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**Experience in preventing and consequences elimination of
man-caused disasters from the audits performed by the
Accounting Chamber of Ukraine at mining facilities**

II Meeting of EUROSAI Task Force on the Audit of Funds
Allocated to Disasters and Catastrophes
Kyiv, Ukraine, June 24-25, 2010



Activities of the Ukrainian mining industry has resulted in significant environment degradation, pollution of surface and underground waters, air and lands and accumulation of industrial wastes.

Most of those facilities are dangerous both to environment and health of people living in their former activity area.

Delays in eliminating the risks produce poses a threat of man-caused disasters and catastrophes, make it impossible for the people to live on these and adjacent territories.

Individual facilities pose a potential threat even for neighboring countries and are of transboundary nature.



Annually Ukraine allocates funds to eliminate former mining enterprises and carry out urgent nature-conservative activities that fall under their areas.

The funds for these purpose are allocated from the State Budget through the Ministry of Industrial Policy of Ukraine.



Works cost-increasing problems take a central place in carrying out the activities on prevention and consequences elimination of man-caused disasters and catastrophes at industrial facilities of Ukraine.

These activities are mainly covered by the state funds.

The problem of **increasing costs** of the works is highly relevant to the Accounting Chamber of Ukraine and this requires its special attention.



Former mining enterprises present potential risks of man-caused disasters and catastrophes:

- iron ore underground extraction (Kryvoi Rog basin)
- non-ferrous metals (Donbas);
- mineral raw materials for chemical industry and fertilizer production (Lviv and Ivano-Frankivsk Oblasts).



In 1998 Ukrainian Government took a decision on a special restructuring procedure for Mykytovskiy mercury complex.





ЗРОБЛЕННЯ
ПІВРІНІСКОГО
ОПІДСВІТЛЮВАННЯ



Production premises of the former Mykytovskiy mercury complex

ОПІДСВІТЛЮВАННЯ
НЕОПІДСВІТЛЮВАННЯ
(ДРОБКА ПІРІВНІ)





Increasing estimated cost of restructuring Mykytovskiy mercury complex

- in terms of equipment procurement – 4.3 times;
- in terms of facility maintenance during the period of works – 1.5 times.



Problems related to restructuring of iron ore underground mining enterprises are pending in **Dnepropetrovsk Oblast**



Industrial panorama of
Kryvoi Rog
iron ore basin



Ukrainian Government took a decision on restructuring iron ore mines “Gigant”, “Saksagan” and “Pervomayskaya”. The funds were planned in the budget, general utilization directions were specified. Initial total estimated cost of the works amounted to UAH 363.7 million.



Iron ore mine
“Saksagan”



As of 2009 a **total cost of restructuring activities for iron ore mines** “Gigant”, “Saksagan” and “Pervomayskaya” equaled UAH 1,633.4 million that means it **increased 6.3 times** against projected one.

Due to non-fulfillment of required works as defined by projects, zone of erosion processes is extending and more and more facilities are found in destruction area.



In Karnavatka village due to delay in carrying out recultivating and strengthening works, the zone of land erosion covered the area with a significantly large number of dwelling houses. 230 families are waiting for resettlement. Estimated cost of resettlement increased by UAH 100 million or above USD 12 million.



