

## **Sustainable Development Programming in Russia: Preliminary Results and Main Problems<sup>\*)</sup>**

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### **Summary**

Paper deals with main problems hindering the sustainable development programming and the achievement of environmental goals in the transitional Russia. The authors divide these problems into two parts. The first one is connected with the current financial and politico-economic crises in Russia. This crises once again stresses the necessity of the modification of the market reform's model taking into account the social consequences of the market transformation. The problems and difficulties of the second type have deep historical roots. They accompany the process of the market transformation during the last decade. The main of these are the following: (i) the macroeconomic instability as a result of the transformation conditions and political contradictions in the society; (ii) the chronicle budget deficit and essential under-investment in nature protection sectors; (iii) an inefficient and environmentally damaging industry structure with a large share of heavy polluting and resource intensive branches of the economy; (iv) the absence of well defined property rights, especially on natural resources; (v) the weakness and "unsustainability" of the state ecological control system; (vi) the inefficiency of macro-ecological policy and the weakness of an ecological lobby. Despite of these difficulties the first steps for achieving the environmental goals by means of sustainable development and ecological programming are under way in Russia. The modern system of sustainable development and ecological programming includes several components. The most important are as follows: the state concept on nature protection and sustainable development; the two-years federal plan-actions on nature protection and sustainable development, which consists of the state environmental programs and corresponding normative-legislative base; the system of environmental standards, taxes and norms (international and national); the set of regional environmental programs, etc. The process of the sustainable de-

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velopment and environmental programming embrace company level as well. The sustainable development achievement could occur due to the implementation of the new international standards on environmental management - ISO 14000.

## 1. Introductory Remarks

The realisation of the sustainable development goals plays an important role for Russia due to the fact the country signed the 1992 Rio Declaration. The significance of these goals also depends on the fact that Russian natural resources potential is considered as a world's natural sustainability provision. In reality, Russia still has 30% of the world wild nature resources (8 mill. hectares of the Russian territory). The Baikal Lake obtains 20% of world fresh water resources. Russia has 30% of world fir forest resources.

In spite of these facts, the complex ecological situation in Russia is not only due to the former centrally planned economy, but new ecological issues have been added during the transitional period, resulting positive and negative influences. The overall ecological picture could be seen from annual "State Report on Environmental Situation in Russia" [1]. Let us introduce and analyse some figures from the last Report.

- **Regions:** 15 % of the total Russian territory is polluted. The most polluted regions are the regions of petrochemical and chemical industries concentration. For instance, these are the region of the South Ural mountains, the Kusbass region, certain areas of the Middle Volga and others. The further economic development of these regions is hardly possible without crucial structural changes directed to the ecological purposes. In comparison 3,5% of Russian territory are declared as special protected natural areas including national parks, natural reserves etc.
- **Nuclear pollution.** The first and still existing complicated problem appears as the consequence of Chernobyl catastrophe (57650 square km. of the Russian territory is polluted). The other problem consists in the processing and utilisation of the nuclear waste. Particular danger concerns the illegal infiltration of third countries nuclear waste contradicting international agreements ratified by Russia. Another issue of the nuclear pollution deals with nuclear underground explosions and nuclear waste storage. Hence the main problem of the nuclear pollution concerns the processing and storing of the nuclear fuel and waste

products. Besides it is necessary to apply high technologies and to form advanced nuclear legislation compatible with the world legislative acts.

