

UNITED NATIONS GEOGRAPHIC INFORMATION WORKING GROUP

Stakeholder Meeting of the United Nations Spatial Data Infrastructure (UNSDI)

Report

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United Nations



FOREWORD

At the 8th Plenary Meeting of United Nations Geographic Information Working Group (UNGIWG) in Bangkok, Thailand (Nov. 2007), it was agreed that UNGIWG members develop a list of United Nations Spatial Data Infrastructure (UNSDI) Deliverables as the first phase of UNSDI implementation and that UNSDI remain separate from UNGIWG, allowing non-UN participation in UNSDI through deliverables, lead by specific UN agencies.

Working from a preliminary list of potential projects proposed by the Co-chairs, UNIGWG Members and Partners met in Rome in February 2008 to review the list of 25 project proposals submitted to the UNGIWG Secretariat. Following the Rome meeting, Drafting Teams consolidated the proposals under three major headings and produced the Draft UNSDI Framework Document which received the endorsement of the UNGIWG Co-chairs.

The UNSDI Stakeholders Meeting of 20 June 2008 called by the Co-chairs was aimed at introducing the Draft UNSDI Framework Document to existing and potential partners and to foster support for its implementation.

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1 Welcome and Adoption of the Agenda

Ms. Alta Haggarty, Co-chair of UNGIWG for OCHA, welcomed the participants to the Stakeholder Meeting for the United Nations Spatial Data Infrastructure initiative (UNSDI). She informed the participants that it had been a very busy period since the 8th Plenary Meeting of UNGIWG in Bangkok in 2007 and this was the first opportunity created by the Co-chairs for a direct discussion with current and potential non-UN partners of the initiative. She referred to the Draft UNSDI Framework Document as the main instrument for partnership development and wished for fruitful discussions.

She noted the presence of representatives of GSDDI, CGIAR, USAID, Czech NCO, Dutch NGO, GEO Secretariat, ITHACA, University of Applied Science Switzerland, ESRI and Sapienza Consulting. She welcomed her colleagues from the UN System: World Bank, UNOG/CAVA, FAO, UNJLC, WHO, UNOSAT, WFP, OCHA and UNHCR. A phone bridge allowed for the participation of representatives of the EU INSPIRE initiative, ESRI, Mapufacture and of UNEP. The full list of participants is presented in Annex 2 of this report.

The agenda of the Meeting was accepted without modification (Annex 1).

2 Introduction to the UNSDI Process and Objectives of the Meeting

Mr. Karl Steinacker, Co-chair of UNGIWG for UNHCR, summarized the design of the UNSDI concept since the 6th Plenary Meeting of UNGIWG in Addis Ababa, Ethiopia, noting that the 7th Plenary in Santiago de Chile corresponded to a rotation of Chairmanship of UNGIWG. The Santiago meeting introduced the UNSDI implementation strategy which guided the UNSDI process since. At the 8th Plenary in Bangkok, Thailand, in 2007, two basic principles were agreed upon;

- the UNSDI will be built on deliverables, or outputs; and
- UNSDI remain separated from UNGIWG, allowing non-UN participation through deliverables, lead by specific agencies.

In February 2008, WFP hosted a UNGIWG Meeting to develop the basis of a Draft Framework Document for UNSDI building on an initial list of twenty five (25) UNSDI project proposals submitted to the UNGIWG Secretariat for consideration. The Secretariat facilitated the work of three drafting teams which engaged in a consultative process resulting in the consolidation of the proposals under three headings: 1) Interoperability and Tools; 2) Core datasets and 3) Capacity building. At the recommendation of the Co-chairs, the final version (v1.1) of the Draft UNSDI Framework Document made a distinction between “UNSDI Core Geo-Datasets” and “Thematic Layers,” the latter being the responsibility of specialized UN agencies. Core geo-datasets are central to inter-agency work and coordination which is the ultimate goal UNSDI.

The Chairs communicated their wish to present to the 9th Plenary Meeting of UNGIWG in Vienna, Austria, in November 2008, a proposal stating that UNGIWG remain the sponsor of UNSDI; that UNSDI is built around deliverables lead by a single or a consortium of UN agencies; that UNGIWG remain a UN entity and that UNSDI Partners collaborate on specific UNSDI deliverables.

