

# **Web-GIS Technologies and their Potential as Decision Support Tools for Sustainable Development**

**Michael SUTHERLAND and Dr. Susan NICHOLS, Canada**

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## **ABSTRACT**

There is evidence that global warming, resource depletion, and other negative human impacts on the environment are apparently affecting the Earth's capacity to meet human needs [Manning et al, 1998]. Industrialization and growth is economically desirable, but without attention to sustainability may be problematic for some ill-fated groups of society, and may seriously limit any region's aspiration for prosperity, as the dynamic and negative repercussions of unsustainability upon society may be significant [Bohlin, 1999].

To strike this balance between economic, social, cultural, and environmental concerns is essentially a challenge for governance. This is especially true considering the realities of the information age and globalization which are forcing jurisdictions to deal with ever-faster rates of change along with increasingly short-term profit-orientation and increased deregulation which (in some cases) make sustainability harder to achieve [vanDijk, 1999]. However to achieve sustainability, allowing equitable allocation of benefits from the exploitation of resources, while avoiding (or minimizing) irreversible effects caused by such exploitation, requires that stakeholders in governance have access to up-to-date, complete, accurate and useful information. This will include information on what resources exist, the spatial extent of the resources, and who has rights, responsibilities, and restrictions in relation to the spatial extents and resources [Nichols, Monahan and Sutherland, 2000].

Web-GIS technologies, though in their infancy, show great promise in the sharing of spatial information among governance stakeholders. With the use of examples, this paper will look at web-GIS technologies and their potential as decision support tools in support of sustainable development.

## **CONTACT**

Michael Sutherland  
Department of Geodesy and Geomatics Engineering  
University of New Brunswick  
Fredericton, NB  
CANADA E3B 5A3  
Tel. + 1 506 451 6812  
Fax + 1 506 453 4943  
E-mail: [msutherl@unb.ca](mailto:msutherl@unb.ca) ;  
<http://www.unb.ca/web/GGE/Research/LandStudies/Sutherland.htm>

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TS3.2 Legal Aspects and GIS for Decision Support  
Michael Sutherland and Susan Nichols  
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Dr. Susan Nichols  
Department of Geodesy and Geomatics Engineering  
University of New Brunswick  
Fredericton, NB  
CANADA E3B 5A3  
Tel. + 1 506 453 5141  
Fax +1 506 453 4943  
E-mail: [nichols@unb.ca](mailto:nichols@unb.ca)  
<http://www.unb.ca/GGE/Personnel/Nichols/Nichols.html>

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