

## CIVILISED ENTREPRENEURSHIP AND HARMONISATION WITH THE ENVIRONMENT

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#### **Status of the environment in Ukraine before its independence**

The motto of the famous selectionist of the 1930s I. Mitchurin was "Not to wait for favours from nature but to take it at any price." It was implemented in Ukraine for more than 70 years. Such behaviour practically brought the unique and rich nature of Ukraine at the end of the 20th Century to the verge of ecological catastrophe. Chernobyl in 1986 was the extreme consequence of such a policy. An economic system existing for many years led to the irrational and wrong use of the natural wealth of Ukraine and to a huge over-consumption of energy. Such a system could not stimulate the preservation and the effective use of nature in the country. The negative impact on the environment was significant: functional and structural. Qualitative and quantitative changes in the status of nature in Ukraine led to the very heavy burden on the economy of the country, which obtained independence in 1991.

At great cost, the doctrine of the great Ukrainian scientist V. Vernadsky submitted at the beginning of the 20th Century and affirming the interdependence between all bios structures as a basis for rational economic activity and ecological problem solutions was not taken into consideration. V. Vernadsky specifically stated that the Earth's destiny depends on the behaviour of human beings and that humanity should elaborate a unified strategy for interaction with nature. In order to materialise this, in his view, it was extremely important not only to form an ecological mentality but also to create new technologies. But V. Vernadsky's advice was forgotten. Businesses introduced scientific/technological developments which worked against the environment and human beings, and the stable functioning of the bios system in Ukraine was completely violated. Repeated lack of adherence to the bios laws brought Ukraine to the present ecological crisis.

Specialists have calculated that at present, the country is losing 10% of its GDP annually in the form of reduction of productivity and premature losses of production facilities, human and ecological resources. The irrational structure of the Ukrainian economy has led to the current situation in which the resource consumption behind the finished product is three times as high as the world level and nine times the EU level. Ukraine is heavily industrial – mining, metallurgy, chemistry and heavy machine-building figure prominently. Covering 0.5% of the Earth's land, Ukraine is extracting almost 5% of all the minerals of the world – coal, iron ore, manganese ore – which has contributed to the current severe ecological crisis. This has impacted badly on agriculture. Trying to increase the volume of arable land in order to obtain bigger crop yields, Ukraine reduced the fertility of its land. Quite frankly, in the 1990s, with the crisis in the Ukrainian agrosector, more and more land is going out of use – but nevertheless the ploughing-up of the lands in Ukraine is twice as intensive as in Europe.

Annually, for production purposes, 1.3-1.4 billion tons of different kinds of minerals and metals are extracted from Ukrainian bowels. Because of imperfect methods of using mineral raw materials, the biggest portion of extracted raw materials is unprocessed and is dumped – an annual wastage of up to 800 million tons. Such cultivation of Ukrainian natural resources – which are non-renewable – during the whole 20th Century, led to the impoverishment of its deposits.

Irresponsible management of heavy industry also led to the very high saturation of dangerous industrial "objects" in the country. In Ukraine, there are 14 RBMK nuclear reactors – Chernobyl type reactors – which are considered unsafe by the International Atomic Energy Agency (IAEA).

A serious environmental threat has its origin in the so-called "tails," which were collected from the technological wastes of mining, metallurgical and chemical industries. Many times these "tails" created imbalances in the ecosystems of different regions and even led to hazardous catastrophes in mining areas, namely in the Krivbass region and in Stebnik – Lviv district – in the 1990s. Another aspect of such negative processes is the appearance of badly-planned, wasteful mines. The cost of extracted ores, minerals and coals is growing alarmingly. In Donbass, each of 1 million tons of coal being extracted at a depth of 800 metres or more, now costs the lives of approximately 30 miners. Annually, the Donbass region is losing about 300 miners because of methane explosions, unexpected land slides and other extraordinary incidents.

#### **Complex character of the crisis and present ecological problems in Ukraine**

It is worth stating that the level of dependency of Ukraine on the status of the environment is more and more noticeable and such a tendency is growing. At present, its natural resources, the extraction and export first and foremost of coal, manganese and metal ores plus agro-industrial production happen to be the main remedy for recovery. The budget of the country as a whole, plus many of its private enterprises, depends heavily on the delivery of raw materials. At the expense of nature, the country maintains a huge bureaucratic staff corps, the army, pensions costs and other social expenses. The paradox is that alongside the diminishing output of industry, imports of natural resources – mainly energy supply – are also rising. So, an improved interaction with nature in Ukraine will be the main source of its recovery from the crisis.

