriate name than the Global Economic Council proposed by Angela Merkel and initially supported by the UN (Draft 18-05-

- a **World Centre for Sustainable Development Strategy** that would be a professional body and would act on the basis of a global network of specialists³⁰,
- an **Information Centre** (also in network form³¹) that would draw up global dynamic monitoring, including forecasts capable of providing warnings, and would shape the

2009). For its task should be to devise (and created conditions for the successful implementation of) a strategy for the sustainable development of the world community as the only way of overcoming global crisis more permanently.

See:

- Merkel, Angela, (2009), Speech by Federal Chancellor Angela Merkel at the World Economic Forum, Fri, 30.01.2009:

http://www.bundesregierung.de/nn_6566/Content/EN/Reden/2009/2009-01-30-merkel-davos-rede.html

- the Open Letter to the Highest Authorities of the Republic of Poland, *i.a.* in *Zielony Sztandar* of January 3rd 2009, *Realia* no. 1/2009:

<http://www.psl.org.pl/kte/listotwartykte.htm> ;

- Appeal to UN Leaders and the G20, *op. cit.*,

- (Draft) Outcome of the United Nations Conference on the World Financial and Economic Crisis and its Impact on Development, 18-05-2009.

Unfortunately, the Davos 2009 proposal from Angela Merkel: - to establish within the UN a Global Economic Council and to enact a Charter for Sustainable Economic Activity did not gain final inclusion by the UN General assembly into the programme of anti-crisis activity (26 - 30. 06. 2009).

In essence, Pope Benedict XVI extended his support to Merkel's anti-crisis initiative, stating that: (...) *there is a strongly felt need (...) for a reform of the United Nations Organization, and likewise of economic institutions and international finance (...)* One also senses the urgent need to find innovative ways of implementing the principle of the responsibility to protect and of giving poorer nations an effective voice in shared decision-making. This seems necessary in order to arrive at a political, juridical and economic order which can increase and give direction to international cooperation for the development of all peoples in solidarity. To manage the global economy; to revive economies hit by the crisis; to avoid any deterioration of the present crisis (...).

See: *the CARITAS IN VERITATE* Encyclical, p. 67, *op. cit.*

³⁰ A proposal to create such a Centre has been around in Poland for years.

See: *Memo from the "Poland 2000 Plus" Committee for Future Studies to the Praesidium of the Polish Academy of Sciences to the highest authorities in the Republic of Poland regarding the need to strengthen the process of global sustainable development and the building of a world society*, Warsaw 2003.06.02, as well as *Polska Inicjatywa Na Rzecz Trwałego Rozwoju Świata*, *op. cit.*.

³¹ Neither the Strategic Centre nor the Information Centre need of necessity be large, highly costly, UN structures. Today's development of teleinformatics (GRID, cloud computing) make possible both warning forecasting using the existing informational and forecasting potential, as well as the programming of protective and developmental measures by way of even remote cooperation in convened *ad hoc* international teams of specialists.

See *inter alia*:

Utsumi, Takeshi, (2003), *Globally Collaborative Environmental Peace Gaming (GCEPG)*, GLOSAS/USA:

<http://tinyurl.com/k2c7a> .

Utsumi, Takeshi((2006). *Global University System for Global Peace*, The GLObal Systems Analysis and Simulation Association in the U.S.A., Inc:

<http://www.friends-partners.org/GLOSAS/> .

foundations of sustainable development policy and the sustainable development economy where the necessary inputs of information are concerned,
- **global financial institutions**, which would have as their main task to support and assist the policy offering safe development to the entire world society.

The Global Economic/Development Council would act to shape policy on a qualitatively new basis centred around INFORMATION. The successive global dynamic monitoring and warning forecasts it would provide would reflect monitoring of the dynamic global process that our world's socio-economic and natural life represents, and they would inform us in advance, not only of various possible catastrophes and threats, but also of any slowdown in world society's development.

The dynamic monitoring and warning forecasts would offer the Strategy Centre its basis for devising programmes to counteract threats, certainly, but also to maintain the pace of development. Programmes would also seek to make the transfer of information more efficient, and the world community more innovation-prone³².

Having been accepted by the Council referred to, the programmes would then be assigned for support by the global financial institutions.

Another important task for the Global Economic/Development Council would be to foster a move from economics in its current form to the economics of sustainable development, this being informed efficiently thanks to in-depth cost-benefit analysis and far-reaching temporal and spatial accommodation of the overall equation's social and natural components. An eco-humanist kind of cognitive and innovative activity would thus be stimulated.

