

International Charter Space and Major Disasters



Charter Activation # 425

Charter Call ID # 493

Disaster Event Flood

Disaster Location Rio Grande do Sul - Brazil

Date of Final Reporting 18 August 2014

PM Report

Reporting forms completed by: Josiane Maria Gomes Mafra

Reporting forms reviewed by: Ivan Márcio Barbosa

Project Managers for Charter activations are expected to provide the PM report to the Charter Executive Secretariat within 45 days after the start of the activation.

*Completion of these fields is mandatory.

A. Disaster Event Summary	
*A1. Emergency type: (indicate choice with an [X])	<input type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Storm/Hurricane <input type="checkbox"/> Other (specify): <input type="checkbox"/> Fires <input type="checkbox"/> Volcano <input type="checkbox"/> Ice <input type="checkbox"/> Industrial danger
*A2. Date disaster initiated (dd/mm/yyyy): 26/06/2014	
*A3. Disaster location and extent: Rio Grande do Sul State - Brazil	
A4. Estimated number of deaths: 02 deaths	
A5. Estimated number of people affected: 22.000 people	
A6. Estimated economic losses: 70 million	
A7. Additional disaster impacts (environmental, infrastructure, etc): highways closed and bridges destroyed; agricultural fields damaged.	
A8. Additional disaster event details: floods, people homeless or displaced, 02 deaths	

B. Activation Information			
*B1. Date of Charter activation (dd/mm/yyyy): 04/07/2014			
*B2. Geographical Coordinates (Lat – Long)			
Bounding Box:	Upper left corner: 27° 0'0"S 56°30'0"O	Centre Point(s):	Lat 28°37'56" S Long 56°1'30" W
	Upper right corner: 26°59'37"S 53° 3'26"O		Lat 27°11'36" S Long 53°15'52" W
	Lower left corner: 29°20'52"S 56°30'27"O		Lat 27°54'2" S Long 55°8'18" W
	Lower right corner: 29°21'0"S 53°02'30"O		
*B3. Authorized User/Requestor: Marcus Suassuna Santos	*Organization: Brazilian Disaster and Risk Management National Centre (CENAD)	*Date AU contacted ODO (dd/mm/yyyy): 04/07/2014	
*B4. Identify the agency that requested the Charter activation and why: Brazilian Disaster and Risk Management National Centre (CENAD), began on 26 June, 2014, heavy rains over the state of Rio Grande do Sul, caused high accumulated rainfall and strong winds. Major floods occurred due this rainfall, causing great damage.			
*B5. ECO: Shailaja Nair	*Organization: ISRO	*Date ECO contacted PM (dd/mm/yyyy): 05/07/2014	

*Completion of these fields is mandatory.

*B6. Project Manager: Josiane Maria Gomes Mafra	*Organization: INPE - National Institute For Space Research	*Date PM nominated (dd/mm/yyyy): 05/07/2014
*B7. Value-adding Reseller or organization(s): INPE		*Date VAR received first images (dd/mm/yyyy): 07/07/2014
*B8. End User(s): Marcus Santos Suassuna	*Organization: Brazilian Disaster and Risc Management National Centre (CENAD)	Date first product delivered to End User (dd/mm/yyyy): 09/07/2014

C. Intervention Summary

*C1. Describe the activation in detail and describe the interaction between the PM and the AU:
PM was nominated on 05/07/2014 and received phone call from AU, where the expectations for product delivery were defined. On the same day, PM was notified of the ERF from ECO and received emails from CSA-ASC, DLR, CNSA-CRESDA, ISRO, ESA, CNES and USGS regarding data acquisition. First available image was RADARSAT-2 (acquired 02/06/2010) on 05/07/2014 and the end product was delivered to EU on 07/07/2014. Other radar imagery became available (from TerraSAR-X, RADARSAT-2 and RISAT-1) before the optical very high resolution (Worldview-2 on 07/13/2014 and Pleiades on 07/07/2014) due to cloud cover. LANDSAT (7 and 8) images were delivered last on 07/22/2014 and 07/21/2014, respectively. All images were used to produce end maps delivered to EU. End products were made available to EU through FTP.

*C2. Provide a chronology of events associated with the disaster and the Charter activation:

07/04/2014: Date of Charter activation

07/05/2014: PM was nominated;

07/05/2014: received phone call from AU;

07/05/2014: received email from ECO with ERF;
received email from CSA-ASC, DLR, CNSA-CRESDA, ISRO, ESA, CNES and USGS regarding data acquisition;

07/07/2014: VAR received first images (data from Sentinel-1);

07/08/2014: Received data from TerraSAR-X;

07/09/2014: Received data from Pleiades;

07/09/2014: First images was delivered to the EU (CartaRS_Flood_Itaqui_ESA_English_v1.1.pdf, CartaRS_Flood_Itaqui_ESA_Portugues_v1.1.pdf);

07/10/2014: Pleiades images was delivered to the EU (CartaRS_Flood_Irai_CNES_English_v1.1.pdf, CartaRS_Flood_Irai_CNES_Portugues_v1.1.pdf);

07/10/2014: First TerraSAR-X images was delivered to the EU (CartaPR_Flood_SaoBorja_TerraSAR_Ingles.pdf, CartaPR_Flood_SaoBorja_TerraSAR_Portugues.pdf)

07/11/2014: Received data from Kompsat 2 and Formosat

07/12/2014: Pre-event image and Event image was delivered to EU

*Completion of these fields is mandatory.