Thus, taking into consideration the ecological crisis which hit Ukraine, the destiny of the population and the state is now very closely bound up with the extraction, development and use

of natural resources. That is why the logic of life forces us to protect the natural resources and utilise them rationally as the main national wealth. In the 17th Century, the famous economist, U. Petti in his first political economy book Political Arithmetic introduced the conception of "national social wealth," which he presented as a sum of accumulated values. Only in the 20th Century has this conception been expanded to include not only the totality of economic wealth – which has its price – but also "free" wealth with the gifts of nature, the price of which was also included in calculations.

For a long time, the registration of Ukrainian national wealth was done by improper methods according to which neither material nor non-material wealth was ever calculated. This was, among other reasons, at the bottom of the tragic consequences for the environment. Under the conditions of the transformation of the national economy into a market economy, Ukraine also started to calculate national wealth in accordance with international standards. In conformity with this model, the main factors of national existence are labour, capital, scientific and technical progress and natural resources, including land and mineral resources.

The human being presents itself as a main source of social-economic progress, as a key element of productive facilities and as a main aim of production in accordance with scientific-technical progress. It is known that productive forces and production relations are in a constant state of development and, according to modern scientific-technical progress, the importance of human beings is constantly increasing. We are witnessing the constant increase of the importance of professional education and the ability of the people to maintain technically complicated equipment. Underestimating the fact that human beings are a constituent part both of society and of nature, we should strive for the creation of a harmonic ecological-economic system. Ukraine at the end of this century has found itself on the threshold of the most complex of crises. Overcoming them will become the target of the coming century.

### **Harmonising development and the environment in Ukraine**

What are the starting points from which Ukraine can realise the principle of harmonious coexistence of human beings and nature, on the eve of the new millennium? It is evident that having been independent for a mere seven years, the country has not yet established a proper and safe national banking/monetary system. That is why, at present, capital plays an essential but still less important role in the production of national wealth. Investment in production in Ukraine has now almost stopped. The country's production facilities are growing old without being renovated, and are gradually heading for the scrapyard. The production capacity of the nation's enterprises is often dormant, and they are, therefore, unable to fulfil their function of the creation of goods, which the population demands.

Ukraine's great mistake, during the years of independence, was the absence of a properly elaborated concept and programme facilitating the smooth entrance of the country into the international division of labour. This resulted in a deterioration of the labour potential as well. The labour factor is also playing a diminishing role at present, because of the break-up of links previously existing for external co-operation and specialisation, non utilisation of equipment and official and non-official unemployment. This also resulted in the loss of productivity of labour and consequent diminishing of the importance of professional knowledge. The reduction of investments in science and education development affected the quality of the educational process and became an obstacle to the development of scientific-technical progress (STP) in Ukraine.

To our regret, Ukraine, being earlier the generator of STP in the region, hindered these activities mostly as a result of financial difficulties. This fact is the cause of much anxiety for Ukraine. As the world has entered the era of computerisation and of information technologies, a complete renewal of interrelations between the new generation of professionals and the new generations of technology has been created.

To promote its international competitiveness, Ukraine should embrace a process of the transformation of the economy from the administrative style of management to the economic one. To facilitate this, Ukraine should pay special attention to the improvement of the skills of the new generation of managers, enabling them to come to competitive decisions and to bear responsibility for their implementation. The country should exert every effort to overcome the consequences of the isolation of Ukrainian economic and ecological science and education from international achievements in such trends as management, and marketing.

How can Ukraine, under such conditions, still be able to salvage its economy? What is being paid for the import of new and used luxury cars, American grain, German and Polish foodstuffs, soft drinks and alcoholic beverages, Chinese and Turkish garments, with which the Ukrainian markets have been flooded? At the expense of what is it possible to dress and feed the country which stopped its own light industry output and does not secure processing of its unique agricultural production? But even under such unfavourable conditions, Ukraine should not be pessimistic concerning its future. Nevertheless, to overcome the crisis and survive it, it should be considered imperative that Ukraine rely mainly on its huge natural resources. Their proper usage will be the basis for transferring its economy and improving its well-being and the health of the people.

Ukraine started to formulate and create its new ecological policy from the beginning of the 1990s, relying on the postulates of V. Vernadsky. Of especially significant value are the initiatives born in Prague and in Kiev – two capitals of Central and East European states which are to a greater degree affected by the irrational structure of industry and heavy pollution originating from heavy industry. It would not be an exaggeration to state that the collapse of the former social system was caused, to a great extent, by the wrong approach to the solution of ecological problems in this part of the world.

