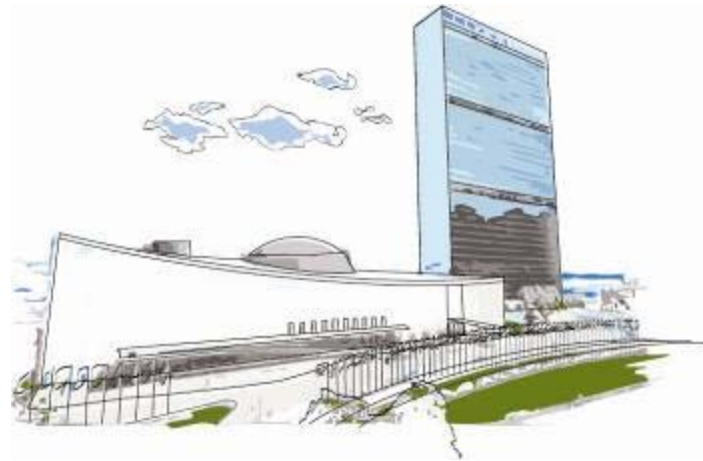


Geospatial support to the UN Secretariat

United Nations Regional Cartographic Conference of the Americas



**Cartographic Section
Division for Geospatial, Information & Telecommunications Technologies
Department of Field Support
United Nations**

Mandate of Cartographic Section

UN Cartographic Section provides geospatial information support to the full range of United Nations operations

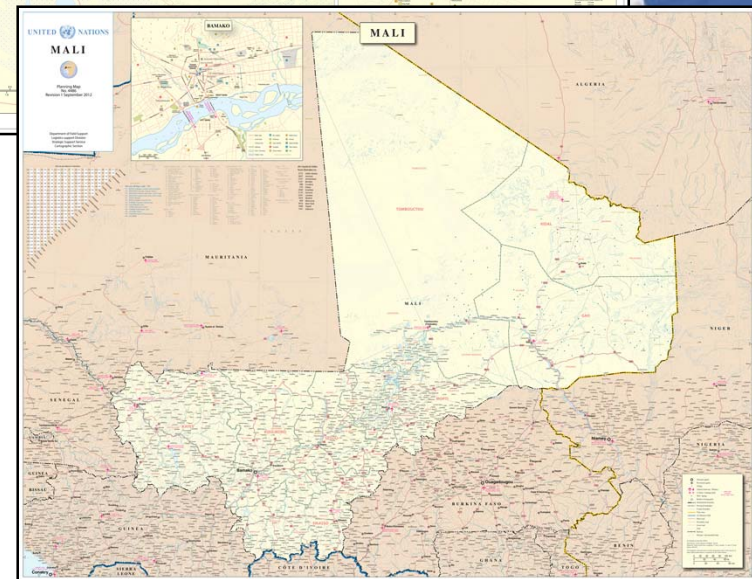
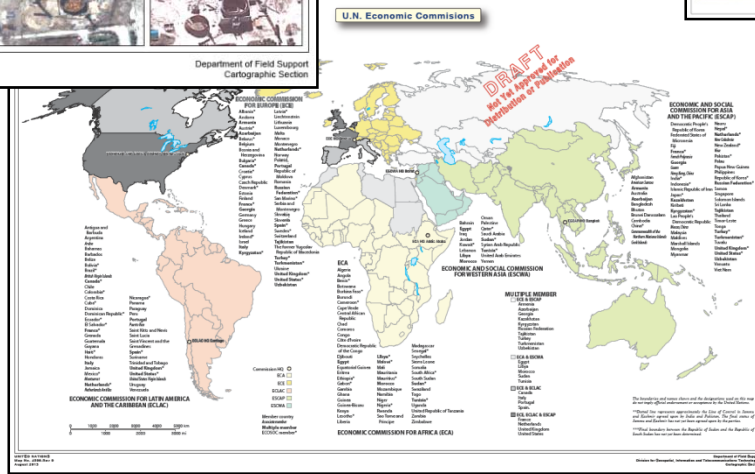
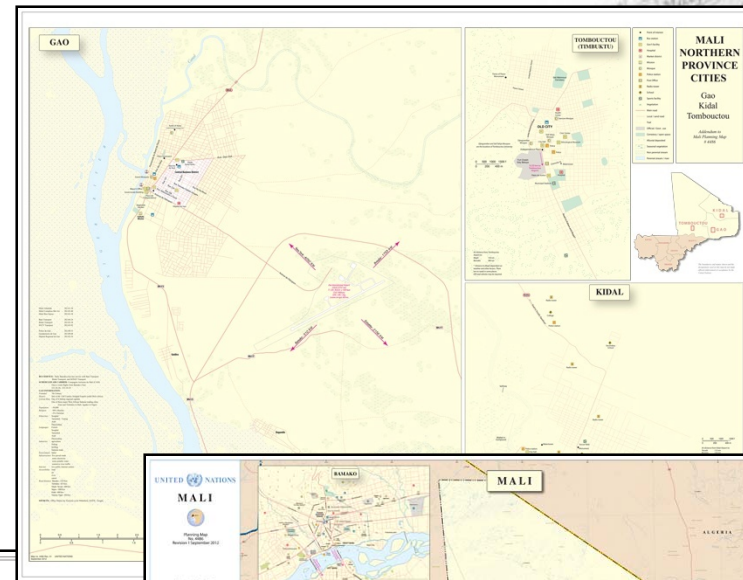
Principal duties include:

- ⇒ Provide accurate and timely geospatial information in support of the decision-making and operational needs of
 - . The Security Council
 - . UN Secretariat
 - . UN Peace Operations (DPKO, DPA, DFS)
 - . UN Operations & Crisis Centre (UNOCC)
- ⇒ Programme management for **UN field mission GIS operations**
- ⇒ Provide technical assistance on **international boundary issues**