(CartaRS_Flood_SaoBorja_KARI_CNES_English_v1.3.pdf,
CartaRS_Flood_SaoBorja_KARI_CNES_Portugues_v1.3.pdf)

07/13/2014: Kompsat 2 images was delivered to EU
(CartaRS_Flood_PortoXavier_KARI_Kompsat2_English_v1.0.pdf,
CartaRS_Flood_PortoXavier_KARI_Kompsat2_Portugues_v1.0.pdf)

07/14/2014: Received data from WorldView-2;

07/15/2014: Received data from LANDSAT-8 and LANDSAT-7;

07/16/2014: Received data from SJ-9A, QuickBird and ASTER

07/17/2014: Last product was delivered to EU
(CartaRS_Flood_SaoMarcosUrugaiana_ESA_English_v1.1.pdf,CartaRS_Flood_SaoMarcosUrugaiana_E
SA_Portugues_v1.1.pdf)

07/18/2014: PM requested the Call closure.

**C3. Fill in the table below identifying the available satellite data with an [X]. List the date (mm/dd/yyyy) that each image was collected).*

Agency	Satellites	Dates of frames requested ¹		*Dates of frames acquired		Dates of frames used in value-adding	
		Programme d	Archived	Programme d	Archived	Programme d	Archived
[] CONAE	[] SAC-C(HSTC)						
	[] SAC-C (MMRS)						
	[] SAC-C(HRT)						
[] CNES	[] SPOT-4						
	[] SPOT-5						
	[X] PLEIADES	07/07/2014 07/08/2014 07/10/2014 07/11/2014 07/12/2014				07/07/2014	
	[X] FORMOSAT	07/11/2014				07/11/2014	
[] CNSA	[] CBERS						
	[X] SJ-9A	07/14/2014					
[X] CSA	[] RADARSAT-1						
	[X] RADARSAT-2	07/06/2014 07/08/2014 07/08/2014	02/06/2010 05/04/2013				
[X] DLR	[X] TerraSAR-X	07/07/2014 07/07/2014				07/07/2014	
	[] RapidEye						
[] DMC	[] DMC						
	[] Nigeriasat-2						

¹This information may be available on the ERF. If not, you may leave this section blank.

*Completion of these fields is mandatory.

[X] ESA	<input type="checkbox"/> ENVISAT						
	<input type="checkbox"/> ERS2						
	<input type="checkbox"/> PROBA						
	[X] Sentinel-1	07/08/2014 07/08/2014 07/08/2014				07/08/2014 07/08/2014	
[X] ISRO	<input type="checkbox"/> LISS-4						
	<input type="checkbox"/> LISS-3						
	<input type="checkbox"/> AWIFS						
	<input type="checkbox"/> Cartosat-1						
	<input type="checkbox"/> Cartosat-2						
	[X] RISAT-1	07/08/2014 07/09/2014 07/10/2014					
[] JAXA	<input type="checkbox"/> ALOS(PRISM)						
	<input type="checkbox"/> ALOS (AVNIR-2)						
	<input type="checkbox"/> ALOS (PALSAR)						
	<input type="checkbox"/> KIBO HDTV-EF						
[] NOAA	<input type="checkbox"/> POES						
	<input type="checkbox"/> GOES						
[X] KARI	[X] KOMPSAT-2	07/07/2014 07/09/2014	02/07/2013 03/23/2013 10/18/2013			07/09/2014	03/23/2013
[X] ROSCOSMOS	<input type="checkbox"/> RESURS-DK1						
	[X] METEOR-M	07/14/2014 07/15/2014					
	[X] KANOPUS-V	07/16/2014		07/06/2014 07/12/2014 07/13/2014			
[X] USGS	[X] LANDSAT-7	07/13/2014 07/13/2014 07/20/2014 07/22/2014					
	[X] LANDSAT-8	07/12/2014 07/13/2014 07/14/2014 07/14/2014 07/21/2014					
	<input type="checkbox"/> IKONOS						
	[X] QuickBird	07/13/2014					
	[X] WorldView	07/13/2014					
	<input type="checkbox"/> GEOEYE1						
	[X] ASTER	07/15/2014					
[X] ISRO	[X] RESOURCESAT2 (AWIFS)	07/11/2014					

D. Intervention Assessment

D1. Explain how the value-adding service provider was chosen:

Value-Added Service was provided by INPE

*Completion of these fields is mandatory.

