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Recovering river landscape
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PLANNING WITH WATER: FROM INVESTMENT END OF PIPE TO OPERATING ON NEEDS.

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Track: b. Resilient spaces of river fruition.

Parole chiave: Stream, resilience, sustainability

The article proposed is an account of a research in progress at the Department of Architecture. This research aims to confirm the thesis that the " end of pipe" approach meant to improve the resilience of river basins is often less effective and less efficient than solutions based on common actions designed to have a positive impact on the reduction of expected water flows.
The thesis find main subjects in the research on the relationship between city and water of I. White [1] (University of Manchester), in the research of Novotny, Ahern and Brown [2] (Boston University and Amherst, Massachusetts), in the research on urban resilience of F.D. Moccia [3-4] (University Federico II of Naples) and in the research of G. La Loggia [5] (University of Palermo).
Even today, the solutions undertaken by the Public Administration are often actions based on the reconfiguration of rivers deputy to dispose the hydraulic load and on traditional mitigation measures such as the construction of huge detention basins dug in the ground to hold temporarily excess water.
This approach, however, in addition to being less efficient compared to interventions and actions tailored to the cause of the problem, has substantial impact on the landscape consolidated over time around the flows.
The model used to try the effects of different solutions on the hydraulic load is built by the basin of a small flume named Alveo dei Camaldoli, in the Metropolitan City of Naples, characterized by the succession of agricultural areas, intensively urbanized areas and degraded areas.
This important flume was interested by a proposed reconfiguration of physical structure. This project aims to mitigate the flooding risk. Today it is yet achieving because the public authorities in defense of the landscape are not favorable.
The research has produced a list of solutions potentially reproducible on a large scale. Such solutions, through the model, has been tested on: the impact on the hydraulic load acting on the flume; costs and benefits of different solutions; administrative and technological viability; the possibility of futher improvement and side effects.

[1] White I. (2010). *Water and the City: risk, resilience and planning for a sustainable future*. London: Routledge
[2] Novotny V., Ahern J. and Brown P. (2010). *Water Centric Sustainable Communities: Planning, Retrofitting, and Building the Next Urban Environment.* Hoboken, NJ: Wiley
[3] Moccia F.D., Palestino M.F. (2013). *Planning Stormwater Resilient Urban Open Spaces.* Clean: Napoli
[4] Moccia F.D., Sgobbo A. (2013) Flood hazard: planning approach to risk mitigation. In M. Guarascio, C.A. Brebbia and F. Garzia (Eds.), *Safety and Security Engineering V*. WIT Press: Southampton
[5] La Loggia G., Fontanazza C.M., Freni G., Notaro V., Oliveri E. and Puleo V. (2012). Urban drainage and sustainable cities: how to achieve flood resilient societies? In S. Mambretti and C.A. Brebbia (Eds.), *Urban Water*. WIT Press: Southampton