



Analysis of recent changes of rainfall in the foothill of the Isonzo basin and effects on the safety of urbanized areas

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The knowledge of the distribution of rainfall in mountain environments Mediterranean is still very complex and requires a comprehensive monitoring and appropriate analytical techniques - statistics to be scientifically valid and easily communicable. The Isonzo's basin - located between Slovenia and Italy within the Julian Alps - has characteristics meteoric absolutely uncommon, revealing the wettest of entire southern side of the Alps. Nonetheless, the climatological studies of detail are very rare; resulting an insufficient knowledge of specific themes, a lack of information for the purpose of territorial planning and especially the development of forecasting future scenarios according to the IPCC guidelines. The lower valley bottom of the Soca river is particularly urbanized and cultivated and the numerous, short minor streams - such as Corno and Versotizza - run within the city of Nova Gorica and Gorizia and their industrial areas. Their torrential regime can cause a flood events in relation to the intensity of more irregular and often very abundant rainfall. In this regard, the meteorological year 2014, was the wettest and perturbed the last thirty years in the whole mountain sector of the Isonzo basin, with punctual values ranging between about 2150 mm in Gorizia and 5600 mm in Musi di Udine, compared to their respective averages of 1400 and 3000 mm in the 1981-2010 period. The high frequency of days with precipitation sufficient to cause local flooding and floods from the minor watercourses is significant increase in recent years; consequently must be considered some fundamental aspects in the planning of little space land not yet urbanized and in the exploitation of agricultural and trade resources - heart of the local economy - increasingly exposed to the floods risk. This study aims to provide a thorough knowledge of the precipitation context of the urban agglomeration of Gorizia - Nova Gorica and its significant around; so to be provided the necessary knowledge to a hydraulic design of that allows the complete safety measures in existing production sites and the correct design of urban areas not yet built up through an comprehensive and precise definition of the areas at flood risk.