



A chance to survive*

The term "sustainable development" emerged and was accepted by the world-wide community because of prognosis foretelling biosphere catastrophe viewed in the 70-s of the last century. Discussions about the crisis of the civilization successfully moving to own collapse and possible ways out of the crisis are still alive and the word combination "sustainable development" is becoming more urgent and popular. A talk with the candidate of biological science, senior lecture of the International Institute of Labor and Social Relations **Victor Ermolenkov** is dedicated to this subject.

? Victor Vladimirovich, how does modern science explain possible crisis reasons in the relationships between civilization and biosphere?

Let us consider the situation in the context of system theory.

TV-set, human being, virus of influenza, society, solar system, socio-nature-economic complex of our planet — all this are samples of systems. Any system consists of interdependent elements shaping something integrated. Open systems are interchanging substances, energy and information with environment — a complex of some external systems. As a result of continuous interchange systems are possible to develop.

Development is irreversible changes in time, in result of which new qualitative state (composition of elements and nature of links alter) appears. Development can take place both in complicating systems (progress) and in simplifying it (regress). The form of these processes can be either evolution or revolution (catastrophic). Catastrophe (phase transition, leap) is a situation when "straw added to a cargo breaks camel's back". Give it in other words in this case abrupt change of the system by smooth changes of parameters of environment takes place.

Development process can take place either due to environment regulating action or as a result of self-organization. **Environment regulating action** on the system often develops on catastrophic scenario as the system either "does not notice" or "does not want to accept" changes in environment. In case of self-organization the system behaves adequate to environment, without trying to create a unique situation in nature when a tail twists a dog around.

? One must suppose that an adequate development variant is preferable when civilization, dog's tail, knows its place. Is it called sustainable development?

After having clarified the notion "development" we can define sustainability as reaction ability, in action force proportional to force produced by environment. Likewise we speak about unsteadiness when there is a discrepancy between reaction of the system and action force: inadequately strong reaction to relatively weak action and vice versa (it has thundered for a long time but peasant does not cross himself and wonder).

There are several variants of dynamic in behavior of any open system such as a separate household and socio-nature complex of the country or the planet.

Variant 1: Environment (super-system) varies regularly. A system tends to stability of elements and connections' characteristics, i.e. to equilibrium inside and to grow. Deviating from equilibrium environment actions (fluctuations) suppressed by it purposely. The growth, interesting for the system, is quantitative change. A great number of fluctuations are accumulated in the course of time. A crisis appears as a reflection of a conflict with the environment. Exactly at this stage "branching" of development scenarios take place. Unpredictability of these scenarios stipulated by the fact that any chance can direct development process of extremely unsustainable system on one-out-three ways. The following events are possible:

- 1) Abrupt quality change, relation harmonization with environment, and accordingly achievement of new sustainable state;
- 2) Collapse — a state when complexity and efficiency of the system sooner or later stabilizes but on the lower level as it even environment permits;
- 3) With a rise of entropy (chaos measurement) the system looses connections between elements and ceases to exist as entirety.

Variant 2. The system can have inside or create mechanisms because of which its self-organization will not require serious regulating external actions on the part of external environment. Sustainability and development here can be combined in one word-group. It is based on dynamic interaction when the system constantly estimates environment and evolves in accordance to changes in supersystem.

? Namely, sustainable development is when the mankind gets feedback from the environment, pays attention to this feedback, analyses it and accordingly changes own activity? Why has not it happened yet if an idea of sustainable development is so simple? Probably, did we get feedback not only in the last century when it "suddenly" turned to be that water and air are spoiled by us and oil reserves run low?

Almost all ideological constructions invented by people and economical theories as well, are aimed at mankind welfare. They fix, canonize the survival experience gained when natural resources needed for progressive civilization were rich. Environment is concerned as something infinitely abundant or at least richness constant. And these resources nature "hid inside" with a purpose that a person — invader and winner — take them and use in own purposes. Today we studying history, admire achievements the ancient people did, describing what they had achieved in "the golden age". The most important mystery for me seems to be a reason because of which these civilizations burst like soap-bubbles after "the golden age". But the reason is hid in the remote antiquity because of misunderstanding of ecology laws.

An idea that the reason is a conflict with environment was born on the gridiron and shaped only in the XX century thankfully to inquiring mind and activity of Italian businessman Aurelio Peccci. A group of like-minded people in 1968 founded the Club of Rome, a public association set the goal to analyze the world problems with the help of global humanity models interacting with environment.

