

# Pilot Implementation Toolkit and PPGIS as Combined Decision Tools



# Journal of Sustainable Tourism

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rsus20>

## Using public participation GIS (PPGIS) on the Geoweb to monitor tourism development preferences

Gregory Brown<sup>a</sup> & Delene Weber<sup>b</sup>

<sup>a</sup> School of GPEM, University of Queensland, St. Lucia Campus, Brisbane, Queensland, Australia

<sup>b</sup> Barbara Hardy Institute, University of South Australia, Mawson Lakes, Australia

Available online: 07 Jun 2012

PPGIS combines the practice of GIS and mapping at local levels to produce knowledge of place. Nowadays, there has been increasing recognition of the importance of public participation as a mechanism to allow communities to have greater control in decision-making and the benefits that flow to them.

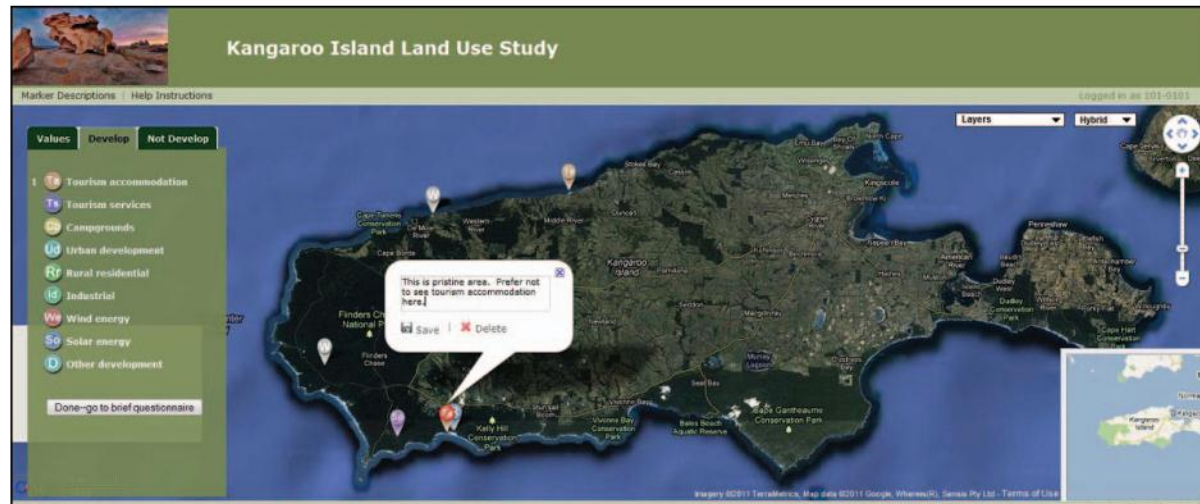


Figure 2. Screen capture of PPGIS system for monitoring development preferences. Participants drag and drop markers in the panel (left) onto the Google map image. Each marker may be optionally annotated.

