International Charter

Space & Major Disasters

Executive Secretariat

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CONTENTS

1 Introduction

1.1 Purpose and scope

This document constitutes the annual report on the operations of the International Charter "Space & Major Disasters" prepared by the Executive Secretariat as laid down in [AD1]. It covers the 2007 calendar year.

The report was built upon the following input:

– Working documents, notes and actions of the Executive Secretariat,
– Input from the Communication Group,
– Project managers' reports for each activation,
– Personnel communications.

The report follows the same structure as the work plan of the executive secretariat

Chapter 1 is the present introduction.

Chapter 2 deals with external relationships, new members, cooperating bodies and authorised users.

Chapter 3 depicts internal business, mainly procedure updates and integration of new members.

Chapter 4 reports on the operations, anomalies and resource consumption.

Chapter 5 reports on communication activities, material and tools.

Chapter 5 provides an assessment of the system performance, products and services, user appraisal and communication assessment.

Eventually some conclusions are drawn in chapter 6.

1.2 Applicable documents

[AD1] Charter "Space and Major Disasters"

[AD2] Charter implementation plan, RSCSA-PL0098

[AD3] Project manager procedure, RSCSA-PR0419

[AD4] Emergency on Call Officer procedure, RSCSA-PR0418-C

1.3 Reference documents

[RD1] G. Cabrera, PM report, ref. ACT117_Argentina_FL_Prelim

[RD2] M. Lamfri, PM report, ref. ACT119_Argentina_FL_Prelim

[RD3] T. Bauna, PM report, ref. ACT120_LymeBay_OS_Final

[RD4] E. Bjorgo, PM report, ref. ACT121_Mozambique_FL_Prelim

[RD5] H. Villegas-Vega, PM report, ref. ACT122_Colombia_VE_Final

[RD6] A. Soldano, PM report, ref. ACT123_Bolivia_FL_Prelim

[RD7] E. Bjorgo, PM report, ref. ACT124_Indonesia_EQ_Prelim

[RD8] E. Bjorgo, PM report, ref. ACT125_Madagascar_HU_Prelim

[RD9] A. Soldano, PM report, ref. ACT126_Argentina_FL_Prelim

[RD10]   R. Nezelek, PM report, ref. ACT127_SolomonIslands_EQ_Prelim

[RD11]   J. Smith, PM report, ref. ACT128_Afghanistan_EQ_Prelim

[RD12]   J. Smith, PM report, ref. ACT129_Afghanistan_FL_Prelim

[RD13]   T. Ruhren, PM report, ref. ACT130_UnitedStates_FL_Prelim

[RD14]   R. Saint-Jean, PM report, ref. ACT131_Canada_IH_Prelim

[RD15]   J. Marso, PM report, ref. ACT132_Colombia_VE_Prelim

[RD16]   J. Piedra Vilches, PM report, ref. ACT133_Chile_EQ_Prelim

[RD17]   M. Dell Acqua, PM report, ref. ACT134_Uruguay_FL_Final

[RD18]   J. Piedra Vilches, PM report, ref. ACT135_Chile_OS_Prelim

[RD19]   K. Brown, PM report, ref. ACT136_UK_FL_Prelim

[RD20]   C. Stewart, PM report, ref. ACT137_Pakistan_FL_Prelim

[RD21]   G. Jianning, PM report, ref. ACT138_China_FL_Final1

[RD22]   L. Suju, PM report, ref. ACT139_China_FL_Final

[RD23]   K. Brown, PM report, ref. ACT140_UK_FL_Final

[RD24]   C. Radestock, PM report, ref. ACT141_Spain_FF_Prelim

[RD25]   G.S. Rao, PM report, ref. ACT142_India_FL_Prelim

[RD26]   R. Nezelek, PM report, ref. ACT143_Vietnam_FL_Prelim

[RD27]   E. M. Santibanez, PM report, ref. ACT144_Peru_EQ_Prelim

[RD28]   E. Bjorgo, PM report, ref. ACT145_NKorea_FL_Prelim

[RD29]   M. Moran, no PM report available

[RD30]   G. Ibanez, PM report, ref. ACT147_Paraguay_FF_Prelim

[RD31]   C. Stewart, PM report, ref. ACT148_Greece_FF_Final

[RD32]   M. Moran, no PM report available

[RD33]   E. Bjorgo, PM report, ref. ACT150_WestAfrica_FL_Prelim1

[RD34]   T. Schneiderhan, PM report, ref. ACT151_Slovenia_FL_Prelim

[RD35]   R. Malosti, PM report, ref. ACT152_NKorea_FL_Prelim

[RD36]   R. Nezelek, PM report, ref. ACT153_Vietnam_FL_Prelim

[RD37]   M. Sneed, PM report, ref. ACT154_California_FF_Prelim

[RD38]   F. Delgado, no PM report available

[RD39]   F. Delgado, no PM report available

[RD40]   R. Nezelek, PM report, ref. ACT157_Vietnam_FL_Prelim

[RD41]   S. Plattner, PM report, ref. ACT158_Bangladesh_HU_Prelim

[RD42]   J. Piedra Vilches, no PM report available

[RD43]   M. Simon, PM report, ref. ACT160_Fiji_HU_Final

[RD44]   L. Bal, PM report, ref. ACT161_Norway_OS_Prelim

[RD45]   EM-DAT: The OFDA/CRED International Disaster Database - www.em-dat.net - Université Catholique de Louvain - Brussels – Belgium

