

Urbanization

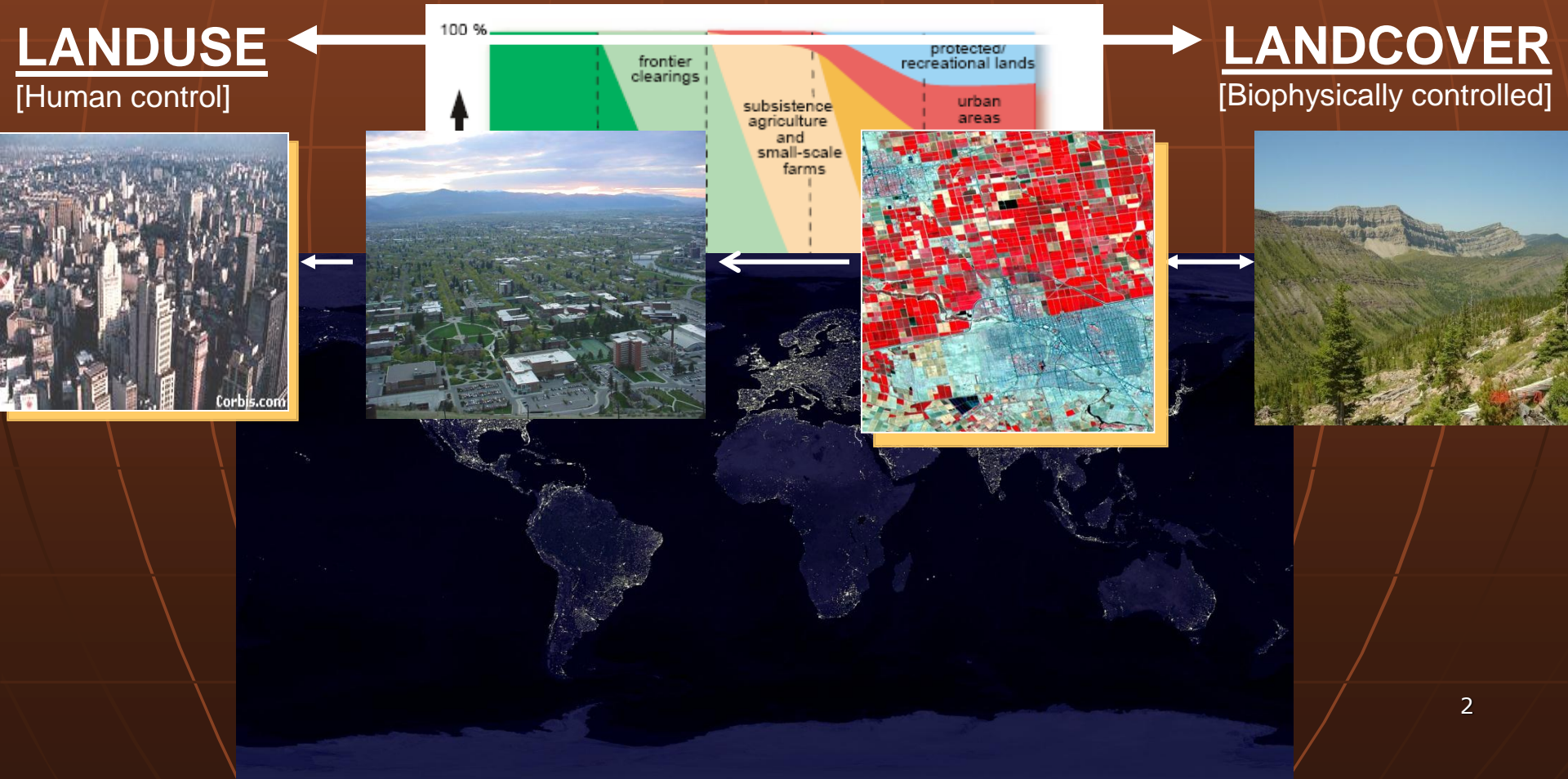
THE UNIVERSITY OF TEXAS AT AUSTIN

JACKSON

SCHOOL OF GEOSCIENCES

New Challenges

- **Rapid Transformation of Landscapes**
 - Land surface as a complex system
 - Natural and managed components, and **multi-scale interactions**
 - Deforestation, Reforestation, Urbanization, Agriculture and Irrigation
 - **Living organisms**



Rapid Urbanization in China

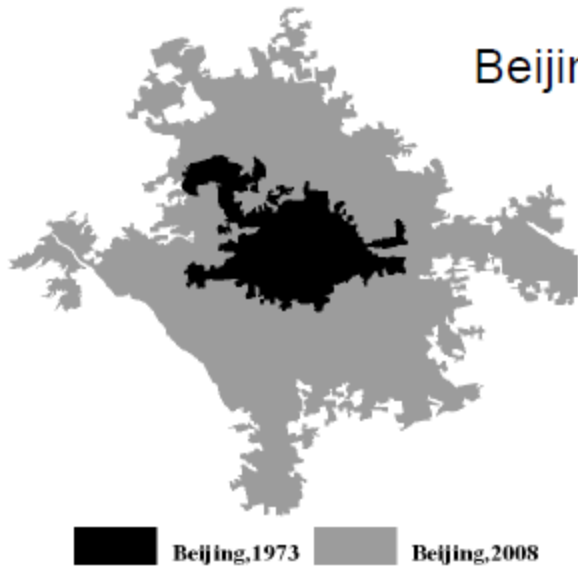
	2005	2010	2020	2030	2040	2050
Population	1307.56	1360.00	1440.00	1470.00	1470.00	1440.00
Urbanization rate	43%	49%	63%	70%	74%	79%
Urban Population	562.12	666.40	907.20	1029.00	1087.80	1137.60
Person per Household	2.96	2.88	2.80	2.75	2.70	2.65
Urban Household	189.91	221.94	288.00	336.76	364.78	380.38
Rural Population	745.44	693.60	532.80	441.00	382.20	302.40
Person per Household	4.08	3.80	3.50	3.40	3.20	3.00
Rural Household	182.71	189.68	181.03	159.97	151.59	144.00

Megacities in China

Ailikon (2011)

Spatial Expansion of Central Build-up Region of Beijing, 1973-2008

Beijing



1973-2008, urban area in Beijing increased 5.56 times

Spatial Expansion of Central Build-up Region of Shanghai, 1975-2008

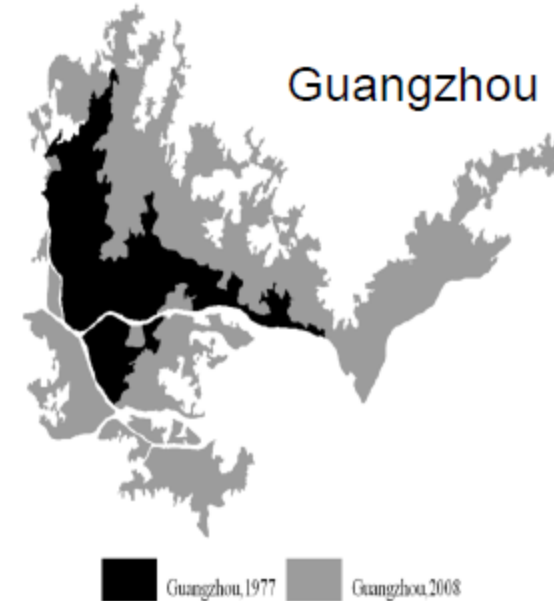
Shanghai



1975-2008, urban area in Shanghai increased 4.88 times

Spatial Expansion of Central Build-up Region of Guangzhou, 1977-2008

Guangzhou



1977-2008, urban area in Guangzhou increased 2.75 times

Modeling Urbanization in RESM



Regional Earth System Modeling and Analysis (RESMA) Symposium – Beijing 2011

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