

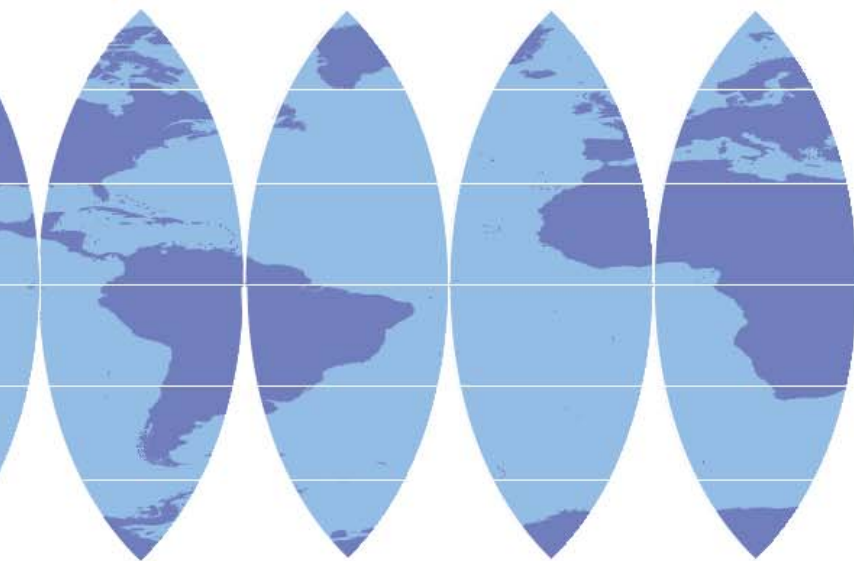


# CARTOGRAPHY AND GEOGRAPHIC INFORMATION SCIENCE

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**Report of the Sixth Plenary Meeting of the  
United Nations Geographic Information Working Group**

Addis Ababa, Ethiopia, 25-27 October 2005



United Nations  
Geographic Information  
Working Group



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## **Preface**

Following the establishment of the United Nations Geographic Information Working Group (UNGIWG) and its first five plenary meetings in New York (March 2000), Rome (March 2001), Washington, DC (June 2002), Nairobi (October 2003) and Geneva (October 2004), the Sixth UNGIWG Plenary Meeting was held in Addis Ababa, Ethiopia, from 25 to 27 October 2005, hosted by the World Food Programme (WFP), and the Food and Agriculture Organization of the UN (FAO). The Plenary Meeting was well attended by a wide range of experts from across the UN system, local and regional institutions, and geospatial industry observers. Topics covered included the work progress of the Working Group, partnership collaboration with other groups and standards setting, communication and outreach, 2006 work plans, and proposal for a UN Spatial Data Infrastructure.

This report summarizes the discussions and outcomes of the three-day meeting. All efforts were made to summarize as closely as possible the discussions and arguments, as well as the conclusions reached during the meeting.

The UNGIWG Secretariat wishes to express its gratitude to the staff of the WFP-Assessment, Analysis and Preparedness Branch (ODA), WFP-Ethiopia Country Office Vulnerability Analysis and Mapping Unit (VAM), FAO-Environment and the Natural Resources Services, and the United Nations Economic Commission for Africa (UNECA) for their professional arrangements, hospitality and the support extended to all the participants during this very fruitful meeting.

UNGIWG was initially endorsed by the Consultative Committee on Programme and Operational Questions (CCPOQ) of the Administrative Committee on Coordination (ACC) in 2000. After the restructuring of the ACC into the United Nations Chief Executive Board for Coordination (CEB), UNGIWG now operates as an interagency coordination group of voluntary network of professionals under the framework of the High Level Committee on Programmes (HLCP) of the CEB.

## 1. Executive Summary

The Sixth Plenary Meeting of the United Nations Geographical Working Group (UNGIWG) took place at the United Nations Economic Commission for Africa (UNECA) Conference Centre in Addis Ababa, Ethiopia from 25 to 27 October 2005, hosted by WFP and FAO.

Sixty-six experts attended this year's meeting representing 14 UN agencies, five UN missions, and 13 industry partners, NGOs, and institutions.

One of the purposes of the meeting was to review progress made, set priorities, and develop plans of action related to the different Task Groups for the coming year. Overall, steady progress has been made, with some Task Group(s) achieving more than others.

Revising and carrying forward the strategic plan developed by the Open Geospatial Consortium (OGC) for UNGIWG in 2002 in the form of a UN Spatial Data Infrastructure (UNSDI), and recognizing that many of the original goals and objectives remain valid, were seen as important activities for UNGIWG. Issues of partnership collaboration within and with other groups, communication and outreach were also considered and discussed.

Several recommendations and decisions emerged from the Sixth UNGIWG Plenary Meeting:

- It was recognized that the Task Groups as subactivities can be regrouped into two main themes: (1) Data and Information (2) Standards.
- The Task Group 2006 Work Plans were endorsed.
- The UNSDI concept was endorsed, with provisional recognition of partnership collaboration and funding options – undertaking consultancy to perform a base-line study, identifying the elements, and components, as well as framing the issues in line with past work done, current events and changes in approach.
- Enhanced collaboration mechanisms with the Global Spatial Data Infrastructure (GSDI), Geographic Information Support Team (GIST) and other groups were discussed.
- Common approaches, position and participation with standard setting bodies (e.g. the International Organization for Standardization [ISO], OGC) were discussed.
- Common approaches, position and collaboration with data and software providers were needed.
- Ways and means to ensure improved functioning of the UNGIWG mechanism were proposed by the Secretariat.
- Modalities to ensure improved functioning of UNGIWG, in terms of communications and outreach, including a newsletter, brochure, Web site, mailing lists, were proposed by the Secretariat.
- A strategy and a plan to gain access to VMAP1 was discussed with Task Group 2 (Core Geodatabases) to pursue acquisition.
- The Secretariat with the support of the UNGIWG members to become more proactive in seeking funds and following up with funding proposals.

- Making the Geographic Information Strategic Plan for the United Nations prepared in 2001-2002, under the leadership of the UN Cartographic Section, publicly available.
- Decisions on the Seventh UNGIWG Plenary Meeting venue/date.

## 2. Introduction

The Sixth UNGIWG Plenary Meeting was opened as scheduled, on the morning of 25 October 2005. This year's meeting was held at the United Nations Economic Commission for Africa (UNECA) Conference Centre in Addis Ababa, Ethiopia, and hosted by WFP and FAO.

The adopted Agenda is attached in Annex II and the List of Participants in Annex III. Representatives from CTBTO, FAO, OCHA, UNDESA, UNDP/Mine Action, DPKO (Cartographic Section, ONUB, MONUC, UNMEE, UNMIL, and UNMIS GIS Units), UNECA, UNEP, UNHCR, UNJLC, UNOOSA, UNOSAT, WFP, WHO registered and participated in the meeting. Representatives from governmental agencies, NGOs (African Union, Ethiopian Mapping Authority, RCMRD, ICRC, ILRI, IITA, IRC, IRD, RESPOND) as well as the private sector (ESRI, Surveylab, OmniTech PLC, Information System Services) also attended the opening sessions of the Meeting. A complete list of acronyms can be found in Annex I.

Mr David Kaatrud (WFP co-Chair) welcomed the participants and chaired the Plenary Meeting in the absence of Jeff Tschirley (FAO co-Chair), who was unable to attend due to urgent engagements in Rome.

## 3. Keynote Address

Dr Wilbur Ottichilo from the Regional Centre for Mapping of Resources for Development (RCMRD), Nairobi, Kenya) gave a keynote presentation on "The Promotion and Use of Geo-information (GI) in Sustainable Development – Particularly in Africa". The full presentation can be found on the UNGIWG Web site.

## 4. Report from the co-Chairs

FAO and WFP took over Co-chairmanship of UNGIWG in April 2005. Activities undertaken since then include the establishment of a Secretariat, the redesign of the Web site and brochure publication. To improve coordination with the Task Group's (TG), two videoconferences were held with the TG Managers in May and September 2005.

The co-Chairs and Secretariat see three thrust areas where they can assist in the process of UNGIWG development and progress towards a UNSDI:

- Strategic, such as in the development of an agreed approach to UNSDI;
- Technical improved oversight TG activities and assist in cross-cutting issues;
- Linkages with key practitioners and users of GIS, decision makers (including the CEB and UN Agency Managers) for advocacy and partners, such as GSDI and the Global Earth Observation System of Systems (GEOSS).

#### **4.1 Strategic Level**

There is a need to refine and carry forward the strategic plan developed by OGC for UNGIWG in 2002. While it is recognized that many of the original goals and objectives remain valid, there is scope to think about a more comprehensive UNSDI approach, which would include core data sets, baseline data layers, standards, metadata and policies as well as technical capacity building and common services (e.g. “The International Charter Space and Major Disasters”). This will require the development of a conceptual framework and is likely to be the core work of the current co-Chairs. Clients of a UNSDI would be UN agencies and partners (regional, national and institutional). Work in this area should be properly aligned with similar non-UN global initiatives, such as GSDI.

