Towards sustainable management of georesources: the importance of Cooperation Projects to boost education on responsible and sustainable mining. The example of the SUGERE and GEODES projects

INTRODUCTION
Sustainable and responsible management of geo-resources requires a rethinking and redesign of our production and consumption patterns. Awareness of the natural environment as a common good to be preserved, and knowledge of the close link between the natural environment and the socio-economic system are prerequisites for a profound change in human attitudes at both individual and societal levels. In this context, training and education of all actors involved in the management of geo-resources is an indispensable starting point for the acquisition of critical, ethical, and conscious thinking and the technical skills necessary to solve local problems and initiate sustainable development.

THE PROJECTS
The present research focuses on two consequential ERASMUS+ projects: SUGERE and GEODES. Both had the common goal of the international standardization of Higher Education training and teaching in Earth Sciences and Mining Engineering.

MAIN GOALS OF SUGERE AND GEODES:
- the INTERNATIONAL STANDARDIZATION OF UNIVERSITY TRAINING AND TEACHING ACTIVITIES concerning EARTH SCIENCES and MINING ENGINEERING
- promotion of a MORE RESPONSIBLE AND SUSTAINABLE USE OF GEORESOURCES.

SHARING OF THE COMMON VIEW OF LOCAL ECONOMIC DEVELOPMENT AS SET BY THE RIGHT BALANCE OF: GEOLOGY/MINING + ENVIRONMENTAL ISSUES + SOCIAL ISSUES + ECONOMIC ISSUES

DEVELOPING DEGREE PROGRAMS AT DIFFERENT LEVELS:
- Bachelor, Master and PhD, in the FIELD OF GEOLOGY, GEOLOGICAL ENGINEERING, AND MINING ENGINEERING
- INVOLVEMENT OF UNIVERSITIES FROM AFRICA (MOZAMBIQUE, ANGOLA AND CABO VERDE – NO MORE PRESENT IN GEODES)

DEVELOPING AND IMPLEMENTING PROGRAMS FOCUSING ON THREE KEY AREAS:
- KNOWLEDGE ABOUT EARTH SCIENCES AND NATURAL RESOURCES,
- SKILLS RELATED TO SUSTAINABLE ENVIRONMENTAL DEVELOPMENT,
- ETHICS AND SOCIAL ECONOMICS.

Thanks to SUGERE project, a strong RESEARCH AND TRAINING NETWORKS BETWEEN EUROPEAN (Portugal, Spain, Italy) AND NON-EUROPEAN (Capo Verde, Angola and Mozambique) UNIVERSITIES interested in mining issues have been set up. GEODES project will continue the path.

These projects promote CULTURE OF SUSTAINABILITY and the DEEPENING OF SKILLS IN THE FIELD OF GEOMINING: from the DEVELOPMENT OF CRITICAL THINKING, fundamental for the RESOLUTION OF LOCAL PROBLEMS, to the ACQUISITION OF ETHICAL VALUES and TECHNICAL SKILLS that underpin SUSTAINABLE DEVELOPMENT.