Destruction of dwelling houses
in Karnavatka village

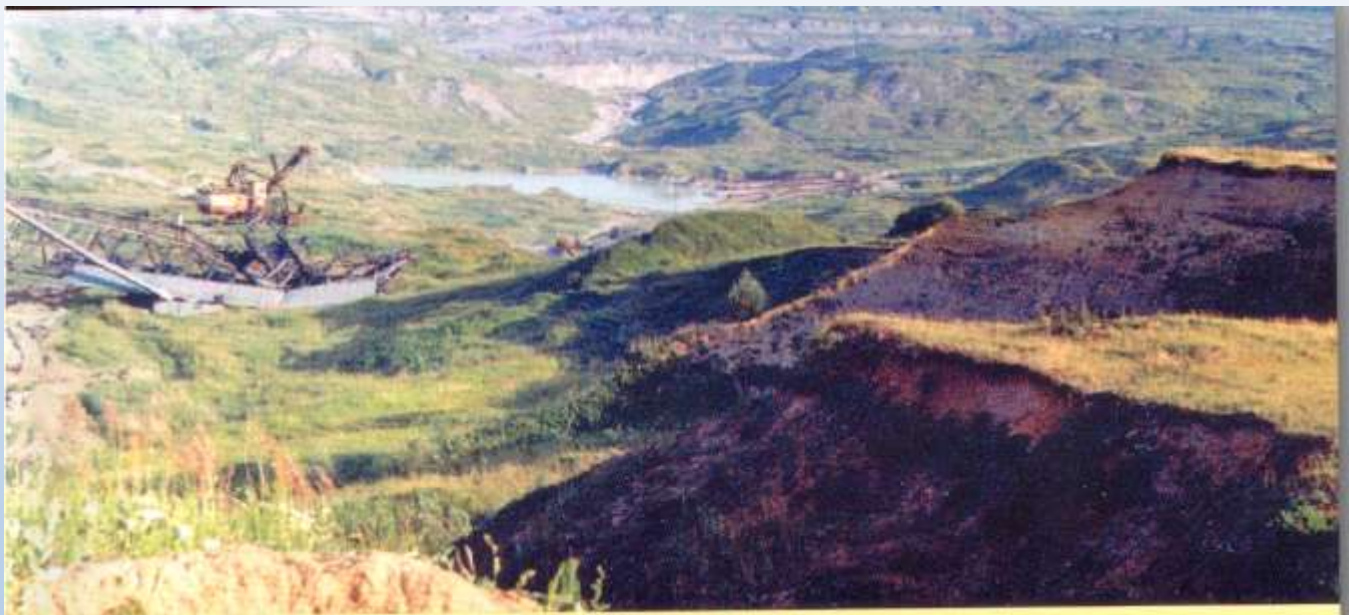


Western regions of Ukraine are troublesome and dangerous as a result of closed down mining facilities.

In Lviv and Ivano-Frankivsk Oblasts are located former entities for sulfur and potassium salts mining



Production activities of mining-chemical enterprises located in Lviv and Ivano-Frankivsk Oblasts resulted in dramatic changes of natural landscapes in affected area





**In 2003 the Ukrainian Government approved restructuring project of Razdolskiy Mining Chemical Enterprise “Sera”
(Lviv Oblast)**

Project estimate – UAH 49,193.6 thousand

Project period - 6 years



Razdolskiy sulfur open pit



16 thousand tons of highly toxic tars are openly placed on the territory of Razdolskiy Mining Chemical Enterprise “Sera” .

Their storage area on the bank of Glyboke Lake is being washed out actively. Toxic waste may get into the lake and then into water intake.

If this happens the consequences elimination of water bodies' chemical pollution will cost ten times more than the disaster prevention





The similar situation is observed in Lviv Oblast at the enterprise producing potassium fertilizers – **Stebnitskiy Mining Chemical Enterprise “Polimineral”**.





Project for restructuring Stebnitskiy Mining Chemical Enterprise “Polimineral” was approved by the Government of Ukraine in 2004.

Project estimate – UAH 162.5 million

Project period - 8 years.

Insufficient funding of restructuring activities resulted in lagging some 7-9 years behind the project schedule, disruption of principal provisions of comprehensive project, aggravation of the environmental situation in the Oblast and creation of conditions for a disaster threat.



Land subsidence in the area of Stebnitskiy Mining Chemical Enterprise “Polimineral”



Partial utilization of the funds allocated to consequences elimination of this disaster and insufficient emergency works resulted in **total project cost increasing almost by 1.5 times.**



Late fulfillment of nature-conservative activities as provided by project for restructuring State Enterprise “Potassium Plant “Oriana” contributed to such aggravation of environmental situation that in February 2010 the town territory and adjacent areas were proclaimed environment disaster zone



Emergency works in Kalush area



There's a constant threat of land subsidence and destruction of buildings and infrastructure in Kalush town



Land subsidence in
Kalush



Land subsidence in northern part of Dombrovskiy open-pit leads to collapse of borders and brines getting into the Limnitsa and Dnestr Rivers, salinization of water horizons in Kalush town on territory above 900 hectares

Dombrovskiy
open-pit





Territories of Kalush town, Krapivnik and Sevka-Kalushskaya villages (Ivano-Frankivsk Oblast) were proclaimed environment disaster zone by the Decree of the President of Ukraine.

Ministry of Finance was entrusted to allocate UAH 398.0 million for these purposes from the reserve fund.

This amount exceeds almost **by 12 times the initial projected cost of works** on stabilizing erosion processes in Kalush plant's mines.



Reasons for delays in works that account for increasing the costs on consequences elimination of disasters and catastrophes:

- Low-quality program support in the field of restructuring mining enterprises;
- Shortcomings of projects for prevention of man-caused disasters and catastrophes;
- Poor control over the works fulfillment by responsible authorities.



Project for reclamation of Yavorovsky sulfur open-pit developed in 1997 provided for works aimed at developing of 25 meter water-proof clay layer, as well as draining and filling up tailing dumps to be exploited for agricultural purposes. Project period – 18 years. Initial project cost – UAH 270 million (approximately USD 150 million).



Sulfur open-pit
before flooding



With due regard to recommendations of the Accounting Chamber of Ukraine, a respective project was approved in 2003 with its costs of UAH 78 million (USD 17.3 million) for the period of 6 years.

Cost-reduction of works – 8.7 times;

Works schedule acceleration – 3 times



An environmentally safe system of Yavorovky lakes was established at the place of open-pit.





Considering a positive experience in performing audits on restructuring mining and chemical enterprises in the part of optimization of state expenditures and their sound management, it seems appropriate continuing further activities and coordination of such efforts within the EUROSAI Task Force framework.



Thank you!