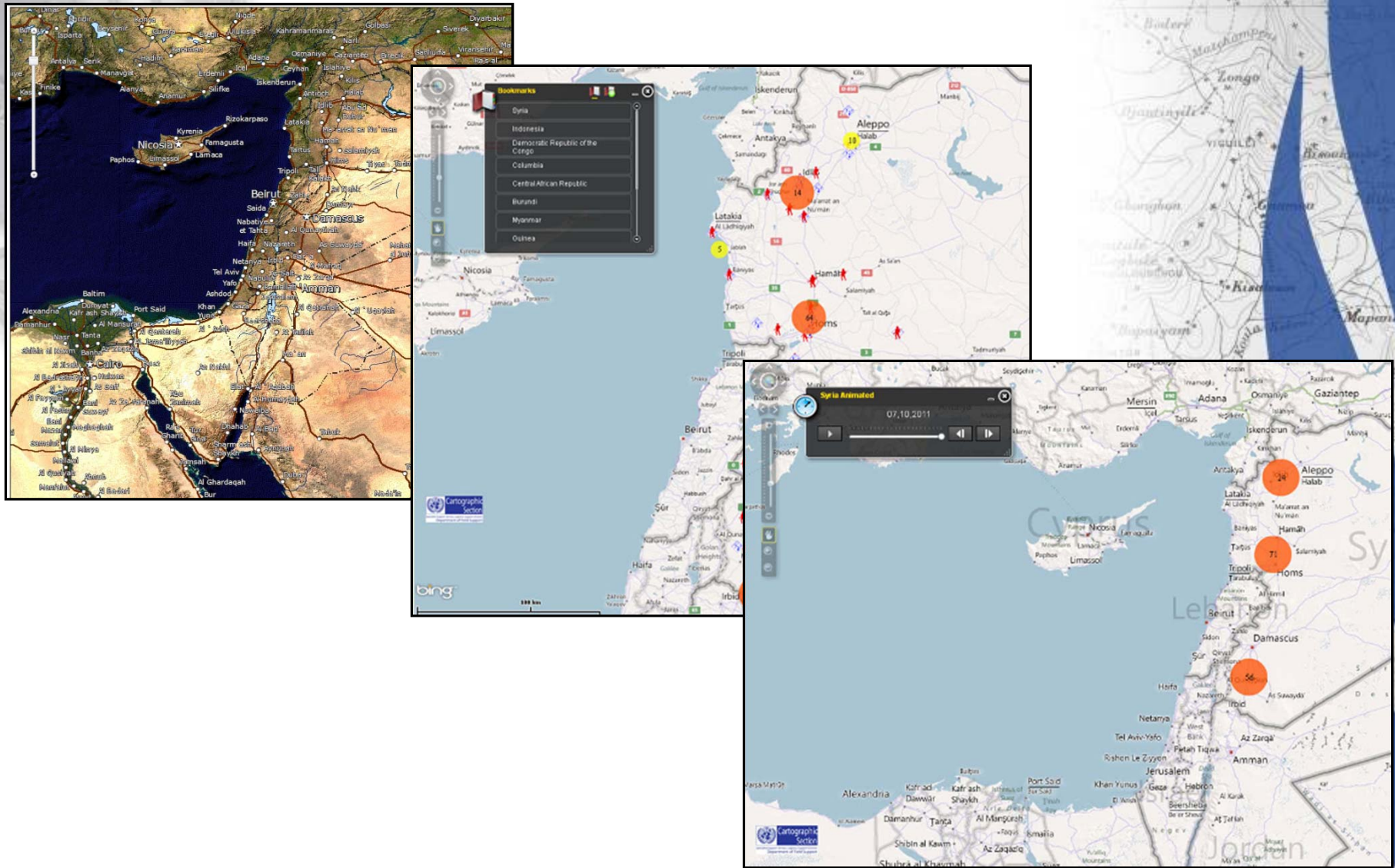


Cartographic products: special support

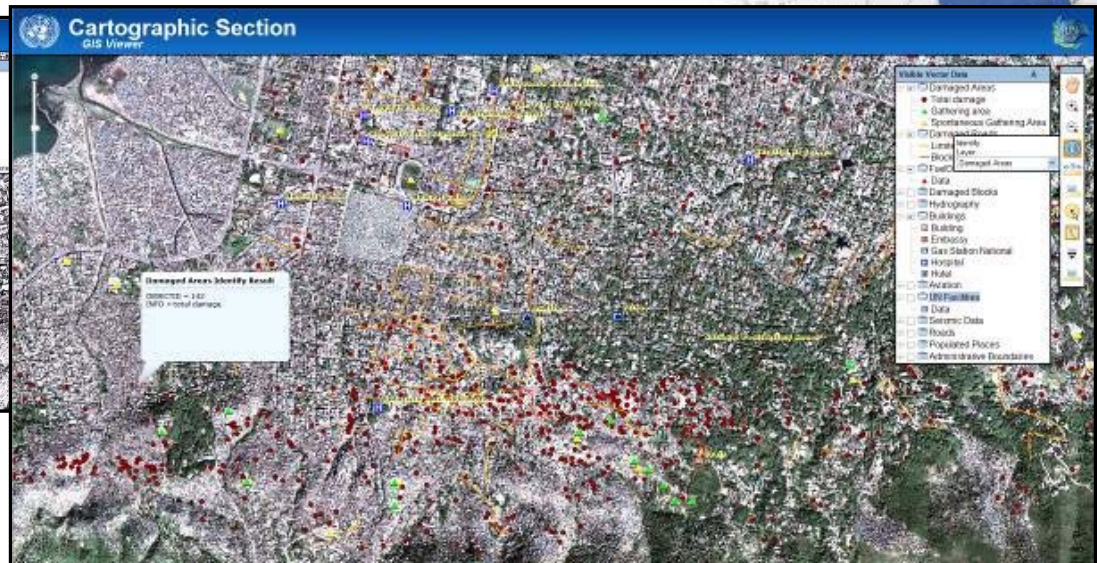
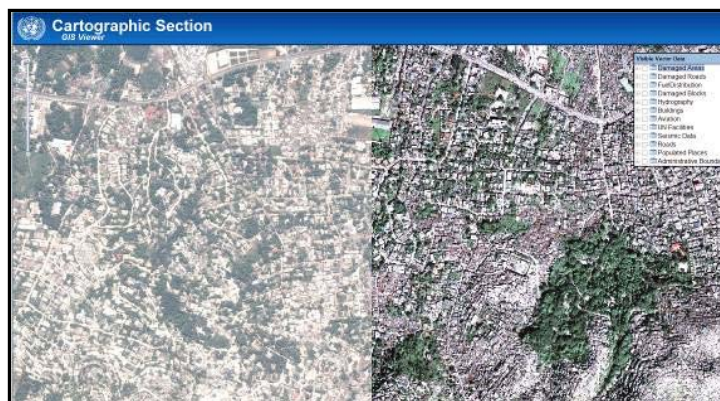
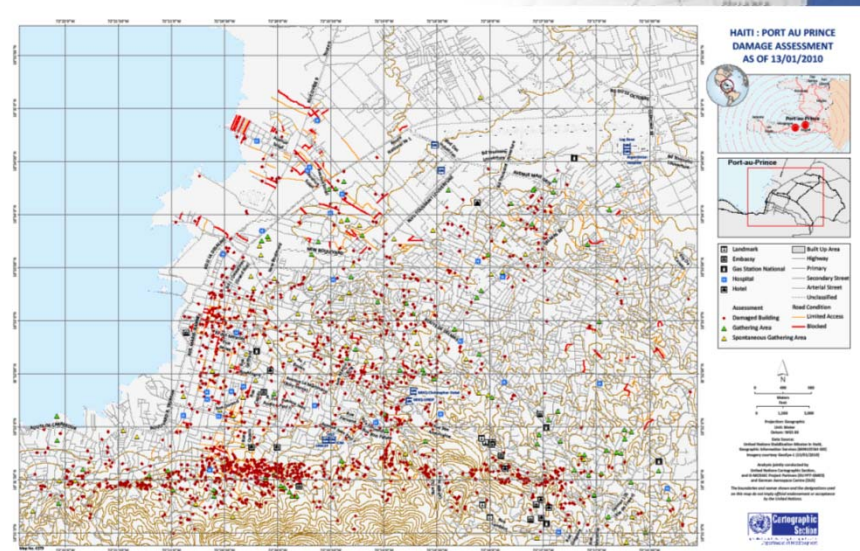
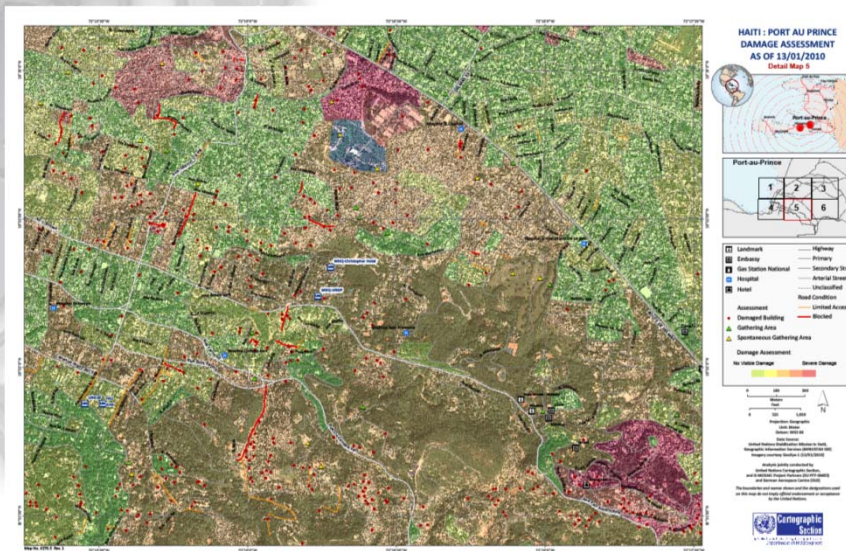
- Customised map production for UN Secretariat and UN entities



