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ROADS REHABILITATION AND ENVIRONMENT IN MOLDOVA: SOME LEGAL AND NORMATIVE HARMONIZATION ASPECTS

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Key words: road, environment, legislation, solutions.

Abstract: This paper analyzes the environmental regulatory reforms of the Republic of Moldova to restore roads and problems over time. Goals and objectives are the analysis of the current situation on road rehabilitation and environmental assessments in this area, as well as issues that require in rehabilitation and maintenance of roads in the Republic of Moldova. Are described briefly: general aspects of road rehabilitation issues; legislation and environmental regulations in the road; differences between Moldova and procedures of the World Bank's environmental assessment in the construction and rehabilitation of roads; problem of national legislative and normative acts harmonization to international requirements. The paper discusses specific environmental to appear on completion of the rehabilitation of roads in the Republic of Moldova. In the final part of the paper presents the conclusions and some suggestions on how to facilitate the rehabilitation of roads in accordance with Agenda 21 of the country and European and international requirements.

Introduction

It is known that Moldova make greater efforts in reforming all areas of the national economy, to overcome existing difficulties, which have a complex connotations - political, economic and social and related to global and regional economic crisis. Reform of all sectors of the national economy determined the need to change attitudes towards the use of natural resources, promote economic and social development compatible with the environment.

In this context the Republic of Moldova has to implement the National Strategy "Agenda 21" (2000), Republic of Moldova - European Union, 2005 –

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2008 (2013), Strategic document „Rethink Moldova” (2010), National Development Strategy "Moldova 2020": SEVEN solutions for growth and poverty reduction (2012), "PROGRESS AND INTEGRATION" Program of the activity of the Government for 2008-2009 and important Government activity programs (2013): Moldovan Village - (2005-2015), European integration: Freedom, Democracy, Welfare – For years 2009-2013, European Integration: Freedom, Democracy, Welfare for years 2011-2014” and others.

Achieving these goals requires action and great efforts to reinvigorate the national economy branches, which in turn requires updating existing normative legislative base, the development of new laws and regulations and/or amend those existing, national standards and norms adaptation to the international ones, and/or taking in force the international standards of ISO and EN series, etc.

The paper discusses specific environmental aspects to appear on completion of the rehabilitation of roads in the Republic of Moldova. Given the fact that the information gained may serve to comparative analysis of national acts with the international ones, in particular the European and can be used to develop concrete recommendations on the harmonization of environmental legislation, norms and standards.

1. Objects and methods of research

Objects of research were: the environmental legislative and normative-methodical acts of United Nations, European Union, Republic of Moldova and Russia, Agenda 21 of the Republic of Moldova, national environmental policy, strategies and programs of the Republic of Moldova and those international: "Republic of Moldova - European Union, 2005 - 2008", Programul de activitate al Guvernului Republicii Moldova „Integrarea Europeană: Libertate, Democrație, Bunăstare” 2011-2014 and others.

It have been studied and the methodical recommendations concerned international (Handbook on the implementation of EC environmental legislation, 2008) and the national ones: Regulation on the harmonization of Moldovan legislation with Community laws (2006), Guide to the preparation of Tables of Concordance (2010), Methodology of law approximation in the Republic of Moldova (2010), Environmental protection laws and policy. Law approximation to EU standards in the Republic of Moldova (Breda Howard, Ludmila Gofman, 2010) and others.

Methods of research were:

1. *Study* the information on the environmental and legislative-normative acts. It was conducted by analyzing of the official materials of international (1999, 2013), European (2013) and national organizations (2007, 2008, 2013) existing in period of independence of the Republic of Moldova (1991 – present) and others.

2. *Collection and processing* of documents materials was carried out under official publications (in written or electronic forms) and existing data bases at international, European and national level.

3. *Comparative analyzes* of the acts in view elaboration of recommendations and proposals for harmonization of national legislative-normative acts to European and international ones.