- Air pollution problem. Due to the economic depression beginning from 1993 there is an essential decrease of the harmful pollution. In 1996 the harmful air pollution decreased on 12,7% in comparison with 1992 (in 1997 the pollution situation was stabilised). From the other side production level decreased on 40%. The reason of this misbalance is connected with the increase of transport pollution. The quantity of the transport units doubled through the considered period. In 1997 there are 30 mill. of these units. As a result 40 mill. of the Russian population in 86 cities bear hard air pollution when it accesses "admissible limits" - AL - in 10 and more times.
- Surface and underground waters resources (strategic resource) pollution. The situation here differs from that of the air pollution improvement. The main reason consists in the weak and non-effective water refinement equipment. 30% of the subsoil waters are polluted. 50 mill. of the Russian population use bad water.
- Soils. The agricultural land territories during 1986-1993 decreased on 6,8 mill. square km. due to the erosion and watering. The total agricultural land is now 200 mill. hectares. The soil pollution decreased due to the decrease of mineral fertilisers application.
- Forests. Now the timber production is only 2/3 compared with 1992. As a result there is a provision of the forest resources conservation. But from the other side forest resources are considered to be renewable and it is necessary to apply a planned cutting of the maternal forests.
- Fish resources. The decrease of fish resources as well as fish production in Russia is a consequence of the international competition from the main fishing countries (Finland, Norway, Japan, etc.). It resulted the decrease of the fishing industry income and marine environment protection expenses.
- Population. As it was mentioned above, 15% of the Russian Federation territory with 25-30 mill. inhabitants is considered to be unfavourable from the ecological point of view. 60 mill. of Russian population lives in the polluted air systems, more than 50 mill. drink polluted water. 15% of diseases for the urban population depend on the ecology. The other reasons of diseases level are inherited factors such as bad food consumption, unsatisfactory medical care etc. The average duration of life is 58 for males and 72 for females; every 4 adult and every 6 child are chronically diseased. There is the natural delay of the population due to the excess of death rate over birth rate. From 1992 the losses of Russia are 2 mill. 700 000 of inhabitants.

## 2. Difficulties of the sustainable development goals achievement

These facts and figures show the complexity and the difficulties of the sustainable development goals achievement. Let us divide these difficulties and problems into two parts. The first one is connected with the current financial and politico-economic crises in Russia. This crises once again stresses the necessity of market reforms model modification taking into account social consequences of market transformation. The problems and difficulties of the second type have deep historical roots. They accompany the process of market transformation during the last decade.

First of all let us focus on the problems of the current financial and politico-economic crises. It is supposed to be not only the part of the world financial crises but is a consequence of the Russian reforms model which was chosen in the beginning of the 90-th. The results of this market transformation are well known. The destruction of the national economy ties, the crash of the banking system, high level of inflation, increasing unemployment, the federal and local municipal budgets deficit, insolvency of the most part of national companies. In 1998 August 70% of the industrial enterprises and 90% of the agrarian firms were insolvent [2]. This crises stressed the necessity of the reforming model modification.

The new variant of the reforming being more compatible with the experience in Western Europe is actively discussed between Russian scientists and politicians. One of the elements of the future reforming is strongly connected with the social-oriented strategy. The essential part of the new ideas deals with the restructuring and technological modernisation of the national sector of the economy. The solution of these tasks would have favourable environmental consequences.

It must be kept in mind that the accent ought to be put not only on the raw-export oriented sector but on the economy as a whole. The latter includes presumably manufacturing and high-technological industries and spheres that lead to the decrease of energy and natural resource consumption. The national sector economy increase would solve the problem of the federal and municipal budget deficits that could be considered as the important condition for the environmental investment process launch.

The 1998 current economic and financial crises induced the sharpening of the ecological problems that accompanied the market transformation long-term issues accumulated during the last decade. We are coming to the analysis of those problems.