GIS: Dashboard & Incident Analysis



GIS: Damage Analysis and Web-mapping



UNmap: Data Layers



SALB: Second Administrative Level Boundaries

www.unsalb.org

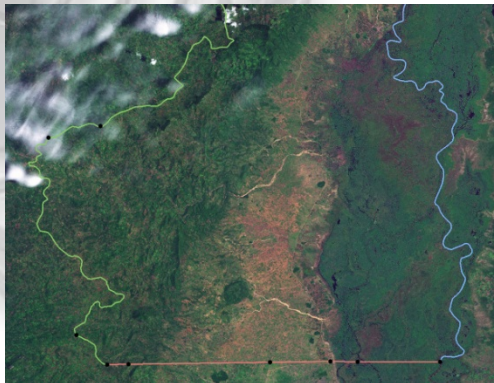
- ❑ SALB is a fundamental data layer for Global mapping & GIS services (i.e., Response to Natural Disaster, Humanitarian Operations, Climate Changes, Pandemic, Peace & Security, etc)
 - ❑ SALB is activities of collection, harmonisation, management and dissemination of the administrative boundary data in coordination with National Mapping Authorities (NMAs)
- ⇒ Seamless administrative boundary maps and data since 2000
 - ⇒ Coded historic changes of administrative boundary
 - ⇒ Contact information of NMAs

www.unsalb.org



UN International Boundary Information System

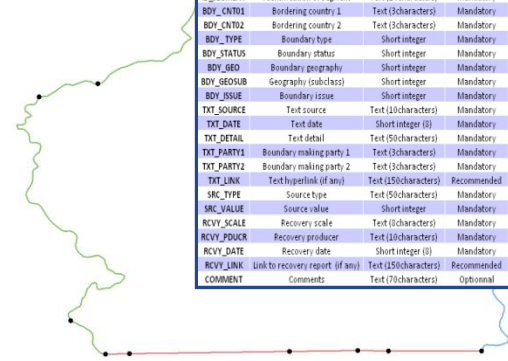
Satellite Imagery



Treaty Text

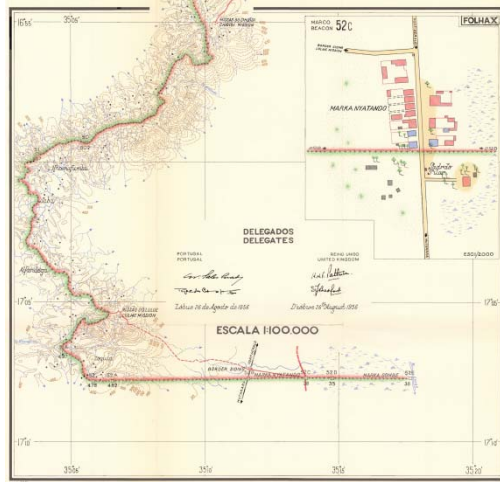
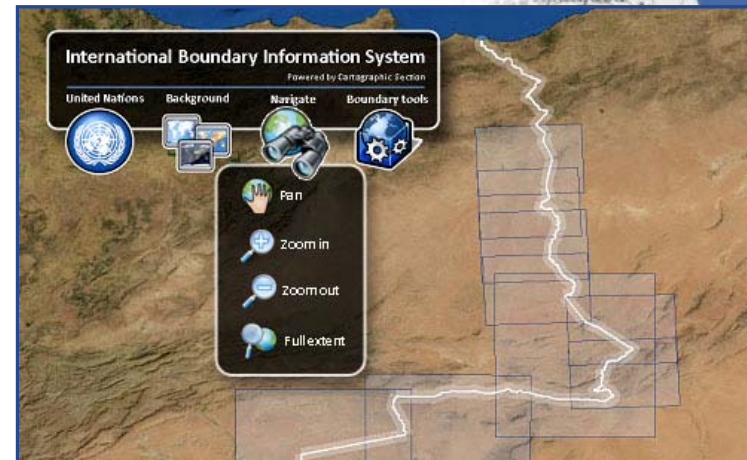
No.	Location	Approx. distance from previous locus measured along the watershed
44D	Between the Conjovo river in Mozambique and the Nyakamba river in Nyasaland	5-20 km.
45	On the highest point of the southern end of the Muzulanyama Hills	6-50 km.
45A	Between the Cachere river in Mozambique and the Lhanje river in Nyasaland	4-70 km.
45B	1 kilometre west of the village named Tendo	4-70 km.
46	On the summit of Chirunda Hill	5-50 km.
46A	Between the Membo river in Mozambique and the Kasuku river in Nyasaland	5-30 km.
47	At a point 500 metres S.W. of Melanga Hill	2-40 km.
47A	On a small hill 1-5 kilometres S.W. of Nyantoko Hill	6-90 km.
47B	On the highest point of the ridge 3-7 kilometres south of Nyantoko Hill	3-20 km.
47C	Between the Nacali river in Mozambique and the Mswabi river in Nyasaland	4-20 km.
47D	Between the Nacali river in Mozambique and the Mswabi river in Nyasaland	2-10 km.
47E	Between the Nacali river in Mozambique and the Mswabi river in Nyasaland	2-70 km.
47F	Between the Nacali river in Mozambique and the Mswabi river in Nyasaland	5-40 km.
48	On the summit of Muliaka Hill	6-60 km.
49	On the summit of Mwanashidzi Hill	7-00 km.
50	On the summit of Chafuta Hill	24-10 km.
51	On the summit of Kafalatenga Hill	3-80 km.
51A	On the summit of Kancire Hill	23-30 km.

GIS data



Field Name	Descriptive	Data type	Rule	Value	Example
ID_SEGMENT	Identification of segment	Text (14characters)	Mandatory	ISO3-ISO3-01	OZA-MU-03
BOV_CNTRY1	Bordering country 1	Text (3characters)	Mandatory	ISO3	SHA
BOV_CNTRY2	Bordering country 2	Text (3characters)	Mandatory	ISO3	TGO
BOV_TYPE	Boundary type	Short integer	Mandatory	Value	1 (International boundary)
BOV_STATUS	Boundary status	Short integer	Mandatory	Value	3 (Demarcated by pillars)
BOV_GEO	Boundary geography	Short integer	Mandatory	Value	2 (Anthropomorphic)
BOV_GEOSUB	Geography (subclass)	Short integer	Mandatory	Value	2 (Road)
BOV_ISSUE	Boundary issue	Short integer	Mandatory	Value	5 (Hostile)
TXT_SOURCE	Text source	Text (10characters)	Mandatory	Source code	UNTS
TXT_DATE	Text date	Short integer (8)	Mandatory	yyymmdd	19490405
TXT_DETAIL	Text detail	Text (50characters)	Mandatory	Full text reference	UN Treaty Series, Vol.1373, 1904, No.23105
TXT_PARTY1	Boundary making party 1	Text (3characters)	Mandatory	ISO3	FRA
TXT_PARTY2	Boundary making party 2	Text (3characters)	Mandatory	ISO3	GBR
TXT_LINK	Text hyperlink (if any)	Text (150characters)	Recommended	URL or other link	http://bratis.un.org/
SRC_TYPE	Source type	Text (50characters)	Mandatory	Full references	Treaty maps (1:100,000)
SRC_VALUE	Source value	Short integer	Mandatory	Value	1 (Excellent quality) to 9 (Low quality)
RCVY_SCALE	Recovery scale	Text (10characters)	Mandatory	Value	50,000
RCVY_PRODUCR	Recovery producer	Text (10characters)	Mandatory	Producer code	UNCS
RCVY_DATE	Recovery date	Short integer (8)	Mandatory	yyymmdd	20000909
RCVY_LINK	Link to recovery report (if any)	Text (150characters)	Recommended	URL or other link	Server URL link to pdf
COMMENT	Comments	Text (70characters)	Optional	Description	Parameters related to boundary