*D2. List the value-added products obtained from the Charter data:

CartaPR_Flood_SaoBorja_TerraSAR_Ingles.pdf
CartaPR_Flood_SaoBorja_TerraSAR_Ingles.tif
CartaPR_Flood_SaoBorja_TerraSAR_Ingles_100dpi.jpg
CartaPR_Flood_SaoBorja_TerraSAR_Ingles_300dpi.jpg
CartaPR_Flood_SaoBorja_TerraSAR_Portugues.pdf
CartaPR_Flood_SaoBorja_TerraSAR_Portugues.tif
CartaPR_Flood_SaoBorja_TerraSAR_Portugues_100dpi.jpg
CartaPR_Flood_SaoBorja_TerraSAR_Portugues_300dpi.jpg
CartaRS_Flood_Irai_CNES_English_v1.1.pdf
CartaRS_Flood_Irai_CNES_Portugues_v1.1.pdf
CartaRS_Flood_Itaqui_ESA_English_v1.1.pdf
CartaRS_Flood_Itaqui_ESA_Portugues_v1.1.pdf
CartaRS_Flood_PortoXavier_KARI_Kompsat2_English_v1.0.pdf
CartaRS_Flood_PortoXavier_KARI_Kompsat2_Portugues_v1.0.pdf
CartaRS_Flood_SaoBorja_ESA_English_v1.1.pdf
CartaRS_Flood_SaoBorja_ESA_Portugues_v1.1.pdf
CartaRS_Flood_SaoBorja_KARI_CNES_English_v1.3.pdf
CartaRS_Flood_SaoBorja_KARI_CNES_Portugues_v1.3.pdf
CartaRS_Flood_SaoMarcosUruguaiiana_ESA_English_v1.1.pdf
CartaRS_Flood_SaoMarcosUruguaiiana_ESA_Portugues_v1.1.pdf
CartaRS_Flood_Uruguaiiana_ESA_English_v1.1.pdf
CartaRS_Flood_Uruguaiiana_ESA_Portugues_v1.1.pdf

*D3. Comment on the quality of the value-added products:

The VAPs were useful for reconnaissance and identifying the flood water extent.

D4. Identify the end users of the value-added products and how they used the products during the various phases of the disaster cycle. If the value-added products were used to illustrate the impact or extent of the disaster during briefing meetings, include this information:

The end user of the value added products was Brazilian Disaster and RISC Management National Centre (CENAD), which used the products in their situation room for planning and rescue.

*D5. Comment on how useful the value-added products were in practice for the end user. Include any other relevant information about how the Charter assisted the end user in mitigating the effects of the disaster:

Products were useful to monitor the flood damage and extents, and to envision uses of the EU products in response planning.

*D6. Identify data provided by the Charter that was not used. If possible, explain why it was not used:

We used all images acquired for this activation however some archive images were not used because it was not necessary.

D7. Based on use of the data provided by the Charter, provide recommendations to improve the scenarios for Charter activations of this type in the future:

*D8. Summarize the conclusions of the project. Discuss any relevant issues associated with the use of the value-added products in the emergency response; the functional units of the Charter; the ability of the PM, value-added service provider and end users to work within the Charter structure; and/or, any other issues encountered during the activation:

For this type of disaster, which is a rapid flood over a huge area, with different flood peak dates along the river, the challenge was to obtain images in the appropriate time and spatial frames.

Overall the structure of the Charter operated as expected, in an efficient manner.

D9. Additional comments, questions, observations, and lessons learned:

*Completion of these fields is mandatory.

D10. Provide a copy of user feedback forms submitted by the end users or email correspondence regarding the end use(s).
 Indicate your choice with an “ X ”. (VG: Very Good, G: Good, R:Regular, B:Bad)

1. Did you encounter difficulties in triggering the Charter?	Yes <u> </u>	No <u>X</u>
Comments:		

2. How was the communication with the Charter officers?	VG <u>X</u>	G <u> </u>	R <u> </u>	B <u> </u>
Comments:				

3. Did the delivered data fulfill your request?	Yes <u>X</u>	Partly <u> </u>	No <u> </u>
Comments:			

4. Were the data delivered in due time?	Yes <u>X</u>	No <u> </u>
If not, what was your expectation?		
Comments:		

5. Were data delivered in an appropriate way?	Yes <u>X</u>	No <u> </u>
Comments:		

6. Were data presented in an appropriate format?	Yes <u>X</u>	No <u> </u>
Comments:		

7. Was the information content relevant and accurate?	Yes <u>X</u>	No <u> </u>
Comments:		

8. Was the overall quality of the products delivered:	VG <u>X</u>	G <u> </u>	R <u> </u>	B <u> </u>
Comments:				

9. Did you use the data for:			
Operations <u>X</u>	Communication <u>X</u>	Planning <u>X</u>	Documentation <u> </u>
Lessons Learned <u> </u>	Other <u>X</u>	Nothing <u> </u>	
Comments:			