#### **4.2 Technical Level**

Issues relating to Task Groups including assisting in cross-cutting issues and assisting TGs to consolidate and finish work. Such important initiatives will form the building blocks to any UNSDI initiative. The Secretariat is available to provide support to cross-cutting issues, particularly in the areas of resource mobilization.

#### **4.3 Linkages with Key Partners and Decision Makers**

How to connect with CEB, decision makers, and UN Agency management for advocacy, partner groups, and practitioners for case studies. Linkages would be through three main subsets:

- Collaboration with partner, practitioners and users of GIS, field based personnel and government partners. This provides a possible exchange structure beyond the Task Groups. The inclusion of case studies by the agency represents an initial start in this regard.
- Communication and outreach to decision makers, for example the CEB, with whom a debriefing has been arranged for early 2006, to the High Level Committee on Programming (a subset of the CEB). They can assist in resource mobilization and advocacy and ensure general attention to the subject matter in the UN as a whole within their respective Agencies. They need to know that UNGIWG exists as a coordination body that they can also exploit, in order to move the process forward.
- Collaboration with other groups and partners, such as GIST, GEOSS and GSDI, (possible joint conference next year). Others may include commercial players, at the same time balanced with the use of open source. These all need to be strengthened as UNGIWG moves forward, as development of an SDI should not be done in isolation.

It is understood that all of this needs to be balanced with the constraints of the available staff time that the co-Chairs and TG Managers can apply to UNGIWG matters.

## 5. Report from the UNGIWG Secretariat

### 5.1 Progress to Date

**Web site:** the UNGIWG Web site was redesigned by FAO and launched in August 2005. FAO and WFP manage the Web site content, while DPKO of the United Nations Cartographic Section (UNCS) maintain the servers. To date feedback has been positive.

**Brochure:** a new UNGIWG brochure was designed and published by FAO in July 2005 and the latest updated version of this is available on the Web site.

**TG Managers Videoconference:** two videoconferences were held (in May and September 2005), with the objectives of reviewing progress on TG work plan as well as preparing for the Sixth UNGIWG Plenary Meeting.

**Mailing lists and contact lists:** these are reviewed and updated to ensure they used effectively.

**TG Progress Reports:** the six TGs have prepared progress reports as part of their preparation for UNGIWG 2005. Full copies can be found on the Web site (<http://www.ungiwg.org/documents.htm>) whilst a brief has been included in Annex IV.

### 5.2 Secretariat Work Plan

Initiatives being planned for 2006 are aimed, in particular, at advocacy and outreach:

- Two newsletters for 2006.
- Promotion of UNGIWG and its activities through publications, other UN and non-UN Web sites, and external mailing lists.
- Regular reporting and announcements.
- Using the Web site and mailing lists more effectively, along with finding way to increase participatory interaction and collaboration among the different members, partners and others on common related issues.
- Ensure that UNGIWG is included in the UN-CEB agenda for the year;
- Quarterly TG Managers videoconferences.
- Rationalization of the UNGIWG mailing list.

## 6. Reports from Task Groups

Task Group breakouts were undertaken using two main subgroups as follows:

- A. Data and Information
  - TG1: International and administrative boundaries
  - TG2: Core Geodatabases
  - TG3: Remote Sensing

## B. Standards

- TG4: Interoperable Services
- TG5: GIS Map Production Guidelines
- TG6: Global Navigation Satellite Systems.

The breakouts gave the TGs the opportunity to identify and clarify in particular their work plans and issues that need to be addressed as outlined below. Full TG Progress Reports with work plans can be found in the UNGIWG Web site (<http://www.ungiwg.org/documents.htm>), whilst a brief summary has been included in Annex IV. Many cross-cutting issues were addressed during discussions and these are described following the Task Group Work Plans.

### 6.1 TG1 International and Administrative Boundaries Work Plan

International Boundaries 2006 Work Plan (without extra resources):

- Development of 1:5 and 1:10m dataset.
- Minimum guidance and support for international boundary representation.

International Boundaries 2006 Work Plan (with extra resources):

- Creation of a base knowledge on international boundaries to convert official boundary text into precise geometric alignment.
- Correction of all the existing dataset according to the official documentation.

Second Administrative Level Boundaries (SALB) 2006 Work Plan:

Making SALB reach the present by the end of 2006, which means offering a full coverage in terms of:

- Historic changes going from 1990 to 2006 at the first administrative level and from 2000 to 2006 at the second administrative level.
- Administrative boundaries maps with one map for each period of representatively observed between 2000 and 2006.
- National Mapping Agency contact information.

Specific Issues:

- Integration of fast track-Global Administrative Unit Layer (GAUL) with the SALB process.
- Sustainability both at project and country level.
- Implementation of the recommendations endorsed by UNGIWG.

### 6.2 TG2 Core Geodatabases Work Plan

- Review of the GCDB list adopted in the previous UNGIWG meetings.
- Selection of the core data layers based on the report prepared by the Task Group.
- Continue efforts for acquisition of VMAP1 with the support from the UNGIWG Secretariat.

Specific Issues:

- Which UN agency will be responsible for which Global Core Database (GCDB) layer, and the process for maintaining it.
- Possible integration of TG1 with TG2.

### **6.3 TG3 Remote Sensing Work Plan**

- Several TG3 activities have been successfully implemented during the last year. It is important to follow up and consolidate services.
- Identify/nominate Focal Points for each organization for updating the UNGIWG VHR meta-database in order to complete it and mainstream it.
- Based on successful successive pilot projects carried out so far, TG3 – Remote Sensing (RS) will engage in Grid technologies applications in view of leveraging slow/instable connectivity problems faced by field users in access RS/GIS resources served through the Web.
- UNGIWG should endorse the establishment under TG3 – RS of a User Focus Group to bring together UN agencies and partners that work with humanitarian response, risk reduction and disaster management to work together to take advantage in a more effective way the existing and planned initiatives that are making available space-based technology solutions to support such activities. Such initiatives include the "International Charter Space and Major Disaster", GEOSS as implemented by the Group on Earth Observations (GEO), the Global Monitoring for Environment and Security (GMES) (more specifically the RESPOND initiative), Global Monitoring for Security and Stability (GMOSS) and others.
- First meeting of UFG proposed to be held in Geneva, mid-December back-to-back to the GEOSS Summit.

Specific Issues:

- Continuity of the ongoing UNGIWG effort in the area of RS.
- Nomination by each member organization of a focal point for data purchases.
- In respect of the Charter there is a need for a user task force to be formed to continue negotiations with the Charter.
- Consolidated list of priority areas of interest for anticipated archive data collection and programming. This has been identified as the best way to improve in responsiveness in the context of an emergency response.

### **6.4 TG4 Interoperable Services Work plan**

- Develop guidelines to advocate for greater interoperability.
- Encourage the use of OGC and ISO/TC211 standards based software, e.g. GeoNetwork opensource and the related Community Web site as appropriate tools for achieving the above.
- Develop a standardized spatial data framework model related to transport infrastructure, in collaboration with TG2, TG5 and TG6.

Specific Issues:

- Identify means for promoting the principle of using open **standards** when designing new Web services based systems by UNGIWG members. For example for new image repository services.
- Identify means for encouraging the evaluation and use of viable tools for addressing the interoperability issues as those developed by FAO, WFP and UNEP. These have not yet been actively promoted by the UNGIWG.

## 6.5 TG5 GIS Map Production Guidelines Work Plan

- Combine FAO and UN Department of Peacekeeping Operations (DPKO) documents with two annexes for large and small scales.
- Solicit and collate suggestions and initiate discussion.
- Incorporate feedback into the final document.
- Develop map templates\* and release the guidelines document and the templates.
- Support production of *International and Administrative Boundaries* (TG1), *Core Geo-database* (TG2) and *Space* (TG3) maps using the templates.

Specific Issues:

- Narrow the mandate of the TG with emphasis on developing standards for maps produced using the core data layers to be adapted by UNGIWG.
- Strengthening of the interconnections between UNGIWG TGs especially regarding development of an object catalogue or data model to inform all of working group activities.
- Collaboration with TG4 on UNGIWG interoperable common service.
- Not only the development of print maps, but also interactive online mapping practices applications. This would include information indexing and a discovery interface has implications for other TGs in terms of how they present their work.
- In order to expedite the adoption of practices through development of templates, there is need to work more closely with TG members specialized in this area.
- Need to widen membership to support the challenge.
- Collaborative platform would assist group members to better coordinate their efforts.
- Need for outreach and capacity building, with a concerted effort at UNGIWG level to take this agenda to a much larger community of potential users.

\* In addition to creating software-specific map templates, explore implementing OGC's Styled Layer Descriptors (SLD) specification for WMS in consultation with TG4 (Interoperability)

## 6.6 TG6 Global Navigation Satellite Systems Work Plan

- Take stock and undertake an inventory of: types and categories of the Global Positioning System (GPS) devices being used in the field; best practices; challenges and issues confronted by different organizations, and training material already developed.
- Increase membership and participation – for example, OCHA and DPKO have indicated interest.

### Specific Issues:

- Expanding TG6 to encompass Georeferencing – Universal Addressing Matching Scheme.
- Greater interaction and dialogue with other TGs (2, 3, and 4).
- Visibility of activities that are taking place, should be improved through the UNGIWG Web site.
- Outputs should include step-by-step guidelines for our partners on how to collect the spatial component of data.
- As georeferencing issues are highly relevant to satellite imagery and as rapid mapping and established procedures exist at UNOSAT level rather than at TG level, UNOSAT should be approached to participate in the TG.

