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nrg4SD

Expert Group Meeting
Landscape Fragmentation and City-Region Planning

Sant Pau, Barcelona
9-11 May 2012

What Is the Issue?

Contemporary production, distribution and consumption systems are increasingly located over dispersed, differentiated networks. But the built environment has largely failed to come to terms with this new logic. As a result, urban development typically lays new communications and transport networks with little regard for the interstitial spaces it cuts across. Increased connectivity has blurred the line between built and natural environments while still attempting to externalise environmental impact. This is increasingly untenable in the context of dwindling resources. Though fuel efficiency and emissions reductions technology may address some of this, other dimensions of unsustainable development require new, explicitly spatial solutions.

Landscape fragmentation is one of the most dire consequences of accelerating urban and transport development. It affects the functioning of ecosystems (e.g. flows of water and nutrients through watersheds) and is specifically disruptive to biodiversity, which requires connectivity between natural areas for survival (e.g. for migration, access to resources and genetic exchange). Not only does landscape fragmentation threaten entire ecosystem services underlying cities' functioning, but it is also pushing certain species to extinction.

Poorly-sited infrastructure is a common driver of landscape fragmentation, as with these parallel highways at the Indiana Dunes National Lakeshore in the USA.

What Is at Stake?

Even those city-regions that are aware of this alarming trend (e.g. in Switzerland) have been virtually unable to decelerate (much less reverse) landscape fragmentation. Many urban areas of the world still have little knowledge of the phenomenon of fragmentation itself; much less its causes and consequences. The solutions must be physical, spatial ones for innovative configuration at the city-region scale. Scientists have advanced our understanding of the drivers behind and methods for measuring fragmentation. But specific guidance on how to translate this knowledge into concrete planning actions remains elusive.

Who Are the Key Players?

Richard Forman
Harvard University, landscape mosaic expert

Jochen Jäger
Concordia University, fragmentation expert

Robert McInnes
Urban wetlands and ecosystems expert

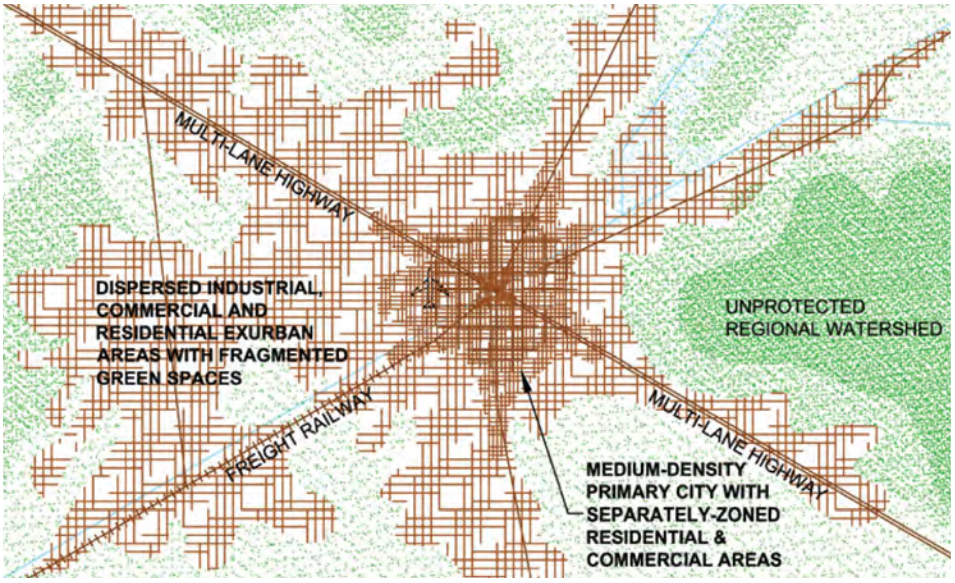
Barcelona Regional

Convention on Biological Diversity

European Forestry Institute

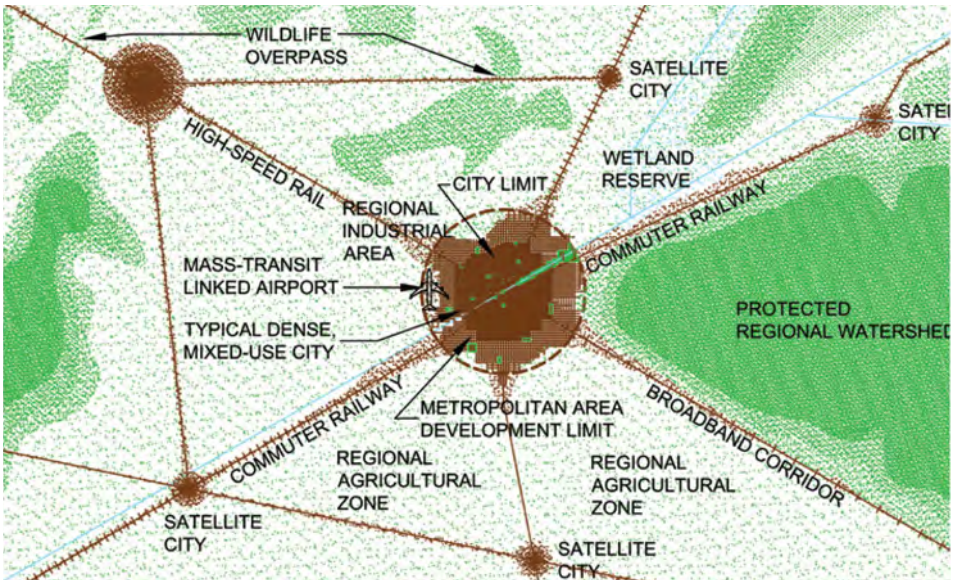
Regions from around the world

What will this meeting accomplish?
This Expert Group Meeting will assemble the world's top landscape fragmentation, landscape mosaic and urban ecology experts alongside government representatives and practitioners from regions around the world. The outputs include a catalogue of regional drivers, an assessment of regional needs, and commitments from regions to undertake certain initiatives. The ultimate outcome, to be developed over the next year, is to produce a set of regional planning guidelines and technical tools that will support city-regions in measuring fragmentation and planning around landscape mosaics.



An urbanised region composed primarily of one low-density, sprawling conurbation fragments the wider landscape in a manner that is detrimental to the functioning of ecosystems ©UN-Habitat

When, where and how?
The meeting will take place over two and one half days, 9-11 May 2012, immediately preceding ICLEI's 3rd Resilient Cities Congress in Bonn (12-15 May). UN-Habitat's pavilion at the Sant Pau complex in Barcelona will accommodate approximately 40 people. Simultaneous interpretation between English and Spanish will be available, with the possibility of a third language.



A regional system of compact, networked cities linked by strategically-located transit lines preserves an overall land mosaic in which ecological -- and human -- systems can interlink and thrive ©UN-Habitat

Further Resources

by Richard Forman
Urban Regions: Ecology and Planning Beyond the City. Cambridge, 2008.

Land Mosaics: the Ecology of Landscapes and Regions. Cambridge, 1995.

by Jochen Jäger
Landscape Fragmentation in Europe. European Environment Agency, 2011. www.eea.europa.eu/publications/landscape-fragmentation-in-europe

'Effective Mesh Density': a Useful Measure of Landscape Fragmentation. European Commission, 2011. ec.europa.eu/environment/integration/research/newsalert/pdf/264na2.pdf

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