10. Overall, the Charter contribution to this emergency was:	VG <u>X</u>	G <u> </u>	R <u> </u>	B <u> </u>
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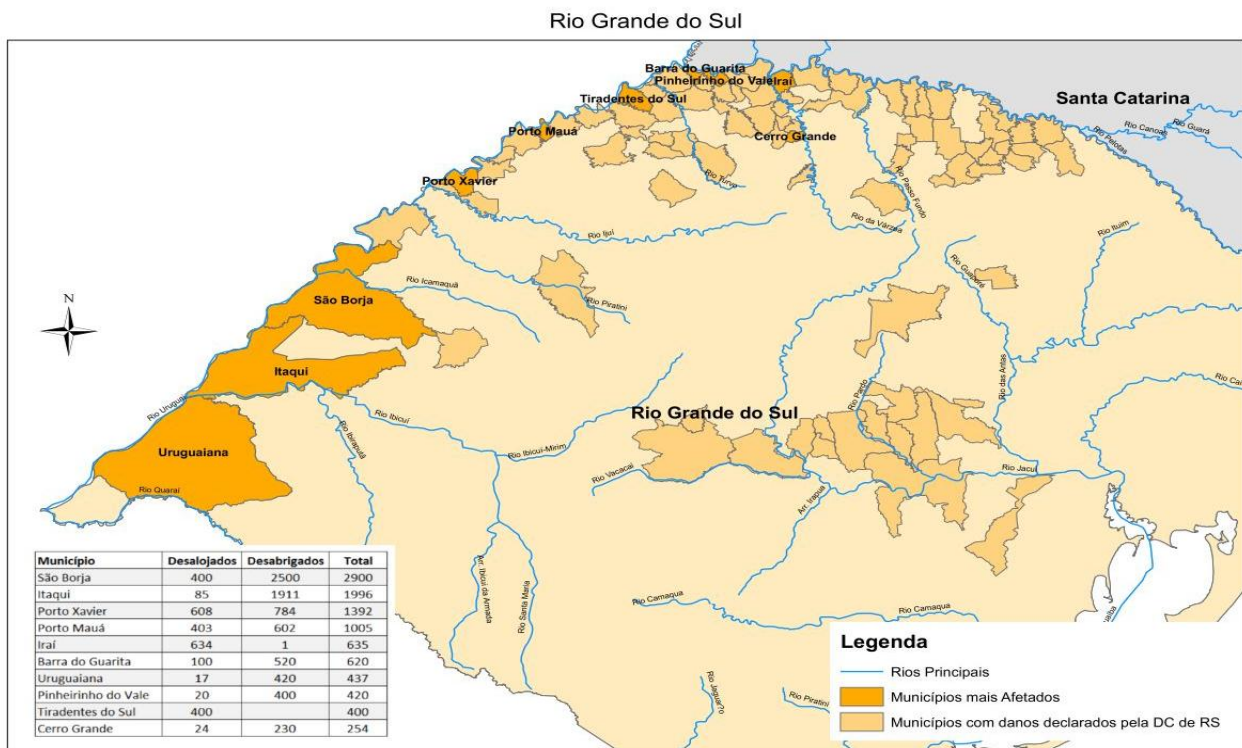
*Completion of these fields is mandatory.

Comments:

Additional Comments:

E. Supporting Documentation

*E1. Insert a map of the affected area and extent of the disaster impact:



*E2. Provide samples of media coverage of the disaster event from TV, radio, news papers, websites, etc. Where possible, copy the content of the article into the PM report rather than only the web addresses:

2/7/2014 às 17h49

RS tem 88 cidades afetadas pelas chuvas

*Completion of these fields is mandatory.

Defesa Civil está fazendo campanha para arrecadar donativos



Cidades ficaram completamente alagadas em junho

O Rio Grande do Sul contabiliza 88 municípios atingidos pelas chuvas, 8.440 pessoas desalojadas e 3.156 desabrigadas. Segundo levantamento atualizado nesta terça-feira (2) pela Defesa Civil, 34 municípios decretaram situação de emergência e um está em estado de calamidade pública. O município de Iraí tem o maior número de desabrigados, 634 pessoas.

Na manhã desta terça-feira, os prefeitos dos municípios atingidos se reuniram para apresentar ao governo do Estado as demandas para a recuperação das cidades. No início da semana, foi instalada uma sala de situação para centralizar as ações de ajuda humanitária, dar seguimento às medidas para desobstrução e restauração de vias, pontes e moradias, e dar apoio a agricultores e pequenos empreendedores.

<http://noticias.r7.com/cidades/rs-tem-88-cidades-afetadas-pelas-chuvas-02072014>

Rio Grande do Sul tem 15 estradas bloqueadas por causa da chuva

Número de municípios em situação de emergência é de 67 segundo Defesa Civil

04/07/2014 | 15h05



*Completion of these fields is mandatory.