## 7. Cross-Cutting Issues

A variety of cross-cutting issues emerged during the discussions. Technical and TG-specific issues along with capacity building (related to sustainability and hence to resources) and policy issues should be addressed within the TGs, with recommendations then made to the co-Chairs. Cross-cutting issues that were common to all groups need to be organized and prioritized to be addressed by the co-Chairs in support of the Task Groups. These issues have been grouped below as management, participation and outreach, resource mobilization, sustainability and open source software.

### 7.1 Management Issues

#### Oversight structure.

UNGIWG needs to strive to develop linkages across and between TGs. This can be achieved through an oversight structure managed by the co-Chairs and the Secretariat, with regular communications between TGs and co-Chairs maintained through the planned quarterly videoconferencing, which:

- enables improved communications between co-Chairs and TG Managers;
- provides a forum to allow for better collaboration, exchange, and linkages between TGs;
- provides a coordination mechanism to manage the process of the different activities being undertaken by the various TGs.

### Groupings of Data and Standards to enable better Integration, Consolidation and Collaboration of UNGIWG Task Groups

#### Issues:

It is generally understood that TG consolidation should be considered where relevant; particularly in organizing TG work so there is interoperability, exchange and collaboration. However it is also recognized that it may be too soon to radically change and reorganize TGs. UNGIWG remains mindful of the legacy that has been created.

Interconnections between Task Groups need to be strengthened, and this can be undertaken initially through the subdivision of TGs under the common headings of data and standards. This provides clear groupings while still maintaining the specific purposes of the TGs. In line with this a person can be assigned to maintain an overview of each of these groups (data and standards) that will form broad categories for an SDI framework. Other areas such as capacity building, services and infrastructure to be added as the process evolves.

This can enable development of the conceptual framework of the UNSDI, in parallel with ongoing TG activities. Any development of an UNSDI will take a pragmatic approach where UNGIWG can build on the revised strategic framework, and align with other efforts that are working in that direction. This will form the basis of the work plan for the co-Chairs for the next year.

Therefore a somewhat parallel system will be operating with the old TGs for consolidating past work, along with development of a new structure for future strategy. Some adjustments may occur to the TGs later to reflect changes as UNGIWG moves forward with the UNSDI.

#### Decision:

It was agreed to maintain the status quo of six TGs (with no further consolidation), but at the same time intensify the oversight role and develop linkages through quarterly videoconferences, to address issues progressively through next year. The working group can later revisit the structure of TGs to align them with a future UNSDI framework.

#### Actions:

As part of the oversight mechanism, have someone to have an overview of data issues, standards issues, looking particularly at how TGs link and overlap. This is a potential role for the Secretariat.

### Sharing Mechanism

#### Issue:

Agencies need to be able to share what is already routinely being done. Hyperlinks to Web site could link into one stop shop idea with common databases and information available. This does not necessarily need extra resources, because organizations are already producing the information, but rather a way found to make data layers available to UNGIWG members.

TGs would need to decide which data layers are needed, which sources are available, and whether there is a funding issue with developing a common database. Metadata remains crucial: who has what, where, and how to get hold of it. UNGIWG, through TG3, needs to be proactive in responding to this issue. As new technology now makes it possible to deliver parts of datasets, as opposed to the whole database, this may mean changes in data policy.

Many are willing to share data, but no clear structure, policy or letter regarding this exists. However there is evolution in the field with more sharing occurring through agencies instructing all GIS operatives to share data by building it into Terms of Reference (TORs) and encouraging partners. Humanitarian crises trigger greater sharing. The GIST has tried to capitalize on this by encouraging donors to make sure that agencies that take advantage of funds, commit to sharing the data that is collected with other GIST members.

Action:

Infrastructure and general guidelines to improve information sharing to be developed through the Secretariat.

#### TG Membership and TORs

Issue:

Attention should be paid to the membership of the TGs, regarding both the Managers and membership. Reconstitution of membership of TGs is always open. Specifically:

- As UNGIWG as a whole has evolved, it is recognized that TG membership could become institutionalized rather than being solely interest related volunteers. This could also assist in maintaining institutional memory within various organizations and TGs. It ensures an organization's commitment, and therefore enables UNGIWG to maintain continuity and data sourcing ability.
- Partnering and liaising with specific expertise, especially those from private sector, academia, from local and national governments, and respected organizations such as the International Cartographic Association and similar initiatives may provide experts.
- TGs may have different types of members, and there may not be one unique model for all TGs.
- Whether each TG needs a set of TORs depends on whether the TG is considered as an information group only, or whether there are additional decision functions that need to be considered.

Decision:

A definition on TG TORs was appended, that is TGs work through technical issues, come up with considered recommendations upon which UNGIWG as a whole can take decisions facilitated by the co-Chairs.

Action:

TGs may need to consider targeting specific expertise, particularly as the UNSDI concept evolves.

## 7.2 Participation and Outreach

### Participation

#### Issue:

Some TGs have a low participation, while others more. In some areas there is much interest that UNGIWG needs to tap.

#### Decision:

As TGs get closer to realizing some tasks, and putting together conceptual framework for SDI, participation in TGs should be encouraged and intensified. Over the next year or so UNGIWG will be making some final decisions on core databases.

#### Action:

Active participation in TGs must be encouraged and tapped by TG Managers.

### Outreach to Partners and Others

#### Issues:

Improving UNGIWG outreach, exploring mechanisms and means to best support and strengthen its various activities, and overall objectives, as well as with the UN Chief Executives Board (CEB) through the High Level Committee on Programming (HLCP). In addition, there is the outreach aspect to the fact that partners and agencies are not represented at the Plenary.

Inclusion and exclusion policies regarding partners need to be resolved. For example, by signing up to UNGIWG, will agencies be forced to drop some partners?

#### Decision:

Advocacy, outreach and communication to the wider community can be addressed by the co-Chairs and Secretariat through the Web site, mailing lists, brochure and newsletter. It is important for TGs to indicate the areas where the Secretariat could support their work in their respective agencies.

#### Action:

co-Chairs will pursue recognition of UNGIWG activities by the CEB and other important bodies. Co-Chairs will undertake a formal briefing of the HLCP in late February 2006. They will also review whether the relationship with the Third Committee, which gave life to UNGIWG initially, still exists. DPKO will further explore the possibility and get back to the Secretariat. There is unlikely to be any action before the 2006 Plenary. The Secretariat is to send out a questionnaire to ascertain what people think should be posted on Web site.

### Potential Private Sector Collaboration

It was recognized that the current interest in the Private Sector for Corporate Social Responsibility (CSR) opens scope for supporting UNGIWG activities.

Such companies have significant global presence and vision. These corporate initiatives can be fairly sustainable with much opportunity. This would be an arrangement whereby UNGIWG would establish a clearly worked out policy with a company. UNGIWG could take advantage of such an arrangement for:

- advocacy and outreach;
- an open UNSDI interface;
- synchronising activities of UNGIWG Task Groups.

One promising example is with Google which may be willing to provide a facility for data storage for UNGIWG, with the restricted use of some aspects (i.e. UNGIWG only).

Action:

Secretariat to follow up. Participation by some UNGIWG members might depend on whether it would affect current arrangements that are already in place.

### **7.3 Resource Mobilization**

Issue:

It is recognized that constraints exist both in respect of available staff time and resources to perform work. UNGIWG recognizes lessons learned from earlier forays into resource mobilization, but is in a position to be proactive in resource mobilization, through the activities of the co-Chairs and Secretariat.

While in some cases resource mobilization has been institutional, in others, agencies have discretely looked for resources and funding. UNGIWG could provide endorsement to this, thus strengthening the case with donors, particularly in cases where projects do fit into the global UNSDI framework for development.

As UNGIWG moves towards an integrated global approach linked to a UNSDI, provided that the conceptual framework with key items is identified (with costs), a first round of resource mobilization can be undertaken. This would include discussions with CEB and others into next year. Any integrated project proposal being made to donors would have some flexibility with provision made for more specific targeted requests. Alternatively to have the umbrella of UNGIWG for a set of proposals, would allow for interested donors to provide a contribution to a part of the whole.

Action:

Individual organizations will continue to pursue their own funding, while co-Chairs, through the Secretariat, intend to assist in resource mobilization, identify gaps and gradually develop an integrated proposal. Some prioritization will be necessary before the next Plenary.

## 7.4 Sustainability

### Issue:

As TGs complete activities, UNGIWG needs to look ahead to 2007 to see who will take on the resultant maintenance responsibilities arising from the TG initiatives. The Secretariat can support this through dialogue with the High Level Committee on Programming. The issue is indicative of the mature phase of many of the activities. Examples include issues such as who will maintain SALB data sets, and the future of UNOSAT.

There is an issue here of not only assigning mandates to agencies, but also of capacity-building features, both internal and external, and this will ultimately relate to the development of a UNSDI.

### Action:

Sustainability issues exist in all TGs and should be addressed by TG Managers in coordination with the Secretariat.