A young American professor Dennis Meadows drafted the first report to the Club of Rome. His logics in modeling were deadly. It turned to be (and was approved by demographic statistics) that the priest Malthus was right captured the tendency in his **An Essay on the Principle of Population**: "population, when unchecked, **increased in a geometrical ratio**". A human being "proud" though it might sound increases as fast as any other biological kind like yeast in a can with home-brewed beer. There is the only difference in velocity. And how does "the great dream of mankind" — communism — with its goal to give people what they need look like in this connection? It looks as a nice utopia as real goals of the planet population (increasing in geometrical ratio) must be ensured by resources (food, goods, energy) also increasing in geometrical ratio. To be precise the resources ought to "increase" faster then population, as it will be necessary to meet "always increasing needs" of people. It is impossible, as the **planet is finite and everything on it has its limits**. And how is well-known in environment protection resource subdivision into exhaustible and inexhaustible? It requires to be reconsidered as increasing and consuming in geometrical ration population is able to exhaust resources of any (!) capacity.

What might happen if mankind does not think about limited resources of biosphere?

People do not still know which exactly anthropological burden the planet can bear. Bit it is clear that three kinds of eco-systems feed us: ploughed fields, hayfield-pasture and forests. Calculate square and productivity at least of it, divide into needs of one person and the result will be a number of people who can be provided by nature. Unfortunately inertia of our thinking is great. It is fixed in believes that "every day brings its own bread", in conviction that if mankind still managed to get itself out of problems, it means that it will keep on. Having such delusions people will exceed the limits of bio-sphere even under condition of stable reproducing resources. After this a strong reason comes into force: "we need to feed people!". For its sake the budget is reshaped in favor of agriculture and to the detriment of social field (culture, education, health care) and to security institutions. A result of such scenario will be forced stabilization of wild uneducated crowd which searches for enemies guilty in all troubles at the level of 11-12 billiard people, in conditions of natural regulation with the help of wars, diseases, i.e. increasing death-rate. Such scenario supposing stable resources and inertial-increasing population would be indeed not the worst outcome for mankind. The main threats are growing exactly because the resources are not

Notion of "globalism"

The global problems are human problems, which concern key interests of the whole civilization, each person. Appearing of **globalism** as a direction of sociological thought is connected with the **Club of Rome** a thinktank of famous scientists, political actors who made first steps on scientific modeling of possible scenarios of the world development, global evaluation of a mankind state by the edge of two thousands. The Club of Rome was established in 1968. In 1972 the first report of the Club of Rome titled "**The Limits to Growth**". The authors group headed by Dennis Meadows set a task with the use of computer modelling and computer technologies to identify the limits to growth of the world civilization. The results were distressing, the system crisis of civilization developing on unsustainable self-destroying way was identified. The studies of the Club of Rome set basis for searching for sustainable (balanced) ways for civilization development.

unlimited as we naively hope. Moreover, they are not constant. Even forest, hayfield-pasture and ploughed fields, which can be reproduced annually, human being destroys at a rapid pace. And mainly because of it a lot of ancient civilizations have become degraded. Everything was developing in accordance with the system theory. Development and growth of civilizations in resource-rich environment, conflict with environment, inertia of environment suppression and collapse of civilization or even de-integration of this system.

Technology development, alternative energy exist. Won't "inquiring mind" find a way out of this situation?

As a matter of principal, eco-systems are able to exist indefinitely long supporting mankind. But we are modern civilization strongly "got hooked" on natural energy sources — oil, gas, coal. In this case the prognosis can be done basing on elementary school arithmetic. Even a child can count time needed for emptying a swimming pool with one pipe from which something (in our case it is natural fuel) is flowing out with the definite velocity. Having solved this task people will define the period given them for a complete substitution of resources, which are used and not replaced. Can we overcome this inert? Our forefather Cro-Magnon man put the basis for "civilization of pyromaniacs" and we have strong thought in our mind that the welfare growth (GDP as well) directly depends on quantity of energy burned.

Sustainable society

Sustainable society is one, enduring over generations, that is far-seeing enough, flexible enough, and wise enough not to undermine either its physical or its social systems of support.

(Meadows, D.H., Meadows, D.L., and Randers. J. (1992))

Sustainable development is a harmonious, self-supporting developing improving the quality of human life while living within the carrying capacity of supporting ecosystems.