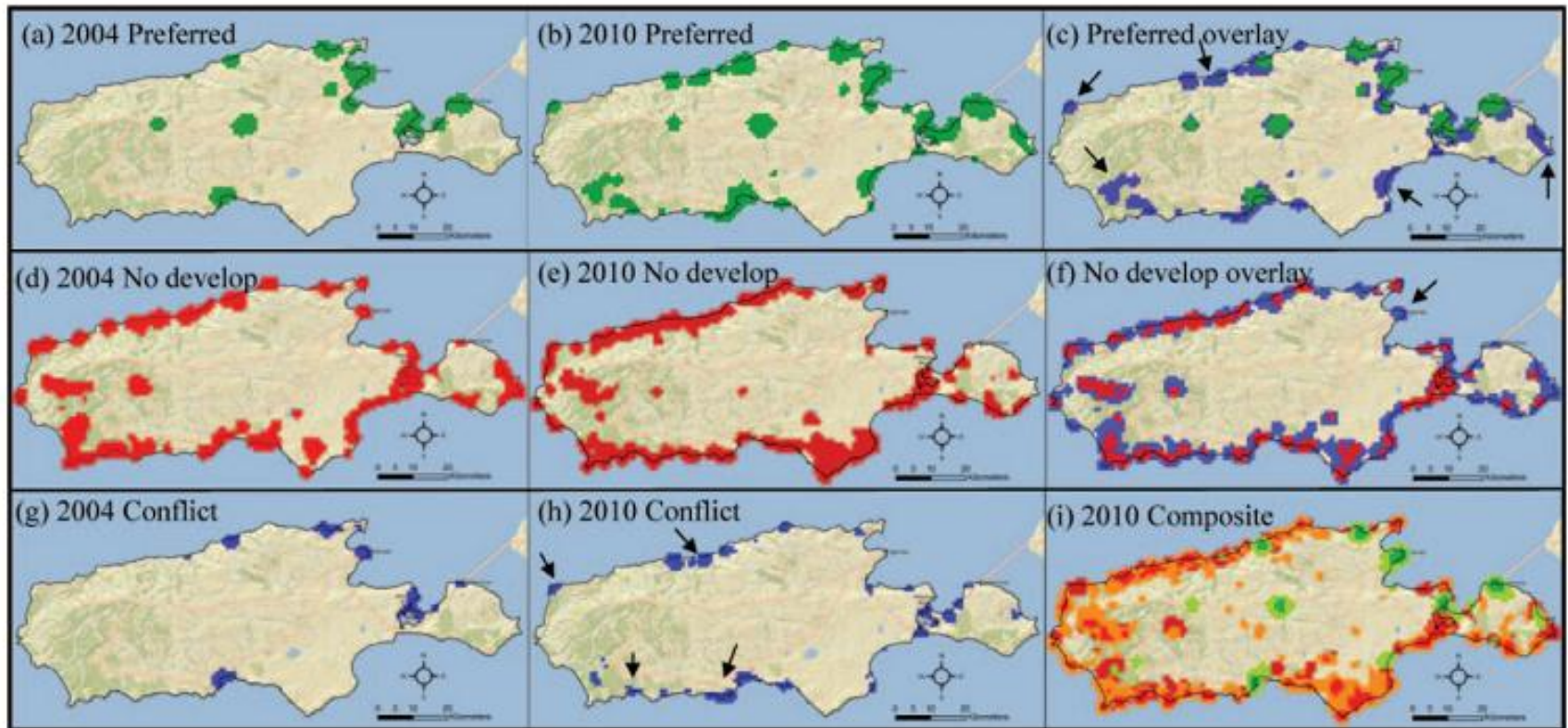


Figure 3. Preferred tourism development locations: (a) in 2004; (b) in 2010; and (c) combined with darker shading indicating new locations in 2010. No development preferences: (d) in 2004; (e) in 2010; and (f) combined with darker shading showing changes. Locations of preference conflict where tourism development hotspots are spatially coincident with no development hotspots: (g) in 2004; (h) in 2010. A composite 2010 map (i) showing development preferences ranging from positive (light) to negative (dark). Source: Author.

**Public Participation GIS (PPGIS) for Regional and Environmental Planning:  
Reflections on a Decade of Empirical Research**