### Capacity building (both internal and external)

This links closely to the issue of sustainability. Under the umbrella of capacity building, support can be provided internally (in terms of the UNGIWG organizations and community) and externally (in terms of partners and governments). By offering or generating training possibilities for member states, UNGIWG could be instrumental in speeding up the process of consolidating data infrastructure. Interactive distance learning in any capacity-building strategy, with applications in technical areas is important.

### Consolidation of Common Services

It was recognized that Common Services are a growing area in the UN, which needs to be looked at in the UNGIWG context. GeoNetwork has grown recently from a limited facility to having extensive participation. Similarly the current increased use of, and growing demand for, satellite imagery means that UNOSAT is taking on Common Service type attributes. Issues exist as to what extent the Charter or GeoNetwork are common services to be consolidated and who should maintain them.

## 7.5 Open Source Software and Open Design

This is especially relevant to TG4, and concerns particularly issues that may arise with respect to commercial solutions.

## 8. UN Spatial Data Infrastructure (UNSDI)

It was agreed that UNGIWG needs to re-enforce strategic aspects of its work. It was also agreed that given the nature and range of UN work, that a distinct version of the SDI should be developed for the UN context, which should be reflected in

the name “UNSDI”. By developing a UNSDI, UNGIWG can provide an overall conceptual framework that can better guide all the TGs and related activities.

It was recognized that UNGIWG’s work to date has in effect been laying the foundations for a UNSDI. It was also agreed that UNGIWG should not work in isolation on a UNSDI. Other global, national and regional level efforts are ongoing with which the UNSDI efforts would need to coordinate and cooperate, where appropriate.

## **8.1 Generic Elements of a UNSDI**

“Spatial Data Infrastructure” (SDI) is the base collection of technologies, data, human resources, policies, institutional arrangements, and partnerships that enable the availability, exchange of and access to geographically-related information using common practices, protocols and specifications.

SDI is a framework to enable users with different mandates and disciplines to operate in a cohesive manner to acquire, access, retrieve, analyse and disseminate geospatial data and information in an easy and secure way. It particularly helps to improve the efficiency of development, management and use of geospatial databases.

## **8.2 Broad Contours of the SDI Framework**

### Goals

At the strategic level, UNGIWG goals are in line with goals of the UN Charter and Millennium Development Goals (MDGs). UNSDI can provide the means to achieve the original vision and goals of UNGIWG. At the very technical level Task Groups may be viewed as building blocks in this process. It is the middle layer that needs to be put in place. A UNSDI initiative would use the GIS Strategic Plan recently issued by the Secretariat as a point of departure.

### Decentralized coordination framework

A UNSDI can be developed based on what has already been achieved. It could provide a high-level coordination framework for UNGIWG, which is, in itself, a coordinating body. Implicit in its development is the recognition of a decentralized matrix approach, connected through agreed, open data exchange standards. UNSDI although a distinct body, would run in line with GSDI and the National Spatial Data Infrastructure (NSDI) initiatives. The development of some key policies would be needed to enable data exchange, and to determine inclusions and exclusions.

### Linkages and partnering

A strategy would be developed regarding partners. UNGIWG is building the UNSDI structure to cater for its own requirements in line with the goals and objectives set for UNGIWG. Objectives include the internal UN community as well as those outside for which the open-ended design will allow capacity building and technical transfer to member states and clients who could benefit. In trying to realize those goals and objectives it is necessary to develop this in line with

partners and member states as all being part of the framework. A UNSDI is not an isolated entity, but is rather an open-ended development that has linkages outside of the UN community, particularly in the area of institutional and technical capacity building and associated donor support.

A strategy of internal and external linkages would have to be developed with the outside community, as member states exist as clients, contribute funds, and have their own efforts to coordinate spatial data infrastructure.

Partners include international and regional bodies as well as member states need to be recognized from the start to enable capacity building, particularly as different agencies have different partners. Technical capacity building will be undertaken both internally and externally (with partner and member states).

#### Continuity

Issues of continuity between Plenaries and institutional memory need to be addressed. Until now each TG member has acted as a volunteer but there may be a need for TG representatives to be organizational, and therefore UNGIWG would get a semi permanent resource from each agency. Continuity between Plenary 6 and 7 would be undertaken through videoconferencing. UNSDI development would take account of implications for TGs regarding their legacy and development of their work.

### **8.3 Actions in the Process to realize the UNSDI**

- Co-Chairs to oversee UNSDI development process.
- Body of literature to be built on, with some dedicated research by a consultant or UNGIWG Secretariat.
- Need for a consultative process with UNGIWG membership framing the issues and identifying action elements and components.
- Build ultimately to formal endorsement in November 2006.
- TGs to continue as key building blocks in this process providing inputs and reinforcement while the conceptual framework is established.
- Need to canvas agencies and see what dedicated resources are available, some agencies have ongoing activities that would fit with UNSDI initiatives – Office for Coordination of Humanitarian Affairs (OCHA) are developing maps on demand and a joint humanitarian field assessments tool box, UNOSAT can contribute raster data, FAO, WFP and UNEP continue to support the GeoNetwork open-source development.

## **9. UNGIWG Collaboration**

### **9.1 With Partners**

Partners present at the UNGIWG Meeting were invited to contribute and share their vision on how they can participate and provide support to the TGs and UNGIWG initiative. Partners present included: the International Institute for Tropical Agriculture (IITA), ESA/RESPOND, Surveylab and ESRI. See

Annex IV for further details.

## 9.2 With Other Groups such as GSDI and GIST

It is important to ensure good links with other practitioners working in the field of GIS exist. UNGIWG should not work in isolation, particularly in light of potential development with regard to a UNSDI.

UNGIWG members made presentations on other groups with whom UNGIWG need to maintain collaboration. These were as follows:

- Spatial Information Management Advisory Group (SIMAG) (Ergin Ataman)
- Global Spatial Data Infrastructure (GSDI) (Jeroen Ticheler)
- Geographic Information Support Team (GIST) (Suha Ulgen)
- Global Earth Observation System of Systems(GEOSS) as implemented by the Group on Earth Observations (GEO) (David Stevens)
- North Atlantic Treaty Organization (NATO) (Kyoung-Soo Eom).

Further details on potential collaboration can be found in Annex IV.

Action:

Secretariat to follow up and liaise with UNGIWG contact people for the various groups to clarify current collaborative status and potential for future collaboration.

## 10. Participation in Standards Setting

A discussion was held to determine a common approach and UNGIWG position to resolve partnership and membership of OGC and ISO.

The Open Geospatial Consortium (OGC) encourages and provides standards for GIS data processing and exchange. They hold four meetings a year, alternating between US/Europe/Asia. FAO has technical membership, and is currently the only member of OGC from UNGIWG. There is an annual fee for membership.

Some overlap exists between OGC and the International Organization for Standardization (ISO). Within ISO there is a technical committee, TC211, for geographical information, setting a wide range of (more than 20) standards. No commercial vendors are involved. FAO involvement is not necessarily needed, but it is important for UNGIWG to have access to standards and to be on the mailing list.

In regard to UNSDI development membership of both OGC and ISO is valuable for the UN. It would be relevant for UNGIWG as a whole to have membership, the advantage being for the promotion of the principles and practices that UNGIWG stands for under UNSDI.

Decision:

It was proposed that UNGIWG should stay engaged, as it is likely that the UNSDI will be developed. It is in their interest to maintain the partnership with UNGIWG. UNGIWG could have access through FAO's membership or make

direct contact with OGC management through the co-Chairs, and keep contact into 2006, as well as in the context of the UNSDI developments.

**Action:**

Secretariat to stay engaged and maintain partnerships. The UN DPKO (Cartographic Section) had membership of OGC as previous Secretariat. It may be possible to transfer this to the new Secretariat. Regarding ISO, UNGIWG was an associate member. DPKO will provide historical perspective regarding past relationship with both OGC and ISO. The present Secretariats will discuss with the previous Secretariat, to ensure that there is continued participation.

## **11. Data, Software and Licensing Agreements**

A discussion was held to clarify and reach a common approach regarding UNGIWG's position to resolve data, software and licensing agreements, including the issue of VMAP1. All that is needed is software which is capable with a proven format that can be used in any way, and that provides interoperability, functionality and is timely. There was debate on whether agencies should tie into just one software, or whether different users should use what suits them. It was agreed that any discussions regarding an alternative platform could not be resolved here, and whether this would need further technical discussion through a TG approach.

This is an issue on which UNGIWG should lead. Many members would be in favour of a one-time purchase, with technical support, through the UN Procurement Unit.

As per DPKO request, ESRI products were adopted by the United Nations Information and Communication Technologies (UNICT) as a standard for UN Secretariat until 30 June 2006. DPKO is establishing a Direct Marketing Arrangement (DMA) with ESRI that will draw a significant impact on UN-wide software and licensing agreements pertaining to ESRI-based technology.

In the case of Satellite Imagery, all imagery acquired must follow the copyright rules of each provider. Imagery provided to the UN through the International Charter Space and Major Disasters is available to all UN agencies responding to the emergency and only during the response phase. Use of this imagery for recovery and risk reduction activities is at the discretion of each satellite operator, except during the Indian Ocean Tsunami of 26 December 2004, when all imagery was made widely available copyright free. There is a need to work together to ensure that imagery acquired is made widely available to the whole user community.