Mr. Steinacker highlighted the efforts made to link UNSDI to institutions and activities in the UN which are responsible for driving harmonisation processes e.g. “Delivering as One UN.”

3 UNSDI Deliverables

Mr. Suha Ulgen of the UNGIWG Secretariat presented the Deliverables of the Draft UNSDI Framework Document that was circulated with the meeting invitation. For a total of US\$ 6,128,000, the package of deliverables provides for data and services for interoperable geospatial services, core geo-datasets and project management (Table Ia); thematic core datasets (Table Ib), and capacity building (Table Ic).

Table I indicates additionally the lead agency or lead consortium as well as the estimated duration and financial resources needed.

Table Ia: UNSDI Deliverables (No.1, 2 and 3)

UNSDI Outputs	Responsible Body	Duration and Cost
1. UNSDI Interoperable Geospatial Services		
1.1 One Source Spatial Data Warehouse	FAO	24 months \$1,850,000 @ \$93,500 per site
1.2 One Source Visualisation Facility	Centre for Advanced Visual Analytics (CAVA/ICTS/UNOG)	18 months \$828,000
<i>Subtotal</i>		<i>\$2,678,000</i>
2. UNSDI Core Geo-Dataset 1:100.000 Scale Global and Continental Standard Encoded Coastline Database	FAO	18 months \$200,000
3. UNSDI Project Management	UNSDI Project Team	24 months \$950,000
TOTAL		\$3,828,000

It was noted that the “1:1.000.000 Scale International and Administrative Boundaries and Coastline Layer” to be coordinated by UNCS and SALB with support from UNECA, UNECLAC, UNESCAP and the UN Map Library, had been removed from the original list as UNCS was not yet ready to endorse its inclusion in the said deliverable.

Mr. Steve Ebener, Representative of the SALB project - one of the lead agencies of the removed item and the lead of the Drafting Team for the proposal - presented for considerations what could potentially become a new deliverable. However, it was to be understood that this was his personal thoughts at this time and that other members of the original consortium should be consulted before a proposal was submitted to the Co-chairs and the Secretariat. Mr. Ebener suggested that

the deliverable can be reformulated to concentrate on the development and application of standards, the revision of the UN metadata profile, and the development of UN data policies (e.g. those adopted by UNESCO/IOC) for core datasets. UNSDI would be the facilitating process which would also empower Task Group 1 of UNGIWG to apply these to all other data layers, including those listed among the thematic datasets of the Draft UNSDI Framework Document.

Table Ib: UNSDI Deliverables (Annex A)

UNSDI Outputs	Responsible Body	Duration and Cost
Annex A : Thematic Core Datasets		
1. Human Health - Boundaries and Facilities: Global Health Resources	WHO	18 months \$250,000
2. Human Population - Centres and Distribution: Rural Demographics Map Series; Mapped Associations Between Urban and Rural Population Distributions and Other Environmental and Socio-economic Indicators	FAO	18 months \$200,000
3. Infrastructure – Roads, Railways, Airports, Harbours and Navigation: Global Transportation Database (UNSDI-T)	UNJLC	24 months \$320,000
4. Hydrology – Drainage, Water Bodies: Global and Continental Standard Encoded Hydrologic Database	FAO	18 months \$150,000
5. Land Cover – Global Land Cover Data	FAO	18 months \$230,000
TOTAL		\$1,150,000

Table Ic: UNSDI Deliverables (Annex B)

UNSDI Outputs	Responsible Body	Duration and Cost
Annex B: Capacity Building		
1. Indigenous Capacity Building (Country level)		
1.1 Lessons Learned From Country Level Experience in Developing an NSDI with the Support of the UNSDI Community	UNSDI Project Team	18 months \$450,000 @ \$75,000 per pilot
1.2 Open Source GIS on Data Grid	UNITAR-UNOSAT	18 months \$100,000
1.3 E-learning Curriculum Outline - Management of Spatial Information	FAO	12 months \$50,000
2. UN Capacity Building		
2.1 UN Regional Decision Support Service	UNEP	24 months \$50,000
2.2 Coordination of National Focal Points in Data Preparedness for	UNOOSA	18 months

Disasters		no cost
3. <i>Capacity Building Project Management</i>	UNSDI Project Team	24 months \$500,000
TOTAL		\$1,150,000

After describing in more detail each deliverable highlighting what the outputs/benefits of each were, Mr. Ulgen invited participants to comment.

