Ghanian City of Accra is Focus of New Research Project by Columbia's Earth Institute

BY JILL STODDARD

The results of an intensive research trip to Accra, Ghana, by Columbia urban planning students will inform a diverse and impressionistic community of researchers who are heading to Accra in June. Both trips, sponsored by The Earth Institute at Columbia, are part of a new research project aimed at helping develop better transportation, housing, sanitation, waste disposal, energy and water supply,有趣的

"I believe that the Earth Institute can be helpful by bringing expertise and technical knowledge to the policy makers and the government of Ghana," said Earth Institute Director Jeffrey Sachs. "The 21st Century Cities project is based on the realization that this century will be heavily influenced by the rapid expansion in developing countries. Population growth leads to economic growth, technological innovation, and cultural exchange. But these cities also suffer from poverty, environmental pollution, disease, and water issues. Our task at the Earth Institute is to help these cities reach their great potential."

Science and technology, combined with an understanding of interconnected urban development processes, can be used by urban leaders in Accra to improve the quality of life in the city," adds Roberta Balstad Miller, who is coordinating the Earth Institute's 21st Century Cities project.

"The government of Accra has already made incredible steps towards a commitment to the health and economic development of their country," adds Sachs. "The 21st Century Cities project will build on this commitment to move the city of Accra towards sustainability."

On Nov. 20, 2002, President Kufour launched the Ghana Macroeconomics and Health Initiative, based on a report issued in 2001 by the World Health Organization's (WHO) Commission on Macroeconomics and Health (which was chaired by Jeffrey Sachs). The report analyzed the impact of health on development, and health-related interventions, including their impact on economic growth and equity in developing countries.

"The policy makers in the government of Ghana are very keen right now to make a breakthrough—from the kind of instability and slow growth they've had, to real dynamism—but in a sustainable manner," says Sachs. "There, and we, are such believers in what's about to happen. We think it can be a great success to make Accra one of the great centers of economic growth and development in Africa."

Cynthia Golembeski, an Architecture, Planning and Preservation graduate student who participated in the urban studio trip to Accra, says her experience there made a lasting impression on her. "I understood the purpose of the studio to be to assist in the planning and management efforts in Accra as a component of a broad-based multi-dimensional cooperative program. But I was unaware of the impact that a personal visit would have in helping me gain a greater conceptual understanding of the predominant issues affecting the people and communities of Accra."

Golembeski added: "I feel as though I have already received an incredible level of education and inspiration in relation to better understanding the complex issues that affect the region."

Researchers Suggest That Ancient Fault Lines in Indiana Have Been Reactivated

BY MARY EMBRY

On June 18, 2002, a magnitude 5.0 earthquake occurred in southern Indiana, followed by a 1.2 magnitude aftershock on June 25, 2002. Because the region is one of the largest seismic zones in eastern North America, researchers are reexamining health problems like malaria. They also are in great need of clean, potable water and better urban sanitation. Another natural threat to be managed is the destructive earthquakes which take place periodically in and around the city.

"We don't yet understand how faults are reactivated, it appears that some pre-existing faults being reactivated in the area, yet seismologically it is poorly understood. It is known that many of the Wabash Valley faults extend into rocks from the Precambrian era, to at least 3 km depth. Kim's research is the first to directly correlate an earthquake with one of the known faults in the Wabash Valley Fault System. His findings suggest that the strike-slip faulting on this Caborn fault was happening on a vertical fault plane at 18 km depth, indicating that ancient buried faults associated with a possible Precambrian rift system are being reactivated by contemporary compressive stress."

"We don't yet understand how faults are reactivated, it appears that some pre-existing faults are more likely to break than others. The study of this sequence should help us to determine the likelihood of future occurrences. More research on these anomalous quakes is required," said Kim.