



Climate change and disaster risk reduction through adaptation plans and policies: the ACT (Adapting to Climate change in Time) project approach

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Natural hazard and related risk represent the conflict between natural and physical system and social and economical setting, constituting a fundamental imbalance for population. As stated by the IPCC (Intergovernmental Panel on Climate Change), mitigation aims at avoiding the unmanageable impacts, while adaptation aims at managing the unavoidable impacts and at increasing the resilience of natural and human systems to current and future impacts of climate change. Adaptation and planning activities, together with mitigation, represent the two actions that must be undertaken to face the problem of climate change. The likely increase in frequency and intensity of extreme weather events (IPCC 2007), could lead to an increase in economic and social damage. Climate change has a significant impact on the hydrological cycle and all its related phenomena. Defining a strong correlation between current climatic trend in occurrence of natural and anthropogenic impacts Vs future scenarios, it seems to be very difficult. The correlation should consider the relationship between meteorological trigger mechanisms (not yet very well associated to climate change) and related impacts. Such activity is being carried out within the framework of the Life ACT Project (Adapting to Climate change in Time) aiming at the development of Local Adaptation Plan which will support the forecast and reduction of environmental, social and economic impacts of climate change on the most vulnerable sectors in the Mediterranean Basin, through an inclusive and participated process, shared by all the local actors involved. Three vulnerable municipalities to climate change have been selected in order to define and implement adaptation plans and policies in areas representative of impacts of climate change: Ancona (Italy), Bullas (Spain) and Patras (Greece). Due to common features of climate pattern in the Mediterranean areas, these municipalities will all have to face some common effects related to climate change: problems concerning water resources (drought, floods), coastal erosion, desertification and soil erosion, loss of biodiversity, health risk and the related economic sectors (i.e.: agriculture, tourism). For the purpose of ACT Project, all the information on existent models and climate forecasting scenarios have been reviewed and analyzed and the climate variables (i.e. temperature, precipitation and sea level rise) were elaborated for the three target areas and implemented in order to realize a down scaling useful for the local scale methodology and assessment. Main outcomes of the project will be addressed to: the development of a standardized process to draw and implement local adaptation strategies, easily applicable to a wide range of local authorities to forecast the impacts of climate change on a local scale and to define corresponding actions; the involvement (by increasing their awareness) of local actors (local industries, citizens, health system, civil protection, etc.) and stakeholders in the development of local adaptation strategy; the development and dissemination of guidelines that can encourage other European communities (in particular in the Mediterranean basin) to adopt the same process and to develop their own local adaptation strategies; the identification and prevention of the risks of environmental disasters related to climate change (e.g. flooding, droughts etc.); the integration of adaptation strategy within existing and future municipal plans, policies, and legislations; the economic evaluation through a cost-benefit analysis that will assist municipalities to choose the most cost effective adaptation actions among others.