*Greg Brown*

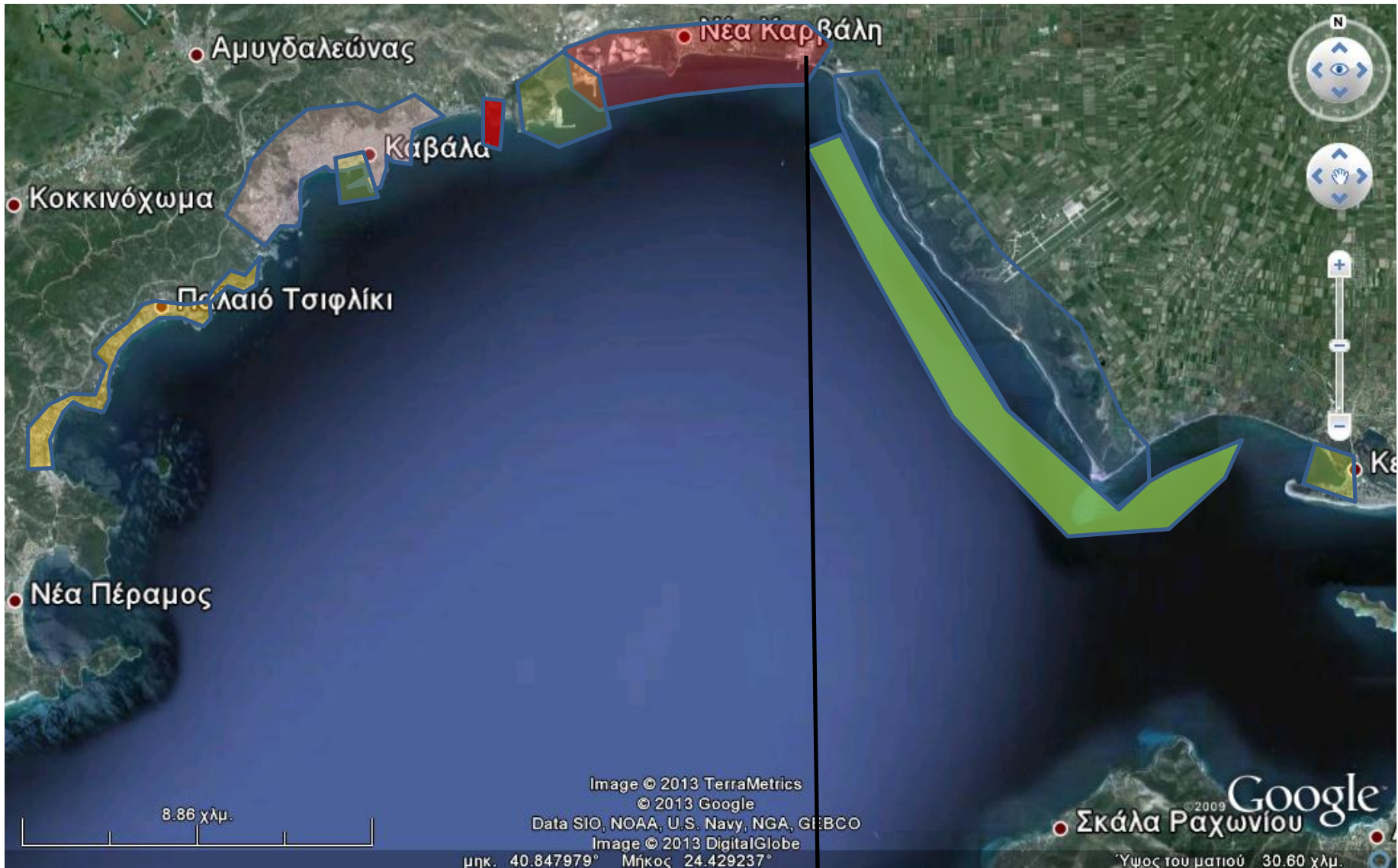


**Figure 4.** Four methods for collecting spatial information through PPGIS: (a) paper map and markers, (b) paper map and sticker dots, (c) Flash-based Internet application, and (d) Google Maps/Earth Internet application