- Decrease of state financing on the ecology in 20 times from 1,4% of GDP in 1987 to 0,08% in 1997. The ecological investments and cost expenditures decreased in 10-15 times as well. In 1994-96 expenditures as percent from Federal Budget was 0,47%, in 1997 only 0,4% which equals to 2,25 trillions roubles. At the same time in 1995 the level of ecological expenditures in the USA was 1,52% of the GDP. Simultaneously, during the financial and socio-economic stabilisation of 1996-1997 the ecological investments in the natural production sphere increased to 2,1% of the total investments [3] that is adequate to the Western countries level. But this positive tendency was not fixed and strengthened during 1998;
- The unbalanced structure of the economy with the large share of the heavy polluting industries and resource intensive branches. The high depreciation of the most ecologically dangerous industry productive units of Russia leads not only to the technical and technological lagging behind but to the sudden risks growth. This phenomena rises the problem of the natural protection investments. According to certain estimates the substitution of the fixed capital, high-tech ecological equipment would require 36 years in the fuel-energetic complex (TEC), 50 years in the agro-industrial complex (APC) and 56 years in metallurgy sphere [4]. The so called eco-business sector (ecological equipment and technology production) acquires a particularly important role in the modern economy. The Russian enterprises would have enormous chances for the mentioned development. Estimates shows that the average rates of the eco-business sector is 5,5% during the 90-th [5]. The Russian eco-business lagging behind the developed countries is explained by the low marketing skills and culture, low competence in the international trade sector, and sometimes the protectionism policies from certain Western countries. The positive example of the Russian eco-products and eco-technology promotion concerns the activities of the German Chamber of Trade and Commerce. The latter forms the new Russian ecological products and technologies data base which through the Internet and other informational channels are spread all over the world.
- The absence of the necessary institutional conditions of the sustainable development and natural protection. First of all it concerns the absence of the well-defined property rights. The main issue of the property rights discussion in the legislative circles and the Russian State Parliament focuses on the problem of the national and foreign residents (natural and juridical persons) private property on land and the question of private property on agricultural land of Russia. These mostly political arguments prevents the solution of the other aspects of the property rights. The essential issue of those problems deals with the real as-

assessment of the natural resource which comes to the market transactions. The other aspect of the property rights problem is the establishment of the real taxes on the market transactions with land and other natural resources. In 1997 there were 800 000 market transactions connected with land and natural resources [6]. Under the fulfilment of the property rights requirements the expected income would equals 25 bill US\$ [7]. Similar incomes all over the world are directed to the state and local budgets and form the basis for nature protection and the reproduction of the natural resources.

- The weakness and "unsustainability" of the state and regional ecological control system. During the 90-th the system of the ecological control changed 7 times and there are no chances to think that it would be the last reorganisation. Besides the main slogan of the changes concerns usually the reduction of the ecological management costs not taking into account the increase of the ecological control effectiveness. That was the main reason the ecological management default.
- The ineffectiveness of the macro-ecological policy connected with the applied market economy transformation model and the lack of the social orientation in the reforming process. This ineffectiveness could be explained by the absence of the acting "green parties" in the State Duma lobbying the government policies.

### **3. The main components of the sustainable development and ecological programming**

Nevertheless some steps to sustainable development goals have been made. In 1994 the president of Russia signed the Order of the state strategy on nature protection and sustainable development. The latter means gradual reproduction of the natural ecosystems to the level of the guaranteeing stability of environment and future provision of sustainable favourable environmental development. According to this Order the federal and regional authorities are responsible for the preparation of sustainable development programmes.

In 1996 the State Concept on nature protection and sustainable development was adopted and published. This Concept was a result of the wide discussion among scientists, officials and politicians. This Concept was a basis of the Two year State Plan-Action on nature protection and sustainable development adopted in 1994.

Now the scheme of the sustainable development model is as follows ( Fig. 1).