1.4 List of acronyms

AU	Authorised User
BNSC	British National Space Council
CAS	China Academy of Science
CMA	China Meteorological Administration
CRESDA	Center for resources Satellite Data and Applications
CSA	Canadian Space Agency
CNES	Centre National d'Etudes Spatiales
CNSA	China National Space Agency
DDSC	Direction de la Défense et de la Sécurité Civiles
DLR	Deutsche Luft- und Raumfahrtagentur
CONAE	Commission Nacional de Actividades Espaciales
DMC	Disaster Management Constellation
ECO	Emergency on Call Officer
ESA	European Space Agency
EUR-OPA	European Open Partial Agreement
IFRC	International Federation of Red Cross / Red Crescent societies
JAXA	Japanese Aerospace Exploration Agency
NCDR	National Center for Disaster Reduction
NOAA	National Oceanic and Atmospheric Administration
NSMC	National Satellite Meteorological Center
ODO	On Duty Operator
OOSA	Office for Outer Space Affairs
PA	Partner Agency
PM	Project Manager
RCMRD	Regional Center for Mapping of Resources for Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNOPS	United Nations Office for Project Services
UNHCR	United Nations High Commissary for Refugees
USGS	United States Geological Survey
VAR	Value adding reseller
WFP	World Food Programme

2 External relations

2.1 New members

On May 24, 2007 the China National Space Agency (CNSA) joined the Charter. CNSA Administrator Prof. Dr Sun Laiyan signed the Charter at ESA Headquarters in Paris, France, in the presence of ESA Director General Jean-Jacques Dordain, CNES Chairman and Chief Executive Officer Yannick d'Escatha and the Chinese Ambassador to France, Zhao Jinjun.

CNSA Administrator Sun Laiyan (right) signing the Charter on 24 May 2007 at ESA headquarters in Paris, France, in the presence of ESA Director General Jean-Jacques Dordain.

Two American commercial satellite imagery firms – DigitalGlobe and GeoEye – joined forces with the US Geological Survey (USGS), representing a unique collaboration between government and industry in the area of commercial space imaging that benefits people worldwide. GeoEye and DigitalGlobe own and operate Earth-imaging satellites that acquire very high-resolution images. While there is normally a cost associated with obtaining high-resolution commercial satellite scenes, the two companies will donate some archived imagery and provide newly tasked imagery through USGS to the Charter.

Sean McCarthy and Elaine Baxter from QinetiQ (www.QinetiQ.com) introduced TopSat, a technology demonstrator electro-optical small satellite jointly funded by the UK Ministry of Defence and BNSC. TopSat was designed and built by a consortium of British companies led by QinetiQ, with other consortium members include Surrey

Satellite Technology Ltd (SSTL), and Rutherford Appleton Laboratories (RAL). TopSat supplies panchromatic and multi-spectral data.

The TopSat consortium is offering the following to the Charter:
- TopSat archive imagery by request to support Charter initiatives
- New image tasking where possible within normal working hours
- Imagery in standard Tiff format (& jpegs for use in publicity documents)

Dave Hodgson (DMC) noted that TopSat is not a member of the Disaster Management Constellation but that they are proposing pooling their resources in order to offer the Charter an additional, useful asset. TopSat would therefore be made available via DMCii. The Board welcomed the offer and agreed that DMCii should liaise with the TopSat consortium to determine the practicalities of making TopSat available to the Charter.

2.2 Cooperating bodies

The level of activity and requests coming from UN through the cooperation agreement was welcomed and acknowledged.

Discussions continued with UN OOSA and other agencies in order to strengthen the relationship with those beneficiary entities within the UN system, such as OCHA or WFP. Another objective was to increase the visibility of the Charter itself.

2.3 Authorised Users

CNSA has updated the Authorized User information for China.

The Charter board was approached by GEO requesting that the GEO member countries be accepted as Charter users and be granted access to archive data. Philippe Bally (ESA) introduced the letter sent by the GEO Secretariat to JAXA. He further presented analysis of the implications of these requests for the Charter. The proposal was discussed and the Board was supportive of the GEO proposals "in principle" but raised some issues and concerns. It was suggested that the GEO secretariat and Charter members work together to take this forward.

2.4 Project Manager Training

USGS trained 11 project managers at the Regional Center for Mapping of Resources for Development (RCMRD) in Nairobi, Kenya. The RCMRD is a non-profit intergovernmental organization with 15 contracting member states including Botswana, Comoros, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Namibia, Seychelles, Somalia, Sudan, Swaziland, Tanzania, Uganda, and Zambia and 10 non-contracting member states

including Angola, Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Madagascar, Mozambique, Rwanda, South Africa, and Zimbabwe. The project managers included 7 scientists and GIS staff from RCMRD, 2 scientists from the Kenya Disaster Response Offices, 1 scientist from USAID, and 1 scientist from FEWS/NET. The NDA was signed by Director General, Dr. Wilber Ottichillo on September 29, 2007.