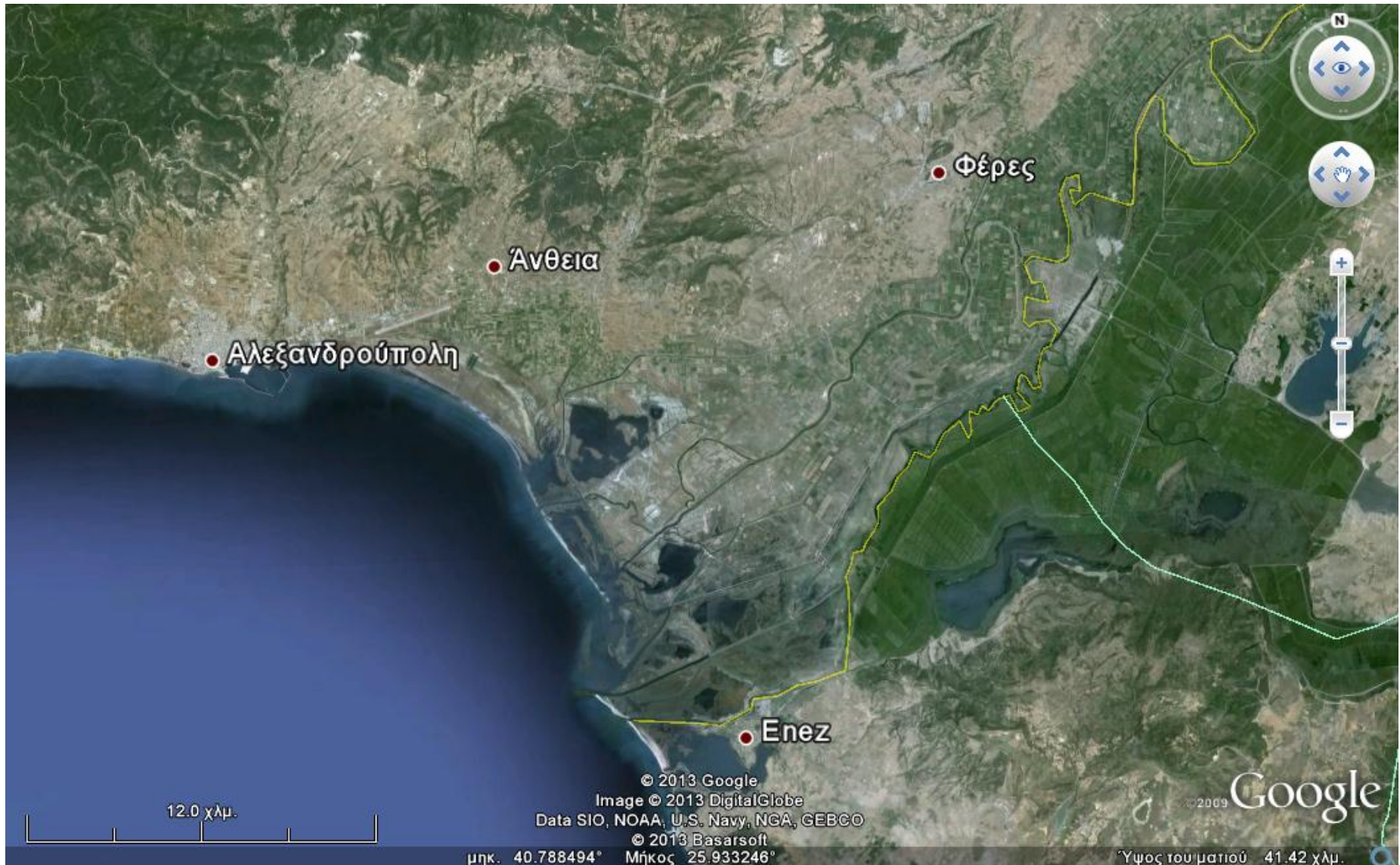
**Table 1.** List of PPGIS studies 1998–2011