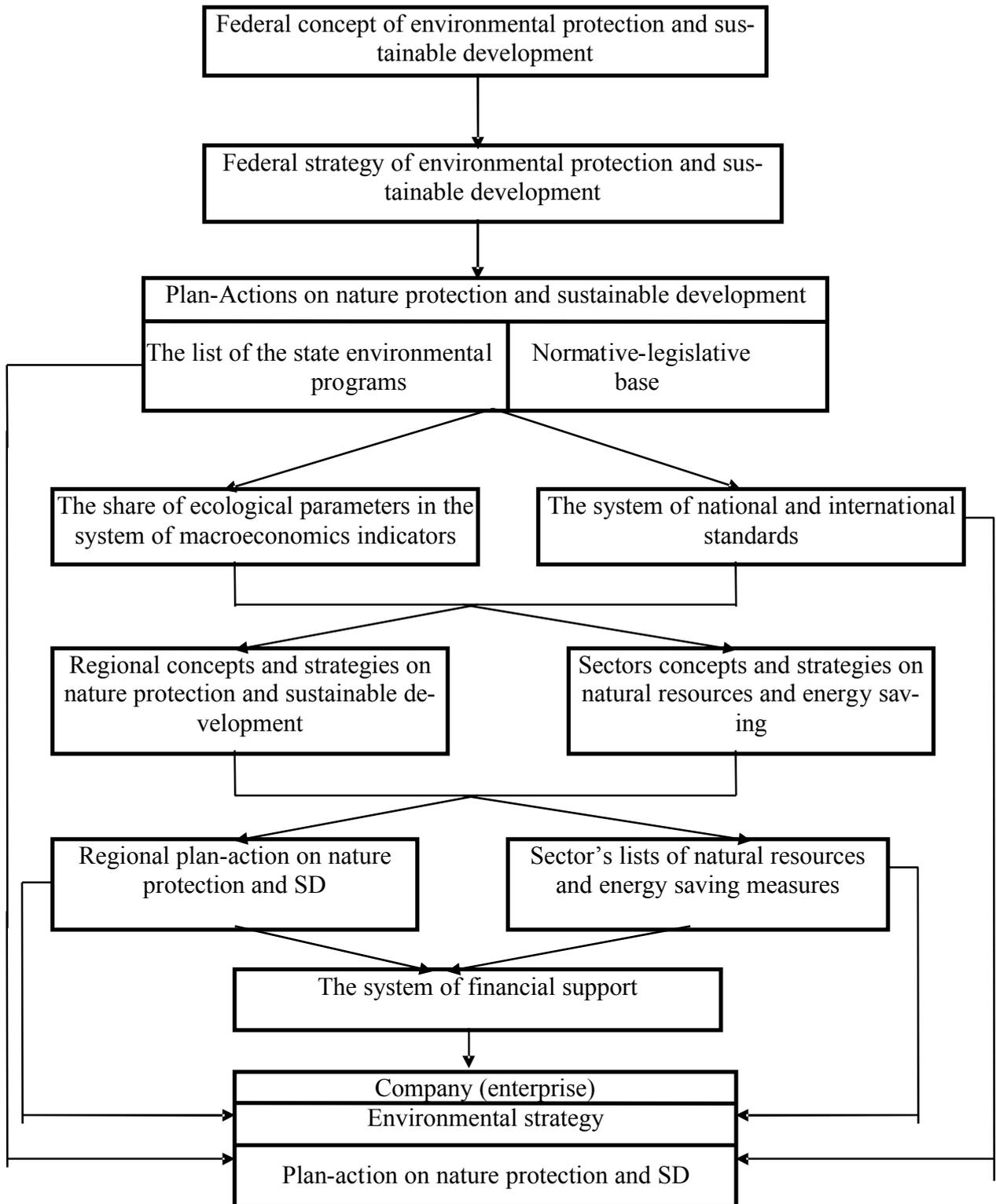


Fig.1: General scheme of sustainable development and ecological programming

The primary issue of the sustainable development and environmental programming deals with the Federal Concept of environmental protection and sustainable development. It serves as a basis for the Federal Strategy of environmental protection and sustainable development. This strategy is the 10-years long term complex forecast of the socio-economical development and the nature protection. This strategy is divided into two 5-years periods. The first long-term forecast was done for the period 1996-2005. Each year this forecast will be specified, modified and prolonged.

In the framework of this Federal Strategy the 2-years Plan-Actions are processed and put into practice. Each of these two-years plans consists of two parts: a list of environmental and sustainable development programmes and adequate normative legislative base. Now the number of the Federal ecological programmes is about thirty [8]. The analysis of their contents shows that the most part of these programmes is directed to the ecological making decisions in the so-called "problem areas". Unfortunately there is a lack of programmes having innovative character oriented to the high-tech ecological equipment and technologies promotion and provision. Another problem is that the finance basis of these programmes as well as the responsibility and programme fulfilment control are not sufficiently clear.