### **Law and environmental management for the 21st Century**

From the first years of its independence, Ukraine started to introduce and implement a new model of ecological-economic policy, namely:

- reduction of the dangers of environmental destruction and population health damage
- limitation and discontinuance of activities which cause harm to the environment and ecosystems
- utilisation of the most efficient methods of managing and consuming natural resources on the basis of international eco-standards, indexes and rules
- inclusion into production expenditures of the expenses of environmental protection
- facilitating the integration of environmental protection principles into socio-economic activities

Making the new ecological-economic policy of Ukraine a reality was influenced by a necessity to create the conditions for the constant development of marketing relationships, to take into consideration the limitations on macro- and micro levels as well as to observe regional interests. According to their significance and priority, Ukraine's ecological goals in the next few years can be submitted in the following order:

### **Recovery of the water environment – Dnieper, Danube, Dniester**

This entails the improvement of water quality through limitation of industrial drains, and perfection of water treatment systems in all country regions. At present, Ukraine – unlike the developed countries – has no national standards regarding drinking water quality as well as no law on drinking water. A very old all-union standard is still being adhered to, according to which chlorine and chlororganic substances are considered as second-rate toxic contamination, which could be out of control. As a result, the population of the Dnieper basin is consuming drinking water with chlorine concentrations of up to 300-350 mg/l while the sanitary norm is 60 mg/l, alongside the resolution: "The quality of water meets the demands of the accepted standard."

It is worth mentioning that specialists from the National Academy of Science of Ukraine have worked out a new technology of drinking water preparation from the Dnieper, an alternative to water chlorinating. It is based on floatation, coagulation, ozonisation and absorption of the pollution residue by activated coal. This technology has now been submitted for implementation.

Practically the whole economy of Ukraine is based on such a scheme where the main water supply source – the Dnieper – is to be placed in the middle. At present, the cascade of six artificial reservoirs draw on it for a total area of 7000 square kilometres. The capacity of hydroelectric power stations is 3.9 million kW, the annual electric power production is 9 billion kW per hour. The Dnieper supplies Ukraine not only with electric power but also provides more than 50% of the country's population with drinking water – more than 1000 towns, 50 of which are big cities. More than 10,000 enterprises are utilising the water of the Dnieper, while 1.5 million hectares are irrigated by Dnieper water. Naturally, contradictions crop up between different authorities, because many organisations are using Dnieper water and nobody is responsible for its quality. The state has no means for the construction of water purification facilities or a data bank on the state of the Dnieper water, nor for a proper water monitoring system.

### **Soil protection for the well-being of people and animals**

This includes the protection of the soil funds of the country, soil recultivation and the elimination of previously caused damage to top-soil, including the Chernobyl disaster, industrial wastes and refuse heaps.

The Carpathian region alone can be submitted as a unique opportunity for recreation for the whole Europe, on a par with beauty spots such as the Alps and Switzerland. This region now suffers from very serious ecological problems, caused by improper development of mining and chemical industries over the last 30-40 years. Places of ecological disaster in the Carpathians include Javoriv, Stebnik, Novy Razdol and Kalush. All of them have approximately similar histories of disaster. One of the classic examples of the transformation of the beautiful places of recreation into a zone of ecological calamity is Javoriv. In the 1960s, a gigantic chemical complex was constructed in the Javoriv district, situated in the Lviv region, for the purposes of sulphur extraction and processing. Three river courses were changed for the success of the project, while three villages and many farmhouses were made defunct.

The SERA enterprise constructed not only mines and production facilities but also a new town – Novojavorivsk – with a population of 30,000 inhabitants. Up to the 1980s, the enterprise yielded an output of 1.4 million tons of sulphur per year. With the collapse of the planned economy, as well as with the exhaustion of sulphur deposits, the enterprise reached the status of full bankruptcy. The town was plagued not only by severe unemployment but also by a very serious ecological disaster. The huge quarry, covering a surface of 2600 hectares, carved the water-bearing stratum. As a result, a dead hydrogen sulphide liquid now fills the whole mine. Though the sulphur is no longer being extracted every day, the authorities still have to pump and then clean about 120000 m<sup>3</sup> of dead liquid. In addition, there is no possibility of closing down the unprofitable enterprise, because of the necessity to pump and purify the dead hydrogen sulphide liquid constantly as well as the need to pump the water out of the three rivers whose courses were changed – about 400,000 m<sup>3</sup> per day daily.