Enchente na área São Borja Foto: Tadeu Vilani / Agencia RBS

O Rio Grande do Sul tem, pelo menos, 15 pontos de estradas bloqueadas por causa da chuva. Sendo três federais e as demais estaduais. E, segundo o último levantamento da Defesa Civil, o número de municípios em situação de emergência é de 67 - mesma cifra divulgada no começo da manhã desta sexta-feira. Já o total de atingidos pela chuva chega a 115. As únicas cidades em estado de calamidade pública continuam sendo Iraí e Barra do Guarita.

De acordo com o último relatório da Defesa Civil, divulgado ao meio dia desta sexta-feira, continua em 15.670 o total de moradores desabrigados e desalojados. Na quinta-feira, eram 576 pessoas a menos.

As chuvas que atingem o Rio Grande do Sul há quase duas semanas, com pouco tempo de trégua, já provocaram duas mortes: Eracildo Luiz Assmann, 56 anos, de Arroio do Tigre, e José Lindomar da Silva, 40 anos, de Jacutinga. A namorada de Eracildo, Paula Thom, 23 anos, segue desaparecida.

<http://zh.clicrbs.com.br/rs/noticias/noticia/2014/07/rio-grande-do-sul-tem-15-estradas-bloqueadas-por-causa-da-chuva-4543588.html>

07/07/2014 07h07 - Atualizado em 07/07/2014 07h07

Mais de 20,4 mil começam a semana fora de casa por causa da chuva, RS

Mais de 18 mil estão desalojados e 1,7 mil desabrigados no estado. Itaqui, na Fronteira Oeste, continua sendo a cidade mais atingida.

Do G1 RS



Enchente leva casa em Itaqui (Foto: Estevão Pires/G1)

O Rio Grande do Sul tem 20.436 pessoas fora de suas casas devido à chuva que vem atingindo o estado nos últimos dias. O relatório da Defesa Civil do estado divulgado às 7h desta segunda-feira (7) mostra que o total de municípios atingidos pela chuva chega a 127. São 18.668 desalojados, que foram para casas de amigos ou familiares, e 1.768 desabrigados, levados a ginásios ou abrigos pelo poder público.

Itaqui, na Fronteira Oeste, continua sendo a cidade mais atingida, com 9.138 pessoas desalojadas e 672 desabrigados. Uruguaiana, na mesma região, é o segundo município com maiores números: 5.750 desalojados e 250 desabrigados.

O número de municípios que decretaram situação de emergência continua o mesmo divulgado no domingo (6), 78, enquanto dois declararam calamidade pública. São Borja é a terceira cidade que mais sente os efeitos da água: 2,5 mil desalojados e 400 desabrigados. Os locais sofrem por conta da cheia do Rio Uruguai.

Em outras localidades, dois homens morreram durante ou após os temporais, um em Jacutinga e outro em Arroio do Tigre. Uma jovem de 23 anos segue desaparecida.

Conforme o Instituto Nacional de Meteorologia (Inmet), a frente fria que vem provocando o mau tempo deve se afastar a partir desta segunda-feira (7), deixando o tempo seco na Fronteira Oeste, região das cidades mais atingidas.

Pode ter chuva fraca nesta segunda na Serra e no Litoral Norte. Entre terça (8) e quinta-feira (10), o tempo será seco em todo o estado.

<http://g1.globo.com/rs/rio-grande-do-sul/noticia/2014/07/mais-de-204-mil-comecam-semana-fora-de-casa-por-causa-da-chuva-rs.html>

Chuvas causam danos no Sul do Brasil



Imagem 35/66: 27.jun.2014 - Casas de Iraí, no noroeste do Rio Grande do Sul, foram invadidas pela água da chuva que atinge o norte do Estado desde o início da semana. De acordo com a Defesa Civil estadual, 1.593 pessoas estão fora de suas residências nesta sexta-feira (27). As regiões mais afetadas são a norte e a noroeste, na divisa com Santa Catarina. Conforme os últimos dados, 1.348 pessoas estão desalojadas (fora de sua casas, mas com ajuda de amigos e parentes) e 245 desabrigadas (necessitando de abrigos públicos) **MAIS** André B. Piovesan/ Folha do

Nordeste

*Completion of these fields is mandatory.



Imagem 49/66: 28 jun.2014 - Em apenas dois dias choveu mais do que a média para mês inteiro no Rio Grande do Sul (RS). A Defesa Civil contabiliza 52 municípios prejudicados e, até agora, as prefeituras de Vicente Dutra, Barão do Cotegipe e Erval Grande enviaram solicitação de homologação do decreto de situação de emergência **MAIS** Ronaldo Bernardi/Agência RBS

<http://noticias.uol.com.br/album/2014/06/09/chuvas-causam-danos-no-sul-do-brasil.htm#fotoNav=35>

09/07/2014 18h45 - Atualizado em 09/07/2014 18h53

Número de municípios afetados pela chuva e cheias no RS sobe para 157

Mais cinco prefeituras decretaram situação de emergência e agora são 131. No total, estado ainda tem 18,3 mil pessoas fora de casa após enchentes.

