

### **Integrated Urban-Environmental Research**

Alberti, M. 1999. Modeling the urban ecosystem: a conceptual framework. *Environment and Planning B* 26, no. 4: 605-30.

The truly integrated urban-environmental model of our key competitors in the NSF Urban Change program. Who has the better formula? Who will get 'there' first?... See the authors' previous work at [www.urbansim.org](http://www.urbansim.org).

Alberti, Marina, and Paul Waddell. unpublished. An integrated urban development and ecological simulation model.

Some more good work from the Washington integrated models group. This is a paper sent to me for review so please handle with care.

Foresman, Tim, Stewart Pickett, and Kristine Kuhlman. 1999. Link globally, act locally: a bold new research program studies how humans and the environment interact. *GeoInfo Systems* : 24-29.

On one of the two NSF-funded "Urban LTER" programs - long-term ecological research in an urban environment (Baltimore, MD). Integrated urban change research approached from the ecological end of things. Note the involvement of multiple players (including UCSB!). Will it work?..

See related web sites: <http://baltimore.umbc.edu/lter/welcome/Default.htm>; and for the 2d (Phoenix, AZ) Urban LTER, see <http://caplter.asu.edu/>.

Hilferink, Maarten, and Piet Rietveld. 1998. *Land Use Scanner: an integrated GIS based model for long term projections of land use in urban and rural areas*, TI 98-108/3. Tinbergen Institute, Amsterdam & Rotterdam, Discussion paper .

A very ambitious Dutch effort to develop a forecasting model for urban and rural land use, based on economic principles (bid prices for land). Very interesting I think.

Klosterman, Richard E., Uri P. Avin, and Kinsey. 1997. The *What If?* Planning Support System.

This document describes a neat software package developed by a widely respected urban planning academic and practitioner (Klosterman, who also organized the D. B. Lee Symposium). It allows local planners to run a great variety of scenarios relating to urban growth and its impacts on the environment. I have a demo CD-ROM (and a diskette with a PowerPoint presentation of the software) if you would like to check it out.

Landis, John D. 1994. The California Urban Futures model: a new generation of metropolitan simulation models. *Environment and Planning B: Planning and Design* 21, no. 4: 399-420.

A well-established competitor of the Clarke urban growth model. It is not an integrated urban-environmental model in the strict sense but, as in the case of the

Clarke model, the urban expansion it predicts over undeveloped land clearly has environmental implications.

See <http://www.ncgia.ucsb.edu/conf/landuse97/> for a more recent paper.

———. 1994. A new tool for land use and transportation planning. *Access*, no. 5: 15-20.  
The lazy person's version of the other Landis reading on our list.

Urban Research Center Utrecht, and Utrecht Center for Environment and Landscape Dynamics. 1998. *Viable cities in sustainable landscapes: integrated into the dynamics and management of urban and landscape networks in Northwest Europe*.

The 'Breedtestrategie' is a Dutch initiative very close in spirit to the NSF's 1998 'Urban Change' solicitation for cross-disciplinary research in urban environments, and especially Keith's and Helen's modeling work. The objective of the Utrecht effort is "The development of a generic framework for understanding and modelling the complex interactions between a 'human centred' urbanization and the preservation and development of natural landscapes". Brush up your Dutch!