

# Need of Location based Information in Emergency and humanitarian Response

Presented by G. Prasad Babu, Founder  
Geo Climate Risk Solutions Pvt. Ltd.

# Contextualization:

## (Climate change & Location Based Information)

### Climate Change

- Increasing frequency and intensity of hazards
- Changes in spatial and temporal patterns
- Unplanned growth
- Resilience of the systems

### Location Based Information

- Real time data capture
- Information about changes that have occurred historically, present and may occur in future



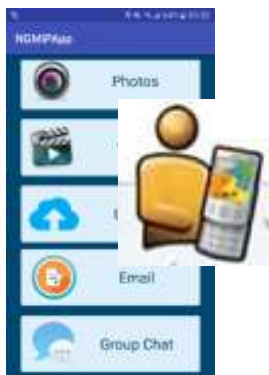
## Importance to Location Based Information

Quick response to emergency or crisis requires three important elements;

Information/Knowledge about;

- a) Precise location
- b) Severity and extent
- c) Immediate needs

Location  
Information



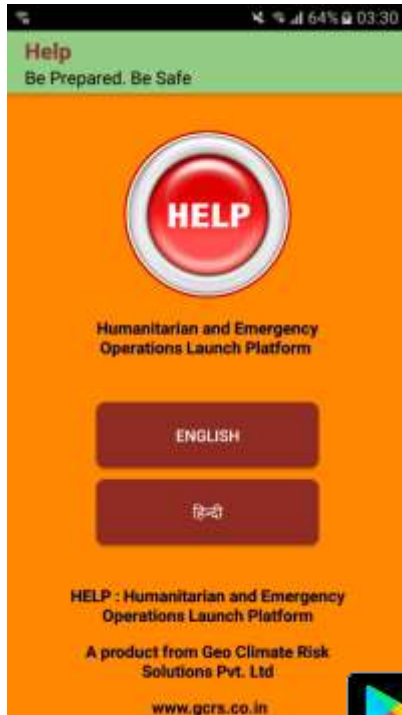
Cloud



Decision Making Board



# Case study 1: Humanitarian and Emergency Operations Launch Platform (HELP)



India's first **open source ICT tool** (mobile and web GIS application) for reporting hazard and damages information.

## Mobile App: HELP GCRS

- 1) Location based hazard and damage data can be sent through email from the mobile app itself
- 3) Captures location (latitude and longitude) information automatically

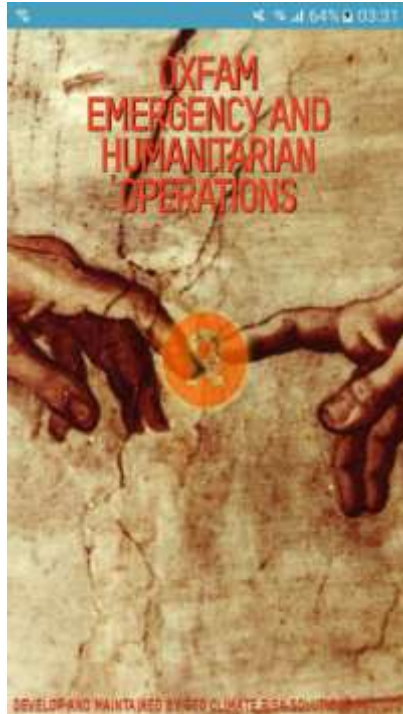
Mobile application available at google play store: HELP GCRS  
<https://play.google.com/store/apps/details?id=survay.hazards.com.hazardsurvey2&hl=en>

**Web Application:** Anyone can upload, view and download data.

Link: <http://182.18.163.226/HELP/Default.aspx>



## Case Study 2: Humanitarian Operations by Oxfam India

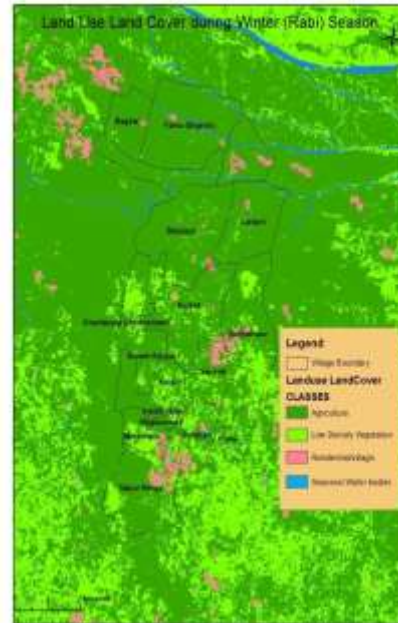


- Post disaster Needs assessment
- Beneficiary selection and registration
- Relief Distribution
- Post disaster relief distribution Monitoring
- Auto report generation



# Case study 3: Resilience to Climate Change

- Development of resilience Indicators
- Mobile App for base line, end line and Monitoring
- Pre and Post Flood crop area analysis



# Case Study 4: Jal Sanchayan



- Jal Sanchayan is a user-friendly android mobile application comprises all components of rainwater harvesting in single platform
- It allows user to know from location conditions and interactive module enable user to calculate potential rainwater to be harvested in user's location
- Provide schematic designs, benefits and operation and maintenance aspects
- provide contact information of authorities, agencies, technical institutions and grass root community organizations working the water sector



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# Case study 5: Mera Bhujal



- Provides groundwater resources information in user locality
- Information on annual groundwater availability and withdrawal
- Stage of groundwater withdrawal
- Indicates the withdrawal stages in color coded format
- Suitable suggestions to augment the groundwater
- Provide groundwater quality information of user locality
- Suggest whether water is permissible to drink or not
- Information available both in Hindi and English
- Provide contact information of central ground water board offices across India
- Plans to provide contact information of agencies working groundwater augmentation and conservation



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# Case Study 6: Groundwater Management



- Participatory Groundwater management
- Water Budgeting
- Water Security Planning
- Institutional Strengthening



# Case Study 7: Risk Analysis



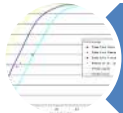
## Hazard Modeling

- Cyclone, Earthquake, Flood, Drought, Tsunami, Fire, Industrial, Landslide, and Weather



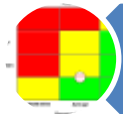
## Exposure data development

- Population, Agriculture, Buildings, Structures and Infrastructure, Livestock and Environmental parameters



## Vulnerability analysis

- Physical, Social, Economic and Environmental



## Risk Assessment

- Damages and losses (Human, Social, economic, and environment) risk maps and profiles



## Actions

- Mitigation Options, adaptation options & Benefit cost analysis

- Risk Analysis of Basic Infrastructure
- Risk analysis of Industrial Units





## Our Expertise

### Thematic areas



Agriculture & Rural  
Development



Knowledge  
Management



Disaster & Climate  
Risk Reduction



Development  
Communications



Environment &  
Spatial Planning



Web and Mobile  
Applications



Geo-spatial  
Services



Monitoring &  
Evaluation



Training &  
Capacity building



Documentation

## Our clients

- Oxfam, India
- Lutheran World Relief
- World Bank Group
- UNDP
- Ministry of Water Resources,  
River Development & Ganga  
Rejuvenation
- Ministry of Tribal Affairs
- World Business Council for  
Sustainable Development
- Aditya Birla Group



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## Contact us

G. Prasad Babu  
Founder & CEO  
Email: [Prasad.babu@gcrs.co.in](mailto:Prasad.babu@gcrs.co.in); [prasadg.iitk@gmail.com](mailto:prasadg.iitk@gmail.com)  
Mobile: +91-9810708901



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