

THE RESULTS OF THE FORMATIVE MODULE TO DEVELOP THERMAL MUDS IN ALBANIA WITH INNOVATIVE METHODOLOGIES



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From 27 March to 6 April 2012, within the framework of the project “*Support to hydrothermal resources development in Albania through innovative methodologies*”, a first formative module entitled “*Integrated approach to the analysis of complex matrices and systems surface energy investigations*”, was held at the University of Tirana, Faculty of Natural Sciences by Dr. Davide Rossi Technical Director of PTO, University of Padua. The formative module was addressed to professionals and researchers of the Tirana University.

The formative module was attended by 24 professionals and researchers of the Tirana University, Faculty of Natural Sciences and PhD students of the Faculty of Natural Sciences, University of Tirana, attending the Surface Phenomena and Corrosion course.

The project *Support to hydrothermal resources development in Albania through innovative methodologies*, promoted by the Association B.A.ZH NGO with the technical support of the Permanent Thermal Observatory, University of Padua, is coordinated in Albania by a scientific Working Group, composed by the Department of Earth Sciences, Faculty of Geology of the Polytechnic University of Tirana, by the Department of Pharmaceutical Sciences, Faculty of Medicine, University of Tirana, and by the Faculty of Natural Sciences of the University of Tirana.

During 2011, the Technical Director of PTO, Dr. Davide Rossi, author of the innovative methodologies, conducted missions to Albania, organized by the BAZH NGO, to formulate the project in close collaboration with the Faculty of Medicine and the Faculty of Natural Sciences of the University of Tirana and with the Department of Earth Sciences, Faculty of Geology of the





Polytechnic University of Tirana. The project proposal was designed with the active participation and contribution of all the involved actors.

The objective of the module was to support institutional and cooperation mechanism through building capacities, promoting academic and scientific integrated research and transferring best practices. In particular, the course was focused on the importance of the so called “fully integrated analytical approach” to the study of complex matrices, with particular attention to thermal muds and their scientific validation as natural means of care for common inflammatory diseases. Aim of the formative module was to illustrate the concept of “broad wide view” of the Materia and underline the importance of the integrated analytical approach for the study of inorganic and organic complex matrices. The course allowed the participants to appreciate conceptually the interconnections between the different analytical approaches.



In the last lesson, BAZH NGO stressed the importance of European financial programs in implementing territorial research projects based on participative methodology and capable to increase the scientific and economic development of the European pre-adhesion countries, as Albania. At the end of the course, the project “*Support to hydrothermal resources development in Albania through innovative methodologies*”, directly linked with the formative module delivered at the Faculty of Natural Sciences of University of Tirana, was introduced to PhD students of that Faculty, attending the course.



The Vice Dean of the Faculty of Natural Sciences of the University of Tirana, Dr. Altin Mele, expressed his greatest appreciation to Dr. Davide Rossi and to the Department of Pharmaceutical and Pharmacological Sciences of the University of Padua for the work carried out within the project. He underlined the relevance of the project to strengthen the ongoing academic collaborations. The Dean of the Faculty, Prof. Dr. Mynyr Koni, assured the participants on the institutional support that will be provided by the Faculty to the project “*Support to hydrothermal resources development in Albania through innovative methodologies*”.

During the Formative module, study visits to research laboratories of Department of Chemical Sciences of the Faculty of Natural Sciences of the Tirana University have been organized and different scientific experiences compared.

In the framework of the project activities, on 26 March 2012, Prof. Benedetto Corain of the University of Padua, delivered a scientific seminar entitled *End of the age of "cheap" oil: what to do?*, at the Faculty of Natural Sciences of the University of Tirana.

The seminar, attended by professionals, professors, researchers and students, was organized by the Faculty of Natural Sciences and the BAZH NGO with the collaboration of the PTO of the University of Padua.

The seminar was focused on the relevance of renewable energy sources for the next generations, considering the too fast and not eco-sustainable consumption of traditional energetic sources, such as oil and gas. The potentiality of geothermal energy in Albania as an alternative energy was also stressed. In fact, many low-enthalpy geothermal sources are located in different areas of Albania. Thermal waters are sulphate, sulphide, methane and iodinate-bromide types, as Euganean Hot Spring waters.

The collaboration with the Academy of Sciences of Albania

During the preparatory activities for the course and the national seminar, an important meeting was held at the Academy of Sciences of Albania (ASA), with Professor Alfred Frasheri of the Faculty of Geology and Mining in the Polytechnic University of Tirana. ASA is the highest and most important scientific institution in the country, and includes many other scientific institutions and centers. ASA is financed by the Government and, thanks to relations with many national institutions, offers expertise and consultancy in different relevant fields, in particular in Natural and Technical Sciences and collaborates to the project *Support to hydrothermal resources development in Albania through innovative methodologies*.

Prof. Alfred Frasheri is one of the pioneer geophysicists in Albania. His contribution in the development of the geophysics in Albania is outstanding. He has served as Chairman of the Albanian Geophysical Society (1991-1999) and also as Chairman of the Albanian Association of Geoscientists and Engineers (1998). He is an active member of EAGE, SEG and the Balkan Geophysical Society.

The meeting was focused on the potentiality of research and developments activities on geothermal energy in Albania, underlining the importance of geothermal resources as permanent sources of clean energy. The great potentialities offered by Albanian territory in terms of hydrothermal resources guaranteed by a great number of hot spring waters, is a bases to launch an Albanian *Hydrothermal and Geothermal Energy Project* linked to the project *Support to hydrothermal resources development in Albania through innovative methodologies*. Prof. Frasheri stressed the importance of heat water and rocks located near surfaces for space heating and cooling, using geothermal heat pumps water/water. He also underlined the opportunity provided by deep heat flow in leaved oil and gas wells for electrical energy generation, for greenhouses, and water-cultivations. Prof. Frasheri stressed the importance of the use of thermal water in connection with solar energy and on the cascade of water temperature from high level up to environmental temperature. The participants agreed that one important step for the development of geothermal and hydrothermal resources in Albania is to complete the analyses of thermal springs and thermal wells, with particular attention to the evaluation of chemical elements, which represents one of the most important parameter in geothermal investigations.

At the end of the meeting, Prof. Frasheri focused the attention on recent researches on photovoltaic energy, in particular on the good news from Russia on energy production from night shadow light.

For more information:

[Support to hydrothermal resources development in Albania through innovative methodologies](#)

[Academy of Sciences of Albania](#)

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