The term sustainable development was officially introduced by the report of Gro Harlem Brudtland "Our Common Future" in 1987.

This development by which (*as it defined by the Brudtland Commission*) needs of the present are met without compromising the ability of future generations to meet their own needs. Sustainable development supposes that reservoir of capital asserts remains unchanged and increases through time.

The only possibility to survive and even fulfill our eternal aspirations to prosperity – to create such a society which will meet all basic needs of its members avoiding conflicts with environment - a society of sustainable development.

? What does it look like?

Imagine a new civilization, in which forests, hayfield-pasture and ploughed fields, preserve their productivity owing to reasonable strategy ensuring sustainable exploitation. Energy needs are met at the expense of renewable resources, i.e. "solar era" in power engineering has started. The relations between people ensure psychological comfort to everybody, and thus there is no discrimination, social diseases and other plagues of society built on the law of hen-house "crab your neighbor, shit on those below". But it is the first aim, the first step on a long road.

While such society is developing a task to create conditions for welfare of future generations will become prior. You see they have the same right to use nature benefits (ecological space of definite quality). After this a revolutionary educational task could be and should be solved. Developed person will respect other kinds of life. Finally he/she will think what a torment of dumb animals are cattle-breeding complexes, zoos, circuses or laboratories for testing on animals toxicity able to affect people.

The following consolidation and working out in details a concept of sustainable development got in the document "Local Agenda 21". It was signed by 179 nations at the UN Conference on Environment and Development in Rio de Janeiro in 1992 as the **blueprint on achieving sustainable development.** The common and specific problems of survival, ecological security and sustainable development of civilization in one global ecological planet space were clearly emphasized for the first time in this document. The first try to produce effect on global problems in planet scale is connected with this Conference in Rio de Janeiro.

? Do you consider such a perspective to be realistic?

A society where goals of economic, ecological and social sub-systems maximize in dynamic interaction can be built. Each region will move to create it using common principals in different ways. Apparently, the most evident results will be achieved at the local level.

? How can we achieve this? You know the society of sustainable development you described reminds utopia dreams?

How shall we do this? First of all we need to identify the main causes of modern crisis, which can destroy the mankind. And the main of them is exactly exhaustion of fossil energy resources. If we manage to solve this problem, to go over to renewable energy sources, greenhouse effect, pollution problems and many others will be eliminated. The sustainable power engineering will require new approaches for transporting system, city design, etc. Nevertheless technologies do not solve everything. Moral backgrounds are needed here. In the present society exactly technologies try to violate nature more and more effectively.

? But what will happen if we treat sustainable development as a set of technologies?

In the field of power engineering it can be already known alternative energy sources – windmills, solar generators, devices for conversion biomass into energy. The energy-saving system, for example, building heat-insulation, that is all already practiced and in use. Either lets use cogenerating. By the way, some countries set the only this task to solve. This is a core of their strategy of sustainable development.

? What is cogenerating?

This is a system for supplying buildings with energy when the house is supplied with only gas. Inside the house electric energy is produced out of gas and according to the second rule of the thermodynamics: any generating gives warmth. So, we simultaneously meet both our energy needs and needs for heating house. Usually this energy is lost.

You saw yourself smoke pouring out of heat power plant.

? Why do not we build energy-efficient houses? Why do not we use energy of wind and solar if everything has been already invented and successfully used?

It meets very strong resistance on different levels. Thousands of critics among officials, scientists-economists and other "specialists" who say that all this is not efficient, that windmills will not work here and solar generators are not for us - it is too cloudy. Generally speaking, this problem of a head which should understand much, get rid of eternal "may be things will come right", interlink isolated facts, look into the future. Although the sense of the issue is so simple as a spade handle – either we transit to sustainable variant of existence or continue switching up unsustainable present way. Enthusiasts-ecologists built several windmills and straw houses in Belarus. We consider them to be miracles and ecologists – eccentrics. And windmills and solar generators exist and work in the very same Denmark, ecology appropriate projects are developed. The West develops on sustainable scenario by leaps and bounds. As far as ecological dwelling for Belarus is concerned people can build by their own forces, from local materials. It will be just cheap or economically reasonable and affordable.

? Does it mean to cut the forest down and to build a wooden hut?