Participants in RCMRD project manager training class, Nairobi, Kenya, September, 2007.

2.5 Integration of new members

Operational integration of CNSA began during the second half of the year.

The 5-day training session was attended by experienced mission planners from DMCII, CSA, ESA, ISRO, JAXA and USGS. CNSA had staff and observers participating from several agencies including CNSA, National Center for Disaster Reduction (NCDR), China Meterological Administration (CMA) National Satellite Meteorological Center (NSMC), Center for Resources Satellite Data and Applications (CRESDA), and the Chinese Academy of Sciences (CAS). The training was held in Beijing in November of 2007.

Operational integration of CNSA will take place after the completion of their integration testing in 2008.

Participants in the ECO training in Beijing, November, 2007.

3   Operations

3.1   Charter activations

The following table summarises the 45 regular activations during the reference period.

The Call-ID is the unique number assigned by the ODO to any User Request Form received. The number of activations actually recognised differs from the Call-ID as some calls are not processed. Such calls are listed in 3.2

Call ID	Activation ID and description	activation date
141	117 Argentina, Floods	January 17, 2007
142	118 Germany, Storms	January 18, 20007
143	119 Argentina/Paraguay/Bolivia, Floods	January 19, 20007
144	120 England, Oil Spill	January 22, 2007
145	121 Mozambique, Floods	February 8, 2007
146	122 Colombia, Volcano	February 19, 2007
147	123 Bolivia, Floods	February 23, 2007
148	124 Indonesia, Earthquake	March 6, 2007
149	125 Madagascar, Cyclone	March 23, 2007
150	126 Argentina, Floods/Landslides	March 30, 2007
151	127 Solomon Islands, Earthquake/Tsunam	April 3, 2007
152	128 Afghanistan, Earthquake	April 3, 2007
153	129 Afghanistan, Floods	April 6, 2007
155	130 United States, Floods	April 17, 2007
156	131 Canada, Ice Jam	April 17, 2007
157	132 Colombia, Volcano	April 20, 2007
158	133 Chile, Earthquake/Landslides	April 26, 2007
159	134 Uruguay, Floods	May 8, 2007
160	135 Chile, Oil Spill	June 1, 2007
161	136 United Kingdom, Floods	June 28, 2007
162	137 Pakistan, Floods	July 2, 2007
163/164	138 China, Floods	July 13, 2007
165	139 China, Floods	July 19, 2007
166	140 United Kingdom, Floods	July 24, 2007
167/168	141 Canary Islands Spain, Fire	August 2, 2007
169	142 India, Floods	August 6, 2007
170	143 Vietnam, Floods	August 7, 2007

171	144 Peru, Earthquake	August 16, 2007
172	145 North Korea, Floods	August 17, 2007
173	146 Mexico, Hurricane	August 21, 2007
174	147 Paraguay, Fires	August 27, 2007
175	148 Greece, Fires	August 29, 2007
176	149 Nicaragua, Hurricane	September 4, 2007
177/178	150 West Africa, Floods	September 14, 2007
179	151 Slovenia, Floods/Landslides	September 19, 2007
180	152 North Korea, Typhoon	September 21, 2007
181	153 Vietnam, Typhoon	October 3, 2007
182	154 United States, Fires	October 23, 2007
183	155 Dominican Republic, Hurricane	October 30, 2007
184	156 Mexico, Floods	November 2, 2007
185	157 Vietnam, Floods	November 15, 2007
186	158 Bangladesh, Cyclone	November 16, 2007
187	159 Chile, Earthquake	November 22, 2007
188	160 Fiji, Cyclone	December 7, 2007
189	161 Norway, Oil Spill	December 12, 2007

Table 3-1 List of 2007 activations

In the following cases, two or more requests were received:

–   138 China Flood, (changing area of interest)

–   141 Canary Islands Spain, Fire, (changing areas of interest)

–   150 West Africa, Floods (Changing area of interest)

