Supplementary Information on RA III/IV Regional Requirements for Satellite Data (July 2012):

Update on Findings of the 2011 Progress Meeting of the RA III/IV Satellite Data Requirements Task Team (4 April 2011, Miami, USA) (Ref: ET-SUP-6/Doc. 7.3, http://www.wmo.int/pages/prog/sat/meetings/documents/ET-SUP-6_Doc_07-03_RAIII-RAIV-Requirements-R1.pdf)

Following each "Finding" of the 2011 Progress Meeting, a status update is provided as an indented paragraph:

Finding: Some products have been incorporated in the GEONETCast Americas dissemination schedule in response to the RA III &RA IV requirements.

> 52 different satellite products are presently on the requirements list (distributed in 3 priority levels), and the incorporation of these products in the GEONETCast Americas broadcast is further progressing. The dissemination of all products would require an estimated maximum bandwith of 2.1Mbit/s. NOAA and INPE performed tests to check the viability of transmitting this large amount of data without compromising the latency and the data flux.

Finding: One difficulty is that the requirements are expressed in a generic way instead of referring to well-identified existing products. In some cases there is no existing product, and satisfying the requirement is not only a matter of telecommunication, but also a matter of product development. In other cases there might be several products, from various organizations, and a choice should be made to avoid redundancy.
Finding: The agreed action plan is to associate each requirement in the table to an existing product. INPE/CPTEC will initiate a draft identification [of products], Task Team Members will review and complete if necessary. In the case of similar candidate products, the Task Team would evaluate the most suitable, or recommend to maintain several products in parallel in a demonstration stage.

> The documentation of requirements in the table, consistent with existing products and clear identification of providers, should be maintained by a successor mechanism to the Task Team, e.g., a Regional Satellite Data Coordination Group. Initial action has been taken by INPE/CPTEC for three example products (highlighted in blue in the Annex) in developing more detail based on selected published information by the providers INPE, NOAA/NESDIS, EUMETSAT, ESA, and via the EUMETCast broadcast. Although there is redundancy, the products differ in some characteristics. This initial work needs to be expanded to address all products.

Finding: While there are several telecommunication solutions to disseminate products, GEONETCast America is still seen as the preferred option by many countries where the NMHS has poor access to the GTS and/or limited internet connectivity. This depends, however, on whether GEONETCast Americas will have a stable operational status or not.
Finding: GEONETCast Americas is operating now with an excellent reliability, but it would require additional resources to maintain it at a fully operational standard (e.g., with permanent monitoring, back-up of the upload segment). Furthermore, no decision has been communicated yet by NOAA with respect to its long-term continuation.

Finding: The renegotiation of the telecommunication contract for 2013 onwards is an opportunity to increase bandwidth and to consolidated the system if a regional partnership could be set up between NOAA and other interested countries. However, making the system more robust could represent a significant increase in costs.

NOAA is in the process of renegotiating the contract with the commercial satellite communications link provider for the GEONETCast-Americas broadcast. The new contract will be for a five year period. NOAA is committed to maintaining the GEONETCast-Americas broadcast. INPE and NOAA are discussing the possibility of increasing the bandwidth of the GEONETCast-Americas broadcast so that it will be possible, in principle, to disseminate Level 1.5 data, mainly those generated by EUMETSAT, through GEONETCast-Americas. INPE is planning to contribute funding to help cover some of the extra expenses of the bandwidth increase. However, the dissemination of EUMETSAT Level 1.5 data should be discussed in further negotiations involving all parties concerned.

Finding: A set of 17 [GEONETCast Americas] stations is being installed in several countries of Central and South America, for various environment management organizations.

23 to 24 GEONETCast Americas stations have been or will be installed in Central and South America and the Caribbean, namely:

- One new station has been installed and is operational in Venezuela.
- Four new stations have been installed and are operational in Costa Rica.
- Five stations are to be installed in El Salvador in the next months.
- Funding has been obtained for seven or eight stations in Mexico.
- Funding has been obtained for one station in Barbados.
- In Brazil, an additional five new stations have been installed, two already operating and three starting up.

Finding**:** If NMHSs are interested in using GEONETCast Americas, they are encouraged to express their interest to NOAA.

NOAA has advertised GEONETCast Americas to NMHS in the region.

Finding: The possible conversion of EUMETCast stations to GEONETCast America stations has been evaluated in the event that EUMETCast-America service should be discontinued. Such conversion would be a minor issue from both the technical and financial viewpoints.

It has been confirmed that this conversion is technically possible and economically viable.

ANNEX: Draft Regional Requirements for Satellite Data in Central and South America (Details for 3 products)

item	Product Name	Data characteristics	Data Provider	Format	Geographical area	Frequency	Avarege File Size (kB)	size comment	Format expected in the Future	FINAL Average Size (compressed) - kB	Basic Application	Priority		Timeliness (min)	Required data rate (kb/s)
1	GOES imagery over the Region - A	GEO satellite, channel VIS, WV, IR, Resolution 4km		level 1B original from Satellite Operator	SAM	15 - 30 minutes	16500	three images	Geotiff	8250	1)Product and Image generation.	P1	Real time	15	73.3
1		GOES images, channel VIS, WV, IR, Resolution 4km/ rectangular projection	INPE	level 1B original from Satellite Operator	SAM	15 - 30 minutes	16500	three images	Geotiff	8250	1)Product and Image generation.	P1	Near real time	15	73.3
		GOES images, channel VIS, WV, IR, Resolution 4km/ satellite projection	NOAA/NESDIS	LRIT	3AM (full disk)	3 hours	3000	3 images	LRIT	3000				15	26.7
			EUMETCast	LRIT	3AM (full disk)	Hourly	3000	3 images	LRIT	3000				15	26.7
43	Global LEO Scatterometer sensors	Retrieval Winds		BUFR	Global	3 hours	24900	(three granules	Bufr	24900	Assimilation	P2	real time	30	110.7
43		Metop-ASCAT ASCAT Coastal Winds at 12.5 km Swath Grid - Metop	EUMETSAT	BUFR	Global	2 hours	2600		BUFR	820	Assimilation	P2	real time	30	3.6
		OCEANSAT-2 - NOAA wind vector 25km	NOAA/NESDIS			2 hours	~2600			2600				30	11.6
44	Ocean surface altimetry - A	Regional (Atlantic and Pacific) LEO satellite altimeter sensor		Retrieval altimetry level 2	SAM	6 hour	680		Bufr	680	Product generation Assimilation	P3	no real time	40	2.3
44		JASON-2 OSTM Level2 OGDR; res 4km	NOAA/DDS	BUFR	GLOBAL	6 hours	680		BUFR	680	Product Generation Assimilation	P3	no real time	40	2.3
		Envisat RA-2 / MWR level 2 FDGDR; res 0.5m a 8m	ESA/ESRIN			3 hours	550			550			no real time	40	1.8
		JASON-2 OSTM Level2 OGDR; res 4km	EUMETCast	NetCDF		2 hours	500		NetCDF	500				40	1.7