**Decision:**

UNGIWG remains committed to Free and Open Source Software (FOSS) solutions but recognize the role of commercial software in the workflow. In terms of the long-term UNSDI development, it is of first and foremost importance that data exchange standards are used. Regarding licensing issues, UNGIWG is generally dealing with the legacy of what has gone before, along with the reality

of what is now. In the longer term, this is an important point that may need input of a TG. Regarding an alternative platform, this cannot be resolved here. Do we want a more technical discussion through a TG approach? In the medium to long term, standards will be necessary for the development of UNSDI.

Actions:

- DPKO and FAO to share their experience and approach with regards to data, software, and licensing agreements.
- Secretariat to make contact with the Procurement Working Group, to find out how they deal with software issues but not to engage in an exercise of software comparisons. The Procurement Working Group may already be looking at that, so Secretariat will enquire.

## **12. Concluding remarks from co-Chairs**

The co-Chairs involvement in UNGIWG will be from a more managerial perspective, with emphasis on their advocacy role, to provide linkages to practitioners and partners.

The co-Chairs recognize the current technical thrust of the TGs that are maturing at different speeds, and anticipate intensifying their oversight of the technical groups, and the eventual streamlining of TG integration.

An important strategic element will be guiding the development of the UNSDI framework and regarding this it was noted that definite progress was made in the plenary discussions. From a log frame point of view, UNGIWG goals and ideals are in line with overall UN goals. UNGIWG needs to work through the UNSDI to develop more clear objectives to obtain those goals, and work on inputs through the TG. A log frame approach could facilitate a better articulated product for mobilizing resources with interested donors.

The accomplishments of the TGs show that there is the potential for the development of a UNSDI. Current data, technical standards, common services (UNOSAT, GeoNetwork, etc.) are all the elements of a wider structure. In terms of objectives, UNGIWG is moving towards a UNSDI. The development and evolution towards a UNSDI would recognize the various aspects GIS applications in which UNGIWG members are involved (development, peacekeeping, emergency work and humanitarian).

In line with this, the need for a balance between a centralized and decentralized approach is recognized, and the need for information exchange, particularly across organizations in an integrated matrix-like manner.

The co-Chairs have indicated their willingness and interest in developing the UNSDI conceptual framework. As part of their advocacy role, they would be willing to direct the development of this structure and then present it to high-level decision makers (including UN decision making bodies, such as the High Level Committee on Programming and decision makers in individual agencies).

It is understood that certain constraints exist and that the work of UNGIWG needs to be balanced with the reality of staff time and availability. However the co-Chairs are willing to undertake activities in the thrust areas described in the co-Chairs report by promoting strategic planning, technical assistance and linkages to practitioners, decision makers and partners. In addition, despite constraints on time and money, a robust Secretariat is anticipated in this role. It is hoped that there will be equal participation from all the agencies, and it is hoped to raise more resources in this effort.

The Secretariat's Work Plan is intended to support Task Groups in addressing their Work Plans for 2006 and in particular for addressing the variety of cross-cutting issues that emerged during the Plenary.

### **13. Date and Venue of UNGIWG-7**

Santiago, Chile, early November 2006, either immediately before or after the Ninth International Conference of GSDI.

## **ANNEXES**

- I. List of Acronyms
- II. Adopted Agenda of the Sixth Plenary Meeting
- III. List of Participants
- IV. Task Group Progress Report brief
- V. Collaboration with Partners and Other Groups
- VI. List of Exhibitors (Poster Session)
- VII. Case Studies

## I. List of Acronyms

ACC	Administrative Committee on Coordination
CCPOQ	Consultative Committee on Programme and Operational Questions
CEB	Chief Executive Board
CGDB	Core Global Database
CSR	Corporate Social Responsibility
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
DMA	Direct Marketing Arrangement
DPKO	UN Department of Peacekeeping Operations
ESRI	Environmental Systems Research Institute, Inc.
FAO	Food and Agriculture Organization of the UN
FOSS	Free and Open Source Software
GAUL	Global Administrative Unit Layer
GCDB	Global Core Database
GEO	Group on Earth Observations
GEOSS	Global Earth Observation System of Systems
GIST	Geographic Information Support Team
GMES	Global Monitoring for Environment and Security
GMOSS	Global Monitoring for Security and Stability
GNSS	Global Navigation Satellite Systems
GPS	Global Positioning System
GSDI	Global Spatial Data Infrastructure
HLCP	High Level Committee on Programming
ICRC	International Committee for Red Cross
IITA	International Institute for Tropical Agriculture
ILRI	International Livestock Research Institute
IRC	International Water and Sanitation Centre (Ethiopia)
IRD	Institut de recherche pour le développement
ISO	International Organization for Standardization
ITOS	Information Technology Outreach Services
MDG	Millennium Development Goal
MONUC	United Nations Mission in the Democratic Republic of Congo
NATO	North Atlantic Treaty Organization
NGA	National Geospatial-Intelligence Agency
NGO	Non-governmental Organization
NMA	National Mapping Agencies
NSDI	National Spatial Data Infrastructure
OCHA	Office for Coordination of Humanitarian Affairs
OGC	Open Geospatial Consortium
ONUB	United Nations Operation in Burundi
RCMRD	Regional Centre for Mapping of Resources for Development
RS	Remote Sensing
SALB	Second Administrative Level Boundaries
SIE	Spatial Information Environment
SIMAG	Spatial Information Management Advisory Group
SLD	Styled Layer Descriptions
TG	Task Group
UNCS	United Nations Cartographic Section

UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UFG	Universidade Federal de Goiás
UNGIWG	United Nations Geographic Information Working Group
UNHCR	United Nations High Commission for Refugees
UNICT	United Nations Information and Communication Technologies
UNITAR	United Nations Institute for Training and Research
UNJLC	United Nations Joint Logistics Centre
UNMEE	United Nations Mission in Ethiopia and Eritrea
UNMIL	United Nations Mission in Liberia
UNMIS	United Nations Mission in the Sudan
UNOOSA	United Nations Office for Outer Space Affairs
UNOSAT	United Nations Satellite Imagery for all
UNSDI	United Nations Spatial Data Infrastructure
VAM	Vulnerability Analysis and Preparedness
WFP	United Nations World Food Programme
WHO	World Health Organization
WMS	Web Map Server

## II. Adopted Agenda of the 6<sup>th</sup> Plenary Meeting of UNGIWG

	<p><b>Tuesday, 25 October 2005 [Closed session]</b></p> <p><b>Overall Objectives:</b></p> <ol style="list-style-type: none"> <li>1. Task Groups consolidate progress to date, plan and prepare 2006 work plan, and identify key issues to be raised in plenary.</li> <li>2. Streamlining form and function of the Task Groups, revise membership as well as enlist new members</li> </ol> <p><b>NOTE:</b></p> <p><i>Closed sessions are open to the participants only from the UN agencies irrespective of their membership in the Task Groups. Members from the UN agencies are encouraged to participate in all three days (both open and closed sessions).</i></p>	<p><b>Moderator / Rapporteur</b></p>
<p><b>8:30</b></p>	<p><b>UNGIWG Registration</b></p> <p><i>Register members, issue nametags, and handout plenary briefing package (agenda, brochures, publications/reports, TG progress reports, venue information/layout, blank notepad, pen).</i></p>	
<p><b>9:15</b></p>	<p><b>Welcome to Task Group Members</b></p> <p><i>Co-Chairs to welcome the members outlining the agenda, objectives, format, and focus for the day's proceedings, streamlining form and function of the Task Group as well as introducing vision for the future -UNSDI, core data, and standards.</i></p>	<p>Co-Chairs</p>
<p><b>10:00</b></p>	<p><b>Task Group breakouts</b></p> <p><i>Task Groups breakout sequentially into two main groupings under the heading of "Data &amp; Information" and "Standards". TG1, TG2, TG3 will fall under "Data &amp; Information" whilst TG4, TG5 and TG6 fall under "Standards". The aim is to discuss, prepare and plan for plenary. Issues to cover include:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Progress to date</i></li> <li>▪ <i>Key issue to raise in plenary</i></li> <li>▪ <i>2006 work plans</i></li> <li>▪ <i>Membership and participation</i></li> <li>▪ <i>Election of TG manager and assignment of rapporteur</i></li> <li>▪ <i>Preparation of reports to plenary</i></li> </ul> <p><i>The Progress Reports already submitted and circulated amongst TG members prior to the meeting will act as a good starting point.</i></p>	<p>TG Managers</p>
<p><b>11:00</b></p>	<p>Coffee break</p>	
<p><b>11:30</b></p>	<p><b>Task Group breakouts</b></p> <p><i>Breakout session continues focusing on 2006 work plans and preparation of reports to plenary.</i></p>	<p>TG Managers</p>
<p><b>13:00</b></p>	<p>Lunch break</p>	
<p><b>14:00</b></p>	<p><b>Task Group breakouts</b></p> <p><i>Task Groups finalize 2006 work plan and reports for plenary, re-establish the membership and their participation by nominating focal points, defining and allocating resources, as well as outlining the scope of work.</i></p>	<p>TG Managers</p>
<p><b>15:30</b></p>	<p>Coffee Break</p>	
<p><b>16:00</b></p>	<p><b>Discussions and Conclusions</b></p> <p><i>Group discussion to finalize preparation for plenary and resolve any other outstanding issues raised during the Task Group breakouts.</i></p>	<p>Co-Chairs</p>
<p><b>17:00</b></p>	<p><b>Closure</b></p>	