As agreed in such cases, data were sent to each requestor in parallel.
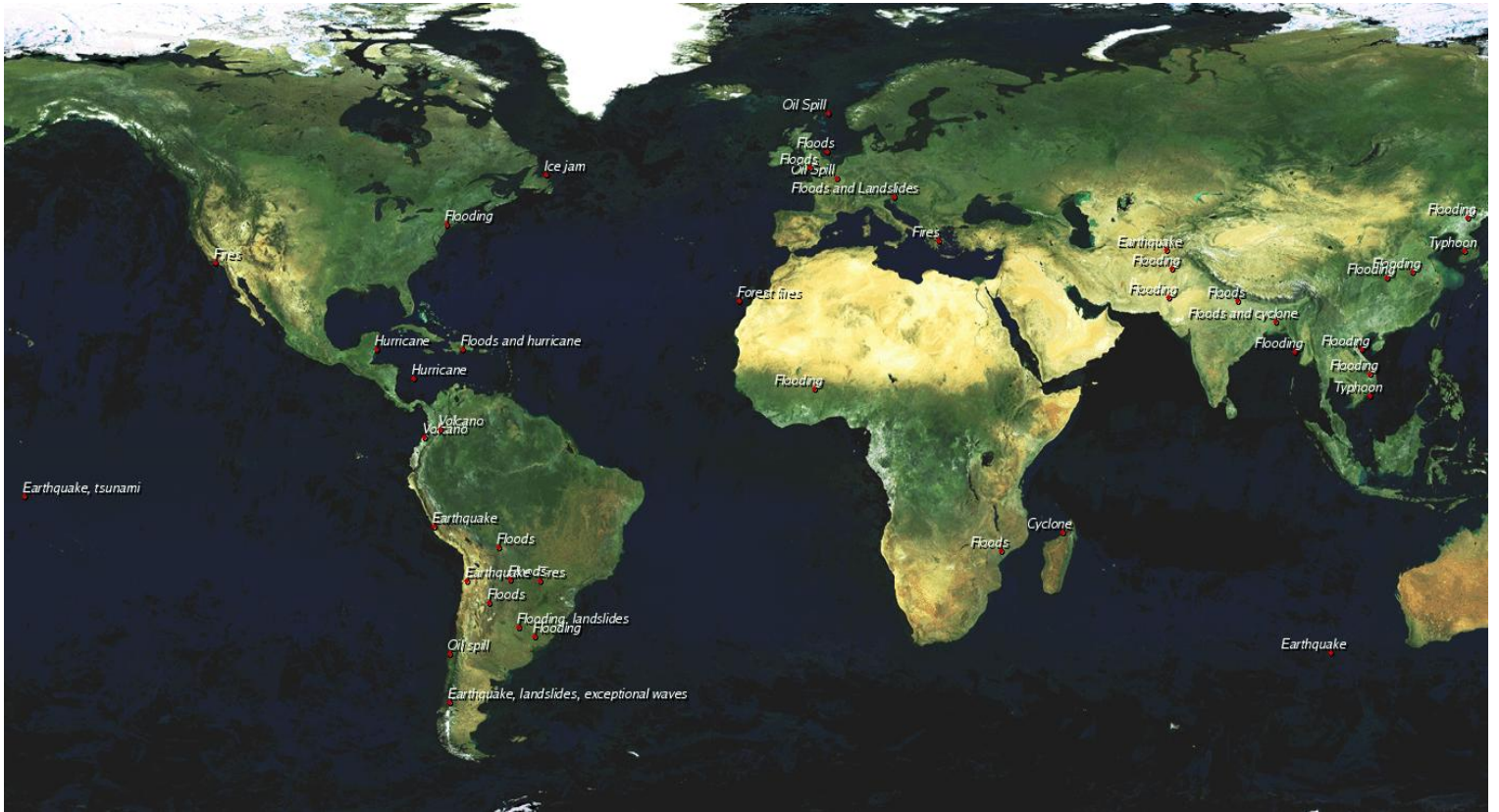
Figure 3-1 Charter activations 2007

Figure 3-1 shows the geographic location of 2007 activations.

Figure 3-2 depicts the number of calls since November 2000. A sustained level of activity observed since April 2003 had been maintained, with an average of 2 calls per month through 2006, but showing an increase in 2007 to an average of over 3 calls per month.

Year	Average # of calls per month
2001	1
2002	1.6
2003	1.6
2004	2.1
2005	2.7
2006	2.3
2007	3.8
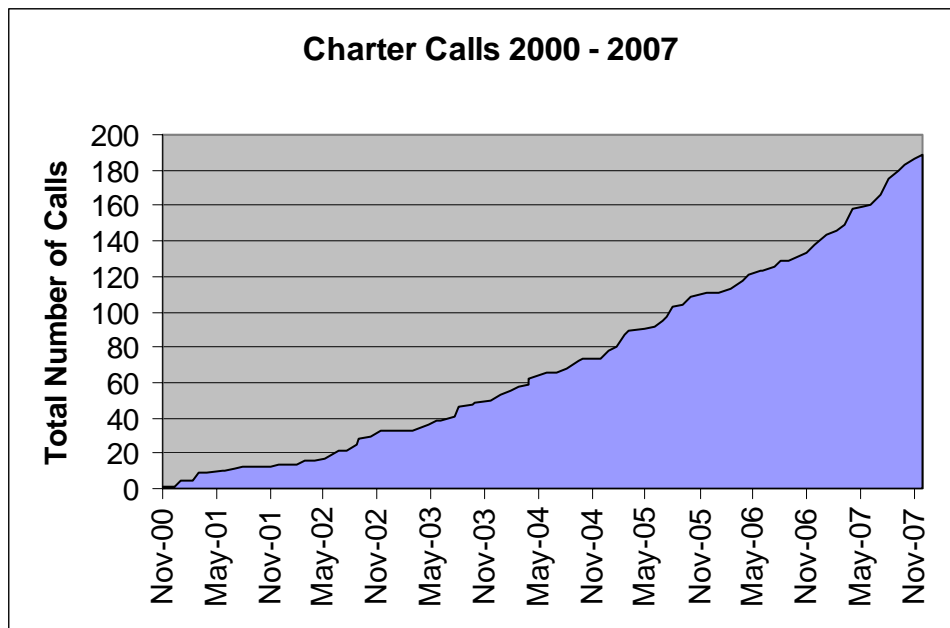
Figure 3-2 Cumulative calls since 2000

3.2 Anomaly reports

2 anomaly reports were opened during this period and mostly dealt with procedural errors, usage of out-of-date forms, etc. The Executive Secretariat analysed all of them and reported to the board.