Do G1 RS

A chuva forte que atingiu o Rio Grande do Sul já parou, mas o número de municípios que contabilizam estragos com cheias, vendavais e deslizamentos não para de crescer. Segundo o último balanço da Defesa Civil, divulgado às 18h desta quarta-feira (9), já são 157 municípios afetados, oito a mais do que os dois boletins anteriores.

O número de prefeituras que decretaram situação de emergência também subiu de 126 para 131. Outros dois municípios, Iraí e Barra do Guarita, decretaram situação de calamidade pública. Na terça-feira (8), o governo do Rio Grande do Sul oficializou o decreto coletivo de emergência de 124 municípios atingidos por chuvas nos últimos dias.

No total, o estado ainda tem 18.391 pessoas fora de casa em função da chuva e cheias. São 17.070 desalojados, que foram para casas de amigos ou familiares, e 1.321 desabrigados, levados a ginásios ou abrigos pelo poder público.

Itaqui, na Fronteira Oeste, continua sendo a cidade mais atingida, com 10.127 pessoas desalojadas e 672 desabrigados. Uruguaiana, na mesma região, apare em seguida: 5.836 desalojados e 236 desabrigados. Os dois municípios foram atingidos pela cheia do Rio Uruguai, que atingiu quase 20 metros acima do nível normal em algumas regiões do estado.

<http://g1.globo.com/rs/rio-grande-do-sul/noticia/2014/07/numero-de-municipios-afetados-pela-chuva-e-cheias-no-rs-sobe-para-157.html>

10/07/2014 07h13 - Atualizado em 10/07/2014 08h44

União reconhece situação de emergência no Rio Grande do Sul

Número de pessoas atingidas pela chuva no estado passa de 18,3 mil. Governo do RS pediu R\$ 19 milhões para municípios afetados.

Do G1 RS



Iraí declarou estado de calamidade pública
(Foto: Fernando Sucolotti/Divulgação)

O governo federal publicou nesta quinta-feira (10) no Diário Oficial da União o decreto que reconhece a situação de emergência de 124 municípios do Rio Grande do Sul e de calamidade pública nas cidades de Iraí e Barra do Guarita em função da chuva forte e da cheia do Rio Uruguai e seus afluentes, ocorridas nos últimos dias. A partir da publicação, o repasse de recursos federais será permitido para os municípios atingidos. Entretanto, os valores ainda não foram definidos.


O governo do estado pediu R\$ 19 milhões para todas as cidades envolvidas. Apesar de a chuva forte já ter parado no estado, os níveis dos rios seguem acima do normal, especialmente o Rio Uruguai nas cidades de Itaqui, Uruguaiana e São Borja, na Fronteira Oeste do estado.

<http://g1.globo.com/rs/rio-grande-do-sul/noticia/2014/07/apos-chuva-e-cheia-uniao-publica-decreto-coletivo-de-emergencia-no-rs.html>

*E3. Insert a copy of the URF here:

*Completion of these fields is mandatory.

**User Request Form
(Affected area information)**

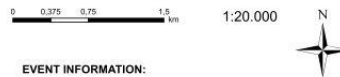
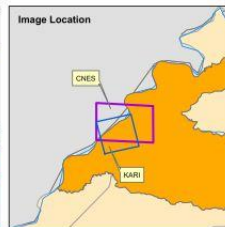
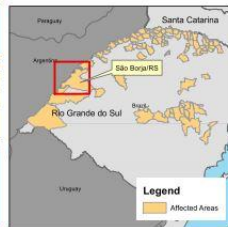
<i>To be filled by ODO</i> Call ID	
1. Date and time of the call	DAY 3 MONTH (Spell) JUNE YEAR 2014 TIME 14H10 LOCAL TIME ZONE BRT UTC TIME-3h
2. Name of the organization and caller (to be used for call back) Phone Fax Cellular phone E-mail	BRAZILIAN DISASTER AND RISK MANAGEMENT NATIONAL CENTRE - CENAD +55 61 3214-0600 +55 61 3214-0600 Ext. +55 61 9694-7647 Ext. marcus.santos@integracao.gov.br
3. Type of disaster <input type="checkbox"/> earthquake <input type="checkbox"/> fire <input checked="" type="checkbox"/> flood <input type="checkbox"/> other (e.g. wind storm, tornado, industrial accident...) specify:	<input type="checkbox"/> ice <input checked="" type="checkbox"/> landslide <input type="checkbox"/> ocean storm (hurricane, cyclone, typhoon) <input type="checkbox"/> ocean wave (tsunami) <input type="checkbox"/> oil spill <input type="checkbox"/> volcano
4. Geographical location	5. Geographical Coordinates in Degrees, minutes, seconds
Region/Country name, approximate geographical location and surface extent. Region/country name: SOUTHERN BRAZIL/RIO GRANDE DO SUL Location From Alpestre/RS To Uruguaiana/RS Extent (km2) 88400	a) Center Point(s) in priority order 1. Lat 28° 37' 56" S Long 56° 1' 30" W 2. Lat 27° 11' 36" S Long 53° 15' 52" W 3. Lat 27° 54' 2" S Long 55° 8' 18" W Please include any additional information on a separate page. b) Upper left Lat 27° 0' 0" S Long 56° 30' 0" W  Lower right Lat 29° 21' 0" S Long 53° 2' 30" W
6. Approximate date/time of occurrence or predicted occurrence	From 26 th of June and on, the most southern state of Brazil, Rio Grande do Sul, received heavy rains. There are predictions that the rains will continue until July 06.
7. Additional information on the disaster	Due to atmosphere conditions satellite radar images are more appropriate.
8. Additional instructions (shipping instructions)	Due to the emergency situation the images are needed in near real time. Download can be done via internet.
<i>To be filled by ODO</i> Authorized User <input checked="" type="checkbox"/> Other <input type="checkbox"/>	

