80NSSC18C0121: An interoperable decision support system for flood disaster response assistance
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The "DFO-Floods" App: free, fully-functional mobile app developed for serving flood-related data layers to assist global disaster response activities..
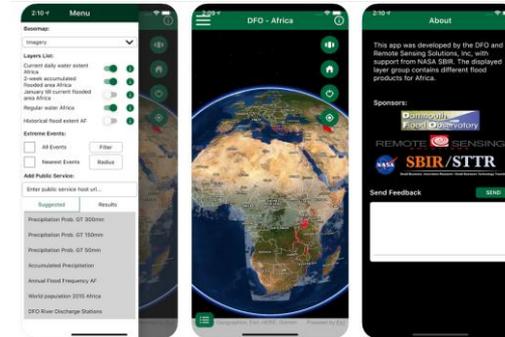
Phase II Key Innovation Met

There is to date no global decision support system for flood disasters that ingests all the data from existing systems and provides real-time critical information that can guide operational reactions on the ground. Because these capabilities evolve over time, any such interoperable system must incorporate changes and improvements thereof, it must be flexible, and itself robust and able to be maintained into the future. These challenges are addressed in this SBIR where Remote Sensing Solutions collaborates with existing efforts of the Dartmouth Flood Observatory (DFO) to develop an interoperable one-stop-shop based on open geospatial data standards that unifies information relevant to flood disaster response.

Technical Objectives Met

Four primary objectives have been defined to achieve this goal (product, i.e. data layer, design; system development; demonstration; commercialization plan). The technical approach to meet the objectives is streamlined into specific work packages, each one including a milestone target to ensure successful project completion.

Notable Deliverables Provided

1. User Needs Survey
2. Technical Requirements Definitions
3. Interactive Online Web Map Service Platform / GIS (Hosted at DFO)
4. Free, Fully Functional Mobile App (iOS & Android)
5. Demo Workshop with Select Stakeholders
6. Progress Reports and Final Report

Possible NASA Application

For NASA mission and pre-mission projects in general and for the NASA Disasters Program, the DSS will be a very valuable resource for assisting disaster response. In this context, for NASA and mandated response agencies, this system can be turned into a service to be inserted into response protocols.

Possible non-NASA Commercialization

Two potential target customer groups: (i) Geospatial data management companies; Flood modeling vendor companies; insurance companies; mortgage lenders/banking industry; (ii) Emergency response organizations; humanitarian agencies; development aid organizations., and other actors operating in flood disaster response.

Planned Phase III Team & Key Partners

Team: Remote Sensing Solutions (RSS) Inc.; DFO CU Boulder; Aquaveo; StormCenter Communications Inc.
Key Partners: FEMA; UN WFP; Pacific Disaster Center (PDC)

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