The extent of destruction to the soil is enormous. The water destroyed embankments; huge ravines, craters and valleys spoiled the soil. All this happened because the proper protective constructions were not envisaged in time. At present, the plan of complete mine and enterprise territory restoration is being elaborated, including the re-routing of the three river courses into their previous beds as well as the establishment of recreational facilities. For the fulfilment of this plan, more than \$US 150,000,000 of investment will be necessary.

### **Improvement of air quality – emissions and pollution control**

This plan aims at the improvement of air quality through further limitation of industrial and automotive pollution, and full-scale detoxification of the environment in hazardous regions

– Donbass, Krivbass, etc.

Remaining for a long time – and until now – an industrial giant, Ukraine came fifth in a 1990 global ranking of countries with the most polluted air. With the economic crisis of the 1990s, the Ukrainian enterprises began "to smoke" considerably less. However, nobody can say by how many times the quantity of harmful pollution in the air decreased, since, in Ukraine, monitoring has not yet been established. Although many enterprises halted their production, pollution has not decreased significantly. Coal-fired electric power plants are working at full blast. Purification facilities are not under control. Used cars without catalytic converters were delivered en masse to Ukraine.

All these factors caused an increased incidence of chronic respiratory diseases amongst the population and genetic anomalies in new-born children. As a result of the UN Frame Convention Conference on Climate Change in Kyoto – December 1997 – and according to the Protocol signed there, Ukraine, Russia and New Zealand were permitted not to decrease the pollution levels in the air – based on 1990 levels – until 2008-2012. Nevertheless, such indulgence should not delay the solution of very urgent problems. Ukraine should not continue to live without ecological monitoring. The implementation of some programmes of introduction of new technologies in the field of pollution restriction and for the construction of purification facilities will now begin in Ukraine. Canada and Holland initiated financial support for these programmes, in order to utilise the part of the quota received by Ukraine under the Kyoto Act.

### **Ecological security – impact of the Chernobyl accident and elaboration of a mutually acceptable conception of International Ecological Security**

This entails the provision of ecological security for nuclear power stations, the liquidation of the Chernobyl disaster consequences and the subsequent stoppage of the Chernobyl power plant by 2000.

The Chernobyl disaster happened 12 years ago but such an event will never be forgotten. To minimise the consequences of this explosion, Ukraine should invest more than one billion \$US annually. In order to liberate humanity from this long-term threat, a programme of consecutive stoppage of the Chernobyl power plant is being implemented in Ukraine at present. In case the Chernobyl power plant is stopped immediately, 2000 tons of processed and new nuclear fuel as well as a big quantity of nuclear waste would remain housed inside its building. It would make Ukraine one of the countries most polluted by nuclear waste in the world. Relying only on its own efforts, Ukraine could fulfil such a programme over 12-15 years. At the same time, the world community demands that Ukraine stop the operation of the Chernobyl power station immediately. This is why our country needs corresponding assistance from the G7 countries, the European Union and international financial organisations. Ukraine will incur losses after the closure of the Chernobyl power station that are in the region of 4 billion \$US. So, to implement such a programme, Ukraine needs not credits and loans but subsidies for construction of nuclear waste storehouses, and equally, superseding of the power stations in the Slavutich region, which should solve the local problem of unemployment and enable the transformation of the Sarcophagus into an ecologically secure system. It is regrettable that Chernobyl has left "an eternal trace" on the Earth. Water, air, soil and life in Ukraine will never be the same as it was before.

The atlas *Europe Pollution by Caesium 1998*, prepared by European and Ukrainian scientists, shows that from 1992 to 1998 the territory polluted by caesium increased to 4,000 km<sup>2</sup> and now occupies close to 60,000 km<sup>2</sup>. Ukraine, continuing the dialogue with the world community concerning financial assistance, is nevertheless carrying out its own work connected with the closure of the power station. Different societies play an important role in the implementation of this programme. For example, The International Association of Towns Suffering from the Chernobyl Disaster was established on August 14, 1998. Fourteen towns from Ukraine, Russia and Belarus became the members of this Association. They established their joint fund and are ready to solve the ecological problems of these regions in common.