Visualisation

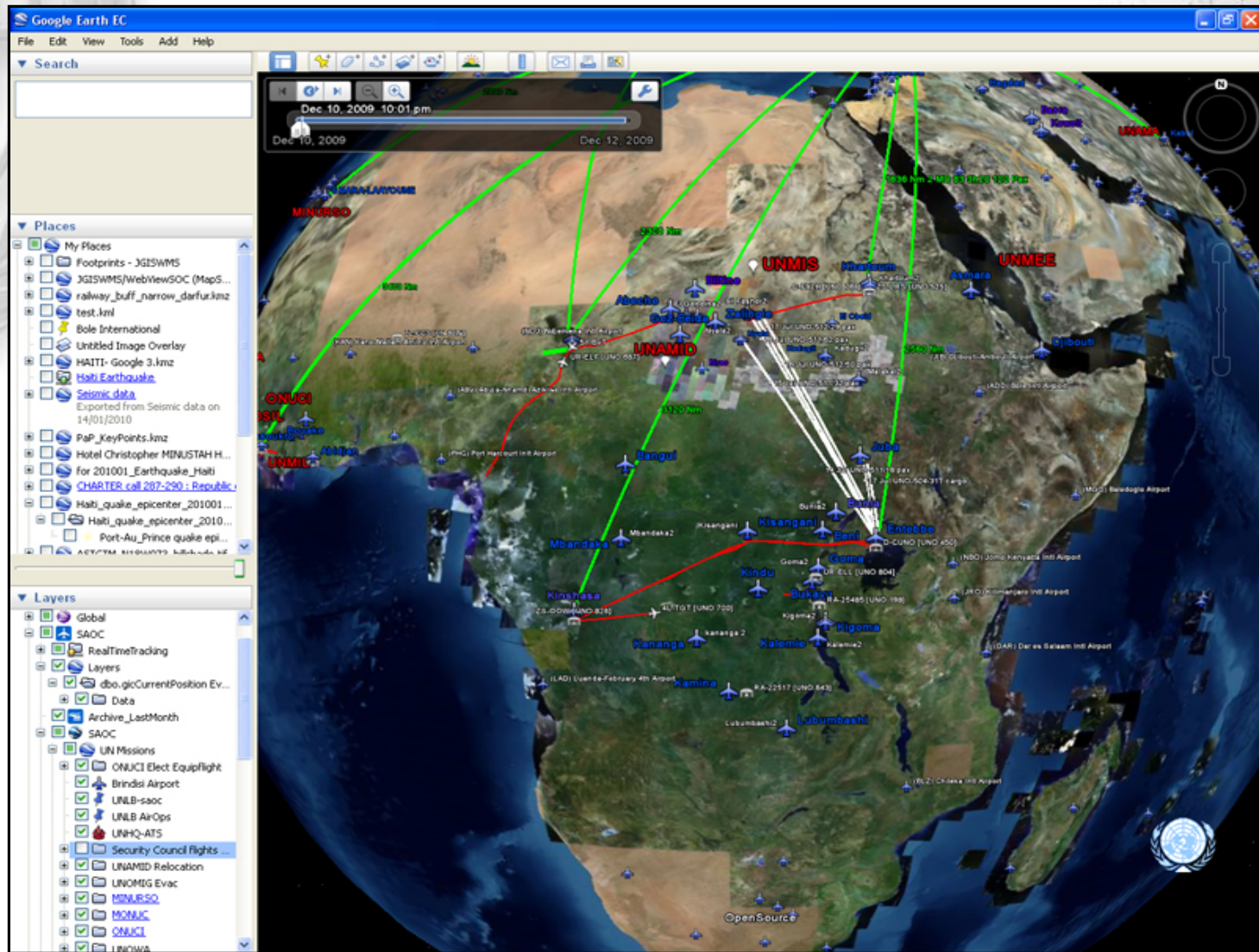


Treaty Maps

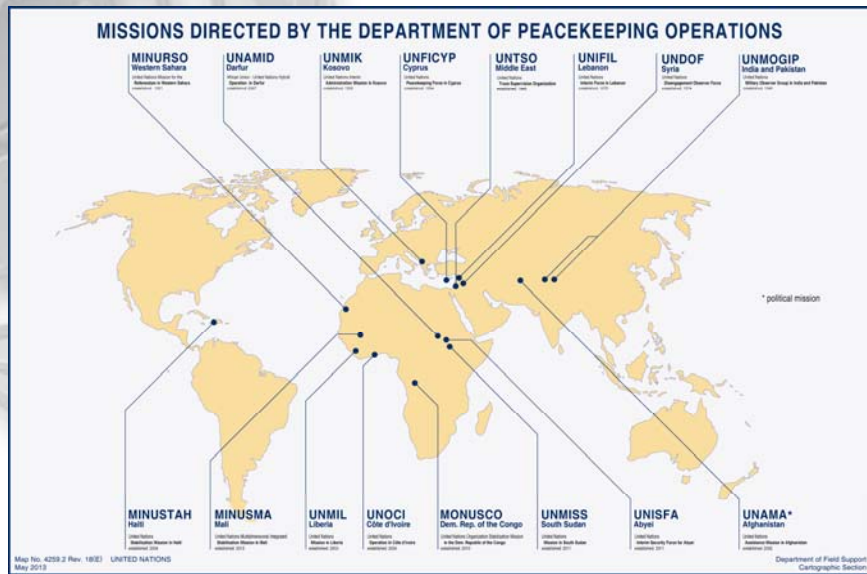
[PORTUGUESE TEXT — TEXTE PORTUGAIS]				
GEOGRAPHICAL COORDINATES AND ALTITUDES OF THE BEACONS		COORDENADAS GEOGRAFICAS E ALTITUDES DOS MARCOS		
N.º	Latitude (S)	Longitude (E)	Altitude (M)	Tipo
2	14 28 48.3	33 56 22.9	1.339	A
3	14 29 24.4	34 05 11.8	1.380	A
4	14 27 22.9	34 05 04.5	1.338	A
5	14 27 04.5	34 06 44.8	1.323	A
6	14 26 16.1	34 11 07.9	1.445	A
6A	14 26 32.5	34 12 42.9	1.497	A
7	14 25 31.9	34 14 02.4	1.534	A
7A	14 25 49.9	34 16 02.4	1.535	A
8	14 23 56.7	34 18 05.0	1.560	A
9	14 23 57.2	34 20 34.4	1.636	A
10	14 23 46.5	34 23 19.8	1.574	A
10A	14 25 59.5	34 25 09.5	1.546	A
10B	14 28 45.7	34 26 48.8	1.508	A
11	14 31 10.5	34 27 50.3	1.462	A
12	14 32 09.8	34 28 53.1	1.458	A
13	14 34 40.5	34 31 34.9	1.567	A
14	14 37 07.4	34 32 54.1	1.494	A
15	14 40 53.2	34 31 26.9	1.380	A
16	14 45 12.6	34 32 49.2	1.416	A
17	14 46 35.1	34 34 04.1	1.439	A
18	14 48 42.9	34 35 01.5	1.471	A
18A	14 50 28.1	34 34 30.6	1.486	A
19	14 52 40.6	34 34 54.3	1.404	A
20	14 54 06.6	34 33 57.7	1.458	A
21	14 57 43.3	34 35 42.3	1.489	A
22	14 58 46.9	34 36 57.9	1.546	A
22A	15 00 30.4	34 37 16.2	1.605	A
23	15 01 39.6	34 36 19.4	1.618	A
23A	15 04 01.9	34 34 23.3	1.646	A
24	15 05 14.3	34 35 06.8	1.638	A
25	15 06 02.2	34 35 23.8	1.805	A
25A	15 06 44.1	34 34 36.0	1.736	B

Treaty Coordinates

UN Earth



UN Peace Operations Statistics

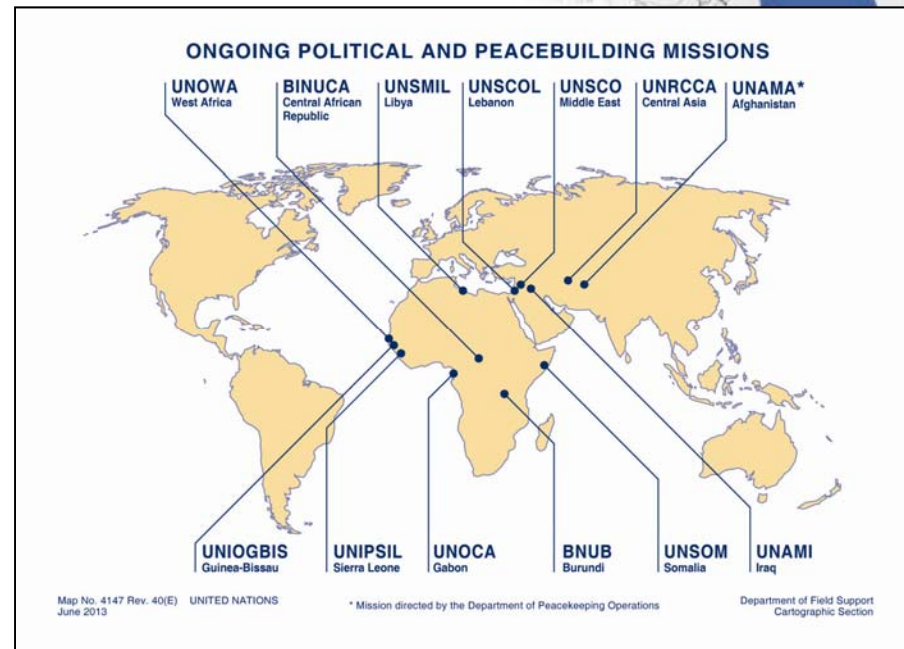


Personnel

	PKO	PBO
• Current operations	16	13
• Uniformed personnel	90,241	456
• International civilian	5,084	1,280
• Local civilian	11,730	2,429
• UN Volunteers	2,076	96
• Total:	109,247	4,261

