

4th International Conference on **Earth Science & Climate Change**

June 16-18, 2015 Alicante, Spain

Reading and representation of environment and landscape: Urban planning responsibility

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In the course of the centuries the urban space has changed, in the viewer, the idea of the compact and defined city turning it into a series of elements that have invalidated the symmetries, the profiles, the topological and architectural overlays, giving rise to a fragmented and often without recognizable boundaries landscape. In fact the actual national and international debate concerns the need for a new and critical sensitivity in dealing with new projects, often more like art installations out of context than to work at a reasonable initial situation environment, not only from a structural point of view and in relation to formal and responsible one. From these considerations, comes the need to a project of knowledge that sees the theme of the survey drawing representation of anthropic spaces as inescapable planning act. The task of recognition and choice of the levels of analysis, of the representation scales, of the forms of the landscape drawing is, in itself, the first step of a critical operation of complex systems in order to identify the origin and transformation matrix, in fact we need to make a sort of deconstructivism in order to recompose the guidelines of the new design of urban spaces, through the conservation and preservation of social and cultural values related to the place of analysis. The project of knowledge is articulated through various techniques of digital representation through direct and indirect surveys, direct observation, reading and manipulation of images, comparison between historical and actual maps, with the aim to critically consider the project as an action in progress in place and time through evaluations of possible future scenarios, even and especially through digital three-dimensional representations. Is, however, evident that, to be safeguarded in the correct way, the landscape should be used in an equally suitable. Therefore the protection, without a program for a more updated reuse results in the exclusion of the Cultural Heritage of the local context and social. The design should be approached as an opportunity interaction between the science of restoration, architectural design and all the knowledge and techniques designed to ensure comfort levels, sustainability, accessibility and security, updated by the standards of European Landscape Convention (Florence, 2000) and Decree of the President of the Council of Ministers of December 12, 2005 Identification of the necessary documentation to verify the landscape compatibility of the proposed actions, pursuant to Article 146, paragraph 3, of the Code of Cultural Heritage and Landscape in the legislative decree of 22 January 2004 and 42.

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A novel environmental capacity management system for Zhushan Bay: Load capacity calculation and hierarchical allocation

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With the increasingly serious situation of water pollution in lakes and reservoirs, the Chinese government is changing the water environmental management strategy from merely pollutant concentration control to environmental capacity management. In this study, a new environmental capacity management system was established. This system is focused on how to calculate the load capacity for a bay of a lake and how to rationally allocate the allowable pollutant loads to each pollutant sources. The management system is composed of a two-dimensional coupled hydrodynamic-water quality model, which is developed for load capacity calculation, and a novel hierarchical allocation subsystem, which allocates the pollutant loads step by step on different levels with different principles and methods. Zhushan Bay of Taihu Lake was selected as a case study. According to the environmental management objectives and the corresponding relationship between pollutant loads and water quality from simulation, the allowable pollutant loads were calculated for TN, TP, NH₃-N, and COD. To achieve the goal of meeting the class III of the NESSW, the current pollutant loads of TN, TP, NH₃-N, and COD, have to be reduced. The developed hierarchical allocation subsystem for Zhushan Bay consists of 5 geographic levels. In level 0, loads are allocated to the lakeshore and runoffs. In level 1, loads are allocated to the 4 runoffs. In level 2, loads are allocated to upstream and local sources. In level 3, loads are allocated to the point and non-point sources in different towns. In level 4, loads are finally allocated to different villages.

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