The forest will grow. It should be cut down expertly, not to exceed what can grow for this period. As far as a house is con-



cerned, houses differ. First of all, if we build a wooden insulated house of high quality it is already ecologically friendly. And there are new original timber designs, a kind of wooden bricks. There is air, which is good thermal insulator, inside. The building economizes with the amount of wood used. Building constructions can be of all kinds so that the materials are local. I think that a group of like-minded people can build such houses for themselves, independently of both "sellers" of super-expensive eco-technologies (which already appeared) and of officials resisting innovations. And if we speak about development of local communities, in particular rural ones, then first of all it can be groups of people united by common idea, who want to leave cities for nature.

? I.e. you think that the most perspective way to get transition to sustainable development is to create eco-settlement, don't you?

Yes, this is the most harmonious and advanced way.

? But not everybody wants to live in rural camps, in nature. And what do you think about such model of community development as the Local Agenda 21?

Eco-settlement is one of the variants, probably the ideal one. Because in this case like-minded people gather together and they themselves create better life in harmony with nature. But we need to educate the rest of society. Certainly, many people make a choice in favor of city life "advantages", although a modern city is obviously unsustainable system. Any power or food failures throw it into chaos and huge concourses of people, of pollution and noise in a city are other prerequisites for such chaos. As far as the Local Agenda 21 is concerned, this is a technique applicable for any community if it is created and implemented not just for form's sake.

The Local Agenda 21

The Local Agenda 21 is a long-term strategy and action plan for sustainable development of oblast, region, village, school and other kinds of communities of active people, whose aim is to ensure welfare and sustainable development of community. Such strategy is developed taking into account three important aspects – ecological, economical and social – in close cooperation with all concerned groups of local population. "Think globally, act locally" is the main principal of the Local Agenda 21.

? Up to now we spoke about the crisis of modern civilizations the crisis of "biosphere-mankind" and sustainable development – as a way to solve energetic and "ecological" problems. Nevertheless the Club of Rome, mentioned above, describes crisis as social and economic as well. The Local Agenda 21 offers to use the balanced approach to solve all aspects of society life for making transition to sustainable development. Couldn't we think that insulation of houses, using of solar generators and creation of eco-settlements is a transition to sustainable development?

I keep on speaking about all these fields balance. Sustainable development relies on a strong scientific founda-

Globalization

Globalization is a trend towards creation of global investment environment and integration of national capital markets. Majority of independent authors writing on sustainable development think that global market economy as it is developing at the present time contradict both the spirit and the letter and the goals of the strategy of sustainable development worked out in Rio de Janeiro. Its driving force is still consumption. It serves first of all the needs of countries of "golden milliard" re-distributing the results of combined activity of the world society in their favor.

tion of all aspects. We calculate how many these and those resources we have and what year we should replace exhaustible resources by inexhaustible ones. Social justice is a solvable task. Liquidation of life standard disproportion between the center and the provinces, "to relieve" women of everyday, almost slave labor, to hear what young people want and not to thrust them own understanding of "right" behavior. To do it just will and elementary honesty are needed. As far as economy of sustainable development is concerned up to now the field is completely undeveloped.

? Sviatoslav Zabelin writes about rent taxation as an alternative to existing profit taxation system and wage cost. Many eco-settlements use so-called LETS-systems – virtual money for circulation inside the society.

Sviatoslav Zabelin

Sviatoslav Zabelin is the leader of Russian public association "Socio-Ecological Union", a candidate of biological science, awarded the prestigious Goldman Prize. His book "Time to Search, Time to Loose" (Moscow, 1998; Riazan, 1998) is one of the best popular Russian-language issues, dedicated to sustainable development. The book was re-issued in Belarus under the title "The Whole World is Home to Me" in 2002 (Minsk, 2002).

Different authors offered different approaches. Some of them can be used, some raises doubts as being too far-fetched. For example, an idea of "negative money". It is to save us from "economy" system's striving to growth. The sense of this idea is that when money is on bank account it does not grow but on the contrary decrease. Penal interest rate. Then a person strives to spend what he/she earned. There are a lot of ideas but it is better to unravel problems gradually. If we transitioned to liberal economy, we could solve very many problems. Each entrepreneur tries to input fewer resources into a product and taking into account current tendencies and needs he/she will make it ecologically friendly. Liberalization of economy is the first step. The next step is to think what restriction ecology should be imposed on economy. Only having developed truly liberal economy we could try to include environ-

mental damage caused by the product production into its price. Although right here the true difficulties in economy begin. As the product price will go to infinity as everything in nature is interdependent. It is very difficult to stop product price increasing somewhere. If to act guiding by common sense it is possible to settle everything in measure and efficiently. The practice shows that index of economic freedom is directly correlates with sulphur emission. More liberal a country is, less sulphur it emits. It turns to be that liberalization is an efficient way for fighting acidic precipitation.