3.3 FTP site

The FTP site has been an increasingly used resource for operations. A special folder for each new call is created on the FTP site, where the ECO can find a digital copy of the user request form and where the full dossier may be dropped.

The FTP site is daily used as an archive of reports, procedures, minutes of meetings and related material. In addition, the FTP site has been used occasionally as a temporary repository to exchange raw data amongst space agencies, Project managers and sometimes authorised users. The FTP site has been expanded to include sample data sets to be used by Project Managers for training and also to include an area for all agencies to provide their appropriate logo and copyright information for use by the Project Managers and value added resellers on products.
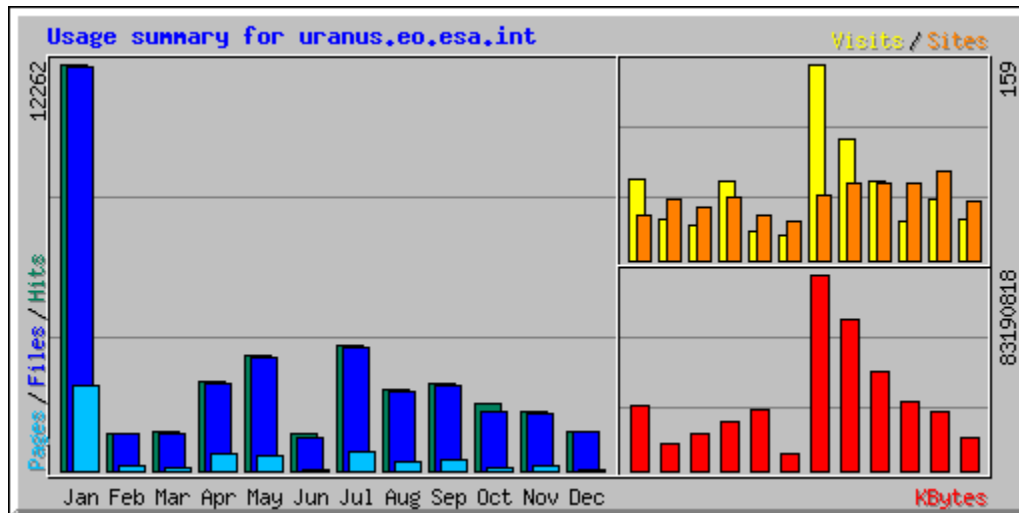
Figure 3-3 - FTP site usage statistics 2007

Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Dec 2007	43	42	2	1	48	14403013	33	57	1158	1184
Nov 2007	58	57	4	1	73	25039568	49	123	1712	1758
Oct 2007	65	58	2	1	62	29460186	32	70	1804	2036
Sep 2007	97	94	11	2	63	42220106	64	303	2556	2619
Aug 2007	79	77	9	3	62	63910897	98	283	2403	2470
Jul 2007	126	124	19	5	53	83190818	159	579	3726	3782
Jun 2007	37	34	1	0	31	6920012	20	45	986	1095
May 2007	112	110	14	0	37	25713593	24	448	3423	3480
Apr 2007	89	87	16	2	51	20821638	64	507	2633	2684
Mar 2007	37	36	3	0	43	15513632	29	98	1127	1166
Feb 2007	39	38	4	1	49	11372084	34	127	1090	1105
Jan 2007	395	393	82	2	37	27299635	66	2565	12184	12262
Totals						365865182	672	5205	34802	35641

Figure 3-4 - FTP monthly usage 2007

3.4 Resource report

There were 687 images used this year. This is nearly double from last year, which compares well with the activation numbers nearly also being doubled. There was an average of 15 scenes used for each activation, while the high average per single resource is 2 (for SPOT). This shows enough the capacity of the Charter and the power of joining forces at moderate expenses of resources.

The SPOT family remains by and large the mostly used resource, followed by ENVISAT. Optical data (SPOT, IRS, LANDSAT, DMC, SAC-C) still exceeds radar data
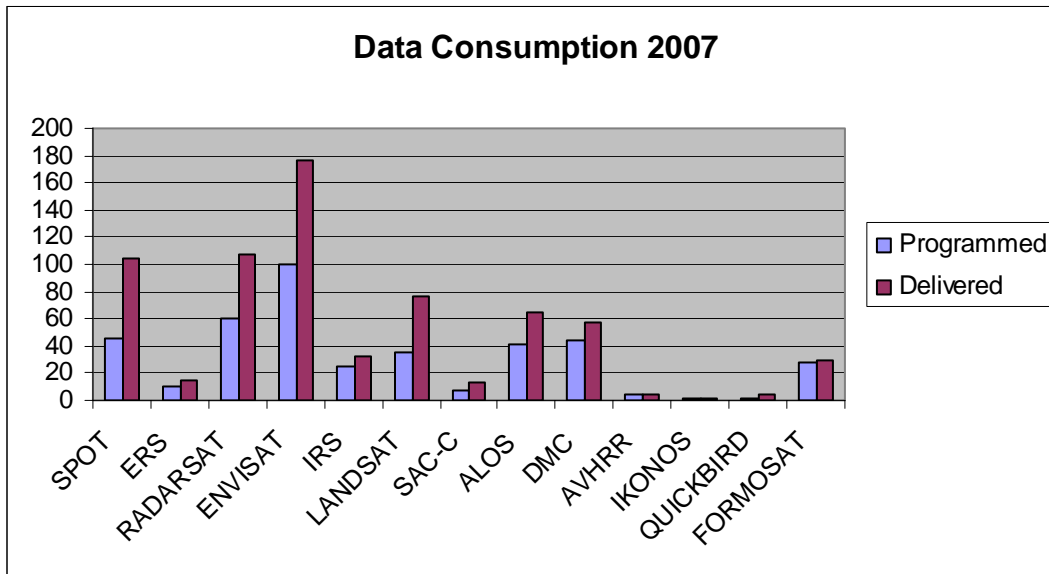
Figure 3-5 Resource consumption

