

ANALYSIS OF OBJECTIVES AND BENEFITS

ZEMIP is a applicative research project with **general objective:**

Exploitation of contact between two countries (Romania and South Africa) by establishing a bilateral cooperation for developing and strenghtening the human and material potential of partners during accomplishing of the projects' tasks for mutual benetifts

General objective of the project accords with the fundamental objective of PNCD II: Capacities-Module III, because through the accomplish of project's theme the general objective of Research Programm of Bilateral/Multilateral Cooperation: *Exploitation of contact between two countries (Romania and South Africa) by establishing a bilateral cooperation for developing and strenghtening the human and material potential of partners during accomplishing of the projects' tasks, which will open new cooperations and new mutual productive sinergies* will be accomplished.

Thus will be realized:

- opening of Romanian scientific research to international scientific research
- organic connection of scientific research developed in the frame of project to national and international socio-economic environment, because the chosen theme is priority, the environment issues induced by the tailing ponds are complex (chemically, technologically, socially) by high charge of toxic substances and mostly by the threat they represent for environment, safety and health status of near communities; the theme of the project also represent is specially interesting for the owner of tailing ponds: forced by the laws to rehabilitate these antropic shapes, they are interested to find efficient methods, with low costs, for eco-rehabilitation.

Reaching of project's general objectives involves accomplishing by each partner the next **specific objectives:**

1. Identification of new cooperation partner and strenghtening the existing partnerships

The new created partnership (there is no other previous cooperation with this team and also with others team from South Africa) will be consolidated

because of permanently cooperation developed during the teams in order to accomplish the project's tasks:

- ☞ inventory/characterization actions of tailing ponds from studied areas (Baia Mare, Johannesburg)

- ☞ geo-chemically-biologically study which involves sampling and analyzing of soil, vegetal species from studied ponds to assess the physico-chemically-biologically characteristics

- ☞ laboratory study (controlled conditions) regarding the efficiency of biophysics system zeolit-microorganisms- vegetal species in blocking or bio-accumulation of heavy metals from soil

- ☞ “in situ” application of optimal biophysics system (zeolit-microorganism-vegetal species) for eco-remediation

- ☞ mathematical modeling of obtained results in order to: predict the behavior of pollutants in different environment conditions, extended assessment of capacities of biophysics system zeolit-microorganism-vegetal species to eco-remediate the studied tailing ponds, establishing of physico-chemically-physiologically mechanisms for blocking/weathering-partitioning of contaminates in studied vegetal species

- ☞ actions regarding training of human resources (young and experienced researchers) for the future funding competition

- ☞ elaboration of informative materials in the field of chemical hazards and their dissemination to population

- ☞ dissemination actions of the project results

- ☞ actions for the management of the project

also accordingly with the **specific objective** of PNCDI II: Capacities-Module III:

Table 3. Activities of ZEMIP that includes young researchers

Activitati	Cunostinte/abilitati castigate
Documetary study	Developing the abilities for using the search engine on internet, of databases and reports; increasing the basic knowledge in environment issue; harmonizing and structuring the obtained information as reports; increasing of foreign language speaking by learning specialty words
Soil and vegetable sampling	Building of sampling network; establishing of geographic coordination (longitude, latitude) using GPS; sampling, preserving and transporting of samples avoiding their contamination
Physico-chemically-biologically analysis of soil and vegetable samples Laboratory study and practical implementation of rehabilitation method	Planning of analysis steps and learning the standardized analysis protocols; working with high performing equipment; field work for practical implementation of rehabilitation methods; statistically interpretation of experimental data and specific parameters deducing (average, standard relative deviation, population standard deviation, Student criteria, etc.); using of performing soft for results interpretation and correlation and their presentation as reports
Dissemination actions of project's results/mobilities	Organization of scientific events (work-shop); specialty studies; presentation of scientific papers to national/international symposiums, conferences in order to gain public speaking ability, to sustain an scientific conclusion, to develop the specialty language; training stage to the consortium's partner
Management of project	Organizing of technical/financial meetings (audit); structuring the stage reports and the final report; coordination of project's activities