The problem of sustainable urbanization is crucial for the human encounter with the consequences of our ballooning environmental footprint. Over half of the human population of the Earth now lives in very large cities, and these have spread rapidly over the land as population densities within cities have decreased and cities have spread into huge city-regions. Our research project is developing a methodology for measuring the rates and the nature of the areal expansion of world cities and the patterns of decreasing population density in order to know whether or not urban sprawl is accelerating or slowing down. We are also studying changes in the world city-size distribution over the past three decades. The system of world cities has been flattening as megacities in the non-core countries have caught up in terms of overall population size with the global cities of the core. We are examining this trend closely to see if it has leveled off or accelerated. And we are studying differences among the cities of the core and the non-core with respect to the rates and nature of urban sprawl and the changing structure of the built environment.