Resource	SPOT	ERS	ENVISAT	RADARSAT	IRS	AVHRR	LANDSAT	SAC-C	DMC
Programmed	59	11	100	61	25	4	35	8	44
Delivered	104	14	177	108	33	4	77	13	57
Max per call	13	7	21	8	8	4	9	4	6
Min per call	0	0	0	0	0	0	0	0	0
Average per call	2.3	0.3	3.9	2.4	.7	0.08	1.7	0.3	1.3

Resource	ALOS	IKONOS	QUICKBIRD	FORMOSAT
Programmed	41	1	2	28
Delivered	65	1	4	29
Max per call	11	1	1	5
Min per call	0	0	0	0
Average per call	1.4	.02	.08	.6

Table 3-1 Total and average resource consumption

In terms of human resources provided by the partner agencies, ECO services were provided on a weekly basis by ESA, CNES, CSA, ISRO, USGS, DMC, and JAXA on a equal footing. The random nature of calls resulted in a rather balanced workload on all partner agencies with 5 calls processed by CONAE and DMC, 4 by ESA and ISRO, 3 by CNES, and 1 each by CSA and USGS . Some ECOs had to handle 2 calls in a week on duty and some had to face changing areas of interest as floods spread widely.
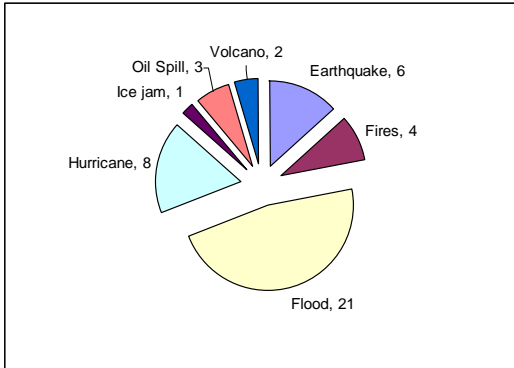
Figure 3-6 Type of disasters
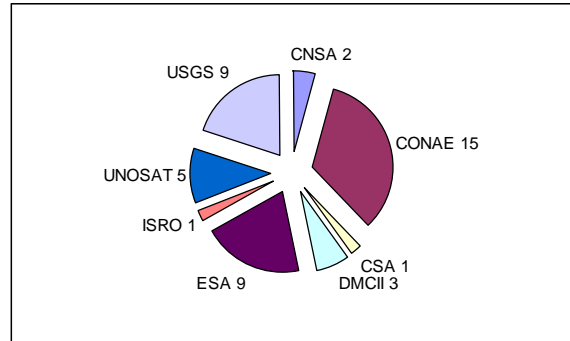
Figure 3-7 Project manager per agency
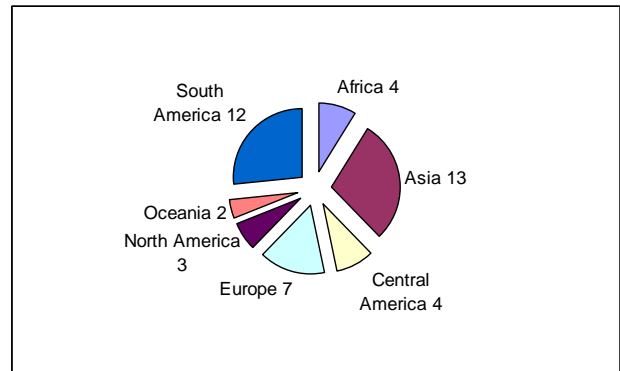
Figure 3-8 Geographic distribution

Still in terms of human resources, the CONAE "family" provided 15 project managers – most of whom were trained during the regional PM training course hosted by CONAE, followed by USGS and ESA families each with 9 accounting for more than half of the total, followed by UNOSAT with 5, DMCII family with 3, CNSA with 2, and ISRO and CSA each with 1. (Figure 3-7).

China	Canada	UK	European Union	India	Argentina	UNOOSA	United States
2	2	3	5	1	13	10	9

Table 3-2 Number of calls per country

As far Authorised users were concerned, China has placed 2 calls.10 calls originated from the UN organisations. 5 calls originated from European AU's, and 9 from United

States, 13 from South America, 2 from Canada, and 1 from India. Table 3-2 provides a list of callers where only the primary caller was considered.

