

31st IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)  
Space Assets and Disaster Management (4)

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DISMAPP: A TOOL FOR NATURAL DISASTERS MANAGEMENT USING CITIZEN SCIENCES

**Abstract**

The present work is oriented to better management after a disaster for better decision making using satellite images and the collaboration of the citizens. Peru is a country that is affected by different disasters, such as:

- Earthquakes (mainly due to the Nazca tectonic plate)
- Floods and landslides due to the "El Nino" and "La Nina" phenomena
- Forest fires
- Pre-oil spills

Faced with this situation, this project proposes the implementation of a geographic information system that is fed by satellite images and by photographs and alerts sent by the affected citizens themselves. After a disaster, affected families and individuals could send alerts and photographs reporting what happened through their cell phones. This information will feed our geographic information system using the position of the mobile devices obtained from their GPS. The information sent by the citizens will be combined with the satellite images, and the parameters that can be extracted from them. All this information compiled in our system will serve to give a general vision of the disaster, identify the most affected areas, as well as to quantify the number of victims. Our system will allow us to know the type of help to be provided and by which road it can arrive. The system will serve as a great help to decision-makers achieving better post-disaster management. This work is a big help for decision-makers and can be used not only in Peru, but it can also be replicated in each of your countries.