Peacekeeping Budgets

- Jul 2013 - Jun 2014: \$7.2 billions
- Jul 2012 - Jun 2013: \$7.2 billions
- Jul 2011 - Jun 2012: \$7.8 billions



UN Peace Operations



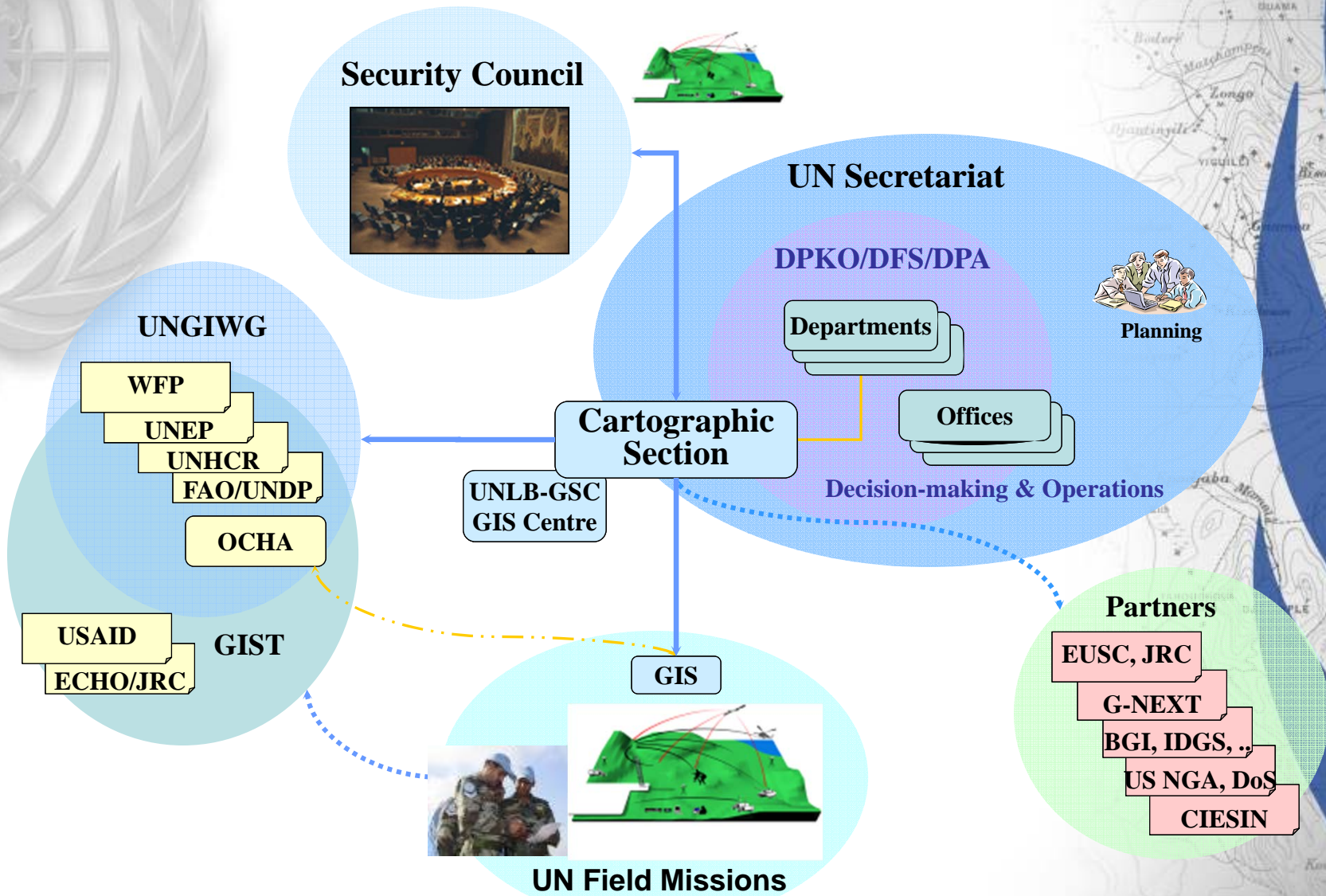
Typical Challenges to the UN

Gap analysis for UNMIS (Sudan):

As of April 2005

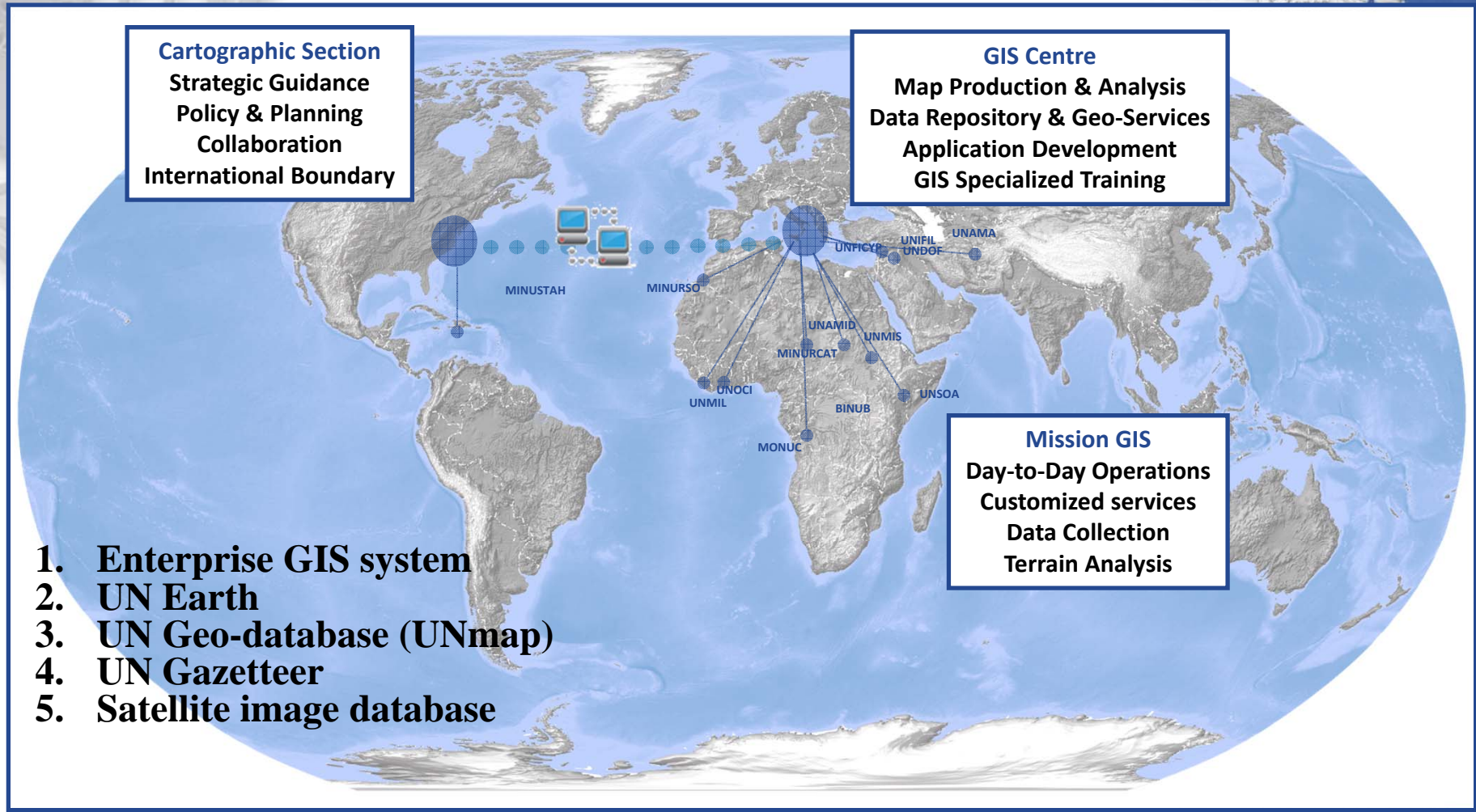
Requirement	Map scale	Data Availability			
		Paper maps	Vector data	Digital elevation	Satellite imagery
Overview Strategic plan	1:1,000,000	ONC available, outdated	DCW avail, outdated	DEM/DTED-0 available	LandSat NaturalVue
Strategic & operational	1:500,000	TPC, Russian, Swiss - outdated	Not available. Darfur, Nuba	DEM/DTED-1 available	
Operational	1:200,000 1:250,000	Sudan, Russian - outdated. JOG not completed.	Not available except partial		Not available
Tactical	1:100,000	Russian/Sudan - partial, not avail, outdated.	Not available		
MilObs/CivPol	1:50,000	Not existence.	Not available	Not available	
City & Street	1:20,000	Not existence. Khartoum, Port Sudan			QuickBird IKONOS