Nicolas Chavent of UNJLC took the floor to repeat the statement made public by UNJLC (Christine Chomilier, OIC Chief of UNJLC and Nicolas Chavent, UNSDI-T Coordinator) in the morning session announcing that version 2.0 of the UNSDI-T was released on 19 June 2008, following the mandate given in Addis Ababa in 2005 (6th Plenary Meeting of UNGIWG). Due to internal constraints at UNJLC, the level of commitment will be reduced and the custodianship will have to be returned to UNGIWG. UNJLC's participation in this activity which contributes to the building of the Transportation UNSDI Deliverable will be on a best-effort basis within the resources available. He added that his agency remains supportive of the UNSDI process and that WFP has indicated its interest in taking the lead on UNSDI-T but it is between UNGIWG and WFP to define how this could proceed. UNJLC ensured that a proper handover in the best and most transparent way possible will be sought. In closing, the representative highlighted **ITHACA**'s role as a partner of UNJLC and recognized the high quality of their work.

The main discussion points pertaining to proposed UNSDI deliverables are summarized as follows:

Open Source tools and Open Source Data

On Deliverable 1.2 of the Draft UNSDI Framework Document Annex B "Open Source GIS on Data Grid," a discussion initiated by one of the **ESRI** representatives on the exclusiveness of Open Source GRID tools led UNOSAT to agree that, although the current concept is building on an Open Source GRASS (Linux) GIS initiative, they will consult with their partners to broaden the scope of the project. The Co-chairs noted that the project needed further consultation to take advantage of other potential opportunities.

The **GSDI** Representative highlighted that data only accessible to UN bodies, unlike those coming from Global Map or IOC, would not be well received by the community and that datasets promulgated by UNSDI should be fully accessible. Co-chairs agreed that this had to be the philosophy of UNSDI.

Scope of UNSDI

Mr. Steinacker, referring to the absence of international boundaries in the data warehouse, expressed his concern that clarification might be asked by partners/users on its withdrawal. Bringing to the attention of external partners that the UNSDI is bound by agency specific mandates and business practices, he asked them to appreciate that the grouping of deliverables also provided for the possibility to add to the list in the future, allowing UNGIWG to progress with the building of UNSDI even if all its components were not perfectly in place.

Participants suggested that the focus should be on datasets, building the infrastructure with policies, standards, etc. and the development of strong interoperability between systems. Recommendations were made by NCOs to build the UNSDI (or any other data collection/data

sharing schemes for that matter) on very specific requirements such as the obligation of governments to report on their progress towards the Millennium Development Goals (MDGs). SDIs have very little to offer if they are not issue-driven, at least in their initial phases of development. The economic benefits of SDIs must be demonstrated. The **USAID** representative provided the example of HIV/AIDS data having significant value.

The **CGIAR** representative informed the participants of many similarities between the UNSDI network of partners and CGIAR centres, each with specific service offerings and datasets. CGIAR did not invest into structure and infrastructure but more into interoperability and standards, making data harvestable as much as possible.

NCO representatives asked for clarification on what scope was desired for capacity building deliverables. The Co-chairs referred to the variety of mandates and constituencies of UNGIWG members which do not permit a generalisation, some serving very specific purposes, others clearly mandated to support and develop the capabilities of the Member States: UNSDI must have the flexibility to accommodate all.

Finally, supportive comments were heard from **Mapufacture** on the project to develop visualisation tools that would also facilitate the integration of spatial and non-spatial datasets. **OpenStreetMap**'s declared support for the UNSDI-T with UNJLC was also affirmed.

Partnerships and Coordination with Parallel Initiatives

Representatives of the **GEO Secretariat**, **INSPIRE** and **GSDI** invited UNGIWG to consult with and work more closely with their own initiatives in a complementary fashion to avoid duplication of effort or delivery of similar products or services. The example of the GEO Portal, supported by GeoNetwork, was cited as a best practice. The FAO representative commented on the experience of collaborating with these organisations stating that the sharing of experiences was always beneficial and reduced the risk of duplication and wastage of resources.

