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NATIONAL REPORT

ROMANIA

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1. General information

Natural conditions of relief, lithological substratum and climate from Romania, corroborated with inadequate management of land resources and pollution from the last decades, has led to different levels of degradation for 7.1 million hectares of land, produced by erosion, landslides etc. Due to this situation, over two thirds of hydrographical network has an increased torrential rate, producing over 175 million euro damages.

The Danube is carrying yearly, from Romanian territory, around 17-20 million mc sludge resulted from land's degrading processes (depth erosions, surface erosions, landslides), as well as from hydrographic network.

Torrentiality and land degrading are exerting their effects on large areas, causing wastages for the national economy, especially through:

reducing or even entirely wasting the soil fertility;

altering hydrological regime of the rivers, with all its negative consequences, such as: predisposition for catastrophic flooding (1970...

damaging or destroying objectives situated in the way of flash floodings (factories, hydro-electric plant, roads, cities)

clogging of the barrier lakes;

elevating bed of rivers and narrowing their courses.

Land degrading processes and torrentiality are concentrated over the mountainous and hilly areas, where the reception area for the rivers with excessive torrentiality totalizing over 1,9 million hectares, and the length of the torrential hydrographic network is 29 000 km, in this area.

The data we have until now, indicate that the first torrents correction works in Romania were carried out by the National Railway Administration, that performed the first works in 1905 and 1912, in Sinaia – Posada – Comarnic area.

During 1920 – 1950, as a result to the obligations undertaken by Romania under the Treaty of Trianon, there were executed consolidation works for a hydro graphic network of 140 km, with a special intensification process on Someș, Criș, Mureș, Timiș (Banat) rivers that flow into Tisa.

In 1930, the "Law on amelioration of degraded lands" was promulgated which would set up the legal frame for: the constitution of the amelioration perimeters, the planning, financing and execution of works necessary for the amelioration of degraded lands and for torrents correction. The Law required that the "Amelioration Project" should be elaborated by the representatives of the Amelioration of Degraded Lands Service within the "Forest Regime Department" which actually caused for the torrents correction works to become a forest sector responsibility.

The period during 1950 – 1992 was outstanding, on the overall of the operations, from the objectives protection point of view, objectives that were executed within the social-economical development program of the country and habitat. Among these programs, we mention the following:

- the hydro-energetic program;
- the national program for the hydro graphic basins complex management plan;
- the program for the update of the communication means;
- the program for the accessibility of forest through forest roads development;
- the valuing program by the afforestation of degraded lands on the agricultural sector.

There should also be mentioned the fact that within the national program for the hydrographic basins complex management plan, a component regarding the torrents correction was also included, meant for protecting the objectives developed through these programs against torrential phenomena.

In 1996, the Forest Research and Management Institute developed a study that proved that during 1950 and 1992, in the forest sector and with state financing, there were successfully executed torrents correction works in 3.166 basins and amelioration perimeters, in a total surface of 983.745 ha, out of which 668.930 ha were inside the state forests. The hydrographic network consolidated through torrents correction works (during the period and on the geographic area mentioned above) measured a total of 1.856 km. At the end of 1992, within the basins mentioned

before, there also existed an undeveloped torrential hydrographic network in a total length of 2.150 km.

Regarding the actions taken on this particular phase, we should bring the following explanations:

- the forest sector founded its own school (recognized by FAO) of complex and integrated management of the torrential watersheds, using the hydro energetic constructions like: ditches, sills, rails, small dams made of: wood, metal, dry stone masonry, concrete, concrete steel, masonry with cement mortar.

- the national program on hydro graphic basins management plan, set up by law, offered the possibility for parallel planning and execution, on large geographic areas, of the works required by the water management sector, of the works against soil erosion, in the agricultural sector and of the hydro graphic basins management, in the forest sector.

The correlation of the above mentioned sectors was set up by an institution founded at the national level, under the name of National Water Board, especially on the reception basins of the accumulation lakes. This correlation had very good results, but its period of existence was rather short. We still think that, for this activity, the correlation of works within the hydro graphic basins complex management plan is extremely important.

- the state financing made possible the creation of the legal frame and of the institutions to implement those programs (research, planning, approval, authorization, execution). The result was mostly felt during 1988 and 1989 when, there were consolidated each year about 120 km of torrential hydro graphic network, recognized to be the peak phase of the operations carried out over one century.

After 1992, the consolidation of torrential hydro graphic basins operation reached a deadlock, due to the reorientation of state funds towards the safety works for the existing correcting systems as well as towards works for forest road protection, so that, during 1992 – 2005 there was made functional a surface of 431.6 km of torrents correction works.

In the last 2 years, in Romania, the torrential rains with high intensity has repeatedly generated catastrophical floods.

In December 2005 the government has approved the “National strategy for floods risk management”. According to this strategy, the Ministry of Agriculture, Forests and Rural Development has to identify high risk areas for erosion and soil degrading and classify them in order to promote new works. Although it will ensures watershed management based on plans accorded with the big hydrographic basins plans for flooding risk management.

II. Information on the present situation

1. Related to the new objectives situation within the period after 1992:

- the central authority responsible with forestry, in its quality of main credit officer, drastically reduced the state budget financing;
- after 1998, the main financing sources were represented by CEDB and EIB
- in 2005, the funds allocated from the state budget, for torrent correction works, were around 8 million euro; this year the amount was tripled.
- currently we trying to access 20 million euro loan from Council of Europe Development Bank.

2. Related to the status of the constituted fund:

- the existent constituted fund, in which most of the works have a common surpassed functionality period, has not beneficiated from maintenance and repairing works and some of these works are really in an advanced degradation stage;
- there have not been elaborated technical norms on the maintenance and repairing operations; they are only now in course of receiving the final approval.

III. Appraisal of the works to be done

It is necessary for the obtained results to be completed by the continuation with new works required for the finalization of the initialised systems and by putting into safety the existent works. Any other delay may lead to the collapse of the existing constructions and to the release of violent torrential phenomena of unbelievable proportions, due to the fact that upstream every dam there are

important quantities of alluviums, which may be moved by the water, transported and laid down on the social-economical objectives downstream.

In order to prevent and mitigate the torrential phenomena, as well as to reduce the intensity of the lands degradation process, we estimate that for the execution of these works there shall be needed funds in a total amount of 180 millions Euro, specifically for:

- putting into safety the existent torrents correction works, as well as for the continuation of the works begun in the period 1950 – 1992, in the torrential watersheds, with the objective of developing a 350 km of hydro graphic network;

- starting new works of torrents correction inside the watersheds damaged by natural disasters which affected objectives of general interest: inhabited areas, accumulations, etc, with the objective of developing a 250 km of hydrographic network;

In order to mitigate the torrential phenomena up to an acceptable degree for the social safety, as well as to regain the ecologic equilibrium within the areas damaged by the degradation process, it is required, on short and medium term, a minimum annual execution rhythm of 200 km of corrected torrential bed.

The “Law on the improvement of land resources” states that: “The National Administration for the Improvement of Land Resources manages the infrastructure of land resources improvement belonging to the public and private sector, *except the lands include in state forest areas managed by National Forest Administration.*”

Because of the reducing process related to the areas managed by the National Forest Administration, it is required for a torrents correction department to be founded within the National Administration for the Improvement of Land Resources. The department shall deal with the financing, through state budget funds and external loans, of the execution of works, as well as of the maintenance operations for the existent works, on the lands that are not managed by the National Forest Administration.