UN Peace Operations GIS concept: Common Operating Picture

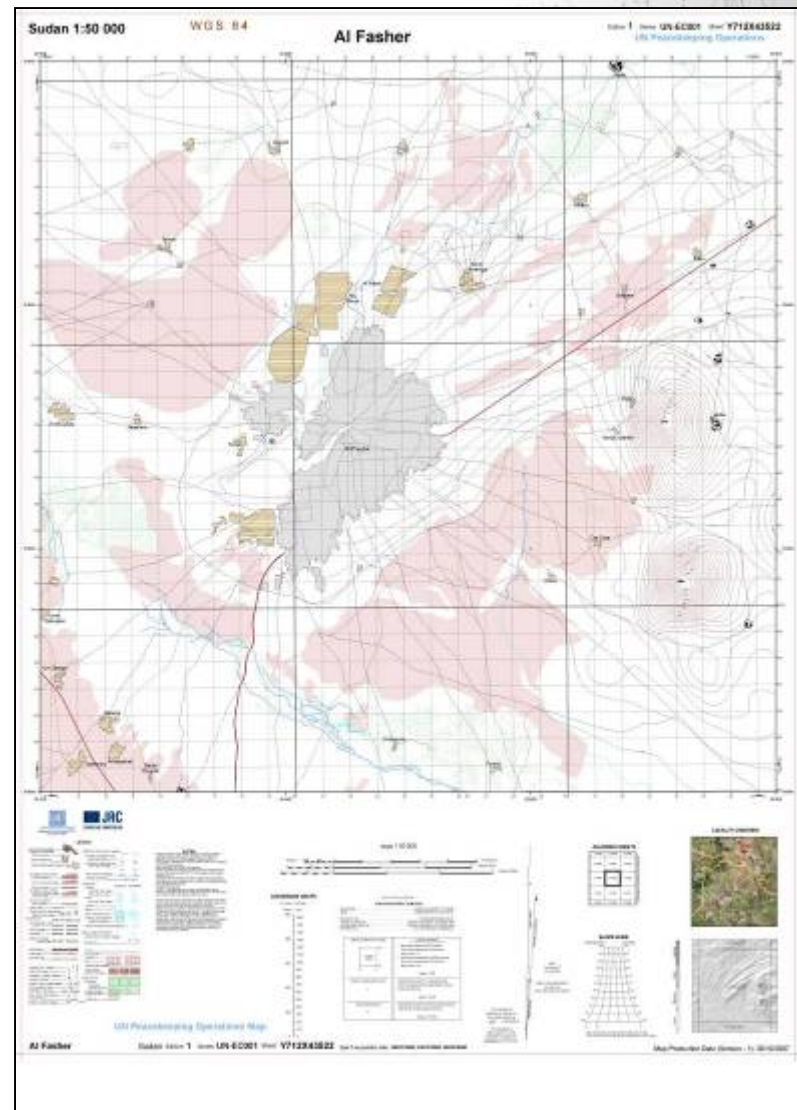
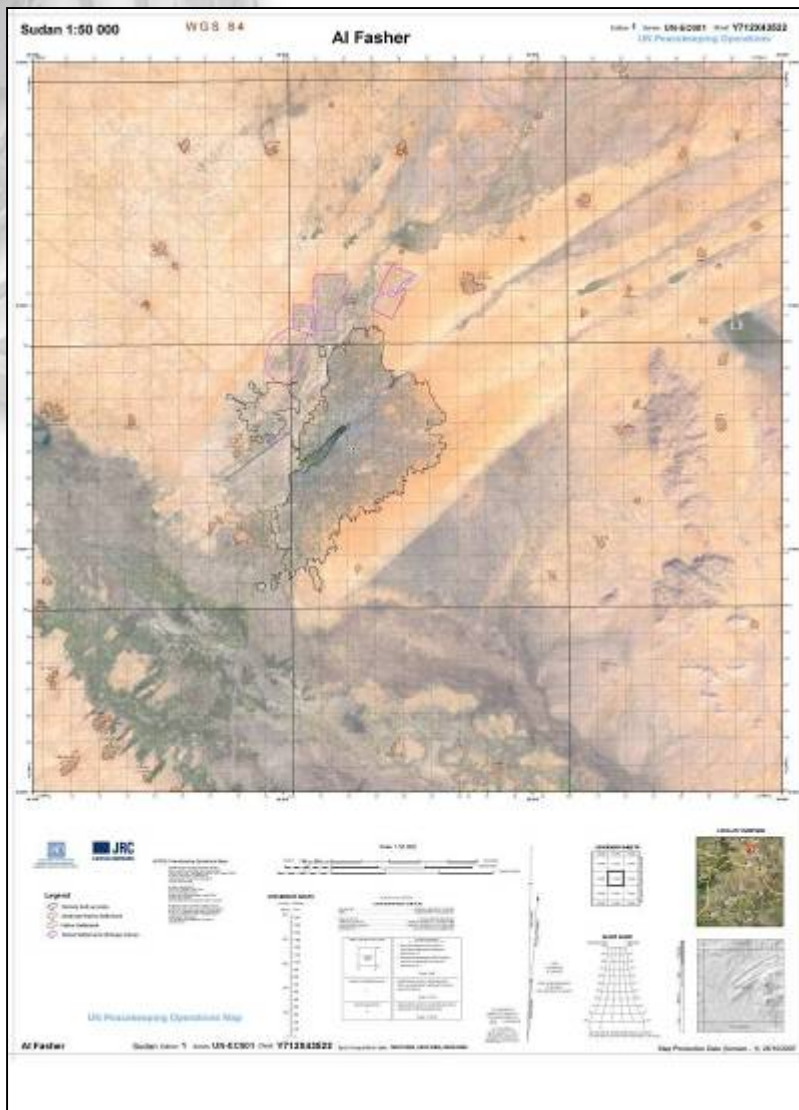