Authorized User/Cooperating Body: Fill the form as indicated above and fax it to +39-06-94-180 202. A completed form may additionally be sent as a backup via email to: charterops@disasterscharter.org.

*E4. Provide a copy of the value-added products here. Please insert copies into this document as .jpeg or other small file formats:

*Completion of these fields is mandatory.

BRAZIL - FLOOD - São Borja - Rio Grande do Sul / RS - 07-JULY-2014



EVENT INFORMATION:

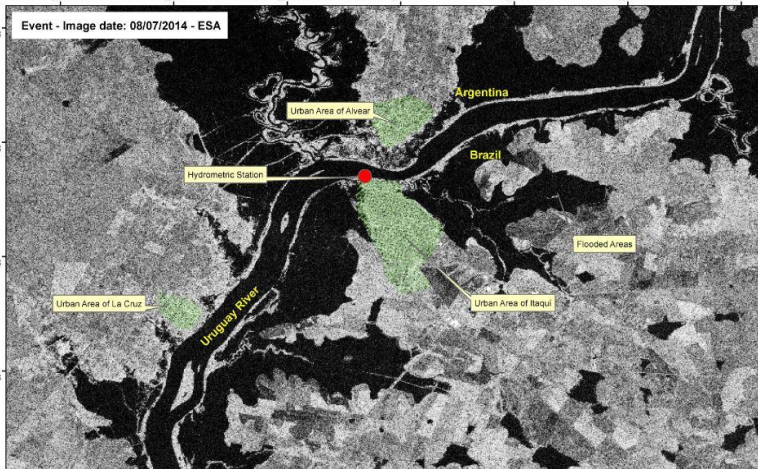
Peak water level: 15,40 meters at 02/07/2014
 CNES image water level: 12,08 meters at 07/07/2014
 Hydrometric station: Passo de São Borja
 Operated by ANA - Brazilian National Water Agency

This product was generated using digital techniques and requires field verification. There is no precision mapping in this product

Product ID: generated by CENAD (Brazilian National Risk and Disaster Management Center), through the agreement International Charter "Space and Major Disasters" Charter Activation ID 425, with images provided by KARI (left image) and CNES (right image)



BRAZIL - FLOOD - Itaquí - Rio Grande do Sul / RS - July 8th, 2014



EVENT INFORMATION:

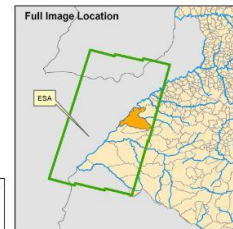
Peak water level: 13,20 meters at July 4th 2014
 ESA image water level: 12,04 meters at July 8th 2014
 Hydrometric station: Itaquí
 Operated by ANA - Brazilian National Water Agency

This product was generated using digital techniques and requires field verification. There is no precision mapping in this product

IMAGE INFORMATION:

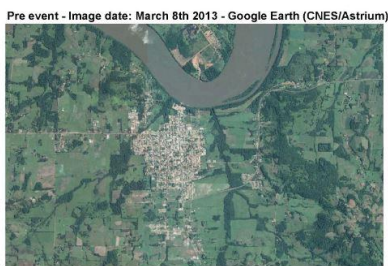
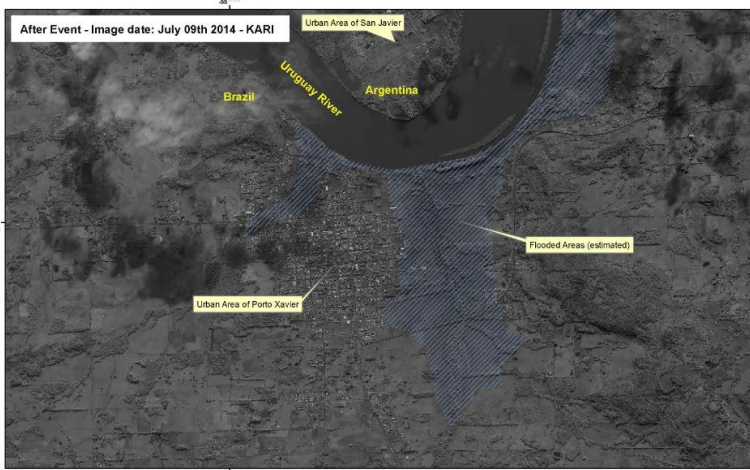
Pre Event:
 ©2014 Google Earth, Image ©2014 CNES/Astrium.
 Event:
 Source: ESA - Sentinel-1
 Acquired: July 8th 2014
 Acquisition Mode: IW
 Resolution: 20 m
 Polarization: HV
 Copyright: © ESA 2014

Product ID: generated by CENAD (Brazilian National Risk and Disaster Management Center), through the agreement International Charter "Space and Major Disasters" Charter Activation ID 425, with images provided by ESA - European Space Agency



*Completion of these fields is mandatory.

BRAZIL - FLOOD - Porto Xavier - Rio Grande do Sul / RS - July 9th 2014



EVENT INFORMATION:
The flooded areas were estimated based on field data, topography and ground features visible in KOMPSAT2 images.

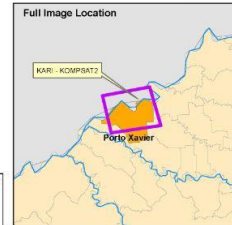
This product was generated using digital techniques and requires field verification. There is no precision mapping in this product

IMAGE INFORMATION:

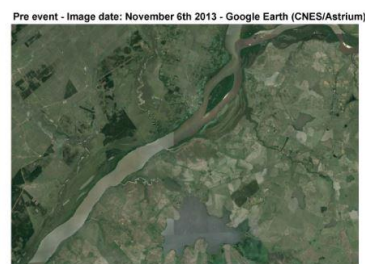
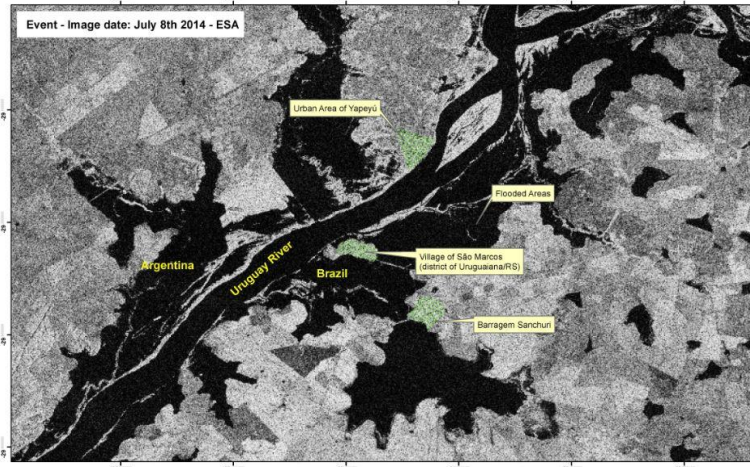
Pre-event Image:
©2014 Google Earth, Image ©2014 CNES/Astrium.

Event Image
Source: KARI - KOMPSAT2
Acquired: July 09th 2014
Acquisition Mode: P (1 m)
Resolution: 1 m
Copyright: © KARI 2014.

Product ID: generated by CENAD (Brazilian National Risk and Disaster Management Center), through the agreement International Charter "Space and Major Disasters" Charter Activation ID 425, with images provided by KARI - Korea Aerospace Research Institute



BRAZIL - FLOOD - São Marcos (Uruguaiana) - Rio Grande do Sul / RS - JULY 8th 2014



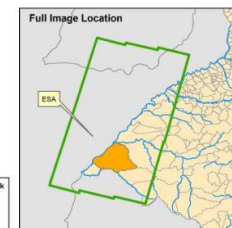
This product was generated using digital techniques and requires field verification. There is no precision mapping in this product

IMAGE INFORMATION:

Pre Event:
©2014 Google Earth, Image ©2014 CNES/Astrium.

Event:
Source: ESA - Sentinel-1
Acquired: July 8th 2014
Acquisition Mode: IW
Resolution: 20 m
Polarisation: HV
Copyright: © ESA 2014

Product ID: generated by CENAD (Brazilian National Risk and Disaster Management Center), through the agreement International Charter "Space and Major Disasters" Charter Activation ID 425, with images provided by ESA - European Space Agency



*Completion of these fields is mandatory.