Year	Implementation Mode	Location	Planning Purpose	Published References
2011	Internet (Google Maps)	Otago Region (New Zealand)	Regional conservation	Brown, G. In process. Website: <a href="http://www.landscapemap2.org/otago">http://www.landscapemap2.org/otago</a>
2011	Internet (Google Maps)	Southland Region (New Zealand)	Regional conservation	Brown, G., and D. Weber. In review. Website: <a href="http://www.landscapemap2.org/nzdoc">http://www.landscapemap2.org/nzdoc</a>
2011	Internet (Google Maps and Google Earth)	South West Victoria (Australia)	Regional conservation and national park management	Brown, G., D. Weber, D. Zanon, and K. de Ble. In process. Website: <a href="http://www.landscapemap2.org/swparks3">http://www.landscapemap2.org/swparks3</a>
2010	Internet (Google Maps)	Kangaroo Island (South Australia)	Tourism and conservation	Brown, G., and D. Weber. In process. Website: <a href="http://www.landscapemap2.org/kangaroo">http://www.landscapemap2.org/kangaroo</a>
2010	Internet (Google Maps)	Grand County (Colorado, U.S.)	Ecosystem service mapping	Brown, G., J. Montag, and K. Lyon. 2011. Website: <a href="http://www.landscapemap2.org/ecoservices">http://www.landscapemap2.org/ecoservices</a>
2009	Internet (Flash)	Alpine Region (Victoria, Australia)	National park planning	Brown, G., and D. Weber. 2011.
2007	Internet (Flash)	Mt. Hood National Forest (Oregon, U.S.)	National forest planning	Brown, G., and P. Reed. 2009. Website: <a href="http://www.landscapemap2.org/mthood">http://www.landscapemap2.org/mthood</a>
2007	Internet (Flash)	Deschutes/Ochoco National Forest (Oregon, U.S.)	National forest planning	Brown, G., and P. Reed. 2009. Website: <a href="http://www.landscapemap2.org/deschutes">http://www.landscapemap2.org/deschutes</a>
2006	Internet (Flash)	Coconino National Forest (Arizona, U.S.)	National forest planning	Brown, G., and P. Reed. 2009. Website: <a href="http://www.landscapemap2.org/coconino">http://www.landscapemap2.org/coconino</a>
2006	Paper	Murray River, Victoria (Australia)	River conservation	Pfaffler, S., X. Zhu, P. Whitelaw, and C. Winter. 2009.
2005	Paper	Orways Region, Victoria (Australia)	Tourism and conservation	Brown, G., and C. Raymond. 2006. Brown, G., and C. Raymond. 2007. Raymond, C., and G. Brown. 2007. Raymond, C., and G. Brown. 2006. Brown, G. 2006.
2004	Paper	Kangaroo Island (Australia)	Tourism and development planning	Brown, G. 2008.
2003	Paper	Anchorage Parks and Open Space (Alaska)	Urban park and open space planning	
2002	Paper	Kenai Peninsula (Alaska)	Coastal area management	Alessa, N., A. Kilskey, and G. Brown. 2008.
2001	Paper	Alaska Highways (Alaska)	Scenic byway nomination	Brown, G. 2003.
2000	Paper	Prince William Sound (Alaska)	Marine conservation	Brown, G., C. Smith, L. Alessa, and A. Kilskey. 2004.
1998	Paper	Chugach National Forest (Alaska)	National forest planning	Brown, G., and P. Reed. 2000. Reed, P., and G. Brown. 2003.