UN Global GIS Infrastructure

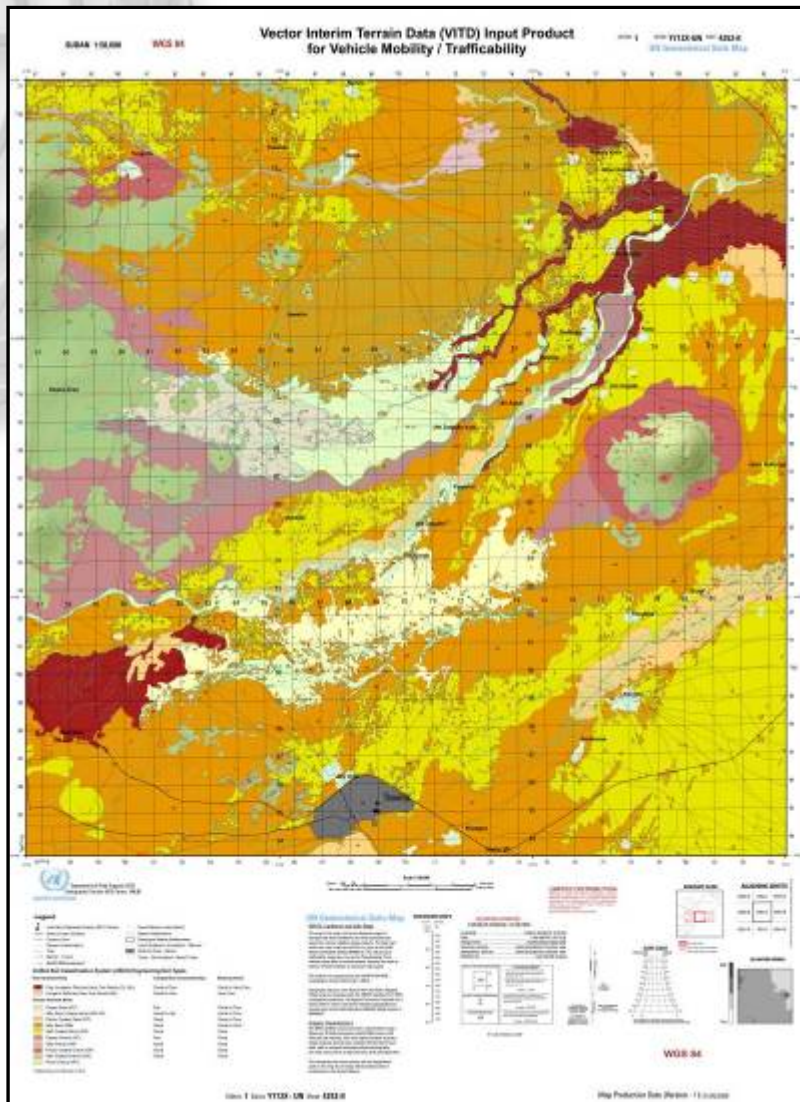
3-tier: UNHQ–UNLB/GSC–Missions



Mapping & Geo-Databases



Terrain Analysis (Trafficability)



Field movement challenges

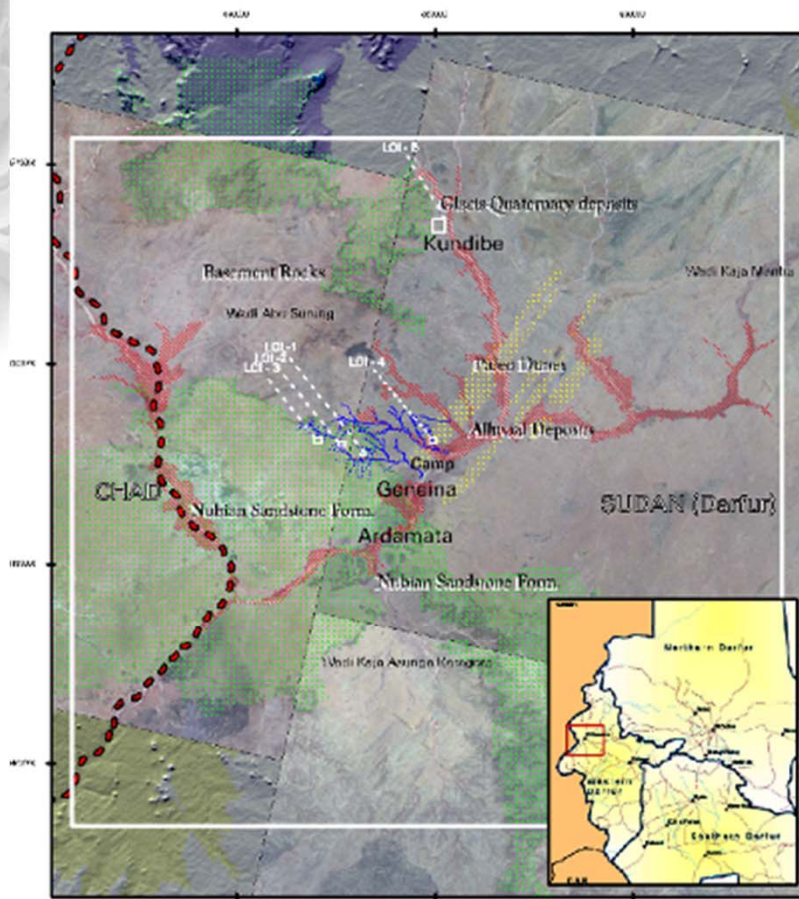


Underground Water Exploration

GROUNDWATER STUDY: SELECTION OF LOI's FOR SURVEYS & DRILLING

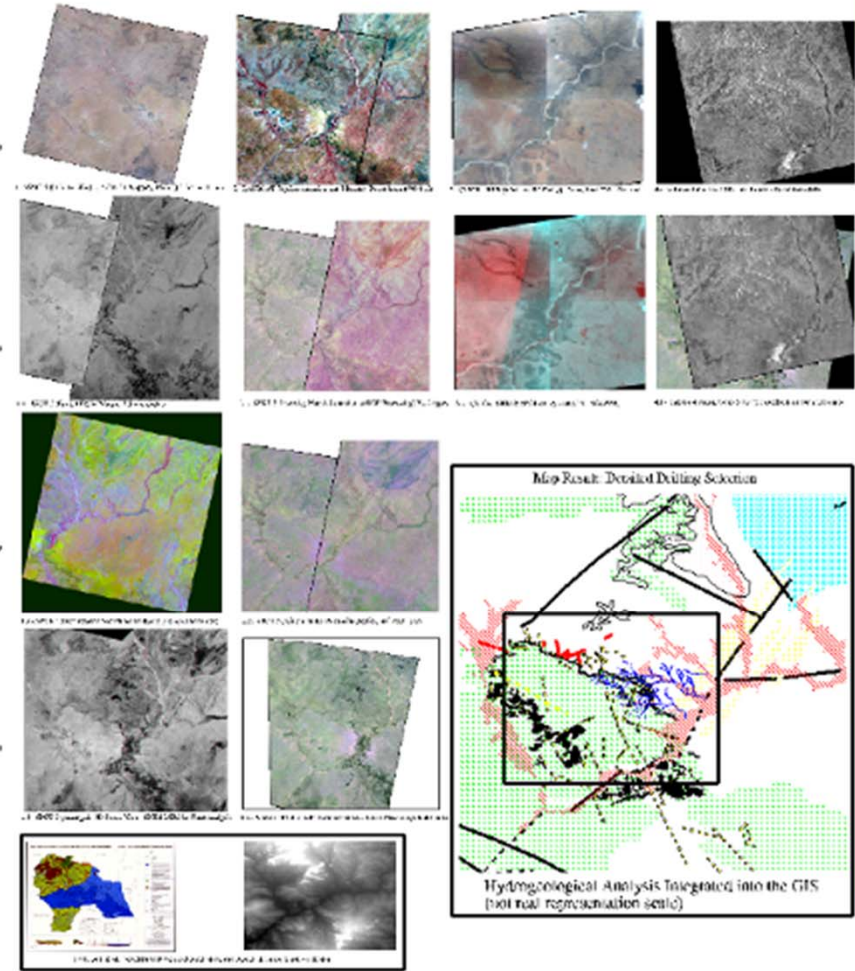
DocId: 34670701 (UNDP)
 13 March 2007
 UNDP/WHO/Geological Section