References were made to

- the GSDI SDI Cookbook, which will be re-issued in 2008 and is free to download. The Cookbook was already used to develop various national SDIs and to guide the development of a regional African SDI. The new edition will offer new standards, and a final chapter on legal, economic and financial issues;
- the INSPIRE data policy and metadata development initiative which supports the promulgation of best practices;
- the possibility of an SDI checklist in reference to certification by GSDI (to be discussed on 26 June within INSPIRE);
- data and services sharing rules within INSPIRE, allowing different policies to cohabit but leaving the final responsibility with individual governments;
- the registry of documented standards developed by GEOS, from all organisational members;
- the GEO standard interoperability forum;

The **INSPIRE** representative and others recommended that UNGIWG members be patient and aim at precise expectations, noting that the INSPIRE Directive involves 27 Member States and that the design started in 1995 leading to the adoption of the Directive only in 2007. Many datasets will be completed by 2016, at best.

4 Summary of the Meeting Outcomes

The Co-chairs expressed their understanding that there is a general endorsement that UNSDI should go ahead, with corrections in course. They also acknowledge that more attention was needed to develop the favourable conditions necessary to its successful implementation. Next steps and partnership opportunities (e.g. **GEO, INSPIRE, GSIDI**) also need to be more closely planned and monitored; the Draft UNSDI Framework Document needs to better address the issue of standards, data sharing practices governed by well-articulated data policies and capacity building components.

It is understood that an SDI is not an objective in itself but only an instrument to meet specific thematic goals. Therefore, triggers for building SDIs differ from one country to the other rendering a central decision-making structure unnecessary.

In the absence of statements to the contrary, the Co-chairs declared that UNSDI will be built on partnerships and that UNGIWG will remain an exclusive UN entity.

The Meeting was informed that the Co-chairs and the Secretariat of UNGIWG will table a resolution/strategy for UNSDI at the 9th Plenary Meeting of UNGIWG in Vienna, Austria, in November 2008 for approval by UNGIWG Members to propose the following:

- the Draft UNSDI Framework Document should be read in conjunction with the UNSDI Strategy Document;
- UNGIWG continues to sponsor UNSDI;
- approval of the majority of UNGIWG members is ensured to go ahead with the implementation of the UNSDI Framework in its totality;
- a lighter institutional structure with an UNSDI Board/Steering Committee, a Technical Advisory Group (TAG) and a Project Team (pending funding) governs UNSDI implementation; and
- an MoU formalizes UNSDI as a Project with commitment from Senior Management of sponsoring UNGIWG members.

Stakeholders asked that UNGIWG better define the role of NCOs, be more accurate and more detailed in the costing of deliverables, and be invited to be more involved in the design and development of the UNSDI.

Finally, the SALB representative invited INSPIRE and ESRI to be partners in the new deliverable proposed (Section 3) to which both answered positively. ESRI also offered its services to assist in the maintenance and development of UNSDI-T with UNJLC and WFP which received positive acknowledgement.

5 Declarations by UNSDI Partners

On the invitation of the Co-chairs:

The representative of the **Dutch NCO** informed that it was already looking closely at the thematic datasets to be developed under the leadership of FAO to define what could be their contribution. The representative added that the NCO is hoping to bring in three ministries to also contribute.

ESRI indicated that it wishes to contribute to the visualisation project with UNOG/CAVA; and

CGIAR expressed its support and was looking forward to increase its collaboration with UNSDI, especially in the area of capacity building.

6 Closing Remarks

Ms. Haggarty stated that the meeting had been very useful in helping to define the way forward and felt confident that the momentum could be kept and that the partners will remain on-board. She added that the Co-chairs will focus on refining the strategic approach. The UNGIWG Secretariat was asked to set a new drafting team for the Draft UNSDI Framework Document, aiming to have a distribution before the 9th Plenary Meeting of UNGIWG. Mr. Steinacker alluded to a possible meeting or consultation process before the Plenary of November 2008 for Member Agencies.

The Co-chairs thanked external Partners and UNGIWG Members present for their contributions and for their ongoing engagement in the UNSDI process. Pointing that increasing the commitment of Senior Management will remain a challenge, Ms. Haggarty thanked all UNGIWG Members for their renewed efforts in that regard.