5. THE INFORMATION CULTURE AS A NEED OF THE MOMENT

The crisis will only be overcome if there is urgent propagation of "information culture" among politicians and public administration personnel, this being viewed as the educational foundation for the information infrastructure of a global system shaping sustainable development. This infrastructure already allows for radical change in:

- the educational system;
- the methods of pursuing policy;
- the economic system,
- the manner in which globalisation progresses.

This would all be accompanied by a shift in the way we adapt to new conditions - from the kind of evolution by Social Darwinism that we see now to a new method based on eco-humanist intellectual evolution³³.

³² For the issue of shaping scientific and production infrastructure in a manner rendering the economy innovation-prone, see, *inter alia*:

Michnowski, Lesław, *Co jest piękniejsze: male czy duże? Na marginesie rozmowy z Lesterem Turowem (What is more beautiful - small or big?, [in]: Polska 2000 Plus, Stan prognoz światowych XXI wieku. Przyszłość globalizacji. Jeszcze o nauce w przyszłości, Polska 2000 Plus Committee for Future Studies to the Praesidium of the Polish Academy of Sciences, Bulletin No. 1 (31/2001), D.W. Elipsa, Warsaw, 2001, pp. 129*

³³ See *inter alia*:

Michnowski, Lesław, 2009, O potrzebie ekohumanizmu i ewolucji ultraintelektualnej (On the need for eco-humanism and an ultra-intellectual evolution), *Zeszyty Wszechnicy*

The main basis for the counteraction of the global crisis and for the shaping of a capacity for sustainable development will thus be a new scientific and technical revolution assisted by ever-more widespread human wisdom and artificial intelligence. This revolution will seek:

- to transform the entire technosphere into a more human- and environment-friendly form,
- to ensure access to the resources that underpin existence, even if these are in short supply,
- to eliminate the need for any life-or-death struggle over access to these resources.

One of the major consequences of this kind of civilisational change will be to reduce high rates of reproduction by offering what have hitherto been less-developed societies the opportunity to play a much fuller part in cognitive and innovative creative activity.

To bring any kind of more durable end to the global crisis civilisation is facing (of which the current financial and economic crisis is just a part), it will be necessary to achieve both eco-humanist axiological change and an in-depth, science- and futurologically-based remodelling of the technosphere, with a view to it being made more “friendly” for both humankind and nature.

In turn, this is all conditioned by the urgent need to embark upon a universal shaping of information culture – most pressingly of all among politicians and the public administration. Through an information culture³⁴ that encapsulates the theoretical bases underpinning synergy of development, it will be necessary to ensure that the socio-natural environment “receives more”, as opposed to simply being “taken from” all the time. This is obviously a key condition if sustainable development of world society is ever to become a reality³⁵.

To overcome the global crisis for civilisation, we will need to reject Social Darwinism in favour of Eco-humanism, as the basis for free access to necessary

Świętokrzyskiej, no.1(26)/2009 - <http://www.psl.org.pl/kte/Opotrzebieekohumanizmuiewu.pdf>

³⁴ The shaping of an information culture for both Poland and world society, e.g. under the auspices of UNESCO, should find its place among the first tasks undertaken to end the global crisis.

³⁵ An important contribution encouraging the rejection of Social Darwinism was made by Pope Benedict XVI in Encyclical *Caritas in Veritate*, op. cit.. (See also the Encyclical *Spe Salvi*, pp 20-22).

This Encyclical contains strategic guidelines regarding activity imperative in reimbuing world society with a capacity to develop. Proposed here as primary values essential in overcoming the global crisis are:

- 1 – the common good of all humankind;
- 2 – subsidiarity;
- 3 – solidarity;
- 4 – justice;
- 5 – love, in line with a capacity to give more than one takes.

An evident necessary condition for the effectiveness of actions directed by these values is that the postulated information-related bases of sustainable development policy and a sustainable economy be built.

At this time in particular, careful study of this Encyclical by those active in politics and the economy would seem appropriate.

information and developing capacity to develop world society sustainably. Developments in ICT taking place already and foreseen make all this a real possibility, but generating the political will for it is another issue, which requires that it be seen as a priority to devise properly, and implement steadily, a far-reaching global strategy for world society's sustainable development. This in turn demands enrichment of information culture – first among politicians and public administrators. This is now a fundamental anti-crisis challenge, if at the same time an opportunity to effectively bring about the practopia of sustainable development³⁶.

Without proper systemic/cybernetic knowledge education of politicians and public administration and the creation of an eco-humanistic mindset among them, it is impossible to durably overcome the global crisis and achieve sustainable development of world society

³⁶ For presentation slides of this paper, see:
<http://www.psl.org.pl/kte/MHLMKarlsruhe.ppt> .

For other arguments about necessity of change Social-Darwinism into Eco-humanism for humankind survival, see:
<http://www.psl.org.pl/kte/artlm.htm> .