? The USA is considered to be rather liberal country. But it does not sign the Kyoto Protocol and no world community can make it to do it. What is a reason and how can it be explained in accordance with what has been mentioned above?

What is the Kyoto Protocol?

The Kyoto Protocol was adopted at the conference in Kyoto, Japan in 1997. The treaty obliges the countries which signed it to reduce their emission of greenhouse gases. The world reduction must come up to 5% a year. In consequence it is expected a significant reduction of pernicious contraries in air compared to the year 1990. Each country has own targets depending on the country size and on volume of emission produced by the country. For example, European Union targets at 8% reduction of greenhouse gases for 10 years, Japan — at 6%.

The scientists did not come to agreement upon whether the carbonic acid gas emission effects climate changes. For example, according to opinion of the professor of the Moscow State University Andrei Kapitsa there is no direct correlation between climate changes and the content of CO₂ in atmosphere, but what is indubitable the climate changes. This issue is considered to be settled. The European politicians sure that production acceleration led to the situation when Europe suffocates with summer hit and winter sport resorts are melting.

According to statistics the above mentioned indexes correlate, but as you see it is not absolutely. The USA's economic success and its habit to sacrifice interests of other countries in favor of own economic growth can produce very harmful stereotypes and thinking inertia.

? So how can we transit to sustainable development? Liberal economy had already existed when the Club of Rome was established and it was discovered that we went "the wrong way".

Liberal economy existed. But it is not a main condition for sustainable development. It is just the first step. The second step is imposing limits on liberal economy. This scientific problem is under intensive study. There is even the international magazine "Ecological Economy".

? What happens if liberal economy does not want to accept ecological limits?

Kyoto Protocol

How did the USA deny the Kyoto Protocol?

The story of the Kyoto Protocol has ended three years after its adoption. In November 2000 only 160 countries participated in the conference in the Hague to discuss mechanisms for the Protocol implementation. The main intrigue of the conference was disagreements between EU on the one hand and the USA on the other hand. A moment for the conference was chosen as unfortunate as possible — at the height of "transition period" in the USA. Europeans hastened (were in hurry) as one of the President Candidates, George Bush Junior, never make secret of his hostile attitude to the Kyoto initiative. Nevertheless, the parties did not manage to come to agreement.

At the last day of the conference the USA in association with Canada, Australia and some non-European developing countries could come to agreement with a group of leaders of European delegation regarding terms at which the USA ratify the treaty. The USA agreed upon the quote 40 millions "greenhouse" but in exchange they demanded for indulgences in terms of quota trading. But European delegation denied confirming the idea of their leaders and the deal was not concluded.

Making a try to eliminate a scandal one of the "negotiators" — the conference chairman and the Ministry of Nature Protection of Netherlands Jan Pronk even announced that the conference was not completed but stopped till May 2001. It is explained by the fact that the meeting's participants even did not adopt any document. For many analysts the inglorious end of the Hague conference sounded as a verdict to the Protocol itself.

What is next? Russia declared that would not sign the treaty at unfavorable terms in December 2003. At that moment when Russian authorities supported the treaty, its adoption was presented as extremely unfavorable. Compared to 1990 Russian emission of carbonic acid gas has reduced by 34% due to shutting down of plants and fabrics. It meant that Russia could not use quotas allocated to it and would get a chance to sell them to the countries, which are in short supply of them — for example, EU and Japan. On the other hand, ratification of the protocol means that majority of the countries must transfer from oil to other energy sources. And this is very unprofitable for oil exporters and in particular to Russia.

Source: News.Battery.Ru

Right here a necessity in a balance between all aspects of developing is becoming comprehensible. A true practice of democratic values is needed. A participation in making ecologically-significant decisions is needed, i.e. all decisions. It can be achieved via freeing ecological information.

? Is it possible to implement this in the nearest future? What are mechanisms to make society development more sustainable and harmonious in any country, democratic or not?