# Kavala Gulf Land Uses and Conflicts



# Alexandroupolis Case study

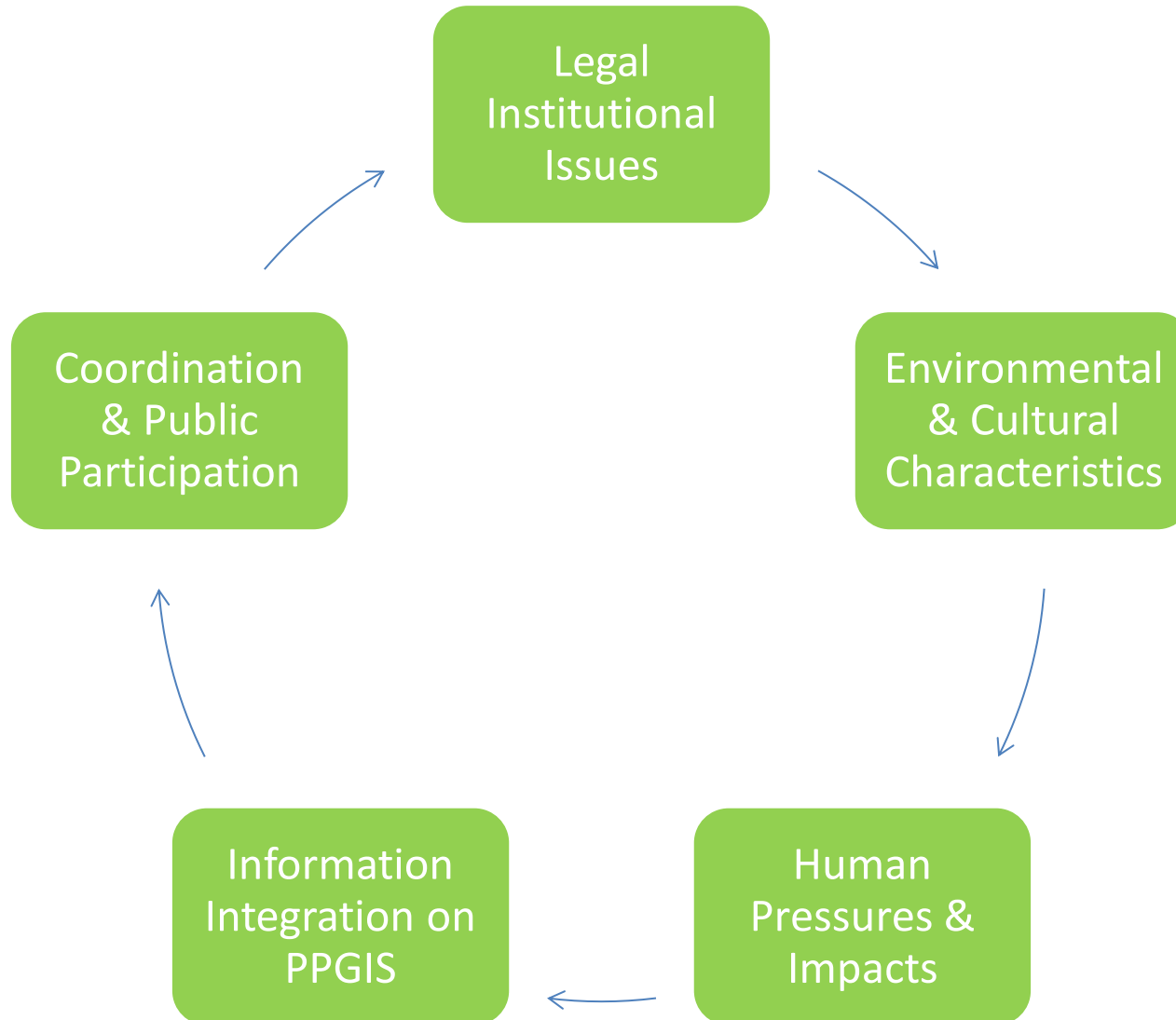


# The Coastal Zone Observatory of Kavala Municipality

1. Describe land uses and human pressures on the coastal zone and report on the consequent environmental response
2. Identify the key legal, institutional and administrative impediments at site-specific context,
3. Develop a local GIS collecting local information on legal and institutional issues, environmental and cultural characteristics, pressures and impacts of human and natural origin,
4. Expand into a PPGIS to promote public awareness on ICZM issues,
5. Involve and educate local and regional stakeholders,
6. Establish policy actions based on PPGIS and the Toolkit of Alternative Instruments