2. Results and discussions

2.1. Assessment and development of a database of environmental documents in road rehabilitation

In accordance with the recommendations of the European Union, Republic of Moldova has approved the programme to implement the majority of legislative and normative acts, which are part of Environmental Acquis and must be transposed into national law.

Republic of Moldova. Legislative and normative documents used in road rehabilitation.

Analyzing the legislative and normative acts and some publications used in the Republic of Moldova on compartments "Rehabilitation of roads and environment" at the current stage of development, we highlight some specific materials, reflecting the complex legal and normative problems regarding roads, namely:

1. Laws - Law of Roads, no. 509-XIII of 22.06.1995; Road Fund Act, no. 720-XIII of 02.02.1996; Auto Transport Code, no.116-XIV of 29.07.98.

2. Bylaws - Regulation on Construction: Roads and bridges, no. D.02.01-96 (1996); Road Traffic Regulation, no 357 of 13.05.2009; List of public roads (Government Decision on the approval of national and local lists of public roads, nr.1323 of 29.12.2000 (2013).

3. Programs on road infrastructure (2013): Budget Investment Program 2011; Foreign Investment Program 2011; Program of works for rehabilitate of roads from external funds in years 2011 – 2015; National roads selected for rehabilitation and repair in years 2011-2014

4. Others.

Analysis of legislative and normative materials in domein of roads showed that the documental base is not optimal developed and existing documents in mostly are outdated. For legal drafting as used the Regulation on Construction: Roads and bridges no. D.02.01-96 (1996) in which are recommended using of several old regulatory acts (regulations from the years 1974-1989 and standards from the years 1977-1986). It appears that the harmonization of national provisions to the European and international requirements is not visible, and most of national

companies and businesses activities are conducted in accordance with the old legislation and rules that do not allow quality work in this area.

Similar problems have been highlighted in the process of drafting of the feasibility studies and technical projects on rehabilitation of roads. It is known that on this phase is given a special attention to the environmental impact assessment in accordance with the following basic environmental acts:

1. Laws (2013)- Law on Environmental Protection, no. 1515-XII (1993) with ulterior amendements; Law on Ecological Expertise and Environmental Impact Assessment, no. 851 (1996).

2. Bylaws (2013)- Regulation on Environmental audits of companies (1998); Regulation on public participation in environmental decision-making (2000); Instruction on organization and implementation of the State Ecological Expertise (2003);

3. Others.

Therefore, planning new objects and activities that can radically affect the environment shall be based on documentation of the environmental impact assessment (EIA) which is necessarily subject to state ecological expertise. Under environmental legislation, in particular Law no. 851, the negative effects of human activity on natural elements and factors, ecosystems, human health and safety, as well as on material goods represents impact upon environment.

2. Environmental procedures and requirements in the rehabilitation of roads

In the Republic of Moldova legal and regulatory requirements for promotion of road rehabilitation requires modification and harmonizing with those european and international.

The EIA system is focused on the basic requirements and criteria checks of the state ecological expertise, developed since the Soviet period. In general aspects they are similar in most countries of the former USSR - now, Eastern Europe and Central Asia countries. Meanwhile, in several countries (including Republic of Moldova) the requirements EIA are proposed only to projects with major impact on the environment, which are according criteria stipulated in the Law no. 851 criteria (Box 1).

Country's projects requiring EIA are subject to the some stages of development. According to the Regulation on Environmental Impact Assessment (Annex to Law no. 851), in art. 9 indicates a string of measures need to be taken into account for the decrease environmental impact (Box 2.)

Box 1. Republic of Moldova. According to the Law on Ecological Expertise and Environmental Impact Assessment no. 851 all projects fall into three main categories:

- **The first category** - projects requiring full EIA before designing and could be developed further (detailed design) only with the positive approval of the EIA findings by State Ecological Expertize (SEE);
- **The second category** - projects require environmental approval of the project activities and to include of a special chapter on the environment in the design documents, and then, respectively, a positive approval from SEE prior to construction; and
- **The third category** - the other projects, which do not need to go through all official procedures EIA and SEE.

Box 2. Measures need to be taken into account for the decrease environmental impact (Annex to Law no. 851, art.9).