	<b>Wednesday, 26 October 2005</b> [Open session] <i>Plenary begins with Keynote and Co-Chairs welcoming all participants. Task Groups present 2006 work plans, two Case Studies are presented, followed by discussions forum and reception.</i>	
<b>8:30</b>	<b>UNGIWG Registration</b> <i>Register participants (members and partners), issue nametags, and handout plenary briefing package (agenda, brochures, publications/reports, TG progress reports, venue information/layout, blank notepad, pen).</i>	
<b>9:00</b>	<b>Opening statement &amp; keynote address</b> <i>The Keynote opens the UNGIWG sixth meeting welcoming everyone and delivering the keynote.</i>	Dr. Wilbur Ottichilo
<b>9:30</b>	<b>Adoption of the agenda</b> <i>New co-Chairs introduce themselves; adopt the agenda, clarify logistical issues, nominations of the Rapporteur, administrative announcements as well as outline progress to date, key challenges, and the vision for the future –UNSDI, core data, and standards.</i>	Co-Chairs
<b>10:00</b>	<b>Report from the Secretariat and Task Groups</b> <i>The Secretariat reports on the recent and current ongoing activities including the launch of new Web site, new brochure, upgrade of the mailing list server, videoconferences. Task Groups and their members introduce themselves.</i>	Michal Smolka (WFP)
<b>10:30</b>	Coffee break	
<b>11:00</b>	<b>Task Group 1: International &amp; Administrative Boundaries</b> <i>TG1 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Steve Ebener (WHO)
<b>11:30</b>	<b>Task Group 2: Core Geodatabase</b> <i>TG2 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Ergin Ataman (FAO)
<b>12:00</b>	<b>Task Group 3: Remote Sensing</b> <i>TG3 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Alain Retiere (UNOSAT)
<b>12:30</b>	<b>Poster Session and Case Studies</b> <i>Open session allowing participants to visit the exhibition space, members to present their case studies (Sudan -collaboration between the various UN agencies in data exchange; Liberia - Interagency remote sensing application in post conflict Liberia in support of peace and development), and partners to demonstrate their products and services.</i>	
<b>13:15</b>	Lunch break	
<b>14:15</b>	<b>Task Group 4: Interoperable Services</b> <i>TG4 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Jeroen Ticheler (FAO)
<b>14:45</b>	<b>Task Group 5: GIS Map Production Guidelines</b> <i>TG5 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Suha Ulgen (OCHA)
<b>15:15</b>	<b>Task Group 6: Global Navigation Satellite Systems</b> <i>TG6 reports on progress to date focusing on 2006 work plan highlighting key issues and challenges, introducing the TG members and their participation.</i>	Michal Smolka (WFP)
<b>15:45</b>	Coffee break	
<b>16:15</b>	<b>Collaboration with Partners</b> <i>Discussion forum allowing Partners to contribute and share their vision on how they can participate and provide their support to the various Task Groups and UNGIWG initiatives.</i>	Co-Chairs

<b>17:00</b>	<b>Discussions and conclusions</b> <i>Comments from participants, brief and conclusion of the day's events, and general discussions on work plans and key issues raised.</i>	Co-Chairs
<b>17:30</b>	<b>Closure</b>	
<b>18:00</b>	<b>Reception</b> <i>Reception at the Hilton Hotel serving drinks and snacks</i>	
	<b>Thursday, 27 October 2005</b> [Morning open session] <i>Objectives to endorse 2006 work plans, address and resolve common related issues and challenges faced by the various members</i>	
<b>9:00</b>	<b>UN Spatial Data Infrastructure (SDI)</b> [Open session] <i>Discussion forum to gain support and seek endorsement for an UNSDI concept, including financial support, and partnership collaboration.</i>	Co-Chairs
<b>10:30</b>	Coffee break	
<b>11:00</b>	<b>UNGIWG activities for 2006</b> [Open session] <i>Endorsement of Task Group's 2006 work plans</i>	Co-Chairs
<b>11:40</b>	<b>Collaboration with other groups</b> [Open session] <i>Discussions and endorsement of how UNGIWG should collaborate and work with other groups such as GSDI, GIST.</i>	Co-Chairs
<b>12:20</b>	<b>Presentation by David Gadsden (ESRI):</b> [Open session] <i>Presentation on the trends in the GIS industry and the broader IT field.</i>	
<b>13:00</b>	Lunch break	
<b>14:00</b>	<b>Participation in standards setting</b> [Closed session] <i>Discussions to clarify, reach common approach and UNGIWG's position to resolve Open Geospatial Consortium (OGC) and International Organization for Standardization (ISO) participation and membership.</i>	Jeroen Ticheler (FAO)
<b>14:45</b>	<b>Data, software, and licensing agreements</b> [Closed session] <i>Discussions to clarify, reach common approach and UNGIWG's position to resolve data, software, and licensing agreements, including the issue of VMAP1</i>	Ergin Ataman (FAO) Alain Retiere (UNOSAT)
<b>15:30</b>	Coffee break	
<b>16:00</b>	<b>Communication and outreach</b> [Closed session] <i>Discussion on improving UNGIWG communication and outreach, exploring the mechanism and means to best support and strengthen its various activities, and overall objectives, as well as with the UN Chief Executive Board (CEB)</i>	Co-Chairs
<b>16:30</b>	<b>Date and venue for the UNGIWG Seventh meeting</b> [Closed session] <i>Confirm date and venue for next UNGIWG meeting. Santiago, Chile, 3-5 November 2006 is proposed to coincide with the 9<sup>th</sup> International Conference of GSDI.</i>	Co-Chairs
<b>16:40</b>	<b>Other Matters</b> [Closed session] <i>Wrap-up and any other business re way forward</i>	Co-Chairs
<b>17:00</b>	Closure	

### III. List of participants

	<b>FULL NAME</b>	<b>JOB TITLE</b>	<b>ORGANIZATION</b>	<b>DEPARTMENT</b>	<b>E-MAIL</b>
1	Mr Ashraf Abushady	Methodology Officer / GIS & Communication Specialist	CTBTO (Vienna)	On-site Inspections	Ashraf.abushady@ctbto.org
2	Mr Ephrem Gebremariam	GIS Officer	FAO (Ethiopia)	Emergency	ephrem.gebremariam@fao.org
3	Mr Ergin Ataman	GIS Manager	FAO (Rome)	SDRN	Ergin.ataman@fao.org
4	Mr Jeroen Ticheler	Technical Officer (Remote Sensing)	FAO (Rome)	SD	Jeroen.Ticheler@fao.org
5	Mr Joshua Maviti	GIS Officer	OCHA (Nairobi)	IMU	maviti@un.org
6	Mr Sadig Elamin	GIS Officer	OCHA (Sudan)		elamins@un.org
7	Mr Suha Ulgen	Technical Coordinator	OCHA (NY)	FIS	ulgen@un.org
8	Ms Margaret Hall	GIS Officer	OCHA (Liberia)	HIC-Liberia	margaret.hall@undp.org
9	Ms Tersit Belete	Web and Graphics Specialist	OCHA (Ethiopia)	IMU	belete@un.org
10	Mr Amor Laaribi	Cartographer/GIS Officer	UN-DESA	Statistics Division	Laaribi@un.org
11	Mr Timur Obukhov	Information Analyst/I MSMA Advisor	UNDP / Mine Action Advisory Team (Ethiopia)		obukhov@un.org
12	Mr Kyoung-Soo Eom	Officer-in-Charge Cartographic Section	DPKO (UNHQ)	Cartographic Section	eom@un.org
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14	Ms Hélène Bray	Geographical Information Officer	DPKO (UNHQ)	Cartographic Section	bray@un.org
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16	Mr Chad Hendrix	GIS Specialist	DPKO / UNMEE (Eritrea-Ethiopia)	GIS Unit	hendrix@un.org
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19	Dr. Paul Belanger	GIS Officer	UNECA (Ethiopia)	DISD/Geoinfo	pbelanger@uneca.org
20	Mr Abdishakour A. Gulaid	GIS Officer	UNECA (Ethiopia)	DISD	agulaid@uneca.org
21	Mr Chukwudozie Ezigbalike	Senior GIS Officer	UNECA (Ethiopia)	DISD	ezigbalike.uneca@un.org
22	Mr Daniel Berhanu	Geoinformation Assistant	UNECA (Ethiopia)	DISD	dberhanu@uneca.org
23	Mr Girm Asrat	Geoinformation Assistant	UNECA (Ethiopia)		gasrat@uneca.org
24	Mr Yared Abebe	Cartographer / GIS Specialist	UNECA (Ethiopia)	SPCO/SSS	YaredAbebe@uneca.org

	FULL NAME	JOB TITLE	ORGANIZATION	DEPARTMENT	E-MAIL
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27	Mr Teshome Abebe	Cartography and GIS Assistant	UNECA (Ethiopia)		tabebe@uneca.org
28	Mr Michael Wilson	Interoperability Guy	UNEP (Nairobi)	DEWA	mick.wilson@unep.org
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30	Ms Jenny Bredin	Associate GIS Officer	UNHCR (Geneva)		bredin@unhcr.ch
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32	Mr David Stevens	Programme Officer	UNOOSA (Vienna)		david.stevens@unvienna.org
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50	Ms Sirgut Belete	Map Editing & Revision Section Head	Ethiopian Mapping Authority	Cartography	sirgut_b@yahoo.com
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63	Mr Deres Tesfaye	General Manager	<b>OmniTech PLC</b> (Ethiopia)		tesfayed@ethionet.et
64	Dr. Wilber K. Ottichilo	Director General	<b>Regional Centre for Mapping of Resources for Development (RCMRD)</b> (Nairobi)		wottichilo@rcmrd.org
65	Mr Lars Holledig	Project Manager	<b>RESPOND/Infoterra Ltd.</b> (UK)		lars.holledig@infoterra-global.com
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## IV. Task Group Progress Report brief

**NOTE:** Please refer to the Web site (<http://www.ungiwg.org/documents.htm>) for complete versions of Task Group Progress Reports.

### **Task Group 1 - International and Administrative Boundaries**

This TG is undertaking two projects:

1. International Boundaries
2. Administrative Boundaries (SALB).

#### **International Boundaries**

##### Objective:

To provide to the UN community a standardized GIS international boundaries dataset with related metadata and boundary information that reflects the cartographic practice of the UN, and is without prejudice to any Member States.

##### Task Group Members:

Members directly implicated in the technical work of the SALB Project:

- Hélène Bray - Manager (DPKO, Cartographic Section)
- Steve Ebener (WHO)
- Brenda Brookes (UN Map Library)
- Yaniss Guigoz (WHO)
- Staff at the DPKO Cartographic Section.

##### Activities (2005):

- New version of 1:1 million dataset in polyline and polygon format
- Draft version of 1:5 million data in polyline and polygon format
- New version of 1:15 million data set in polyline and polygon format
- New version of the world map template, a PDF file showing the attribution of territories
- New version of the guideline for map clearance, listing all contested boundaries and territories.

#### **Administrative Boundaries (SALB)**

##### Objective:

Create a redistributable Second Administrative Level Boundaries (SALB) global data set to be used with the GIS technology completed by a database on historic changes.

##### Task Group Members:

Members directly implicated in the technical work of the SALB project:

- Steve Ebener - Manager (WHO)
- Teshome Abebe (UNECA)
- Hélène Bray (UN Cartographic Section)
- Brenda Brookes (UN Map Library)
- Jessica Cardenas (UN Map Library)
- Chukwudozie Ezigbalike (UNECA)
- Yaniss Guigoz (WHO)

- Alejandra Silva (UN ECLAC).

In addition to this list of active members, more than 300 individuals within or outside the UN as well as all the National Mapping Agencies (NMAs) of all the UN Member Countries are kept informed of the progresses made by the SALB project through the SALB Newsletter (see more information in the next section).

#### Activities (2005):

WHO being engaged in a major restructuration process (which started more than one year ago and which is not yet completed) a great deal of energy of the SALB coordination group had to be engaged in this process in order to insure the continuity of all its activities, including the SALB project. This of course had an influence directly on the achievement of some of the tasks decided during the last UNGIWG Plenary Meeting.

Due to the reason mentioned before and also for the necessity to find external resources in order to continue the SALB project within WHO, most of the efforts of the project coordination group has been put this past year on resource mobilization and strengthening of collaboration with global or regional entities.

The progress made include:

- Create a centre or network of expertise for the management of subnational data.
- January 2000 table for all the countries.

### **Task Group 2 - Core Geodatabases**

#### Objective:

To prepare a global framework core data layers for the UN systems, along the lines of the International Boundaries and the SALB databases.

#### Task Group Members:

- Kais Zouabi (DPKO)
- Amor Laaribi (UN-DESA)
- Chukwudozie Ezigbalike (UNECA)
- Paola De Salvo (WFP)
- Jean-Pierre Meert(WHO)
- Kathy O'Neill (WHO).

Election of TG Manager and Rapporteur

- Ergin Ataman (FAO), Kathy O'Neill (WHO), Amor Laaribi (UNSD).

#### Activities (2005):

The main activity of the TG2, the preparation of the Inventory Report, was completed and published as an FAO document (its preparation and printing was carried out by the FAO Poverty Mapping Project, thanks to the funds provided by the Government of Norway).

### **Task Group 3 - Remote Sensing**

#### Objective:

- Provide an overview of which UN organization has what type of very high-resolution imagery over which areas.
- Provide with satellite imagery purchasing agreements that ensures easy ordering, rapid access and reduced cost to data.
- Expand the range and objectives for the Charter to better comply with UN requirements.

#### Task Group Membership:

The Task Group has 38 members and is headed by Mr Alain Retiere (UNITAR-UNOSAT) with the assistance of Mr Einar Bjorgo (UNITAR-UNOSAT).

There have been a total of 61 e-mails sent by/to the Task Group members through the [rs@ungiwg.org](mailto:rs@ungiwg.org) mailing list since December 2003.

#### Activities (2005)

The following tasks were included at the last UNGIWG Meeting in Geneva:

- Letter to the National Geospatial-Intelligence Agency (NGA) for release of SRTM 30m data over areas of priority (to be determined).
- Creation of a central imagery download service for UN community, building on existing metadata service hosted by UNOSAT (including Landsat and other medium resolution data).
- Improving the sharing of information on dataset updates.
- Provision of compressed versions of Landsat mosaic.
- Expansion of the use of the Charter “Space and Major Disasters” for the UN community.
- Continuation of the populating the high-resolution images online catalogue.
- Evaluation of global Landsat mosaic for accuracy.
- Investigation reason of UN duplication in previous VHR imagery purchases.

### **Task Group 4 – Interoperable Services**

#### Objective:

The Interoperability Services Task Group works on improving access to, and interactive use of, spatial data to enhance data sharing and support decision-making through international standards and specifications.

#### Task Group Membership:

FAO and UNEP were nominated to manage Task Group 4 at the 5<sup>th</sup> Plenary Meeting in Geneva. Currently the TG membership stands as:

- Jeroen Ticheler (FAO) -TG Manager
- Mick Wilson (UNEP) –TG Manager.

No other members were listed as part of the Task Group at the last meeting. Membership will need to be re-established during the Sixth Meeting to include

interest groups and key individuals from UN agencies involved in interoperability issues.

TG4 Change of TG Manager from Jeroen Ticheler (FAO) to Mick Wilson (UNEP).

#### Activities (2005):

TG4 has not been very active, however several developments in the field of interoperable services have taken place through its members. In addition, tasks assigned to TG4 have been dealt with through multi-lateral collaboration and will be described here.

- Community Web site to support GeoNetwork opensource development.
- ISO19139 implementation standard for ISO 19115 metadata has been released as a final draft in September 2005 and is awaiting final comments and approval.
- FAO, OCHA, UNEP, WFP and WHO in collaboration with partner organizations focused on the exchange of metadata and data between organizations.
- GeoNetwork Workshop organized by WFP and FAO in Rome and OCHA GeoNetwork Workshop in New York.
- Copyright and intellectual property. OCHA has begun discussions with GSDI on this topic.

#### **Task Group 5 - Map Production Guidelines**

##### Objectives:

The objective of the Map Production Guidelines Task Group is to compile a set of standards applicable to most mapping situations.

##### Task Group Membership:

Joint TG managers Suha Ulgen (OCHA) and Régis Bourgault (DPKO)

Members:

- Eric Schijndel (UNMEE)
- Michael Mwangi (UNEP)
- Steeve Ebener (WHO)
- H  l  ne Bray (DPKO)
- Johannes Akiwumi (UNEP)
- Ergin Ataman (FAO)
- Orlando Nino (UNECA)
- Ashraf Abushady (CTBTO)
- Fabio Grita (FAO)

New Membership for 2006

- FAO, DPKO, UNEP, WHO, OCHA, UNHCR
- Joint managers Suha Ulgen (OCHA) and R  gis Bourgault (DPKO)
- Kathy O'Neill – An inventory of the data that is collected by each agency should be part of the core data set.

### Activities (2005):

Eric van Schijndel, who had requested that an ESRI ArcGIS Style symbology set be sent to him, produced a set of templates for ArcGIS and ERDAS software. He shared these templates with Task Group members in March 2005 to solicit feedback. The templates are produced with the intention to ease the production of maps, which observe map style, and symbology guidelines suggested in the aforementioned DPKO document.

The tasks identified by the Map Production Guidelines Task Group in October 2004 still remain to be undertaken and will constitute the bulk of the 2005-2006 Task Group programme.

