Hazus Flood Loss and Damage Estimation Data on the Web, by Ibrahim Demir

About the Author: Ibrahim Demir, an Assistant Professor of Civil and Environmental Engineering at the University of Iowa, has focused his research in hydroinformatics, environmental information systems, scientific visualization, information communication, cyberinfrastructure systems, soft computing, big data analytics, and novel educational systems.

In the last decade, global flood damage has significantly increased, driving the interest and need of researchers, communities, and decision makers to understand the impacts and consequences of flooding. Emergency managers use Hazus to help understand the possible flooding impacts in their communities. Researchers at the Iowa Flood Center at the University of Iowa developed an online system to include flood loss and damage estimation capabilities based on datasets in Hazus. Citizens and researchers without extensive GIS skills can access near real-time flood loss visualizations and maps.

The Iowa Flood Information System (IFIS), shown above, is a web-based platform that enables access to community-based flood conditions, forecasts, visualizations, inundation maps and flood-related information, and applications. Operational since 2011, IFIS has more than 275,000 users mostly in the Midwest region. The system provides data and information including 4,500 flood scenario maps, 600 real-time sensors, and real-time flood forecast models for over 1,000 communities.
Hazus Flood Loss and Damage Estimation on the Web (continued)

The Hazus component in IFIS uses 400 pre-calculated flood scenarios to provide flood loss and damage estimation for seven communities in Iowa. With more than 400 sensors, Iowa has one of the densest real-time stream sensor networks in the nation. This allows IFIS to display quasi real-time data for emergency managers to evaluate current flood conditions.

IFIS uses Google Maps as the base layer to visualize flood damage analysis. For many flood scenarios, automated queries make analysis possible within seconds. Moreover, the queries are easy to adjust for new or updated datasets. Users can show buildings, critical infrastructure, emergency centers, police stations, fire stations, care facilities, utilities, schools, and more.

In addition, this web-based system provides access to many different data sources such as the National Structure Inventory (NSI), National Agricultural Statistical Survey data, land use data, and other census datasets. By integrating Hazus analyses with other flood information, IFIS can improve coordination between a wide variety of stakeholders and organizations. Users can get Hazus-based insights from the scenarios without installing software. By getting an introduction to Hazus damage estimation through IFIS, users can see the benefits of Hazus and potentially explore Hazus more deeply by using the full software.

Hazus Conference: Postponed to Spring 2018

The Annual Hazus User Conference has been POSTPONEI to Spring 2018. Volunteers from the South Carolina Emergency Management Division and College of Charleston Lowcountry Hazards Center are organizing the event.

We apologize for any inconvenience this may have caused.

For questions about registration fee refunds, please contact Norm Levine at LevineN@cofc.edu

Are you interested in presenting in Spring 2018?
- Please contact Charlie Kaufman at ckaufman@emd.sc.gov
- Abstracts should fall into one of the following tracks: General Hazus, Education and Research, or Emergency Management

For questions about the Hazus Conference, please email Hazus-outreach@riskmapcds.com

Upcoming Courses

E0124: Hazus for Flood
October 30 – November 2, 2017
Download the course schedule and enroll at the EMI Courses Page
Contact Paul Ganem at EMI to get your certificates today! paul.ganem@fema.dhs.gov

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