



MONTANAVIEW

AmericaView Emergency Response Database for Major Disasters

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Overview of MontanaView

- Consortium of universities, non-profit organizations & government agencies to promote the understanding and utilization of remotely sensed data – *maintain archive of publicly available data.*
- MontanaView part of AmericaView (presently 36 states and growing)
- Established 2004
- Lead transferred from U of MT to MSU in 2005
- <http://montanaview.org/>



MontanaView Membership

- Montana State University (lead)
- University of Montana
- Montana State Library NRIS
- MAGIP
- NRCS
- Precision Agriculture Research Assoc.
- GeoEssentials
- USGS Northern Rocky Mountain Science Center (associate)

Expansion since 2009:

- Salish Kootenai College
- Montana Tech



The International Charter

The International Charter Space and Major Disasters was initiated by the European Space Agency (ESA) and the Centre National d'Etudes Spatiales (CNES) following the UNISPACE III conference in 1999. The Canadian Space Agency (CSA) signed the Charter in 2000.

Today, the Charter helps coordinate an increasing number of space agencies worldwide that cooperate on a voluntary basis, with no exchange of funds. Each member agency has committed resources to support the provision of the Charter.

The Charter is an important step forward in linking the needs of disaster and relief organisations with space technology solutions to help mitigate the effects of disasters on human life, property and the environment.

What doesn't the Charter provide ?



Charter Member Agencies



CSA 
Canada

NOAA 
USGS 
USA

CONAE 
Argentina

CNES 
France

ESA 
Europe

BNSC/DMC 
UK NI TR DZ

ISRO 
India

CNSA 
China

JAXA 
Japan

International Charter Resources

Radar	ERS-2, RADARSAT-1 & 2, ENVISAT, ALOS PALSAR
Optical HR/VHR	SPOT2, SPOT4, SPOT5, IRS-1C, IRS-P6, IRS-P5, CHRIS/PROBA, LANDSAT5, LANDSAT7 ALOS AVNIR/PRISM, BILSAT, ALSAT, NigeriaSat, UKDMC, Beijing-1, CBERS-2 Ikonos, QuickBird, Formosat, Topsat
Optical MR	MERIS, POES, GOES, SAC-C



International Charter Activations



Activations – cont.

- 54 internationally since 1 January 2009
- 4 last year in the USA
- 17 in USA since 2005

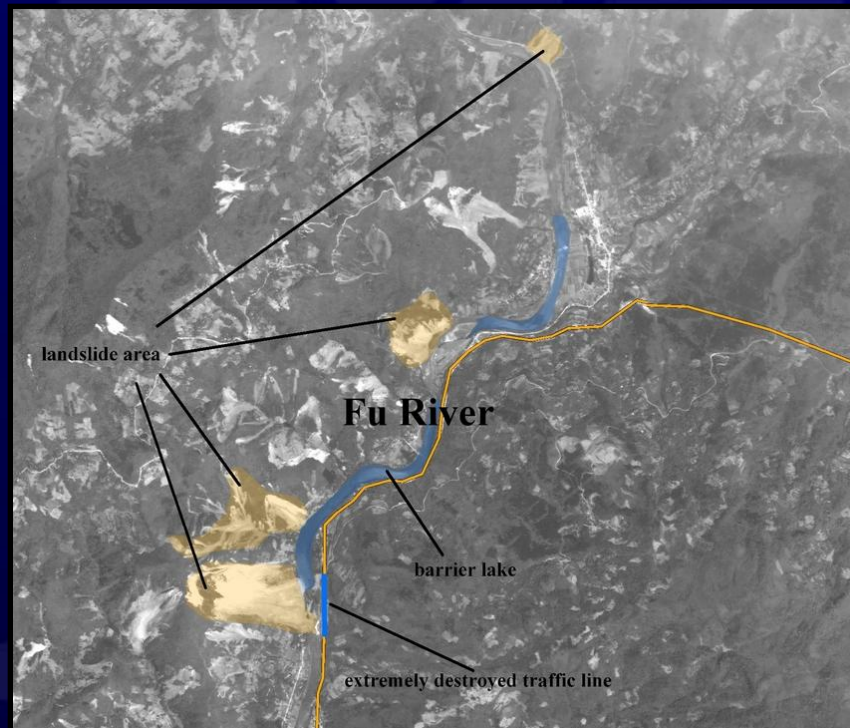


Recent Activations

- International
 - Flood in Cotonou Benin 10/12/2010
 - Floods in Vietnam 10/07/2010
 - Flooding in South Sudan 09/14/2010
 - Earthquake in Haiti 01/13/2010
- North America
 - Flood in Alberta Canada 06/22/2010
 - Deep Water Gulf Oil Spill 04/22/2010



China Earthquake 2008



Deep Water Horizon Oil Spill



Iceland Volcano



Role of AmericaView within the International charter

- All US activations were in AmericaView member states
- Many AmericaView members have participated on an *ad hoc* basis



What doesn't International Charter do ?

Problem: No resources for processing products!

Answer: Emergency Response Database



MontanaView's Plan of Action

- Utilize the AmericaView and StateView networks
- Establish a state and national database of the willing and able



Project Status

- Started in Montana & now operational
- Other AmericaView states are participating
- Participate at:
<http://emergencyresponse.montana.edu>



Data Collection

http://lark.msu.montana.edu:8080/ - Windows Internet Explorer

http://lark.msu.montana.edu:8080/

Google

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Home

Page

Safety

Tools



Emergency Response with Satellite Imagery

Satellite and airborne remote sensing has become an increasingly important asset for emergency response to major disasters, often providing the first accurate assessment of damage and providing first and subsequent responders with invaluable information. Organizations responsible for emergency response, however, often cannot afford to maintain staff experienced in processing remotely sensed imagery. University personnel and the private sector have often filled this need on a temporary, urgent basis throughout the United States in recent years.

A special case arises when the International Charter on Space and Major Disasters is invoked. The International Charter provides a system whereby authorized users can call on member remote sensing data providers throughout the world to provide imagery on an emergency basis. These data are often provided in unprocessed and unfamiliar formats that are even more problematic for responders without remote sensing expertise. These data are not released to the public, but are shared with emergency response coordinators.

MontanaView, a consortium of university, agency, and private organizations in Montana and a member of the AmericaView national consortium, is collecting key information from members of the remote sensing community as to willingness and ability to provide volunteer support in the case of disaster response. We fully understand that many members of the remote sensing community might be limited in their ability to help, whether because of time, financial, work, or other constraints, and no stigma attaches to any inability to provide support. Support is generally provided on a free, volunteer basis. It is important that, in responding to this form, you keep your constraints in mind so that, in the event of an emergency, valuable time is focused on contacting those most likely to be able to assist.

We estimate that this form will take approximately 10 minutes to complete. If you have any questions regarding this questionnaire or related matters, please do not hesitate to contact Rick Lawrence (rickl@montana.edu) or Christine Sommers-Austin (sommersaustin@montana.edu).

START ▶

Done

Local intranet | Protected Mode: Off

100%

Questionnaire

http://lark.msu.montana.edu:8080/insert.a5w - Windows Internet Explorer

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Home

Page

Safety

Tools



We appreciate your willingness to assist in times of an emergency/major disaster. This form will add your information to AmericaView's Emergency Response database and the data you provide will allow us to quickly and accurately identify those who possess specific expertise for the benefit of those affected in times of emergency.

Thank you for your time.

First Name	<input type="text"/>
Last Name	<input type="text"/>
Title	<input type="text"/>
Organization Name	<input type="text"/>
Email Address	<input type="text"/>
Work Phone	<input type="text"/>
Cell Phone	<input type="text"/>
Home Phone	<input type="text"/>
State	<input type="text"/>
Will you assist:	
• With a major disaster in your state?	<input type="text"/>
• With a disaster involving major loss or risk to life in your state?	<input type="text"/>
• If the International Charter is invoked in your state?	<input type="text"/>
• With a major disaster outside of your state?	<input type="text"/>
• With a disaster involving major loss or risk to life outside your state?	<input type="text"/>
• If the International Charter is invoked outside your state?	<input type="text"/>

Done

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What time zone do you live in?

