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## GROUNDWATER RESOURCES IN LOCAL DEVELOPMENT STRATEGIES: CASE OF IZMIR

Koray Velibeyoğlu<sup>1,\*</sup>, Hamidreza Yazdani<sup>2</sup>, Alper Baba<sup>3</sup>

<sup>1</sup>*Izmir Institute of Technology, Department of City and Regional Planning, İzmir, Turkey*

<sup>2</sup>*Izmir Metropolitan Municipality, Directorate of Historic Environment and Cultural Properties, İzmir, Turkey*

<sup>3</sup>*Izmir Institute of Technology, Department of Civil Engineering, İzmir, Turkey*

\*Corresponding author: korayvelibeyoglu@iyte.edu.tr

**Abstract:** Rural socio-economic development has gained utmost importance in Turkish Metropolitan Municipalities within the frame of recent legal changes extending boundaries towards their peripheral areas. With this regard, İzmir Metropolitan Municipality has completed series of local development strategies aiming at the sustainable development of the city's rural hinterland. For three fertile sub-region of İzmir, namely as Yarımada, Gediz-Bakırçay and Küçük Menderes, local development strategies were prepared consecutively. In the framework of local development strategies; agriculture, tourism, settlement pattern and culture, local innovation and entrepreneurship, and environmental issues and water resources were examined as project themes. Among them, water resources has utmost important since the local development of whole sectors are largely dependent on them. Therefore, local development strategies have underlined the reality of river basins and potentials and limitations on groundwater resources due to the fact that surface waters have already been contaminated. More than half of İzmir's water budget (nearly 70%) comes from groundwater resources. In recent years, rapid increase in population, and uneven development in tourism and industry have brought more pressure on these precious resources. To become more water resilient İzmir needs to follow good practices in management of groundwater all over the world. The paper reviews these cases and creates a pathway to İzmir integrated with local development strategies. Methodologically, local development strategies were based on the idea that rural regions are not places of isolation and deprivation, by asset-based development and creative approaches, it can reestablish the healthy continuum between urban and rural. Thus, building on local assets was the main development strategy. This long-term endogenous development path was first identified, mapped and then presented within the form of local asset-based development ideas. At the first stage, description and mapping of local natural and cultural assets were determined via interactive community meetings. Then, an asset-driven database was constituted to make spatial mapping of given assets. Lastly, potential conflicting asset-based development ideas from each development theme were tested with each other and subsequently 'spatial interaction analysis' was scrutinized to understand any contrasting relations for the future development of the selected river basin regions. This study aims to make 'spatial interaction analysis' that elaborates potential conflicts between groundwater resources and asset-based development ideas within the frame of selected development themes such as settlement patterns, agriculture and tourism. By doing this, we scrutinize availability of groundwater resources in selected regions, distribution of water budget among



sectors, and implications of the anticipated conflicts between contrasting strategy ideas. The results of spatial interaction analysis give us potential action areas bridging the conflict between selected ideas and pave way to find novel solutions to provide sustainability of the important river basins of Izmir. The model presented in this study is important for basins that live rapid development pressure and water scarcity at the same time. Thus, the paper seeks to find sustainable path of local development without harming valuable groundwater resources implying not only Izmir but also cities around Mediterranean basin.

**Keywords:** groundwater, local development, water resources, strategy, Izmir, GIS