4 Communications

4.1 Web site

The web site has been part of the standard communication activities. The following table shows statistics on the web site filtered from robots and internal traffic.

Summary by Month									
Month	Daily Avg				Monthly Totals				
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Dec 2007	25544	22179	1211	638	19631	135721628	19807	37570	687554	791893
Nov 2007	31308	27100	1400	771	24653	187838105	23132	42028	813027	939252
Oct 2007	28313	24683	1274	704	22247	133262950	21824	39512	765199	877710
Sep 2007	27952	24067	1252	683	20435	94041869	20500	37577	722021	838570
Aug 2007	26270	20558	1118	576	16797	70751796	17875	34677	637311	814370
Jul 2007	20871	18080	948	505	15237	52635817	15669	29410	560491	647010
Jun 2007	23093	17819	986	556	16097	44279338	16704	29589	534573	692818
May 2007	26841	22801	1083	623	19171	51186987	19330	33580	706858	832084
Apr 2007	29369	25429	1229	668	19220	57202177	20046	36884	762884	881075
Mar 2007	31729	27891	1249	700	20613	78706362	21709	38719	864651	983603
Feb 2007	27745	24740	1149	687	18121	61671807	19253	32197	692727	776876
Jan 2007	28759	24649	1109	631	18945	79993327	19584	34395	764121	891547
Totals						1047292163	235433	426138	8511417	9966808

Table 4-1 Charter web monthly usage 2007

These figures are also presented in the following chart. Overall 2007 has seen approximately 10,000,000 hits, around 700 daily visits with a yearly traffic above 1000 Terabytes.
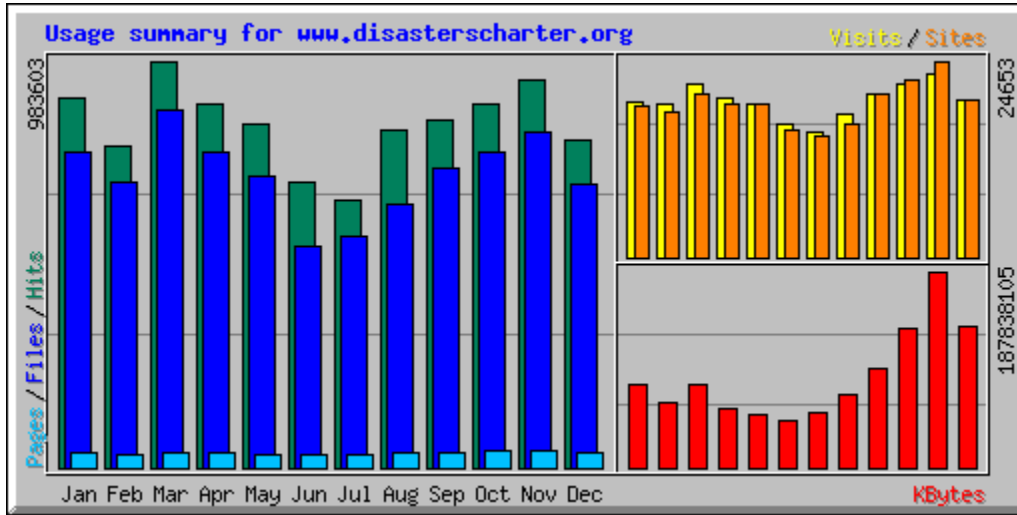
Figure 4-1 Charter web usage statistics 2007

4.2 Promotion material

The web site has been a very important communication vehicle this year.

4.3 Conferences & presentations

The following table provides a list of the events or conferences where the Charter was presented.

Event	Venue	Date	Speakers
ASPRS	Tampa, FL	May 5 – May11	Brenda Jones
World Disaster Conference	Atlanta, GA	May 29 – June 1	Brenda Jones
ASPRS	Ottawa	Oct 28-Nov 2	Brenda Jones Ahmed Mahmood

Table 4-2 List of conferences with Charter presence

4.4 Press releases and press cuttings

The following table summarises the main press releases and web stories issues by the partner agencies during this period. Such issues are related to major disasters and Charter activation, such as the Asian tsunami, the Kashmir earthquake or the Romanian floods, or to celebrations, such as accession of JAXA and BNSC-DMC to the Charter or the 5th anniversary of the Charter, or eventually the EURATECH exercise.

Press releases

Date	Issuing agency	Title	Notes
12 April	USGS	Commercial Satellite Imagery Companies Partner with the U.S. Geological Survey in Support of the International Charter "Space and Major Disasters"	Charter web

Table 3 - Press release

The next table is a selection of press / web cuttings relating to the Charter, often repeating the aforementioned press releases, and to some extent measuring the effectiveness of this communication vehicle.

Other web cuttings, such as the entry in the *Wikipedia* encyclopaedia or the entry in the French educational web site are evidences of the long-term impact of the Charter.

As already outlined in the 2004 annual report, the Asian tsunami has been a milestone inasmuch it revealed the capabilities of satellite imagery for emergency relief to a wide public.

