The Rise of the Megaregion

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Agenda

• Overview of the Megaregion

• Megaregion Activities

• Megaregion and Sustainability
Overview of the Megaregion
Megaregions are networks of metropolitan centers and their areas of influence, linked by geographic proximity, shared environmental concerns, and social, cultural, and economic ties (Ross and Woo, 2011).
Megaregions represent a new and potentially beneficial context for American transportation planning and a new tool appropriate for national and global environments.

### Why Megaregion Matters

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<td>Megaregion</td>
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<td>Non-megaregion</td>
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Megaregion

Core areas are urban centers and their metropolitan sphere of influence which comprise the core of the megaregion.

Functional regions are groups of metro regions linked through economic interaction and geographic proximity.

A megaregion is a functional region with an additional layer of shared social, cultural, and environmental characteristics.
Megaregions Global Rise

• The world’s mega-regions may be home to more than 100 million people (UN report, 2010). The world’s 40 largest megaregions cover only a tiny fraction of the land, but account for 66% of global economic activity and about 85% of technological and scientific innovation.
Megaregion Benefits

- Internalize Externalities (e.g., pass-through congestion, pollution)
- Inter-region Economic Complementarities
- Correspondence with ‘Problem-Shed’
- Coordinate Infrastructure Investment
- Compete at Different Global Scale
Megaregion Benefits

- Enhance Economic Development across Jurisdictional Boundaries
- Share Best Practices
- Promote Data Collection, Sharing, and Use
History of Megaregion Activities

I-95 Corridor Coalition
- Founded in early 1990s
- Maine to Florida
- Projected 100% increase in truck volumes from 2011 to 2040

Mid-Atlantic Rail Operations (MAROps)
- Led by I-95 Corridor Coalition (2009)
- 5 Mid-Atlantic states, 3 railroads
- Document rail condition and chokepoints
Global Water Overuse and Scarcity

"I can imagine people for the first time are aware of the fact that their water needs are connected to water resources elsewhere in their megaregion”

--- said Juliette Michaelson, Vice President for Strategy at the Regional Plan Association (Hansen, 2015).

Source: Berg, (2009)
The Sacramento Water Forum (Water Supply and Conservation)

- Includes governments, water districts, environmental organizations, and businesses in a single large northern California watershed to:
  - Address increased surface water diversions;
  - Reduce diversion impacts in drier years;
  - Support improved pattern of fishery flow releases from Folsom Reservoir;
  - Lower American River habitat management;
  - Water conservation;
  - Groundwater management;

Image Source: http://www.waterforum.org/
Multi-jurisdictional Aquifer Management (Water Resource Management)

- Ogallala Aquifer (Central Plains Megaregion)
- Ogallala supports 20% of American Agriculture
- Sustainable mining would require reducing outflow by around 80%
- Multi-jurisdictional issues of management

Image Source: Mächtigkeit der Sättigungszone des Ogallala-Aquifers (1997)
“Megaregion planning involves transportation planning and decision making that is executed across boundaries for mutual benefit. It can be a very flexible short term arrangement or a long term arrangement with many agencies.”

Source: FHWA (2015)
Binational and Tristate Connection in Cascadia Megaregion

- Core cities in Cascadia megaregion are linked by Interstate-5 highway.

- I-5 is projected to experience a 487% increase in freight demand by 2035.

- Cross-border tourism is expected to grow significantly.

- How to plan for binational and tristate transportation infrastructure?

Example of Megaregion Activities: Arizona Sun Corridor Consortium

Roles
Livability Work Groups: engage community, collect data and best practices, recommend strategies

Regional Hubs: Organize work groups, approve menu of strategies, develop regional approach

Joint Planning Advisory Council: Develop Sun Corridor strategies and sustainability plan

Source: https://www.azmag.gov/Documents/POPTAC_2010-07-19_ATT5_Sun-Corridor-Consortium-Organizational-Chart_.pdf
Joint Venture Silicon Valley

- Non-governmental organization started in 1993
- Bring together public and private actors in Silicon Valley
- Address issues of economy and quality of life
Can Megaregion Planning be a New Approach for Sustainable Development?

Selected Megaregion Drivers

**Economic Drivers**
- World cities
- E-commerce
- Multinational corporations

**Societal Drivers**
- Urbanization
- Migration
- Development equity

**Environmental Drivers**
- Water pollution and scarcity
- Climate change
- Energy consumption

**Megaregion Resolutions**
- Inter-jurisdictional governance
- Managed development
- Transportation infrastructure prioritization
- Green infrastructure planning
- Regional corporation
- Revenue sharing
Emerging Demands

- Panama canal expansion; ports expansions; global shipping pattern shifts
- Old infrastructure with insufficient capacity will suppress economic activities
- Freight flow changes with infrastructure change and population growth
- Environmental problems are cross jurisdictional borders
- Private-Sector Involvement
- Distribution Center Sprawl
- Electronic business grows rapidly
- Information technology facilitates new travel modes and information collection methods
Megaregion Solutions

Enhancing Economic Competitiveness – Megaregion Infrastructure Planning

- Manage Interstate Corridor Congestion
- Promote Infrastructure-Based Economic Activities: Ports, High-Speed Rail, Airports
- Facilitate Economic Development in Peripheral and Rural Areas
- Augment the spill-over effects across urban network

Manage Resources Through Megaregion Collaboration, Planning and Implementation

- Land consumption
- Resource management
- Energy consumption
- Climate change
- Emission reduction control
- Water resources management
- Habitat preservation
Megaregion Leadership

- US DOT: Beyond Traffic Megaregion Forums
- FHWA initiates and supports megaregion research
- "By 2050, emerging megaregions could absorb 75 percent of the U.S. population"
- "Investment decisions could be transferred to states, or to other governance structures, including new institutions, perhaps organized around emerging megaregions"

Citation Source: “Beyond Traffic: US DOT's 30 Year Framework for the Future”
What would a Sustainable Megaregion Planning Framework look like?

Federal & State | Local
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Megaregion

- Environmental
  - A Viable Natural Environment
  - Sustainable Natural and Built Environment
  - Sustainable Economic Development

- Social
  - Nurturing Community
  - Equitable Social Environment

- Economic
  - Sufficient Economy