Yes
[Dropdown]

Please indicate your areas of expertise in data analysis and image processing:
(use the ctrl key to select multiple values)

- Chemical
- Dam Failure
- Drought
- Earthquake
- Fire
- Flood
- Hazardous Material
- Heat
- Hurricane/Typhoon

Please indicate the sensors or platforms whose data you have worked with:
(Use the ctrl key to select multiple values from the list)

- SPOT
- SAC-C
- RADARSAT/ENVISAT/PALSAR/InSAR
- MODIS
- Landsat
- IRS
- IKONOS/GeoEye/OrbView/QuickBird/WorldView/Formosat/ Topsat etc.
- DMC (Disaster Monitoring Constellation)

In addition to the previous question, please indicate sensors or platforms whose raw data (level 0) that you have processed:
(use the ctrl key to select multiple values)

- SPOT - Level 0
- SAC-C - Level 0
- RADARSAT/ENVISAT/PALSAR/InSAR - Level 0
- MODIS - Level 0
- Landsat - Level 0
- IRS - Level 0
- IKONOS/GeoEye/OrbView/QuickBird/WorldView/Formosat/ Topsat etc. - Level 0
- DMC (Disaster Monitoring Constellation) - Level 0

For the following days/times, select Yes or No to verify the times you would be willing to assist with emergency response.

- Monday 8 a.m. to 5 p.m.
- Monday 5 p.m. to 9 p.m.
- All other hours on Monday
- Tuesday 8 a.m. to 5 p.m.
- Tuesday 5 p.m. to 9 p.m.
- All other hours on Tuesday
- Wednesday 8 a.m. to 5 p.m.
- Wednesday 5 p.m. to 9 p.m.
- All other hours on Wednesday
- Thursday 8 a.m. to 5 p.m.
- Thursday 5 p.m. to 9 p.m.
- All other hours on Thursday
- Friday 8 a.m. to 5 p.m.

Saturday 8 a.m. to 5 p.m.

Yes

Saturday 5 p.m. to 9 p.m.

Yes

All other hours on Saturday

Yes

Sunday 8 a.m. to 5 p.m.

Yes

Sunday 5 p.m. to 9 p.m.

Yes

All other hours on Sunday

Yes

List any Homeland Security Infrastructure Program (HSIP)

Freedom or other standard vector layers for map generation to which you have access to:

Are there other datasets, imagery, vector data or sensors that your organization maintains that could be made available for emergency response?

How could your organization best assist in an emergency event?

(use the ctrl key to select multiple values)

Pre-event planning
Event response
Post-event analysis
Developing/updating our emergency response policy

Are there specific datasets that would benefit your organization's response efforts?

What value-added products could you assist in creating during an emergency event?

List any resources you have for archiving and distributing digital data during an emergency event:

Please indicate the operating systems that you work with:

(use the ctrl key to select multiple values)

Windows
Apple OS
Unix

Out of the operating systems you selected in the previous question, which one is the primary operating system that you use?

Windows

Please indicate which software programs with which you commonly use:

(use the ctrl key to select multiple values)

ERDAS Imagine
ArcGIS/ArcInfo
ENVI
PCI

Are you willing to allow other emergency responders to utilize your lab or facilities in an emergency event?

Yes

Do you require compensation in order to assist?

No

Please list names and email addresses of individuals, including those within your organization, that you would recommend for this questionnaire:

Is there any additional information you would like to provide?

Submit Cancel

Success Depends on Professionals Like You

1. Please complete the questionnaire to participate in the project: <http://emergencyresponse.montana.edu>
2. Send the link to other colleagues so they can also participate



Acknowledgments

- JC Seong – GeorgiaView
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- Christine Sommers-Austin – Project Manager
- Lance Clampitt - USGS NRMSC

<http://emergencyresponse.montana.edu>