Press cuttings

Date	Title	Source
17 Oct	UK takes over helm of International Charter	http://www.esa.int/esaEO/SEMD0RAMS7F_index_0.html
24 May	The China National Space Administration (CNSA) joins the International Charter	http://www.esa.int/esaEO/SEMCG59RR1F_environment_0.html
12 Apr	Commercial Satellite Imagery Companies Partner with USGS in Support of the International Charter	http://www.disasterscharter.org/announce_e.html
27 June	International Charter "Space and Major Disasters"	http://www.pdc.org/PDCNewsWebArticles/2007/InternationalCharter/charter.htm

Table 4 - Press cuttings

5 Assessment

5.1 Overall impact

One may try to assess the overall impact of the Charter on management of the major disasters which hit the planet in 2007. As in 2006, the analysis was performed against the International Disaster Database EM-DAT listing of disasters set up by the OFDA/CRED of Université Catholique de Louvain [RD45].

Figure 5-1 below reports the "top-ten" disasters in terms of death established by OFDA-CRED. The Charter was activated for the top disaster, plus the third, fourth, fifth, sixth, and eighth ranked disasters in the number of deaths. This indicates an upward trend from 2006, where fewer of the top 10 disasters were responded to by the Charter.

Top 10 Disasters – Number Killed – 2007 **Red Text Indicates Charter Response**			
Date	Country	Type	# Killed
15/11/2007	**Bangladesh**	**Cyclone**	**4234**
21/07/2007	Bangladesh	Flood	1110
03/07/2007	**India**	**Flood**	**1103**
07/08/2007	**Korea DPR**	**Flood**	**610**
15/06/2007	**China**	**Flood**	**535**
15/08/2007	**Peru**	**Earthquake**	**519**
26/06/2007	Pakistan	Cyclone	242
23/06/2007	**Pakistan**	**Flood**	**228**
01/07/2007	India	Flood	225
23/07/2007	Nepal	Flood	214

Figure 5-1 2007 top 10 disasters by number of deaths. Source : EM-DAT [RD45]

This analysis suggests that in 2007, the Charter had been recognised by the worldwide disaster communities as a useful mechanism for very large events, thanks to its links to national civil protection agencies as well as to the United nations specialised

organisations, and at the same time, as a tool used for more specific or regional events through capillary relationship of its members with regional and local emergency management organisations.

5.2 System performance assessment

In 2007 too, very good reaction times were noted. The standard turnaround time is close to 2 days in average. Performance expectations from civil protection authorities are high, especially for those who benefited from good performances in the past and some of them were sometimes disappointed not to obtain such performances in a sustained mode. While the Charter mechanism worked correctly in 2007, its performance is bound by the performances of the satellite systems brought by the partner agencies.

5.3 Service and Product assessment

The following section is a short outlook of value-adding services that Charter partner agencies had provided beyond their obligations under the Charter, in dedicated contracts (CNES), contracts under the GMES programme (ESA with the RESPOND and RISKEOS projects), in-house or external resources (CONAE, USGS, ISRO, CSA). The UN have been contributing noticeable through the UNOSAT programme, which is also a partner of the RESPOND project.

There were no major disasters in 2007, but the total number of disasters responded to nearly doubled.

One could notice the slightly different level of service expected by emergency management organizations – chiefly civil protection agencies or UNOCHA/UNDAC that send rescue teams shortly after the event - which require information within 3 days, and humanitarian organizations – typically UN specialized organizations such as WFP – which can accommodate longer delays.

There have also been more requests about using Radar data for interferometric studies in regards to deformation of volcanoes and effects of earthquakes. There have also been more requests for data sharing and storage for use in future response efforts.

5.4 Users appraisal

The users were again very appreciative of the information gained through the maps that were generated with Charter products. Many were used as briefing tools and to help decision makers decide on response strategies.

The cooperative work with the UN organisations again allowed Charter coverage in situations where the Charter mechanism may not be known.

Further feedback

A number of other types of users not directly involved in emergency and rescue operation have also expressed the interest for the products prepared within the Charter framework.

Such user organisations encompass flood or forest management authorities, local government and local civil protection services.

5.5 Communication assessment

Relatively few enquiries came from general public and several requests came from authorities, other applying to become and Authorised User. Since these authorities are the prime target of the communication, it shows the efficiency of the actions conducted so far and in particular, the efficiency of the participation to selected conferences.

The list of conferences shows a rather wide coverage, with a presence well distributed over the world.

Once more communication messages could be streamline along the following lines:
–   Provision of a synthetic view of the situation, supporting strategic planning
–   In some specific cases products may be used also for tactical decisions
–   Best usage is achieved if triggered in time, or whenever possible prior to the actual disaster;
–   Provision of regular updates in long-lasting (several days) operations
–   Products are useful for immediate recovery actions, within the scope of the Charter
–   Excellent communication tool towards local government and citizens.

6 Conclusions

2007 has been a year of growth with the participation of CNSA. Some procedures will be modified to accommodate the growth in membership and additional space assets.

While its traditional user base – civil protection agencies – is familiar with its usage, it has been used or considered by a wide community of actors, noticeably through the Internet. Communication should be adapted in order to cope with this public and media coverage.