The next stage of environmental and sustainable development programming concerns the estimation of the share of the ecological parameters in the system of macroeconomic indicators (GNP,GDP). The federal programming (including the system of ecological standards) is used as the basis of it in different regions and sectors of the national economy. Regional and sectoral authorities implement similar forms of environmental and sustainable development programming: the elaboration of the regional (sector's) concepts and strategies, action-plans, etc.

The central core of the sustainable development and environmental programming concerns the financial issues. There are the multiplicity of the financial sources for environmental protection in Russia. These is a three-level budget system: the Federal, Regional, Municipal budgets accumulate the so-called "resources taxes". Another financial source concerns the Ecological funds. So far they are one of the new elements of the ecological financing we would focus on them more deeply. The system of the special ecological funds is created in Russia for the sake of the regular nature protection tasks settlement.

The income part of these funds contains:

- charges for nature pollution
- penalties for extra-normal pollution

- confiscated means of hunting and fishing and products of fishing and hunting

In accordance with the legislation expenditure part of the Fund is supposed to be spent:

(i) 60% on nature protection for local municipal needs; (ii) 30% - on nature protection of regional, area, republican level; (iii) 10% - in the Federal Ecological Fund on nature protection of Federal level. In practice the two levels (municipal and regional) of natural protection are not divided into separate parts.

Among the other sources there are:

- Insurance companies reserves
- National and international banks credits
- Tradable pollution permits. It implies the selling and purchasing of the pollution rights at the intergovernmental level which appeared after the Kyoto 1997 World Conference on climate change. Due to the production decrease Russia fulfils among others international CO<sup>2</sup> norms and hence could be a supplier of those permits to other countries.

The process of the sustainable development and environmental programming embrace the company level as well. The sustainable development achievement could occur due to the implementation of the new international standards on environmental management - ISO 14000. This series of standards is connected with the sustainable development and environmental programming realisation on the enterprise level. The introduction of those standards is supposed to be voluntary. Consequently Joint ventures and exporting companies in the first turn are interested in the implementation of these norms.

The other mean of the enterprise sustainable development orientation is the ecological expertise of investment projects. The Law on ecological expertise in Russia was ratified in 1995 and now the approval process of the investment projects and its ecological expertise looks as follows (see Fig. 2).