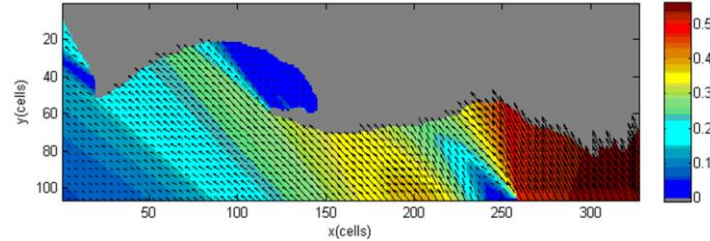
# ICZM Observatory



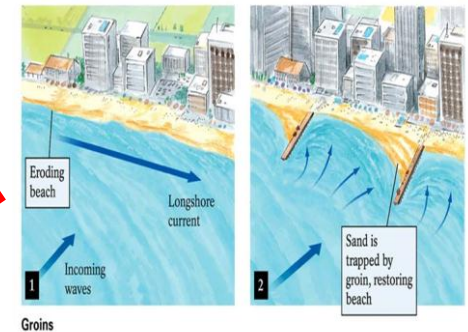
# Fighting Coastal Erosion using the Toolkit and PPGIS



Identify Areas Under Erosion



Identify the Causes of Erosion



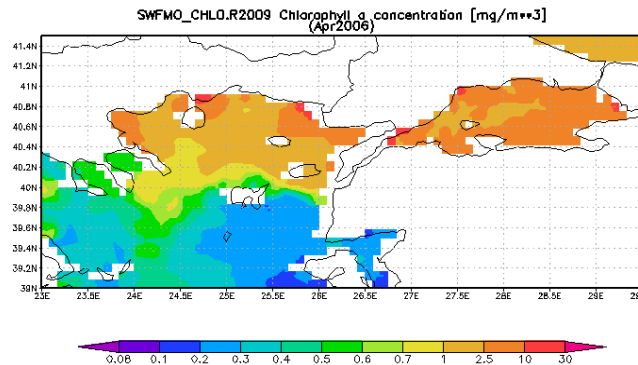
Involve Stakeholders and Decide the Necessary Actions

# Fighting Coastal Eutrophication using the Toolkit and PPGIS

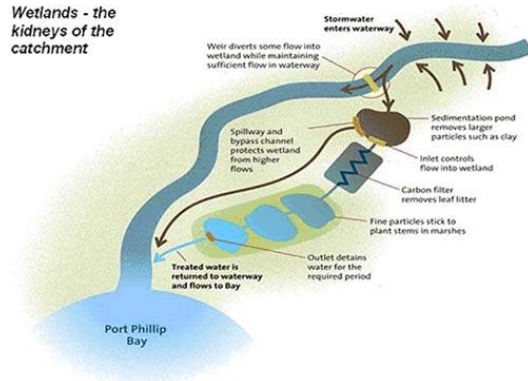
Identify Areas  
Prone to  
Eutrophication

Establish an  
Early-Warning  
System for  
Incidents

Set-up a  
mitigation policy  
together with all  
stakeholders



*Wetlands - the  
kidneys of the  
catchment*



## Other WP8 Actions

1. Organize a Workshop with key stakeholders and final beneficiaries in Haifa to explain the Toolkit and PPGIS interaction at local level.
2. PPGIS output analysis and submission to local and cross-border stakeholders.
3. Transform the submitted analysis into a solid Decision Support System.
4. Discuss outputs with local stakeholders to compare preferences.
5. Organize a Mediterranean Workshop on Decision Making Process through the ICZM Toolkit and the PPGIS
6. Revision of Toolkit and PPGIS based on stakeholders views.
7. Examine the potential of the pilot case-study analysis to be included as part of the EU legislation
8. Organize project's Final Conference in Kavala