AL -GENEINA, Darfur (SUDAN): AREA OVERVIEW



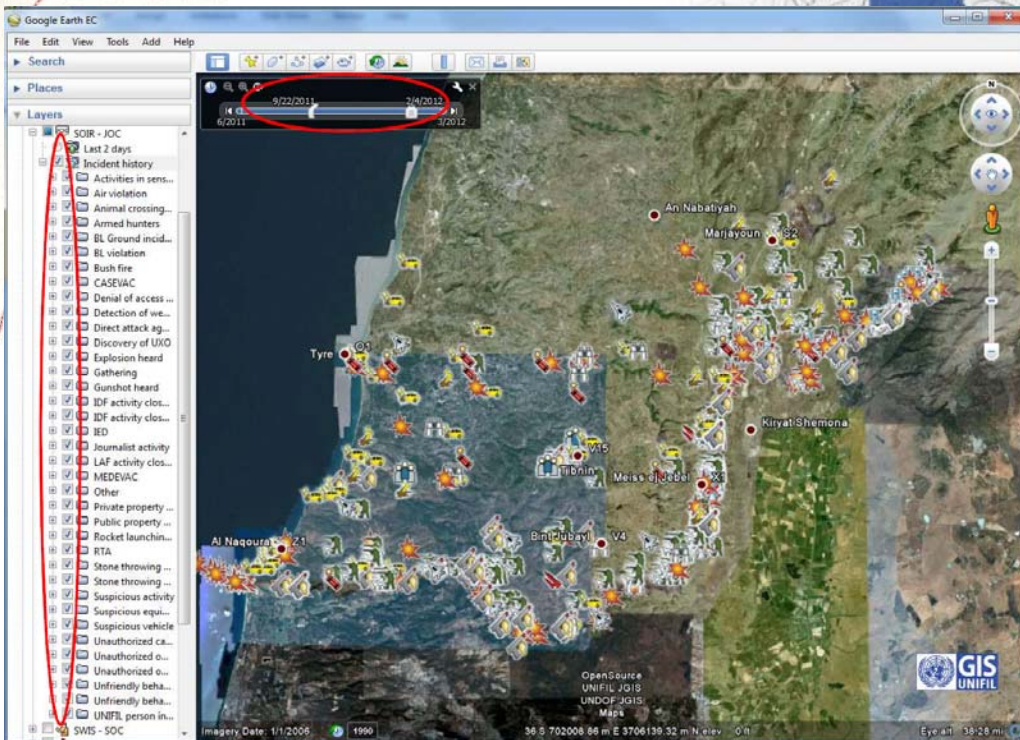
Spoc-5 Satellite data and preliminary geological analysis
 LOIs (Locations of Interest) for groundwater drilling

GIS and SATELLITE DATA : Data Sources and Processing Workflows



Incident reporting

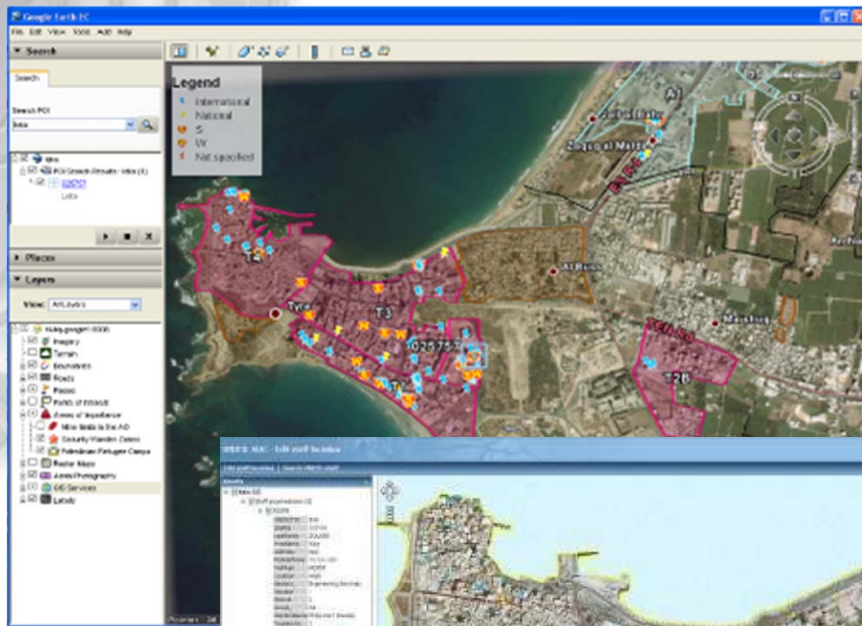
UNIFIL - SOIR Today Yesterday Last week





UN Cartographic Section

UNHQ, 19 August 2013

Safety & Security Support



Address	Guesthouse ID	Mobile	Call Sign	Location	Section	Warden	Recruit	Blood	Warden Name	Type	Photo	Emergency	GlobalID
13st Wazir Akbar Khan, next to UNHCR Guesthouse	NA	700182734	WQ 41	Kabul	SRSS Political	*	?	A+	Zulfiqar Bhat	I			(E6694A3C-E5B9-4C6B-A9A0-304EF092E71)
13st Wazir Akbar Khan, next to UNHCR Guesthouse	NA	700093848	WQ 211	Kabul	Field Support	Amir	?	A+	Zulfiqar Bhat	I			(7663B5EA-425E-4B17-B0AB-F33A2F99AFA)
13st Wazir Akbar Khan, next to UNHCR Guesthouse	NA	799772577	WQ 465	Kabul	Human Rights	*	?	G+	Zulfiqar Bhat	I			(E9C2545B-A584-43CF-A36E-D1448B649E44)
								G+	Zulfiqar Bhat	I			(2F1F9D70-59B1-4C32-8534-6DDCF92D3DCB)
								A6+	Zulfiqar Bhat	I			(E855989C-4661-4930-BCE6-22CC4DE7CF67)

International Boundary Issues

UN Cartographic Section provides technical assistance and guidance on international boundary issues

Activities include:

- ⇒ Provide analysis and guidance to queries raised by UN Secretariat and UN Family
- ⇒ Provide direct technical assistance to Member States for boundary delimitation & demarcation

International Boundaries
Administrative Boundaries

Welcome to the United Nations International and Administrative Boundaries Resources

UNGIWG UNGIWG Home Page

UNCIS United Nations Cartographic Section : International Boundaries

- Guidelines
- International Boundary datasets

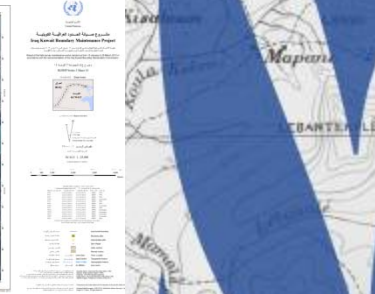
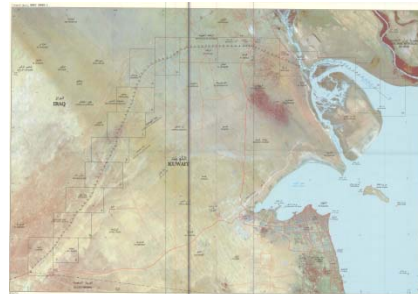
SALB Second Administrative Level Bo



International Boundary Projects

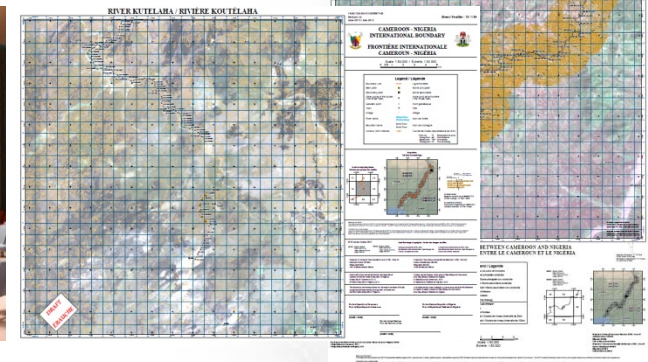
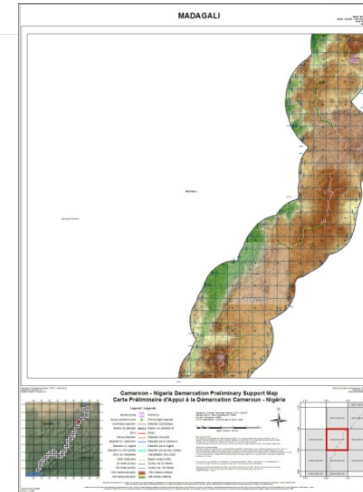
- Iraq-Kuwait Boundary Maintenance Project (IKBMP)

- . Iraq-Kuwait Boundary Demarcation Commission's (IKBDC) recommendation and Security Council Resolution 833 (1993)
- . Initiated in September 2005 – entrenchment in October 2008
- . Reactivation in May 2012, followed by Quick field assessment in June 2012
- . IKBMP technical team in the border area for physical field maintenance
- . *Mapping of the border area and reporting to the Security Council*



International Boundary Projects

- **Cameroon-Nigeria Mixed Commission (CNMC)**
 - . International Court of Justice's (ICJ) judgment in 2002
 - . Watershed workshop in August 2011
 - . CNMC Working Session in June 2013



Thank you



Kyoung-Soo Eom
Chief Cartographic Section
eom@un.org
+1 (212) 963-0221