I think that adult education is the most proper mechanism.

? Do you mean formal education?

Informal education to greater degree. Me, myself completed such training and better value its certificate, useless for other people, then my "formal" diploma, because I really got to know much exactly in the system of informal adult education.

? What were the events that made such an impact?

These are the events of the Filamats' Association, Association of Education Amateurs, Folk University. Very competent and non-partisan specialists taught in a small group of people. It was possible to have a dialogue and in informal surrounding to talk on a subject under consideration, to get answers to any question of concern. These were completely de-ideologized events. It let me both social sector and ecology and economy to combine under one model of sustainable development. Subject succession is also important as education at the Folk University started with history, culture. These are the most important subjects. This is what turns society into society. All issues raised in the process of education were sounded and discussed.

? If we speak about education in favour of sustainable development, how could you correlate a role of formal and informal education for changing people's awakening taking into account that you yourself a teacher at the university?

I will view my opinion. Informal education is more valuable for me as people come to it not with a purpose to get some real material dividends. They come, as it is their inside cognitive need. The questions accumulated and they would like to get answers to them. People come to the system of formal education to get a certificate, which will help them to get position in the social ladder, in the hierarchy accepted in the society.

There is completely different motivation there and the education process is less "human". Although naturally very many people try to settle simultaneously these issues as well. Some people have priorities in this system of knowledge, values and relations.

? You conduct course on sustainable development in the university? Have you witnessed such "transformation" happened to some of your students?

Yes, of course. A public association I worked with was represented by young people who had a need to understand and a wish to participate in changing the world. At university I read lectures on ecological, nature protection subjects: "ecology", "sustainable development", "energy saving, modeling in ecology", etc. I always tried to interconnect all these in one model where economy, ecology and social spheres are inter-related. among five hundred students attended my lectures there are forty who would like to understand the course "Sustainable Development". There are five or six among them who will wish to act as activists of organization.

? What do your students get having listened to the course on sustainable development: systematic

knowledge on how to make society sustainable, either a supply of optimism or pessimism or apathy from understanding that a catastrophe inescapable?

First of all, they get some systematic knowledge about the world. They give answers to the most important questions to which I would say philosophy has not still answered. They understand that nature, as an super-system, is more important then we are; that many problems, riddles and mysteries of ancient civilizations are simply explained – conflicts with super-system, with environment. They start thinking about future, about what mankind and they personally are expected. They start thinking about reasons of mankind existence in general.

When we study the course on environment protection we use the problem-oriented approach. The students get understanding of reasons and try to find ways out. Understanding the fact that everything is brought together and often one right decision can lead to solution of a block of problems. It is very important. It lets protect forces from being scattered. Searching for a key link is rather fascinating. A completely new variant of mankind's existence begins to appear and it is not utopian. It is scientifically grounded. That is what they understand during education. If it happens as a system, opposed to separate pieces of knowledge, then a feeling of participation in the world processes, of unity with the world, biosphere. You start seeing nature not as a supplier of free-of-charge goods but as what really supports your life on the planet, what part you are also. And it is also what will support your children and grandchildren. Time connection appears... The existence becomes sensible.

? Do you have feedback from your students? What happens to them when they come into real life, get jobs appointment.

Many of my students still call me. Sometimes their life is not easy. And a level of systematic knowledge got let them be up to the mark in questions regarding environment protection and sustainable development. It is potential. Unfortunately, up to now it is not on demand. Although very slow, time still works for them. The future is theirs.

