



Chapter III

Beyond the Public Meeting: Building a Field-Based Participatory GIS for Land Use Planning in Monongalia County, West Virginia

Timothy L. Hawthorne, West Virginia University, USA

Michael Dougherty, West Virginia University, USA

Gregory Elmes, West Virginia University, USA

Christopher Fletcher, Monongalia County Planning Dept., W.VA., USA

Brent McCusker, West Virginia University, USA

Marta Pinto, Catholic University of Portugal, Portugal

Daniel Weiner, West Virginia University, USA

Abstract

This chapter describes how community-based qualitative information about local land use is being incorporated into a Participatory Geographic Information System (PGIS) for the Cheat Lake Planning District of Monongalia County, West Virginia. The research demonstrates how PGIS can be an effective methodology for promoting community input into land

use planning and for augmenting spatial decision-making for “smart growth.” The Cheat Lake PGIS is field-based and provides residents with an opportunity to discuss and map their priority land use issues and to identify land use hotspots in a way that is not typically possible in a general public meeting. This project also provides a useful example of the integration of academic PGIS research with an emerging county planning infrastructure and related set of regulations. This is achieved through multimedia representation of local knowledge with formal spatial information; for example, traditional GIS raster and vector data, community narratives, mental maps, GPS transect walks, geo-referenced photos, and sound. The Cheat Lake PGIS pilot project also offers important lessons for participatory land use planning.

Introduction

Participatory Geographic Information Systems (PGIS) merge participatory development methods with geo-spatial technologies. Participation for integrating local knowledge in these systems varies considerably over space and is tailored to answer specific geographic questions at the local level. PGIS are becoming an effective methodology for incorporating community local knowledge into complex spatial decision-making processes in locations where local planning infrastructure is in place and broad access to geo-spatial technologies already exist, but also in developing regions where participatory development is already well established (Craig et al., 2002).

In this chapter, a PGIS case study involving the Cheat Lake Planning District (CLPD) of Monongalia County (West Virginia) is presented (Figure 1). The CLPD is located in a high growth corridor east of Morgantown and suffers from rapid growth without the needed planning institutions, infrastructure, and regulations (Hawthorne, 2005). As a result, there is “dumb growth” taking place in the area and a growing desire by the local community for more effective land use planning. This marks an important change in local social attitudes because resistance to planning has been the dominant sentiment until recently. The Cheat Lake Planning District thus offers an interesting case study highlighting one Participatory GIS methodological approach for encouraging residential participation and for integrating community local knowledge with existing land use planning. The case study also provides an example of PGIS as one form of a more broadly defined “Collaborative GIS” process (Jankowski & Nyerges, 2001).

Historically the Cheat Lake area has had low residential densities, some agricultural activity, large forested areas, and rural landscapes. Over the last decade, the City of Morgantown, located just west of the Cheat Lake area,

21 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/beyond-public-meeting/6651

Related Content

Alternative Tool for an Integrative Landscape Interpretation: Case Study of the Arrábida Maritime Coast, Portugal

Ricardo J. Ribeiro, Joana Corte Lopes and François Boucault (2019). *Geospatial Intelligence: Concepts, Methodologies, Tools, and Applications* (pp. 670-693). www.irma-international.org/chapter/alternative-tool-for-an-integrative-landscape-interpretation/222921

Land Cover Analysis for Evapotranspiration Assessment in Catania Metropolitan Region

Paolo La Greca, Daniele La Rosa, Francesco Martinico and Riccardo Privitera (2013). *Geographic Information Analysis for Sustainable Development and Economic Planning: New Technologies* (pp. 102-114). www.irma-international.org/chapter/land-cover-analysis-evapotranspiration-assessment/69051

Challenges of Semantic 3D City Models: A Contribution of the COST Research Action TU0801

Roland Billen, Anne-Françoise Cutting-Decelle, Claudine Métral, Gilles Falquet, Sisi Zlatanova and Ognjen Marina (2015). *International Journal of 3-D Information Modeling* (pp. 68-76). www.irma-international.org/article/challenges-of-semantic-3d-city-models/138264

Geographical Distribution and Surveillance of Tuberculosis (TB) Using Spatial Statistics

Ila Agnihotri, PK Joshi and Neeraj Tiwari (2013). *International Journal of Applied Geospatial Research* (pp. 39-53). www.irma-international.org/article/geographical-distribution-surveillance-tuberculosis-using/75782

Integrating Geoinformatics and Remote Sensing Data to Assess Impacts of Flooding on Land Productivity in the Zambezi River Floodplains, Namibia

Kelebogile B. Mfundisi, Alex M. Mudabeti and Anastacia Makati (2018). *Handbook of Research on Geospatial Science and Technologies* (pp. 201-212). www.irma-international.org/chapter/integrating-geoinformatics-and-remote-sensing-data-to-assess-impacts-of-flooding-on-land-productivity-in-the-zambezi-river-floodplains-namibia/187728