

# Social Vulnerability

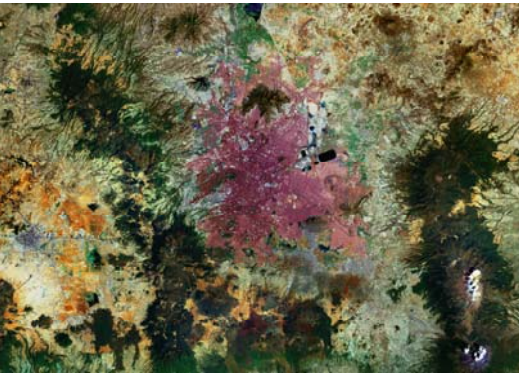
## Summer Academy 2007

### Megacities as Hotspots of Risk



#### New York, USA

Population [Mio.]: 21.2; 17.8; 18.7  
Expected population 2015: 22.8; 19.9  
Area [km<sup>2</sup>]: 10 768; 8 683  
Pop. density [people/km<sup>2</sup>]: 1 969; 2 050  
Potential hazards: cyclone, terrorism



#### Mexico City, Mexico

Population [m]: 18.7; 17.4; 19.4  
Expected population 2015: 20.6; 21.6  
Area [km<sup>2</sup>]: 4 600; 2 072  
Pop. density [people/km<sup>2</sup>]: 4 065; 8 400  
Potential hazards: earthquake, volcano



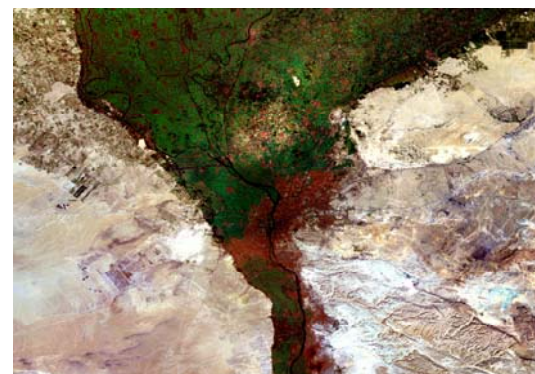
#### Tokyo, Japan

Population [m]: 35; 33.2; 35.2  
Expected population 2015: 36.2; 35.5  
Area [km<sup>2</sup>]: 13 100; 6 993  
Pop. density [people/km<sup>2</sup>]: 2 672; 4 750  
Potential hazards: cyclones, earthquake, tsunami, volcano



#### Sao Paulo, Brazil

Population [m]: 17.9; 17.7; 18.3  
Expected population 2015: 20.0; 20.5  
Area [km<sup>2</sup>]: 4 800; 1 968  
Pop. density [people/km<sup>2</sup>]: 3 729; 9 000  
No serious potential hazards



#### Cairo, Egypt

Population [m]: 10.8; 12.02; 11.1  
Expected population 2015: 13.1; 13.3  
Area [km<sup>2</sup>]: 1 400; 1 295  
Pop. density [people/km<sup>2</sup>]: 7 714; 9 400  
Potential hazards: earthquake, terrorism



#### Mumbai, India

Population [m]: 17.4; 14.4; 18.2  
Expected population 2015: 22.6; 21.9  
Area [km<sup>2</sup>]: 4 350; 484  
Pop. density [people/km<sup>2</sup>]: 4 000; 29 650  
Potential hazards: tsunami and storm surge, flooding, terrorism

## Different Risks Different Megacities

Megacities on the same scale

Munich Re Foundation Poster Series:  
Human aspects of natural disasters

All images on the same scale 1: 400 000, pixel resolution on ground 150m  
Data Source: MR Geo Risk Research 2003, [www.citymayors.com](http://www.citymayors.com) 2007, UN 2006  
Image source: ESRI 2007

### Conclusions

- Megacities often appear as simple dots on maps whilst being complex wide reaching conurbations consisting of different people, cultures and natural settings facing different hazards.
- All have in common an unseizable character not allowing quantification or comparison, as the population figures indicate.
- Accessing social vulnerability requires location specific in depth analysis of the cultural and natural context.