

Spatial planning and water management at a local scale. The area of Sierra de Los Padres (General Pueyrredon Municipality, Province Buenos Aires, Argentina) as a case study

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Spatial Planning (SP), besides being a scientific discipline and an administrative technique, is a public policy that should be transversal to sectoral policies. Thus, SP could be treated as a public function that responds to the need to organize and manage the occupation of space so that problems and imbalances caused by the spontaneous growth of human activities could be anticipated, in the search for greater socio-spatial justice and quality of life beyond mere economic growth. SP takes a holistic and systemic approach that is conceived from the consideration of all components of the territory: biophysical, economic, socio-cultural and political-administrative. In addition, the occupation of land and the rational use of natural resources are processes inherent to the sustainable development paradigm, which places its focus on the relationship between society and nature. In this sense, it is not possible to think of a successful SP process regardless of the guidelines proposed by the Integrated Water Resources Management (IWRM), since water is a key component in territorial planning. Therefore, it is important to mention The Dublin Statement on Water and Sustainable Development (1992) from which the concept of IWRM arises. This is defined as a process that promotes the regulated management of the different uses of water and related resources, in order to maximize the social and economic welfare in an efficient, equitable and sustainable manner.

The aim of this study is to analyse and evaluate the processes of spatial planning and its relationship to water management at a local level, taking as a case study the area of Sierra de los Padres, in the Municipality of General Pueyrredon (Province Buenos Aires, Argentina).

The study area is located 16 km from Mar del Plata, head of General Pueyrredon in the southeast of the province of Buenos Aires and main tourist destination on the Atlantic coast of Argentina. The settlements that make up the area are Sierra de los Padres, La Gloria de la Peregrina, Santa Paula, Colinas Verdes and El Coyunco with 6.836 permanent inhabitants according to the 2010 National Population, Households and Dwellings Census. The area is located in a suburban zone of hills and lakes with the natural setting of the Tandilia Range, with potentialities such as: a high landscape value and biodiversity (encloses the Laguna de Los Padres Nature Reserve); the availability and quality of water and soil resources; the development of residential, tourist, recreational and agricultural activities (intensive horticultural and fruit crop, especially kiwi). In recent decades, remarkable socio-territorial dynamics are shown, where several transformations are observed: a) land use changes (from rural to residential); b) high demand for natural resources such as water and soil; c) population changes (demographic growth). This means a growing demand for water resources, where groundwater is the only source of supply for domestic and agricultural use. In that sense, it is important to incorporate all issues related to the quality and availability of water to SP and thus contribute to the planning of the area.

The methodology included descriptive and evaluative stages based on a qualitative research from primary and secondary sources of information. In the first place, the literature review (international and local) regarding SP, IWRM and the linkages between both processes was performed. Secondly, an analysis of current legal issues in relation to SP and water resources in the study area was made which included: the Spatial Planning Code of General Pueyrredon Municipality, local ordinances related and the Water Code of Buenos Aires Province. Then, an analysis of planning instruments that include the study area was performed and in-depth interviews aimed at qualified informants were conducted in order to identify stakeholders capable of carrying out SP and IWRM processes. The respondents were:

the municipal delegate of Sierra de Los Padres and La Peregrina; the presidents of the associations of residents of Santa Paula, Sierra de Los Padres and the La Gloria de la Peregrina; the president of the water cooperative of Sierra de Los Padres; the president of the fruit and vegetable growers association; the director of the local newspaper; a manager of the municipal water supply and sewage company (OSSE). From the interviews, it was possible to identify a greater number of stakeholders and a map showing the interrelationships between them was built: the Water Authority of the Province; the Provincial Sanitation and Hydraulic Works; the General Pueyrredon Municipality; OSSE; the Water Cooperative of Sierra de Los Padres; the neighbourhood associations in the area; the association of fruit and vegetable producers.

The results show that the spatial planning regulations are out of date and that the planning tools in the study area are inadequate, which reveals serious imbalances within the General Pueyrredon Municipality. Regarding water management, analysis of the data indicates that water-related stakeholders are not articulated in terms of a process of IWRM. Furthermore, it appears that the current SP, in general terms, is not taking into account the water resources so the need for a greater coordination between the two processes in the future arises. This work highlights the importance of applying the IWRM strategies and link them to SP processes in order to contribute to sustainable land management.