

MIT Haiti Data Project

Developing a useful assessment of needs for the Haitian people, local organizations, the US Joint Task Force, and the international community

17 March 2010

Overview

MIT's Center for Transportation and Logistics, the Sloan School of Management, and students from across campus and elsewhere are collaborating on up-to-the-minute assessments to inform humanitarian efforts in Haiti. The ongoing project is helping take stock of the current state of health, food, shelter and water for residents of Haiti in the aftermath of the January 2010 earthquake. Our partner is the U.S. military's Joint Task Force in Haiti, known as JTF-H. Marc Zissman, Assistant Head of the Communications and Information Technology Division at MIT Lincoln Laboratory, is on assignment with the JTF-H in Port-au-Prince and is our main contact in the field.

The Joint Task Force is embarking on a rolling survey of 288 displacement camps and neighborhoods in the country to determine the supply needs as part of a wider effort to support the relief effort and its shift to reconstruction. This information is urgently needed for planning and decision-making by the military, non-governmental organizations, the United Nations, and others. The data collection and assessment serves the United States' mission in Haiti supporting efforts to provide shelter, establish settlements, and conduct debris removal as well as ensuring the delivery of aid to the Haitian people. U.S. military forces will transition efforts to willing partners as the capacity of non-governmental organizations and international relief agencies grows. To support this transition, the JTF-H will identify and monitor unmet needs across Haiti, sharing results publicly.

The MIT team of students, faculty and staff will help interpret, improve, extend, and eventually reflect upon the JTF-H data collection efforts. On an ongoing basis during the rest of the spring semester, our team will analyze data collected daily in Haiti on key areas of need, adding what we can from other sources in order to supply missing information and to enable triangulation for data quality. We intend to develop an online portal to display the results of our analysis dynamically, allowing the Joint Task Force and any other decision-makers to understand Haiti's needs and current supplies. A wide range of advisors is available to the team via Dr. Zissman and his Lincoln Laboratory colleagues, including leading experts at MITRE and other research and academic institutions working on areas that complement our work. On the ground in Haiti, the JTF-H survey is designed in collaboration with Partners in Health/*Zamni Lasante*, the Centers for Disease Control, and other key stakeholders.

A further goal of the project is to connect with others in the MIT community and elsewhere, both to draw on approaches that can inform and improve ours, and to contribute to a broader picture of long-term sustainability and development in Haiti. For instance, we are linking our efforts with MIT Media Lab faculty and students whose *Krik Krak* portal connects projects, classes, and events. Beyond MIT,

team members recently met with Google technical staff and leadership to learn of their work in Haiti and to make the most of existing tools and approaches.

While our team includes students in a graduate-level MIT Sloan School of Management class taught by Anjali Sastry, *Applications of System Dynamics: Global Challenges*, other student participants are volunteers. Several have designed independent studies in collaboration with Jarrod Goentzel. The nine graduate students include 5 from the MIT Engineering Systems Division, 2 from the Fletcher School of Law & Diplomacy at Tufts University, and 2 from the MIT Sloan School of Management (one of whom is also studying at the Harvard Kennedy School). In addition, MIT has institutional linkages to Harvard and Tufts in this domain via the Humanitarian Studies Initiative.

We already have a research program to build on. At the MIT Center for Transportation and Logistics, the Humanitarian Logistics research project is examining supply chain strategies, processes, and technologies that will help improve forecasting, coordination, performance measurement, and use of technology in humanitarian operations. Project director Dr. Jarrod Goentzel is also Executive Director of both the Master of Engineering in Logistics Program and the MIT-Zaragoza International Logistics Program. He and Ph.D. student Erica Gralla are not only part of the Haiti Data Project, but also have experience in this area, including past research and existing work under way with the World Food Programme and Partners In Health, Haiti.

MIT Sloan Senior Lecturer Dr. Anjali Sastry investigates health care delivery in resource-limited settings. Her course, *G-Lab: Global Health Delivery*, was inspired by the Global Health Delivery Project's call for a new role for management and engineering in alleviating the bottlenecks that limit health care for those who most need it. Over the past two years, twenty-five teams of her graduate students put their MIT toolkits to work on campus and on site in Kenya, South Africa, Tanzania, Uganda, Ghana, Sierra Leone and Malawi. This experience addressing the pressing practical challenges faced by clinics, hospitals, companies, and non-governmental organizations on the front lines of delivering health care also informs the current project.

In mid-March, Jarrod Goentzel and Erica Gralla joined the JTF-H team in Haiti, conducting field research to help shape and refine the entire team's work while there and upon their return.

Activities

Major activities of the Haiti Data Project fall into two broad streams of work:

- Data Assessment – This entails examining the incoming survey data, presenting it in useful ways to stakeholders in Haiti, and developing the framing and context for the analysis, including the conceptual framework, sector expertise, and additional data sources.
- Systems Analysis – This entails assembling a history and conducting a system dynamics analysis.

We expect to be sharing more information on the web as we go. Our [blog](#) contains a mix of informal reports of work in progress and will include links to key resources and results. Meanwhile, please contact us with any questions.

Planned roundtable discussions

8:30 to 10:00 am Wednesday March 31

8:30 to 10:00 am Wednesday April 28

We will hold open meetings for MIT faculty and students to join a discussion of specific current issues in the project and will invite domain experts whose input we need to each of these meetings. Please let us know if you'd like to attend.

Contact us

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Resources

MIT President's letter to the community on Haiti: <http://web.mit.edu/newsoffice/2010/haiti-letter.html>

For more on JTF-Haiti: <http://www.southcom.mil/AppsSC/factFiles.php?id=138>

To give to MIT's Haiti efforts: <https://giving.mit.edu/givenow/GiftStart.dyn?desig=4014346>

The Tufts-Harvard-MIT Humanitarian collaboration: <http://www.humanitarianstudies.org/>

MIT news story on the class, 5 March 2010: <http://web.mit.edu/newsoffice/2010/classes-haiti-0305>

Team blog accessible via: <http://globalhealth.mit.edu/category/haiti/>

A list of team members and their bios are available.