



Strategies adopted to improve students and teachers culture of prevention of geoenvironmental problems through formal and informal education

Elena Ferrero (1), Alessandra Magagna (2), Marco Giardino (2,3)

(1) CISAO, University of Torino, Italy (elena.ferrero@unito.it), (2) Earth Sciences Dept., University of Turin, Torino, Italy (alessandra.magagna@unito.it), (3) NatRisk, Interdepartmental Centre for Natural Risks, University of Turin, Italy (www.natrisk.org)

Starting from the assumption that Earth Sciences education is fundamental to improve people's consciousness on proper management of natural hazards and georesources, to develop resilience's capacity in the population and the effectiveness of protection measures, we analyze different strategies adopted in the educational system of the Piemonte Region (NW Italy). Experiences refer to primary and secondary schools, to universities courses of Natural Sciences and Geological Sciences Degrees, to Preparatory courses for teachers of primary and secondary level.

In addition to this formal educational context, experiences were performed in informal situation, like field trips and seminars promoted by other agencies and associations, such as for instance the National Association of Natural Sciences Teachers (ANISN), Natural History Museums, Natural Parks of the Region.

Another particular case study included cooperation projects based on partnerships between students of different countries, cultures and languages. This type of educational activities is quite challenging for the teachers to organize, but it is very stimulating for the students and extremely fruitful: it allows students to experience complex situations with open mind, to learn and understand cross relationships between different disciplines and between different and faraway countries.

In all cases a common starting point consisted in stressing the attention of the educational project on the motivation and the personal involvement of the participants, both from the emotional point of view and the operative and cognitive point of view.

Case studies will be presented for showing the way students consider georesources and their sustainable exploitation and perceive natural hazards and risks, not only the major and catastrophic ones, but also the minor, hidden and silent ones.