

Frame of the project in the research priority field of PNII

ZEMIP is framed in PRIORITY FIELD 3: ENVIRONMENT, AREA 3.1. *Pathways and mechanism for reduction of environment pollution*, justified by the fact that the tailing ponds are critical areas located in the proximity of human communities with high risk of accident and pollution. Even then some ponds were covered in alogen soil, this is contaminated by mobilization of pollutants from background (heavy metals, *cyanides*) and erosion processes. The project proposes to establish an ecological method (simple and efficient) for ecological reconstruction of ponds coming from non-ferrous industry. Rehabilitation of ponds by using the zeolites, covering the dam with vegetation with high adaptability to high amount of heavy metals involve the increase of physically/chemically stability as reducing the proportion of fine particle transported by the winds, rainfalls and exfiltrations. Thus are reduced the risk of ecological accidents caused by the collapse of dams. Benefic effects are demonstrated and over the quality of soils around the pond and over the safety/health of population from near villages. Application of such method became more necessary that in Baia Mare and Johannesburg areas exist a lot of tailing ponds from non-ferrous industry, without any rehabilitation, which are permanently pollution sources. Starting from these aspects, *ZEMIP* project addresses partially and to priorities of Area 3.3. *Protection and ecological reconstruction of critical areas* and PRIORITY FIELD 4: HEALTH and also to PRIORITY FIELD: 5. AGRICULTURE, FOOD SAFETY which prove the complexity of project 's theme.