9.3.4. Description of actions proposed for averting, liquidation, minimize and offset of any environmental impact. A. Plans territorial nature protection. B. Technical Solutions for: decontamination, recycling of waste, protection of architectural and archeological monuments, etc. C. Measures of compensation. D. Other actions.

9.3.5. Description of operative measures for risk of any possible damage and unforeseen impact to the environment.

9.3.6. Scheme monitoring and environmental quality management, operating period of the object and of their activity achievement.

9.3.7. Description of the forecasting methods used, of the main principles used to assess the impact and of the ways of obtaining real indicators and forecasting of the quality of the environment in the district where the project is to be implemented.

9.3.8. Evaluation of uncertainty of the key findings.

Develop document EIA is a complex and includes:

- Analysis of project activities in combination with the base state of the environment;
- Comparative analysis of cumulative concentrations of pollutants with the maximum permissible concentrations (MPC) (eg: air pollution);
- Computer modeling (mostly produced in Russia) environmental impact by possible activities that are typically used directly without being translated or adapted to climate Moldova. Some models are developed by State Hydrometeorological Service in the Republic of Moldova.

From those mentioned in Box 2 it is clear that environmental protection plan is part of project documentation (project execution) and usually includes the chapter "Protection of the environment" or "Book of the environment".

However, the project selection procedures are arbitrary and have some gaps because of lacking the clear criteria that has specify which projects fall under the state ecological expertise. Moreover, final and complete environmental assessment is only accessible at the end of the design. In consequence, almost all types of activities fall under this practice, even those with minor impact on the environment.

In general, all activities resulting in the formation of a series of principles and tasks that need to be followed to promote the projects can be demonstrated in a scheme (Figure 1).

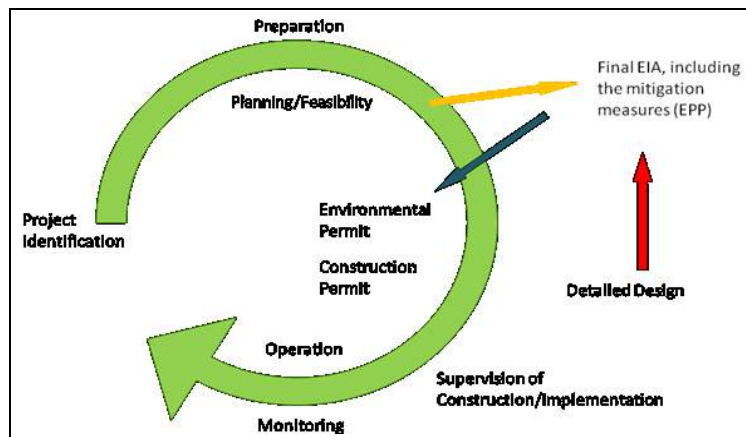


Fig. 1

Approval of project documentation, especially in the "Environment" is performed by the State Ecological Expertise, which often approve the same material twice: the *first time* at the feasibility study phase and the *second* - at the conceptual design phase.

But during training young Moldovan state issues related to infrastructure development, quality and sustainability of roads, many years have not been raised at their fair value, causes the poor economic situation and the poor legislation base.

Therefore, this important economic sector was hard hit by deteriorating its infrastructure and capabilities: some subdivisions have disappeared, and the number of specialized companies and enterprises decreased. In addition, it appears private interprises and companies operating large profile which, however, after weak legislation, old style and normative, as well as with a little experience created difficulties in projects implementation in roads branch.

In recent years, foreign assistance related to growth in Moldova is a redoubled effort in road rehabilitation projects, in which participate many specialized companies from abroad. Participation of foreign companies allows rehabilitation of roads with a high quality because they use international laws and regulations.