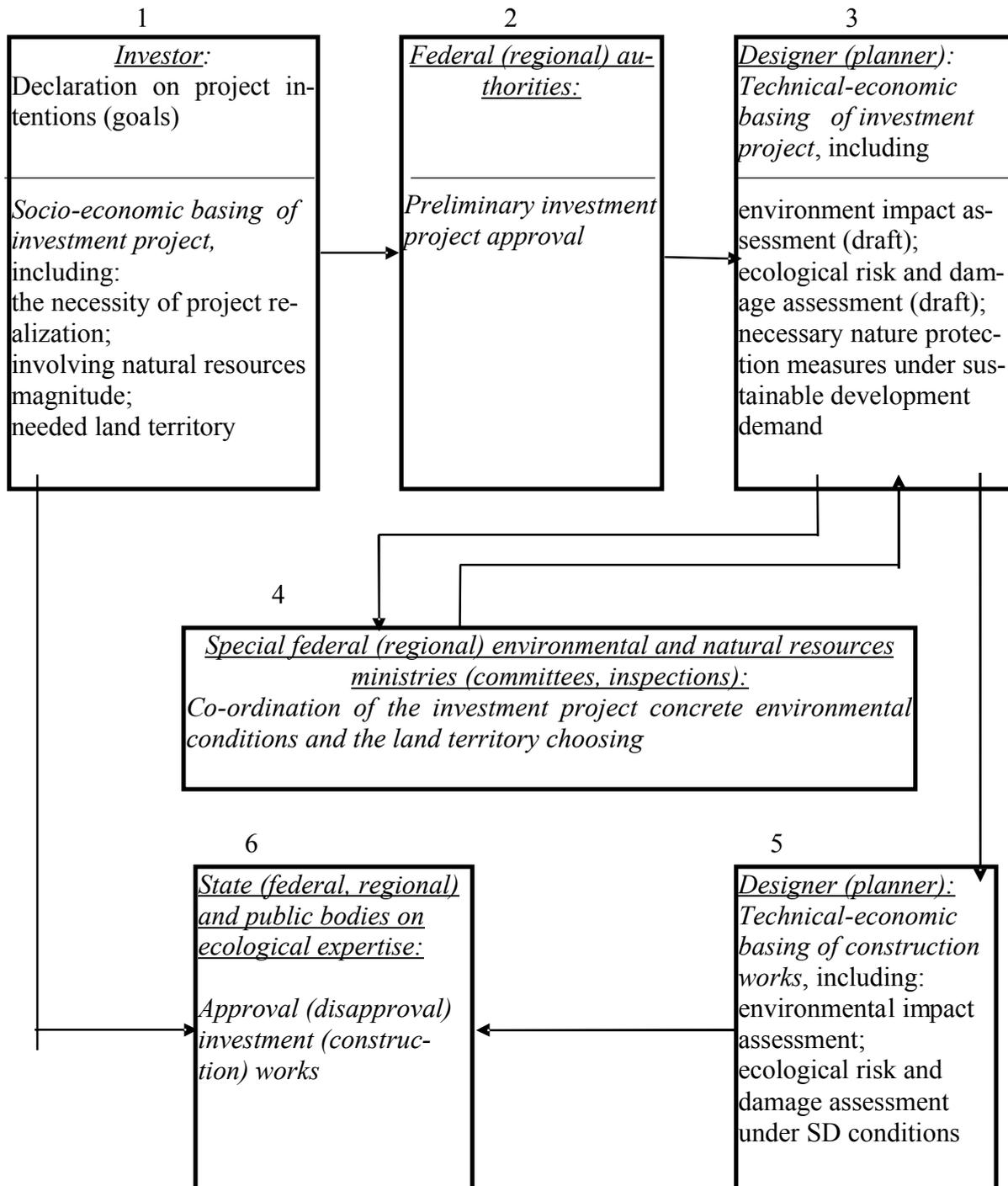


Fig.2: The process of the investment project co-ordination and ecological expertise

The sustainable development criteria are taken into account through the approval process at several stages, namely at the stages 3, 4, 5 and 6. This procedure provides the sustainability and ecological safeties of the future production.

#### 4. Conclusion

Those are the first results of the sustainable development and environmental programming in Russia. Sustainable development is the general and complicated task and it is necessary to keep in mind all the aspects of it. One of the problems that was mentioned but not deeply analysed is the social sustainability - the problem which is extremely essential for the transitional economies. Market reforms in Russia deepened the inequality and social polarisation of the society. For example in the beginning of 1998 the profit of private owners was 50% of GDP compared with 25% in the developed countries; 50% of savings belongs to 10% of the Russian citizens; the share of the employees incomes in GDP decreased from 49% in 1990 to 18-20% in 1998 [9].

The solution and settlement of the modern environmental problems in Russia require the public participation and general ecological culture and education dissemination. The spreading of the advanced international experience in Russia is necessary to overcome the information and cultural barrier between East and West and to support the efforts to improve the ecological situation. The preparation of the modern textbook on Environmental Economics and Ecological management for Russian Graduates and Post-Graduates by the European University Viadrina Frankfurt (Oder) and Sankt Petersburg State University under support of the Volkswagen-Stiftung can be regarded as one attempt in this direction. Ecological education in the 80-th that was started on the higher academic universities level and was in a way a copy of the American text-books and monographs nowadays changes crucially. Firstly, the subject of the "Environmental economics" is a part of the State higher education standard and all the Russian state Universities are obliged and responsible for its inclusion into the curricula. Secondly, new Russian text-books adopted to the public appeared on the literature market. Thirdly, there is a mass media popularisation campaign going on continuously beginning from the end of the 80-th that plays an important role in the general ecological education development.

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