### **Recovery of the Black and Azov Seas – ecological renaissance through BSEC and other co-operation programmes**

The Black and the Azov seas are the most polluted sea basins in the world. Their further pollution is to be stopped and their ecological security is to be provided. The time has come to rescue these seas from their complete death and full loss of fish productivity as well as from the loss of their recreational use. Thirty years ago, it was possible to catch 23 different species of fish in the Black Sea. The fish productivity of the Black Sea per 1 km<sup>2</sup> in 1960 was 5 times more than in the Mediterranean Sea. At the end of the 1990s, this situation has reversed. It is now only possible to catch 5 species of fish. According to the comparative table of fish productivity of the seas being prepared by the specialists of the Oceanological Institute of Ukraine, the index of restoration of the majority of fishes in the Black Sea today is 3 times less than in the Baltic Sea, 4 times less than in the Caspian Sea, 18 times less than in the North Sea.

If earlier the depth limitation of life in the Black Sea was fixed at the level of 200 m, today it has changed to 100 m, in some places even reaching the level of 50-60 m. The disposal of polluted wastewaters from the Danube, the Dnieper, the Dniester and the Don is constantly increasing, and this fact has resulted in the decline of fishing and tourism, as well as the deterioration of the health and wealth of the population residing in the basins of the Black and the Azov Seas.

Elaborated by English hydrobiologist, Lorens Me, the Programme for Regulation and Environmental Safeguard of the Black Sea, the headquarters of which are in Istanbul, now has a budget of 25,000,000 \$US, intended for the three years up to 2000. Its task is to co-ordinate research activities, and to promote and prepare urgent measures for cleaning the sea out. Ukraine has also signed the International Convention for the Protection of the Black Sea from Pollution, which envisages taking legal action for the control of sea pollution. Six countries have signed this convention – Bulgaria, Georgia, Russia, Turkey, Romania and Ukraine – and, presently, they are ready to sign the second convention, which foresees the establishment of fishing quotas.

As to the Azov Sea, which is not deep at all, it will have lost almost all of its fish productivity by the end of this century, because its main problems have never found any solution. These problems mainly include the stabilisation of salt level in the sea by the regulation of the Don river's fresh water run-off and reduction of industrial pollution. The Azovstal alone, an industrial giant in Mariupol, is using 2,5 million m<sup>3</sup> of sea water for the cooling of its equipment.

### **Ukraine and the Global Ecological Fund**

The Global Ecological Fund (GEF), created by industrially developed countries at the end of the 1980s, permitted Ukraine to take part in the implementation of several ecological projects in the framework of its group of countries – Bulgaria, Georgia, Moldova, Poland, Romania and Ukraine. Currently, Ukraine participates in the following project directions: (a) biodiversity conservation; (b) climate and "greenhouse effect"; (c) ozone screen of the Earth; (d) protection and use of the soil and land resources; (e) participation in international agreements and conventions in the sphere of ecology.

Within the framework of GEF ecological programmes, Ukraine managed in the 1990s to materialise projects in the fields of biodiversity of the Carpathians – 1993-1997, grant of 0.5 million \$US – and biodiversity of the Danube delta – 1998, grant of 1.5 million \$US. The Black Sea project implementation started in 1993, for a period of 20 years. All the Black Sea countries are taking part in a programme under which each of these countries, by 2000, should develop at least one pilot project on rehabilitation of the areas vital to the recovery of fish reserves. Additionally, each country in the region should prepare a National Strategic Plan of action for recovery of the Black Sea with a detailed schedule for its implementation. The Ministries of Ecology of BSEC countries should analyse the results of the programme fulfilment every five years and adopt recommendations of joint additional actions for salvation and recovery of the Black Sea and its coasts.

### **Economics of the environment and new environmental policy**

There are many innovations within the framework of the new ecological policy which have been carried out in Ukraine during recent years. The mechanism of payment for pollution has become the main and popular tool in the country. The use of natural resources is no longer free of charge. For the first time, a charge for soil, forest, water and recreation resources use has been introduced in Ukraine. Since 1994, a special section in the budget of Ukraine, titled Preservation of Environment and Nuclear Security, is allotted to environmental protection activities. To make this process more active, special economic zones were established in the districts of ecological disaster, namely Slavutich near Chernobyl and Kurortopolis Truskavetz, a health resort area in the Carpathians.