## **TG6 - Global Navigation Satellite Systems**

### Objectives:

To harmonize and facilitate field data collection activities undertaken by the different UN agencies where GPS technology is being used, through improving and addressing the following key areas:

- Consistency, reliability, common standards and procedures, integration, documentation and metadata, training and supportive material

### Task Group Membership:

WFP was nominated to manage the Global Navigation Satellite Systems (GNSS) at the Fifth Plenary Meeting in Geneva. Currently the TG membership stands as:

- Menghestab Haile (WFP) -TG Manager
- Michal Smolka (WFP) –WFP Focal Point
- Steeve Ebener (WHO)
- Lorant Czarán (DPKO)
- Golam Kamal (UNDP).

Membership will need to be reviewed and re-established during the Addis Ababa meeting to include interest groups and key individuals from UN agencies involved in GPS issues in order to tackle the GNSS objectives collectively.

### Activities (2005)

Because this Group has not been particularly active since its inception, WFP has undertaken a number of preliminary activities to begin addressing and understanding the various issues and challenges confronted when making use of GPS technology in the field collection process.

These activities include:

- Begin looking at various GPS technologies (high- and low-end), with a focus on some new available high-end technology with possible collaboration with industry leader.
- Familiarize ourselves with this new technology by undertaking a number a basic user tests in Rome as well as receiving field feedback

from the Ethiopian office on the feasibility of making use of such devices as an high-end solutions.

- Undertake practical exercise of collating the WFP field office GPS locations from all the various bureaus and country offices into a single location file to help highlight the very issues and challenges confronted when making use of GPS.
- Raise awareness by outlining the various issues and challenges, and a possible way forward in tackling the issue of GPS as a collection. device through a presentation to key divisions and units within WFP.
- Review and re-examine the Task Groups overall objectives, in an attempt to better articulate and clarify its main purpose and objectives as outlined in this Progress Report. These are to be proposed at Addis Ababa as GNSS' overall objectives.

## **V. Collaboration with Partners and other Groups**

### **Partners:**

Partners present at UNGIWG Meeting were invited to contribute and share their vision on how they can participate and provide support to the TGs and UNGIWG initiative.

#### **IITA – Ibadan, Nigeria (Christopher Legg)**

The International Institute for Tropical Agriculture represents a consortium for spatial information and metadata, projects in 15 CGIAR Centres. They expect to be users of the products of UNGIWG Task Groups. They generate their own administrative boundaries, but these are not as ambitious as those produced by UNGIWG. They have developed their own global databases, generally relating to the tropics, for crop distribution, soils, and roads and they use remote sensing. Regarding map production guidelines, they need to look at this further with the CG.

#### **European Space Agency and RESPOND (Lars Holledig)**

They have moved from consolidation and production of initial documents/documentation to a more service-oriented phase.

#### **Surveylab – New Zealand (Tony Thistall)**

Showcasing a GPS tool.

Encouraged by the high level approach to interoperability and data and data capture.

#### **ESRI Inc. (David Gadsden)**

### **Other Groups:**

#### **SIMAG- Spatial Information Management Group (Ergin Ataman)**

They have held two meetings to date Rome (2003) and New York. They discuss similar issues to UNGIWG, and have many practitioners and users. They could be potential partners.

Action:

Secretariat to follow up with Ergin Ataman.

#### **GSDI – Jeroen Ticheler**

GSDI (The Global Spatial Data Infrastructure) is an association providing coordination and harmonization, enabling linkages between different initiatives. GSDI produces general guidelines and policies, and therefore is not an actual SDI. It harmonizes between different SDI initiatives at regional level. An annual conference is undertaken and case studies and workshops. Clear scope for collaboration exists.

Action:

Kyoung-Soo Eom (DPKO) to check the Secretariat's record for possible past collaboration.

#### **GIST – Suha Ulgen**

GIST (Geographic Information Support Team) is a coordination body that was

initiated by a GIS practitioner responding to humanitarian crises globally. It predates UNGIWG by a few years and is committed to observe UNGIWG standards and guidelines. Members include UN agencies, universities, donors, NGOs and possibly commercial entities.

OCHA/FIS is the Secretariat of the GIST. Suha Ulgen is the lead person at OCHA liaising with the GIST (as well as UNGIWG).

Mobilization after a disaster where we share GI resources, (data, processing services, networking).

Information Technology Outreach Services (ITOS) at the University of Georgia holds the data repository for the GIST. There is a password protected FTP server and a public access geospatial data warehouse.

Working groups

- Data preparedness Working Group
- Information resources Working Group
- Procedure Working Group.

GIST resources UNGIWG can tap into:

- University (research and development)
- Donor (get them mandate the recipients to share their data)
- NGOs test the standards and processes in the field
- Commercial interests (corporate responsibility angle).

### **GEOSS – David Stevens**

David Stevens made a short presentation on the Group on Earth Observations (GEO) and its implementation plan - Global Earth Observation System of Systems (GEOSS), particularly the status of, and importance of GEOSS to UNGIWG. FAO is active in GEOSS, in particular Mr Jeff Tschirley.

### **NATO – Kyoung-Soo Eom**

DPKO was invited to the NATO geospatial community that is divided into two major groups:

- NATO Geospatial group (for NATO member states only) in the field
- NATO partners for peace (NATO member states and further extended to the peace partners; countries and international/regional organizations).

Potential relationship with UNGIWG could be established for mutual benefits through operational aspects of VMAP 1 and 2, which could be extended to the whole globe. NATO has indicated interest to establish a relationship with UNGIWG for further extension of broad collaboration with UN systems. DPKO has a current relationship with NATO and as such can continue to represent on behalf of UNGIWG. Establishment of a formal relationship between UNGIWG and NATO will be discussed continuously in co-Chairs, Secretariat and DPKO.

## VI. List of Exhibitors (Poster Session)

	<b>Organization</b>	<b>Title of Exhibit</b>	<b>Description of Exhibit</b>
1	<b>UNECA</b>		Various Projects
2	<b>UNITAR/UNOSAT</b>	“UNOSAT –satellite imagery for all”	“Liberia Project, Chad Project, Matagalpa Project, Tsunami Project”
3	<b>UNJLC</b>	Inter-agency Road rehabilitation Monitoring	Information flow and GIS procedures for interagency road rehabilitation management and monitoring
4	<b>FAO</b>	Poverty Mapping	Maps and documents on Poverty Mapping
5	<b>FAO</b>	GeoNetwork Opensource	Open Source Catalog software for Spatial Data Infrastructures
6	<b>WFP</b>	Emergency Preparedness	Various examples from different emergencies
7	<b>WFP</b>	SIE-Spatial Information Environment	An overview of the SIE nodes, in terms of people involved, area covered and data types.
8	<b>ESRI</b>	ESRI GIS Technology Overview	GIS Software Architecture, product information and software demonstrations
9	<b>Surveylab</b>	Rapid Data Capture	Handheld Apparatus for Mobile Mapping and Reporting (HAMMER)
10	<b>WHO</b>	WHO’s Public Health Mapping Tools and Resources	Posters on SALB, WHO’s geospatial database, WHO tools; services availability mapping surveys
11	<b>DPKO Missions</b>	Geographic products for Peacekeeping Operations	Various products from UN Missions in Liberia (UNMIL), Burundi (ONUB), D.R. Congo (MONUC) and Sudan (UNMIS)

## **VII. Case Studies**

### **CASE STUDY ONE**

#### **Interagency cooperation in GIS and Mapping – SIM: a case study.**

By Sadig Elamin  
OCHA

Establishment, development and maintenance of effective and efficient GIS and mapping programmes in support of humanitarian, development and peacekeeping operations is an extremely complex and expensive operation. Once implemented, the savings to short-, medium- and long-term operations can more than repay the initial investment, although not always directly evident in budget outcomes. The speed with which such a system is readily available to all potential users for planning and operations is also a critical factor.

One means of decreasing some of the initial outlay, and increasing the timeframe within which an efficient system is operational, is by cooperation between the many organizations operating over a common area.

This case study examines the development and implementation of the Sudan Interagency Mapping Working Group, or as it has become more affectionately known, SIM.

#### ***POINTS to be expanded in main paper***

- Benefits of GIS and Mapping to humanitarian, development and peacekeeping operations
- History of SIM
- Implementation of SIM
- SIM Projects
- Management
- Benefits of SIM
- Points that could have been done better or differently
- Recommendations for SIM and other operations in the future.

### **CASE STUDY TWO**

#### **New frontiers for Satellite Imagery in Humanitarian Assistance**

Case studies from the UNOSAT experience

By Alain Retiere  
UNOSAT

The presentation will focus on some recent innovative initiatives where the use of satellite imagery is being pushed beyond the usual boundaries, i.e. for monitoring the return back home of villagers in Liberia, identifying and evaluating water resources for better managing the Darfour refugee camps location and maximum size setting in Chad, producing multi-source remotely acquired crisis data sets for supporting sustainable recovery in the Tsunami affected regions of Sri Lanka and Indonesia; applying innovative on-the-job training methodology to develop local capacities in remote sensing and GIS for disaster risk reduction in Nicaragua.

The presentation will set the context in which the four experiences have emergency as well as the rationale that brought users to remote sensing as solutions, the institutional and financial settings and the partnerships involved as well as the distribution of role and responsibilities, the technical aspects (data sources, processing techniques, data integration strategy, training aspects, etc.), and difficulties faced (technical, institutional, financial, long-term sustainability) during the implementation, the limits foreseen and the potential for further wider application.