Article I. Analysis of documentation used by companies and businesses in the country and abroad in the field of roads has shown that in the development and implementation of projects reveals more differences in

Box 3. Case Study 1. Deference of requirements of the World Bank and of the Republic of Moldova into the development and implementation of an environmental management plan.	
Requirements of the World Bank (Operational manual. OP 4.01 - Environmental Assessment)	Requirements of the Republic of Moldova (Law on Ecological Expertise and Environmental Impact Assessment, no. 851 (1996).
Legal Status: EMP requested by WB is legalized and applied. The need for environmental assessment (EMP) is stipulated in the agreement lending / borrowing (also is provide money to implement the Environmental Monitoring Plan).	The legal framework in Moldova does not require developing and implementing of an environmental protection plan. The Law 1515-XII on Environmental Protection has'nt stipulates requirements for it.
Approaches to mitigation measures of the environmental impact	
EMPs requirements of WB derived from the EIA study.	Environmental protection plans which are required by national laws are also based on EIA documentation, but provide a list of specific impact mitigation measures.
WB usually require EIA / EMP at a very early stage (at feasibility level, or even before deciding to grant funding). This is done for dissemination / publishing / consulting better and better.	Law no. 851 (Article 17) requires: ... 1) Organization and EIA at all stages of planning and design objects, funding the development of EIA documentation, organizing public debates on the proposed activity and the presentation of the EIA documentation, with necessary approvals for to carry out the state ecological expertise; 4) The positive advise of the state ecological expertise serves as the basis for the chapter "Environmental Protection" in the project and planning documentation.

Box 3 continued	
1	2
<p>Environmental Management Plan includes:</p> <ol style="list-style-type: none"> 1. A brief project description; 2. Mitigation or control of pollutions plan: including responsibilities and costs; 3. Monitoring requirements: Including responsibilities and costs; 4. Institutional arrangements to be used to implement the EMP including: Responsibilities; Institutional strengthening (training) arrangements; 5. Reporting requirements: Schedules; Public consultation summary (minutes of meetings with affected groups and stakeholders, etc.). 	<p>Environmental Plan includes:</p> <ol style="list-style-type: none"> 1. Description of the project; 2. Mitigation (or control) of the environmental impacts, including the responsibilities and costs. <p><i>Or , The Moldovan EPP is mostly limited to this:</i></p> <p>What are the implications?</p> <ol style="list-style-type: none"> 1. When the country has no provision for a legally binding EMP: Environmental mitigation measures are more difficult to enforce; 2. When monitoring plan is not included: The effectiveness of mitigation measures cannot be assessed; 3. When institutional responsibilities are not assigned: It is difficult to ensure accountability, monitor compliance, or reward good performance; 4. When costs are not estimated: It is less likely that the mitigation measures will be adequately financed; 5. When public consultation is not documented: It is less likely that consultation will be timely and adequate.

Article II. international, including the World Bank environmental policy document (OP 4.01 - Environmental Assessment (1999)). Some of these differences, for example, the development and implementation of an Environmental Management Plan (EMP), are presented in Box 3. legislative and regulatory requirements of the Republic of Moldova and

However in the development of projects also must be considered some particularities of the existed roads of the rehabilitation conditions thereof in the Republic of Moldova, which may be:

Distance between localities (villages, towns) is relatively small, so it can be avoided the placing of the training camps for workers in construction sites, although workers transportation at the end of the working day to the premises leased necessary is less expensive.

The consequences are features, such as:

1. There is no need for field workers preparing food;

- No sleeping facilities are required;
 - No need to shower facilities, washing clothes etc.
2. Most road rehabilitation projects are for the existing road, so:
- Not required detailed studies;
 - Environmental impact is more significant during the implementation (execution of projects in the field);
 - The terms and costs can be reduced and the reasons that the roads are of short length.

Conclusions

A. Updating existing normative legislative base require more effort, given the possibilities for their practical implementation in terms of co-participation of companies and foreign companies;

B. Adapting national norms and standards to those European and international and / or to receive international standards of ISO and EN series and to create conditions for their implementation, etc..

C. Creating favorable conditions for the implementation of the road rehabilitation projects by manz national companies and interprises, ensuring sustainable development in this branch and Agenda 21 of the Republic of Moldova.

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