The Ministry of Ecological Security of Ukraine, conforming with European standards, has introduced the new indexes of quality of environmental components which can be measured and tested. Many instructions and normative documents have been elaborated to correct the laws on protection of air, soil and water from pollution. On the whole, a state system of ecological regulation is being established in the country, with the help of which it will be possible to afford to transcend the principle of reaction to existing problems to the proactive principle of preventing pollution and taking constant control and necessary prompt actions. A very important component of the new regulation system will be the state ecological expertise, now being installed, according to which the new law "about Ecological Expertise" was adopted in 1998. At present, the ecological expertise departments of the Ministry of Ecological Security of Ukraine annually scrutinise 4,000 to 5,000 different pre projects and project documents – 4,500 projects in 1995.

However, a change in the situation regarding environmental protection is not possible through the efforts of the state alone. The solution of the environmental protection problem should be the essential part of business activities in Ukraine. To promote this concept, the Parliament of Ukraine should elaborate and adopt a programme involving a move to a model of sustainable development based on the ecologisation of all business activities.

One of the most important directions in this sphere should be the implementation, in practice, of the principles of "green tax systems" – the taxes should be gathered not from labour but from used natural resources and pollution. This alone will stimulate the appearance and quick development of enterprises, which are efficient in ecological respects.

We regret that Ukraine still has no ecological management at all. For most of the Ukrainian enterprises, this concept is mere words. They have no idea about such opportunities. But according to the information available, annual services and production in the field of the environment total a sum of about 200 billion \$US. It means that this is one of the biggest markets in the world. Ukrainian businessmen can enter this market through environmental education.

### **Environmental management – eco-auditing – services and expertise**

The development of environmental management and eco-auditing, and the adoption of European standards on environmental protection as part of these processes will be a very important step in the formation of an environmental mentality among Ukrainian entrepreneurs. For Ukrainian industrialists, it is important to know that EU regulations on environmental protection are based on special methods in testing but not on the definition of quantity of the wastes produced.

Today, one of the most popular kinds of business is eco-service. Many companies in the developed countries are ready to provide services for designing and implementing modern projects. The tendencies in this type of services are various: execution of environmental audits, issuing of ecological certificates, decontamination of soil, application of ecological expertise, cleaning of the sea and its coasts from dumped crude oil, processing of waste, and others.

One of the positive examples of the involvement of Ukrainian shipbuilding in environmental protection is the production of the ships at the dockyard in Mariupol by Azov Shipyard for

the accumulation of wastes and oil from the sea surface. During 30 years of work at the above shipyard, the enterprise managed to arrange the production of 3 models of waste-assembling ships and has built 217 ships, more than 30 of which were delivered to Greece. This enterprise continues to receive orders for these ships from Greece and other countries. The efficiency of these ships is well illustrated in the following example: in 1995, an Italian tanker in the port of Piraeus, Greece, whilst it was moored in the oil terminal, destroyed 70-80 m of oil pipeline. As a result 760 tons of crude oil were drawn off into the harbour. The Greek company ERE which was engaged in localisation and liquidation of the disaster, had previously purchased the waste-assembling ship in Ukraine at a price of less than 100,000 \$US and managed to liquidate the disaster. From unofficial sources we knew that the company ERE has received remuneration of about 1.3 million \$US. Unfortunately, Ukraine has, at present, only a very weak "sanitary fleet," though the menace of ecological damage in 17 Ukrainian ports on the Black and the Azov seas is very high. In the first quarter of 1997, in the ports of Ukraine, 33 cases of ecological damage were fixed – nine of them in Sebastopol. The losses from these accidents amounted to 16 million \$US.

Many changes have been introduced in Ukraine in the 1990s relating to the improvement of legislation in the sphere of environmental protection. The Parliament of Ukraine adopted the law "about Ecological Expertise" and the Cabinet of Ministers of Ukraine adopted the Decree of March 19, 1997, on the gradual installation of EU directives, sanitary, ecological, veterinary and phytosanitary regulations, as well as international and European standards. Nevertheless, Ukraine needs further improvement of legislation in this field.

### **Towards sustainability**

No doubt, it is high time for Ukraine to shift to the model of sustainable, eco-balanced, safe and efficient social/economic development and to elaborate the programme of actions for the materialisation of this idea and model. But this is a long-term process, which needs the solution of unprecedented-in-scale social, economic and ecological tasks.

The world community has already been trying to solve the problems of harmonisation of our interaction with nature. Ukraine, which presently carries a considerable burden of unbalanced ecosystems, will play a key role in the world-wide programme. The future of Ukraine depends on the consolidation of the efforts of the whole society, state and entrepreneurs in joint activity in the field of harmonisation of relations with nature. It should give impetus to a new renaissance in Ukraine.

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