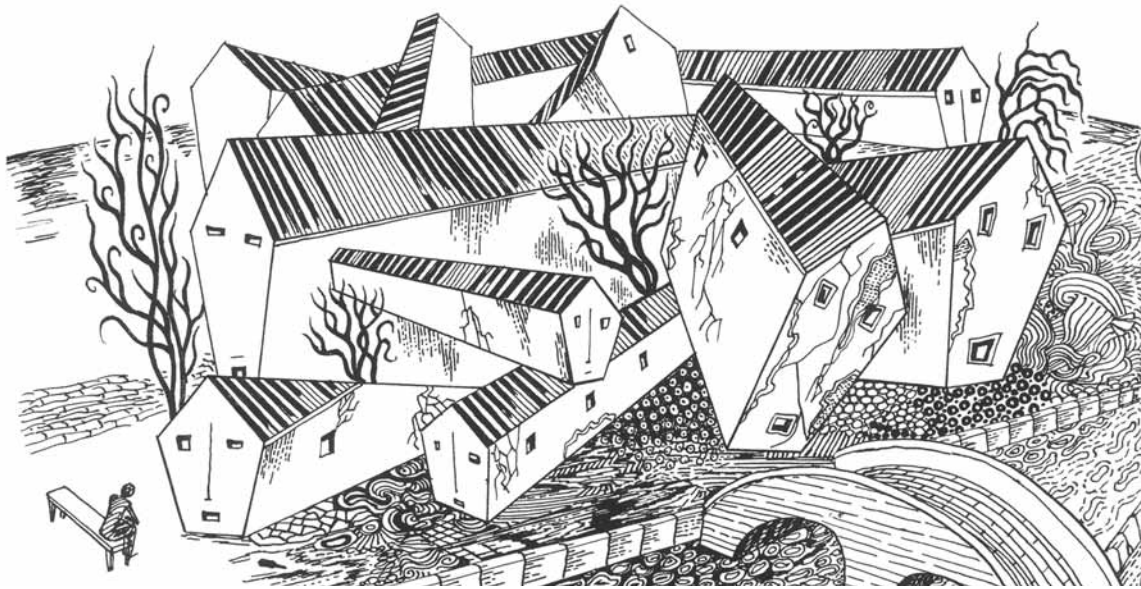
? Formal education lets train specialists in the fields of ecology, environment protection and sustainable development. Informal education in contrary gives an opportunity to "cover" wide groups of population and give them understanding of current processes and of a necessity of change. What can you say about perspectives of informal education in favor of sustainable development in Belarus?

As far as informal education particularly in the field of sustainable development is concerned I would say that it simply does not exist. There is no systematic approach to this issue. There is no well-worked out scheme, where everything would be interconnected. I think that with a purpose to understand sustainable development deeply, at least theoretical background is needed. Ecology as a science can be such a background, if it is popularized and purified from excessive terminology...

? I.e. we are back again to the opinion you have viewed that sustainable development is still ecology, aren't we?

It is natural. Ecology applicable to mankind's society.

? If we speak about the situation in our country do you think that this knowledge, moreover systematic knowledge, not superficial, needed for every member of public associations dealing with informal education in the third sector?



Sure. Members of public associations are not indifferent. I wish they understood in which direction to move. Currently, for example, the foundations support projects on community development and the Local Agendas 21. Let's imagine a situation, when an organization is granted and starts to write the Local Agenda 21 for a settlement. Thereby they know neither about ecology, no about interconnection between social, ecological and economic aspects. This way the idea is discredited and grant's means is wasting. Reasonably each project should be checked on a criteria for correspondence to principals of sustainable development.



You said that informal education can bring more benefits as a person himself/herself makes a choice what to study and comes moved by his/her cognitive motives.

No, I did not say that he/she could chose what course to study. My idea was that informal education is needed to be transformed into a system with a programme and the programme should have a core — an ideology of sustainable development. The priority for informal education is development of such a programme. We should give a person a system of not-contradicting knowledge, not separated data in deferent fields. Exactly a concept of sustainable development is now very important and perspective for society integration. Sustainable development is something reconciling, non-conflict for clever people, stimulating for cooperation between different sectors of the society and in different activities.

One more important moment regarding a role of informal education for sustainable development is changing of stereotypes in people's mind and behavior, discussing and adoption of new ethical norms without which true changes are not possible. Many things needed for making a transition from unsustainable development to sustainable have been known long time: there are developed recommendations for cities and villages, for different regions of the Earth, etc. But people for prestige reasons are not ready to back down a car, it seems quite normal for them to wear skin of dead animals or treat animals like prisoners. Sustainable development is impossible to come true without ecological ethic. What is under discussion within the frames of formal or informal education if it is a question of ethics? These are interactions between boys and girls, parents and children, Europeans and Arabians. Our interactions with pigs we do not consider. In general we do not consider our interactions with nature. Our interactions with future generations we also do not consider: they do not exist yet — should we have moral obligation to them? These questions are very important for sustainable development. Otherwise young people will never limit themselves and will jealously see towards the West. "Let me live so as people live in Sweden and I will also call for environment protection", — my students sometimes say to me. Informal education can take responsibility for all these new questions, until awkward-to-handle inert machine of formal education is "swung".

Interviewer **Natalia Riabova**

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