Annex 1: Meeting Agenda

UNSDI STAKEHOLDER MEETING

- 1) *13:30 – 14:00* Welcome and Adoption of the Meeting Agenda (Co-chairs); and Introduction to the UNSDI Process and the objectives of the UNSDI Stakeholder Meeting
- 2) *14:00 – 15:30* Presentations on UNSDI Outputs by UNSDI Participating Agencies and their Partners.
- 3) *15:30 – 16:00* Break
- 4) *16:00 – 17:15* Formal declarations by UNSDI Partners and general discussion on the UNSDI Project
- 5) *17:15 – 17:30* Co-chairs' summary of the meeting outcomes and plan of work until UNGIWG-9
- 6) *17:30* Closing remarks

Annex 2: List of Participants

UN

CEB Secretariat	Richard Maciver
FAO	Jeff Tschirley
OCHA	Sofie Garde Thomle
UNGIWG Co-chair (OCHA)	Alta Haggarty
UNGIWG Co-chair (UNHCR)	Karl Steinacker
UNGIWG Secretariat (OCHA)	Suha Ulgen
UNHCR	Luc St. Pierre
UNHCR	Yvon Orand
UNJLC	Nicolas Chavent
UNOG/ICTS	Jeson Bellone
UNOSAT	Einar Bjorgo
WFP	Carlo Pandolfi
WHO	Jason Pickering
WHO/SALB	Steeve Ebener
World Bank	Reza Firuzbadi

By phone

UNEP	Mick Wilson
UNOOSA/UN-SPIDER	Joerg Szarzynski

Non-UN

CGIAR	Enrica Porcari
Czech NCO	Karel Charvat
Dutch NCO	Jan Cees Venema
ESRI	Emanuele Gennai,
GEO Secretariat	Osamu Ochiai
GSDI Association	Roger Longhorn
IICT	Olivier Ertz
IICT	Daniel Rappo
ITHACA	Paolo Pasquali
ITHACA	Andrea Ajmar

Sapienza Consulting
USAID

By phone

ESRI
INSPIRE
Mapufacture

By written statement

Spanish NCO
Hungarian NCO

Paolo Bourelly
Dorina Maris

Carmelle Terborgh
Alessandro Annoni
Andrew Turner

Dr. Michael Gould
Dr. Gabor Remetey

Annex 3: Glossary

CAVA	Centre for Advance Visual Analytics
CEB	Chief Executive Board
CGIAR	Consultative Group on International Agricultural Research
CTBTO	Comprehensive Test Ban Treaty Organization
ESRI	Environmental Systems Research Institute
FAO	Food and Agriculture Organization
GEO	Group for Earth Observation
GIS	Geographic Information System
GRASS	Geographic Resources Analysis Support System
GSDI	Global Spatial Data Infrastructure
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immunodeficiency Syndrome
IAEA	International Atomic Energy Agency
ICTS	Information Communication Technology Services
INSPIRE	Infrastructure for Spatial Information in the European Community
IOC	Intergovernmental Oceanographic Commission (UNESCO)
ITHACA	Information Technology for Humanitarian Assistance, Cooperation and Action
MDG	Millenium Development Goals
MoC	Memorandum of Cooperation
MoU	Memorandum of Understanding
NCO	National Coordination Office
OCHA	Office for the Coordination of Humanitarian Affairs
SALB	Second Administrative Leve Boundary (Project)
SDI	Spatial Data Infrastructure
UNCS	United Nations Cartographic Section
UNECA	Untied Nations Economic Comission for Africa
UNECLAC	United Nations Economic Commission for Latin America and the Caribbean
UNEP	United Nations Enviroment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGIWG	United Nations Geographic Information Working Group

UNHCR	United Nations High Commissioner for Refugees
UNITAR	United Nations Institute for Training and Research
UNJLC	United Nations Joint Logistics Centre
UNODC	United Nations Office on Drugs and Crime
UNOG	United Nations Office in Geneva
UNOOSA	United Nations Office for Outer Space Affairs
UNOPS	United Nations Office for Project Services
UNOSAT	United Nations Operational Satellite Applications Programme
UNSDI	United Nations Spatial Data Infrastructure
UNSDI-T	UNSDI Transport (data model)
UNSPIDER	United Nations Platform for Space-based Information for Disaster Management and Emergency Response
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization