United **N**ations **G**eographic **I**nformation **W**orking **G**roup   **10 Years**

UNITED NATIONS GEOGRAPHIC INFORMATION WORKING GROUP

Report of the Tenth Plenary
Bonn, Germany 19-21 October 2009

NOTES

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Group Photograph of Participants:

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Resolutions by the 10th Plenary Meeting of the United Nations Geographic Information Working Group

The participants of the 10th Plenary Meeting of the United Nations Geographic Information Working Group held in Bonn, Germany from 19- 21 October 2009:

Extend their appreciation to the co-chairs (ECA and UNOOSA) for the work carried out since they took over the co-chairmanship in February 2009 and also for the organisation of the 10th UNGIWG Plenary Meeting.

Acknowledge the successful efforts of the UNGIWG Secretariat in producing a comprehensive member's mailing list and *stress* the need to ensure that all United Nations Organizations provide regular updates and inclusions to the mailing list and also the need that all member Organizations nominate their respective Focal Point.

Agree that UNGIWG activities shall be carried out through Special Interest Groups (SIGs) and time-bound *ad hoc* Task Groups. Special Interest Groups (SIG) are long-term groups of members addressing significant areas of work that are central to the objectives of UNGIWG. Time-bound *ad hoc* Task Groups, set up by the Plenary, or upon recommendation from the SIGs, and consisting of members and individuals invited from partner organizations, will focus on specific actions that need to be carried out collectively.

Agree to also continue with the implementation of the United Nations Spatial Data Infrastructure (UNSDI) and that the way forward is to build upon the already agreed framework with each agency ensuring, to the extent possible, that the work carried out in their respective organisation builds into the proposed UNSDI, while at the same time working together on the implementation of a practical example of the planned UNSDI.

On the transition to Special Interest Groups:

Agree that the two Task Groups Core Geo-Database and Remote Sensing will transition to Special Interest Groups and *request* that the UNGIWG Secretariat send out a message inviting interested UNGIWG members to join these newly established SIGs.

Agree that no Special Interest Group needs to be created for the Interoperability Services Task Group and that the members of the Global Navigation Satellite Systems (GNSS) Task Group and the Map Production Guidelines Task Group will be consulted about the possibility of continuing to fulfil their present important tasks as a Special Interest Group.

Emphasize the need to create Terms of Reference for each SIG, detailing the focus and *modus operandi* of the group.

Suggest that the effectiveness of the new Special Interest Groups structure be revised during the next 2010 Plenary.

On the implementation of the United Nations Spatial Data Infrastructure (UNSDI):

Agree that the Co-chairs should revisit the proposed UNSDI Framework document with the aim of updating as needed and identifying action items to be carried out with the current available resources (such as carrying out a technology scan, updating user requirements, and updating the UNSDI Framework).

Stress the need to propose a strategy plan to ensure the implementation of the UNSDI Framework Document, in coordination with the UNGIWG Principals.

Agree to create a time bound *ad hoc* Task Group to revise the UNSDI framework, and *stress* the need to coordinate with leading United Nations agencies for that purpose. This Task Group will demonstrate the institutional and technical readiness of agencies and programmes to publish discoverable pilot open web services as the basis for an ongoing, multi-purpose infrastructure usable by the entire UN family. Membership will comprise those who, in this meeting, indicated that their organizations are able to meet operational requirements.

On other matters:

Recognize the importance of supporting the Global Impact and Vulnerability Alert System (GIVAS) team, and *agree* to create a time bound *ad hoc* Task Group for that purpose.

Emphasize the need to follow up on the special agreement reached with the Open Geospatial Consortium (OGC) and ensure the establishment of a UNGIWG membership at the Principal level. *Agree* that the co-chairs should follow up on the prospect of a UN - OGC Interoperability Experiment and on a future Open Web Services testbed participation. *Agree* also that the UN should consider hosting OGC meetings as part of the UN - OGC membership agreement.

Request that the co-chairs draft a letter to the UN Secretariat Chief Information Technology Officer (CITO) with the purpose of thanking him for his supportive statement and ensuring his support for the UNSDI framework,

Suggests that action be taken on setting up an ISeeIT Kiosk presence at the United Nations Climate Change Conference in Copenhagen, with the possibility of jointly collaborating with UNHCR and FAO or other member organizations present.

Request that the co-chairs draft a letter of gratitude to the former Co-chairs, thanking them for their contribution to the significant progress, and providing them with an update on the latest UNGIWG actions and decisions.

Recommendations for the upcoming plenary:

Agree that the co-chairs should look into the hosting options of the next UNGIWG Plenary Meeting including the possibility of organising the next meeting in Beirut.

1. Executive Summary

The United Nations Geographic Information Working Group (UNGIWG) held its 10th annual plenary meeting from 19 to 21 October 2009 at the United Nations Campus in Bonn, Germany. The meeting was organized by the United Nations Office for Outer Space Affairs (UNOOSA) and the United Nations Economic Commission for Africa (UNECA). Sixty-eight (68) geo-information experts participated in the meeting, representing United Nations Departments, Offices and Agencies, governmental authorities, academia, as well as public and private sector observer organizations, from around he World. The first two days of the Plenary witnessed a number of open sessions during which updates were presented by the UNGIWG Secretariat as well as Task Group managers and representatives on their respective activities and plans for 2010. In addition, the Co-chairs delivered a progress report on the development of the United Nations Spatial Data Infrastructure (UNSDI), highlighted the Chief Information Technology Officer's (CITO) involvement in the UNSDI, and explored ways of linking up with and supporting the Global Impact and Vulnerability Alert System (GIVAS) initiative. Other important discussions covered the prospects of transitioning the Task Groups into Special Interest Groups (SIGs), joining the Open Geospatial Consortium (OGC), and updating the UNSDI Framework Document. Various innovative projects and SDI efforts were also brought to the fore through presentations, optional demos, and poster sessions.

During the closed session that took place on the third and last day of the Plenary, UNGIWG members deliberated on the SIG transition issue, the UNSDI framework document, OGC membership, and some other pending issues.

The plenary agreed on the following UNGIWG-10 outcomes:

- Carrying out of UNGIWG activities through Special Interest Groups (SIGs) and time-bound ad hoc Task Groups.
- Transitioning the Core Geo-database, Map Production Guidelines and Remote Sensing Task Groups into Special Interest Groups.
- Revisiting and updating the UNSDI Framework document as needed and developing a strategy plan to ensure its implementation in coordination with the UNGIWG Principals.
- Creation of a time-bound ad hoc task group to revise the UNSDI framework document, while also demonstrating the institutional and technical readiness of agencies and programmes to publish discoverable pilot open web services as the basis for an ongoing, multi-purpose infrastructure usable by the entire United Nations family.
- Creation of a time-bound ad hoc Task Group to support the Global Impact and Vulnerability Alert System Team (GIVAS).
- Reaching a special UNGIWG Principal Committee-level membership agreement with OGC.

2. Welcome Statements and UNGIWG-10 Opening Session

On 19 October 2009, Mr. David Stevens, UNGIWG Co-chair and Programme Coordinator of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) inaugurated the 10th UNGIWG meeting with an opening statement welcoming all participants to Bonn, and calling their attention to the advantages of holding the meeting in Bonn, which has now become a hub for 19 United Nations organizations. He then described UNGIWG as a special long-standing body, elaborating on that special sense of community that characterizes it, and for that purpose called for a 5 minute "introduce-yourself-to-your- neighbour" exercise to further emphasize this collective aspect of the Working Group.

This ice-breaker was followed by additional welcoming words by each of Mr. Dozie Ezigbalike, UNGIWG Co-chair and Chief of the Geo-information Systems Section at the United Nations Economic Commission for Africa, and Mr. Lorant Czaran, as UNGIWG Secretariat contact and Head of the United Nations Platform for Space-based Information for Disaster Management (UN-SPIDER) Bonn Office, as well as a briefing on the necessary logistical information for the meeting. Mr. Czaran also reminded the participants that the UNGIWG meeting will be held back to back with the 3rd International UN-SPIDER Workshop, and invited any interested party to attend the workshop as well, which was held from 21 to 23 October 2009.

3. Secretariat report on UNGIWG activities:

Following the introductory note, Mr. Czaran provided a brief overview of the activities and accomplishments carried out by the UNGIWG Secretariat from 1 March 2009 to 15 October 2009. The report covered the following points:

- On 19 February 2009, the chairmanship handover meeting between previous and new co-chairs was held.
- During the November 2008 UNGIWG Plenary meeting in Vienna, it was decided to include all GIS/Remote Sensing experts in the United Nations system in the UNGIWG mailing list. This has been implemented and the mailing list now includes around 450 members. (with more input expected, especially from the World Health Organization, World Food Program, and other field offices.)
- Another new mailing list was set up for focal points from the 33 member organizations of UNGIWG, principals@ungiwg.org, with the aim of discussing administrative and executive decisions. It has been operational since July 2009 and will start being used for decision making in the near future. As is the case with the members' mailing list, some focal points are still missing and their prompt nomination is anticipated to achieve a full list.
- Several teleconferences were held with the Chief Information Technology Officer (CITO) of the United Nations Secretariat, discussing his involvement in the UNSDI

effort, and seeking the support of the newly established Office of Information and Communication Technology (OICT) at the United Nations Secretariat (overseeing ICT-related policy at the United Nations Secretariat Level.)

- In May 2009, the UNGIWG Secretariat participated in the First Session of the Committee on Development Information, Science and Technology (CODIST-1) plenary at UNECA, where it had a presentation on the Working Group and UNSDI.
- In June 2009, the UNGIWG Secretariat was also present at the Global Spatial Data Infrastructure (GSDI) conference in Rotterdam, and led the track on UNSDI-related topics.
- In July 2009, for the 3rd time in a row, UNGIWG also organized a United Nations showcase for the Environmental Systems Research Institute (ESRI) International User Conference. The United Nations Cartographic Section (UNCS) also helped develop poster templates for a common United Nations guise, and discussions were held with the President of ESRI, Mr. Jack Dangermond, on improved data access and the development of global datasets that would benefit the United Nations.
- In July 2009, a United Nations delegation also organized under the UNGIWG umbrella participated in a full day visit at the Google Headquarters in Mountain View, California, where several discussions were held with both the commercial and non-profit departments of Google on possible areas of collaboration.
- A full agreement will be finalized soon between the United Nations and the Open Geospatial Consortium (OGC), aiming at re-introducing the United Nations as a Principal Committee level member in the Consortium.
- A report/inventory was compiled, that recaptures all of the actions and resolutions over the past 9 years. Mr. Czaran stressed that it is crucial for all members to revisit and capture these actions as needed.
- A new Terms of Reference (ToR) document has been drafted for the Special Interest Group concept. It is still to be discussed, voted upon, before publishing it on the UNGIWG website.
- The Partners Mailing List now includes 257 members from different organizations who are updated regularly on UNGIWG activities.
- In September 2009, UNGIWG was asked to participate in setting up a geospatial database to support the UNECA African Climate Policy Centre (ACPC) CLIMDEV efforts, and the Secretariat attended the consultative meeting in Addis Ababa to explore ways of supporting this request.

4. Discussion and approval of Plenary Agenda

Following the Secretariat update, Mr. Czaran answered some inquiries about the OGC membership, and listed some of the privileges of becoming an OGC member, such as attending Technical Committee meetings, Principal Committee meetings, gaining access to document repositories, tapping into resources of OGC membership, and exploring Interoperability Experiments and Test Beds in which the United Nations can participate. He

also stressed the fact that becoming a member could help UNGIWG set up better interoperability pilot projects and induce more United Nations agencies and personnel to participate in UNGIWG. Then, Mr. Czaran proceeded to read out and discuss the Plenary Agenda for the upcoming days, accepted some additional suggestions and finally ensured its full endorsement by the participants.

5. Task Group reports:

5.1 Core Geodatabases and Administrative Boundaries (TG1)

A. Core Geodatabases

Mr. John Latham (FAO), leader of the Core Geodatabases Task Group, proceeded to summarizing the development, implementation and progress of some general actions that were agreed upon at the 9th UNGIWG Plenary in November 2008 in Vienna.

He started out by recalling the objectives of this Task Group which included identifying and preparing a global framework of core data layers for the United Nations System and providing the international community with a working platform for the collection, management, analysis, visualization and sharing of sub-national data down to the second sub-national level at least.

The following additional points ensued:

- The evolving transitional nature of the Terms of Reference which was moving from UNGIWG into a UNSDI framework over the last 3 years was addressed, and it was announced that TG1 needs to revisit some of the principles of UNSDI and follow some of the very specific documents that were laid down for that purpose.
- The United Nations Food and Agriculture Organization (FAO) was used as an example of an organization that completed a survey of all its global spatial data, warehouses, and published it on GeoNetwork. It is basically a summary of all of the FAO core geodatabases (administrative and political boundaries, agriculture, applied ecology, forestry, population, etc.).
- The **Global Administrative Unit Layers** (GAUL) 2009 version was released and distributed through GeoNetwork. This version includes updates on a number of countries. The GAUL team is currently working on GAUL 2010, with the foreseen activities of integrating data received from various sources, increasing the number of countries with administrative units mapped below second level, and exploring the option of replacing the coastlines with a more accurate data source.
- **On the United Nations Populated Place and Agglomerations Database:** The database includes all developing and emerging countries. Data was collected on the following variables (country code, country name, city code, city name, latitude and longitude, estimated population, last census available, last census year, etc.). Calls

have been put out for information, but it has proved extremely difficult to get responses. Mr. Latham therefore stressed the need for various expert groups to better communicate and avoid duplicating efforts, and called upon the community to keep the data updated! He suggested this be done through data cataloguing, harvesting, and updating archives, in addition to screening and data quality control.

- **On Coastlines:** Various United Nations agencies have started preliminary activities on the compilation of the coastline dataset. Data sources are being reviewed and data available for individual countries is being collected, with some included in the new release of GAUL 2009. The new Global Mangrove Atlas is now finalized in the English Language and FAO is planning to create an Atlas on Mangroves in French & Spanish.
- **On Hydrology data:** The development of standard encoded global and continental hydrology spatial databases continues. These consist of layers with the major river basins of the world including their sub-basins, rivers, and open water bodies. The first version of continental databases is completed for Latin America and South East Asia, while work is still in progress for the continent of Africa.
- **On Land Cover and Land Use:** The first standard for thematic classification approaches has been approved by ISO/TC211.
- Other datasets of relevance were mentioned, such as the Land Use product, the World Soils Database (released by FAO), the Global Wood Biomass Database (which could also help with the UNREDD initiative).
- **UNSDI Distance Learning tool:** An e-conference will be held to deliberate on the development of a distance learning tool, a modular-based approach with ESRI and the IT, Science and Technology Division of the United Nations Economic Commission for Africa (ITSTD), and all UNGIWG member agencies are invited to participate to pull together their individually-developed resources and expertise.

Discussion

Following the presentation, the following issues were discussed:

- ❖ Mr. Giorgio Sartori (WFP) pointed out that an inventory of global datasets is being carried out by WFP, and that they are working on integrating data on the transport layer, as part of their WFP-SDI. Participants will be alerted as soon as it is finalized.
- ❖ Mr. Dusan Sakulski (UNU-CUSA) expressed interest in joining the e-learning and modular approach e-conference.
- ❖ Mr. Gabor Remetey-Fülöpp (HUNAGI) reminded the plenary that World Food Day was recently celebrated, and on that note inquired about the role that Geographic Information has in facilitating action against hunger and poverty. Mr. John Latham answered by pointing out the increasingly important role that geospatial information is playing in improving access to food, reducing vulnerability, providing knowledge about the distribution of people, dynamics of populations, and informing about the status of the natural resource base.

❖ Mr. Czaran reminded the participants that UNGIWG is a Class A liaison to the International Organization for Standardization's Technical Committee on Geoinformation and Geomatics (ISO/TC 211). This implies that any UNGIWG member or organization can submit proposals or work items, and that there is no specific need to join ISO/TC211 for liaison as individual organizations.

❖ Mr. Andrew Alspach (UN-OCHA) indicated that the Interagency Standing Committee (IASC) has a sub-group that is working on common operational datasets, co-chaired by the United Nations High Commissioner for Refugees (UNHCR), and suggested that they discuss bilaterally on cross-fertilization prospects.

B. International and Administrative Boundaries

Mr. Guillaume Criloux (UNCS) gave a presentation on International and Administrative Boundaries on behalf of Mr Guillaume le Sourd (UNCS), Mr. Steve Ebener (WHO), and Mr. Robert Sandev (UN-OLA).

On International Boundaries:

• Much effort is being invested in gathering authoritative sources of information on boundaries, such as treaty maps, coordinates, boundary text descriptions, and related imagery. This authoritative data is needed to support map clearance procedures, compile the information in a seamless and comprehensive geodatabase on international boundaries, and to provide the users with a friendly interface, allowing them to access the compiled geodatabase.

• A brief overview of the methodology was also presented, and the process leading up to the data dissemination phase was thoroughly explained. Mr. Criloux also showcased some maps, focusing mostly on African boundaries and stating that a lot of documentation on that area exists in United Nations libraries, catering to the great United Nations interest in that region of the world.

• Currently, more than 750 Treaty maps and 400 supporting evidence maps are at their disposal.

On Administrative Boundaries (SALB):

• NMA contact information has been updated for 103 countries
• Historic changes for 48 countries were compiled
• Map was updated for 18 countries
• One new map was validated

2009-2011 plans:

• Continuation of the work and elaborating the prospect of institutionalizing the project within the United Nations Secretariat & making it their responsibility.

Final Recommendations:

- Need to get the preceding four sections in this Task Group harmoniously interlinked, and to have their datasets compatible with one another.
- Get the Global Boundary Dataset as authoritative as possible, with a transparent methodology so that everybody can check & offer adjustments.

Discussion:

Following the presentation, the following points were raised:

- ❖ Answering an inquiry on ways of presenting international boundary conflicts in the Task Group's compilation, Mr. Kyoung-Soo Eom (UNDFS/UNCS) stressed the highly sensitive nature of international boundaries, clarifying that the Cartographic Section has no authority to draw the lines. In conflict situations, such as the Falkland Islands or the Persian Gulf, they resort to consulting the U.N. Office of Legal Affairs (OLA), or simply a General Assembly Resolution on that matter.
- ❖ Adding to the National Geospatial Agency (NGA) Coastlines dataset issue, Mr. Lorant Czaran stated that it is developed at a 1:100,000 scale, and is being currently generalized to 1:1million for the purpose of fitting the international boundary data. Mr. Eom also mentioned that the International Boundary Dataset they have developed (ranging from 5,000 to 250,000 scale) are also in the process of being generalized to 1 million, as per the boundary dataset standard. However, Mr. Dozie Ezigbalike warned about the technical issues that might arise when generalizing those maps at a 1 million scale, one of which was the loss of information and important details.
- ❖ Mr. Eom added that in spite of the Second Administrative Level Boundaries (SALB) being a collective effort, the United Nations Cartographic Section would be the guiding office as far as international boundaries and the harmonization of boundary issues are concerned. However, he added that on certain occasions, the need might arise to officially address the United Nations Under-Secretary-General for Legal Affairs.
- ❖ Following up on that matter, Mr. Ezigbalike pointed out that the issue at hand was not solely cartographic, but rather a politically imbued one. Questions such as whether to classify Egypt as part of Africa or the Middle East are definition and policy issues, and this is one area where UNGIWG needs to play a crucial role by harmonizing these definition issues and the various agencies' categorising standards.

5.2 Map Production Guidelines (TG3)

Ms. Akiko Harayama (OCHA) joined the Plenary via conference call and gave a brief presentation on the work and concerns of the Map Production Guidelines Task Group.

She started out by reminding the participants that the Task Group exists with the aim of bringing together a community of practice on mapping, collecting existing standards on mapping and making it available to UNGIWG. She also pointed out that the Task Group does not try to set a common mapping standard, as each organization already has its own set of standards.

Ms. Harayama then proceeded to presenting the Task Groups's recent achievements. These consisted of the following:

- Homogenizing their webpage design with that of UNGIWG, by applying the same overall design template.
- Creating guidelines for overcoming some common challenges tied to map production
- Finalizing a subscribers' contact form that allows people to subscribe to the task group and get more insight into who is doing mapping around the world, and for whom.

Still, Ms. Harayama refrained from fully promoting the website before receiving more input from the Working Group. She therefore encouraged each and every organization to favourably respond to requests for guidelines, style sheets and further contributions, even if they are still not perfected or in a working version phase.

Discussion:

Following the presentation, the floor was open for comments and questions, most of which reflected a wide show of support around the room:

- ❖ Mr. Nate Smith (USAID) lent support to the effort, highlighting the potential that such an initiative can have in ridding the group of frustrations with cartographic representations, and stressed the importance of training their eyes to see things in the same way. He hereby provided the example of homogenizing colour codes and stopping different organizations from using different colour codes for the same natural phenomena.
- ❖ Mr. Czaran reminded the Plenary that a few years back, some templates were developed at 100,000 and 500,000 scales, and stressed the need to locate these templates, review them, and check whether they could be uploaded to the website also.
- ❖ Ms. Helen Bray (UNDSS) praised the Task Group's initiative and indicated that their work could help bring in the expertise that they need in their Department.
- ❖ Mr. Sartori (WFP) suggested that there be more tightened lines of communication between the Task Group and the rest of the Working Group.
- ❖ Mr. Ezigbalike finally agreed that the Task Group's continuity is of essence and pointed out that further deliberation will be needed to decide upon its transition from a Task Group to a Special Interest Group.

5.3 Interoperability (TG4)

Mr. Mick Wilson (UNEP/DEWA) indicated that he did not have a structured activity to report, as some of the Task Group's initiatives, the provision of data and services, as well as the development of a Geonetwork toolkit were all being implemented without the initial Task Group structure that has been previously set up. He therefore put forth the question of transitioning to a Special Interest Group.

The Remote Sensing Task Group and the GNSS Task Group did not present a report. It was stated by the representative of UNITAR that the expectation of the Remote Sensing Task Group transitioning into a Special Interest Group was the reason for not preparing a specific report. It was also reiterated that this Group was an important one, and that work should continue in a SIG structure.

The GNSS Task Group was inactive in the recent years, and no action was decided therefore regarding its transitioning.

6. Discussion on communication, structure strategies, and SIGs

Following Mick Wilson's brief statement, the floor was opened to discuss some communication strategies & structure issues within the Working Group as a whole.

- ❖ Mr. Czaran called attention to the *UNGIWG mailing list* which served the purpose of greater communication, as well as updating and sharing information within the group. He also clarified that its use should not be restricted to the Secretariat or focal Points, but should rather encompass all UNGIWG members.
- ❖ Mr. David Stevens addressed the issue of structure and output, stating that despite some slight fallback on structuring the UNSDI process, major steps have been adopted recently and more progress has been realized than in the previous years. Still, in spite of the forward-moving flow, Mr Stevens stressed the need to restore some structure within the system.
- ❖ Building on this idea, Mr. Czaran harked back to the last Plenary where it was decided to transform the Task Groups into Special Interest Groups, and explained the mechanisms of these new groups. People having more interest in specific domains will have the choice of grouping in special interest groups, where a mailing list will be set up, and Task Group co-chairs will be replaced with someone who is assigned to just lead and moderate the mailing lists. Then, tasks and Task Groups will become really concrete time-bound efforts to resolve pending issues that either the Special Interest Group or the Plenary identifies. Mr. Czaran reminded the plenary that the draft Terms of Reference still needs to be discussed, revised, and finally voted upon, before sending out to the Focal Point mailing list for endorsement.
- ❖ Mr. John Latham (FAO) observed that the Special Interest Group concept is indeed useful, but wondered whether all Task Groups will become Special Interest Groups,

and questioned pertinent quality control matters, indicating the need for improved governance to avoid ending up with micro-projects.

❖ Answering back, Mr. Czaran stated that the Working Group is trying to follow models that the Committee on Earth Observation Satellites (CEOS) and many others have already established, and that governance will emanate from the Plenary and Focal Points. He reiterated the point that the Special Interest Groups will now become mailing lists, comprising communities that will discuss and debate certain topics such as remote sensing or core datasets, and if a task should arise, then a few members will sign up and ensure that it gets done.

7. OpenStreetMap Presentation

Following the discussion, the plenary broke out for the day's lunch break, and the participants were given the option of attending a presentation by Ms. Sandra Sudhoff (CartONG) on OpenStreetMap (OSM).

Throughout the presentation, Ms. Sudhoff aimed at informing the plenary on the recent progress of their project in terms of data availability & other pertinent matters:

- The OSM convention was introduced as a bottom up approach, which fits within other approaches, and allows for the integration and easy data sharing between two systems. It is now a growing, active and skilled community, with a functional architecture, allowing for the storage, maintenance and serving of data.
- Ms. Sudhoff also introduced the Humanitarian OpenStreetMap Team (HOT), a new initiative rooted in OSM, providing open source and sharable data, directed towards humanitarian response and economic development. Hence, the core mission of HOT is connecting the points between humanitarian and mapping communities and allow for data collection during crises.
- She also went through other OSM crucial pillars such as advocacy, training and outreach, giving as an example the mapping parties that are being carried out in the developing world. She then highlighted some OSM projects that went under the titles of data sharing as well as crisis support and development, such as mapping Gaza and the West Bank, and elaborated on the rewarding effort of tapping into local knowledge to gather data.

Finally, Ms. Sudhoff revealed that more and more UN agencies are using OSM data, and that the HOT framework is ready to partner up and explore sharing and serving data with UNGIWG, as it is compatible with the UNSDI data models, and offers a large skilled community and tools.

8. The United Nations Spatial Data Infrastructure

8.1 Progress Report on UNSDI development:

Mr. Ezigbalike presented to the membership the latest in terms of progress on the UNSDI front. He started out by clarifying that the UNSDI vision has not changed indeed, however the main question that lingers on is that of identifying a proper institutional home for the implementation.

Mr. Ezigbalike then recalled the ways in which UNGIWG's work needs to contribute to the effort of delivering as One United Nation. And this is where the decision to formalize a UNSDI, one which would become a framework for sharing data and services within the UN family, fell into place. He then reminded the plenary that an SDI is not for sale, but is rather characterized by a do-it-yourself nature, especially that the expertise needed to set it up already exists within the Working Group.

He then explained how the Working Group should avoid approaching the UNSDI as if it were simply a project, but rather try adopting a bottom-up approach instead, focusing on discrete deliverables to put in place. So far, there has been no budget for coordinating and managing data resources, however, what is being proposed is that UNGIWG should agree as a community, and attempt to leverage all existing data and build upon them. Mr. Ezigbalike pointed out that nearly 50% of the data needed by some agencies today are already being known and used by others, which highlights the importance of submitting new initiatives involving geospatial data as UNSDI projects.

Hence, a clear institutional setup, an institutional home, and more commitment from the individual agencies are all essential requirements to help fully establish a UNSDI.

Furthermore, Mr. Ezigbalike stated that the Chief Information Technology Officer (CITO) has established the concept of "Centres of Excellence" and wondered whether the UNSDI could be considered as one. These Centres consist of a logical grouping of related skills or disciplines, where individuals can learn and share knowledge, in a virtual or face-to-face mode. They are meant to match resources to demand and act as a catalyst for new business strategies.

As regards the institutional home issue, Mr. Ezigbalike mentioned that OICT has appointed a short-term staff to advise it on its role in the implementation of the UNSDI. However, the suitability of having the OICT as an institutional home has yet to be determined, seeing that the UNSDI is not an ICT project per se.

Mr. Ezigbalike then moved on to suggest tapping into the abundant expertise of partners such as within the EU/INSPIRE, GSDI, OGC, ESRI, ICA, Google, etc., from which many lessons could be drawn. He also stressed the need for sourcing and exchanging expertise with NGOs and other organizations for the purpose of recognizing common interests, gaining more awareness of their projects, and finally harmonizing and coordinating efforts between the two

sides. Mr. Ezigbalike wrapped up by leaving the floor open for comments, questions and discussions dealing with the aforementioned points.

8.2 Discussion on UNSDI

- ❖ Mr. Latham inquired as to whether the governance structure of the UNSDI proposal has undergone any changes, and requested some clarification on the status of the United Nations Office for Project Services (UNOPS) project proposal that was never formalized.
- ❖ Mr. Ezigbalike assured the Plenary that the governance structure of the UNSDI will have to settle for some simple fine-tuning, without undergoing a complete change.
- ❖ Mr. Czaran addressed the second part of the question dealing with the UNOPS project proposal, and reminded the group that the proposal was initially put forward as a last resort, in case no other agency volunteers to host the UNSDI as a project. However, at this point, it is becoming more feasible to carry it out internally, upon the identification of adequate resources.
- ❖ Mr. Wilson wondered who will have the mandate to negotiate the interagency mechanisms and instruments that will get the UNSDI to start working, and also added that the UNSDI will have to be an embedded commitment within Programmes and Agencies and a part of their regular budgeted programming tasks.
- ❖ Ms. Kimberly Roberson (UNHCR) pointed out that the SDI was first discussed with the CITO in the context of a project that he is still working on (providing crisis information management and common platforms for data standards, interoperability and outreach). Therefore, discussions with the CITO should carry on as they would go beyond what might be considered as his mandate within the ICT area. She added that the metadata standards that the SDI has to offer them will constitute a good point of departure.
- ❖ Mr. Ezigbalike further built on that point, stating that it would be fruitful to work with the OICT as peers, bringing in their ICT expertise and the UNGIWG geographic information expertise.
- ❖ Mr. Sartori then put forth the issue of fundraising for the UNSDI, with Mr. Stevens and Mr. Ezigbalike both agreeing that the implementation of the SDI and securing funds needs to be done internally within the UNGIWG member agencies, starting with whatever they have in place, instead of waiting for another year to get external funding and a project proposal materialized.
- ❖ Mr. Eom shared some additional thoughts on how the UNCS could use its mandate to approach member states, create an SDI to support United Nations operations in general, and help build one United Nations framework for the whole community. For that purpose, resources are necessary, and these should emanate from all offices, seeing that the UNSDI is initially a collective effort in itself.
- ❖ Mr. Suha Ulgen (OICT), conveyed the CITO's expression of interest in UNSDI and his willingness to get involved in the process as a possible coordinator. However, Mr. Ulgen pointed out that the first priority was to ensure that the UNGIWG Secretariat in itself has a unified position on the UNSDI.

9. Presentation on the United Nations Framework Convention on Climate Change:

Mr. Kevin Grose, Coordinator of Information Services at the United Nations Framework Convention on Climate Change (UNFCCC), gave a brief presentation on UNFCCC, their accomplishments and upcoming activities, followed by a discussion of possible bridges between the Climate Change Secretariat and UNGIWG, their possible membership in the Working Group, as well as the opportunity to participate in the Copenhagen Climate Change Conference in December.

- Touching on the ways in which UNFCCC activities might be relevant to UNGIWG, Mr. Grose pointed out that the UNFCCC gathers plenty of data and that the Secretariat plays a key role in setting the standards by which the data is collected.
- Up until now, they have not had many opportunities to use the geospatial element largely, because of the agencies' concern about having their data compared against others and overlaid with other datasets. However this is starting to undergo some changes with the Secretariat recently agreeing on bringing in and using more data.
- Another area of relevance would be that of systematic observation, whereby UNFCCC works with all United Nations organizations that are involved in climate change related work, assisting in getting data into the climate change process, and primarily supporting the parties through creating documents that contain results of the data collection.
- Mr. Grose also presented the Carbon Market and the International Transaction Log System, as well as the Clean Development Mechanism, going over certain initiatives with Google and UNEP/GRID that aimed at making data more visually appealing and useful for decision making.

Finally, Mr. Grose called attention to one technical and two substantive programmes being implemented by the Secretariat, and through which they can connect into the UNGIWG realm. He suggested that UNGIWG and UNFCCC follow up on that issue and explore ways in which they can start collaborating and joining efforts.

10. Introduction to GIVAS and video-conference presentation

10.1 Presenting the GIVAS initiative

Following the UNFCCC briefing, the plenary connected via video-conference to the Global Impact and Vulnerability Alert System (GIVAS) team at the United Nations Headquarters in New York with the aim of getting introduced to the GIVAS mandate, and to explore ways in which UNGIWG might be able to offer support. The GIVAS team was represented by Ms. Eva Busza, the Principal Officer and Ms. Zazie Schafer, the Senior Programme Advisor, in the Strategic Planning Unit of the Executive Office of the Secretary General.

Ms. Busza and Ms. Schafer gave a presentation that introduced the plenary to the GIVAS initiative, the circumstances which gave birth to it, as well as the added value of this system. They described how GIVAS will allow for a bigger picture or a cross-sectoral analysis of any emergency or disaster, and the collection of new types of data faster for better and quicker decision making. They also aim at shaping the initiative, led by the Secretary General, in a way that could provide a spotlight on some core UNGIWG goals on data collection and analysis as well as a system that uses cutting edge technologies for data collection, visualization and integration.

Ongoing Projects

- Working on getting an understanding of what monitoring and database systems exist in the United Nations system and beyond. They have managed to identify 37 of those already, and still need to get a sense of what data is available and not yet known so that they could potentially integrate it in an interface that GIVAS will provide.
- Scoping potential partners for this project, aiming at institutions and individuals in the field, and also reaching beyond the United Nations System to the private and academic sector.
- The following website has also been developed for the GIVAS initiative: http://www.voicesofthevulnerable.net

Future Steps

- Building a GIVAS team that is able to leverage the expertise of the United Nations System.
- Identifying data collection tools and providers and developing a small set of early crisis indicators.
- Getting the support of UNGIWG in understanding the potential of spatial information in revealing dimensions of vulnerability, grasping the potential of GIS for rapid data collection, as well as acquiring best practices of complex data integration and identifying centres of excellence.

10.2 Discussion on collaboration prospects between UNGIWG and GIVAS

Following the presentation, the participants expressed their views on how UNGIWG can extend a helping hand to GIVAS, and the discussion covered the following points:

- ❖ Mr. Wilson expressed his hopes to see GIVAS plan for strategic capacity within the United Nations in the long term, and have this plan become a paradigm for interagency collaboration, UN responsiveness, and working at quick pace.
- ❖ Professor Sakulski congratulated the team on their initiative, and asked about possible bridges between the UNU scientific realm and the GIVAS implementation potential.

❖ Mr. Ezigbalike, speaking on behalf of UNGIWG, suggested setting up a Task Group to study ways in which the working group can exploit already existing data in the UN system to make it available to GIVAS, as well as investigating ways to plan the UNSDI and implement it through GIVAS.

❖ Mr. Latham advised the GIVAS team to try and build on the already existing data and expertise, in order to overcome the burden of data collection and other technological problems that they might have to face. In the food sector, he suggested they deal with the Food Insecurity and Vulnerability Information Mapping System (FIVIMS) that looks at many of the early warning indicators of food insecurity as well as socio-economic and population distribution indicators. This might provide them with some guidance on what has already been done and where to go in the future.

❖ The GIVAS team further described what the system will do and how it is being conceptualized. They noted that they see it as one that will be responsive to any kind of exogenous shock that goes beyond 1st dimension, also described as a cross-sectoral crisis concept. They assured the Plenary that they are not trying to duplicate any work in the United Nations system, but just dealing with multiple dimensions and trying to become a paradigm that will bring together United Nations efforts.

Ms. Schafer and Ms. Busza expressed great interest in exploring the ways in which the UNSDI and the GIVAS initiatives could meet and complement one another:

- They communicated the need for the UNGIWG expertise and critical assessment when dealing with the incentive and technical sides of getting agencies to free up datasets.
- They envisioned a system which would also be an advocacy tool for the Secretary General allowing him to use concrete data to promote messages that different agencies need to put forth on the global scene.
- The system will also allow agencies and information officers to tap into information that they might not be able to get internally and leverage data that other parts of the system are not providing.
- GIVAS will also act as a catalyst for the domestic initiatives of member states, through interfacing with governments and building on national data systems.

❖ A few suggestions followed pace, such as examining the European project to research the usefulness of SDIs, through which over 160 SDIs were evaluated, or the Humanitarian Dashboard initiative by UN OCHA.

❖ Ms. Jessica Pfund (Google) also offered the possibility of leveraging Google resources, and making accessible huge amounts of aggregated data.

11. The CITO Address:

Mr. Soon-Hong Choi, Assistant Secretary General and Chief Information Technology Officer, could not be present at the Plenary or via video conferencing, but provided a

statement that reflected great support for the work and efforts of UNGIWG. Therefore, the following statement was read out by Mr. Czaran on behalf of the CITO:

"I am very pleased to have the opportunity to address the UNGIWG community at your 10th anniversary plenary. Congratulations for building and sustaining for over a decade a strong and dedicated community of practice committed to fulfilling the UN's mandates by leveraging geographic information.

Last year, at your 9th Plenary in Vienna, I conveyed a message to you via video and stated my commitment and support for UNGIWG in its efforts to advance the use of geospatial information and technologies, and to promulgate best practices within the UN System. Since that time and in follow up to the ICT Network's recognition of the UN Spatial Data Infrastructure Framework as a significant initiative towards "delivering as one," I have explored together with the UNGIWG Co-chairs how my office can best contribute to this important initiative.

As you know, the Office of Information and Communication Technology (OICT) was created earlier this year as a result of General Assembly Resolution A/63/262 in recognition of the need for a central authority to set common standards, improve knowledge and information management, optimize use of resources, improve information and communications technology services, and provide an Organization-wide perspective on ICT. It is within this context that it was suggested that the OICT contribute to the UNGIWG's UN SDI effort.

Given my office's coordinating role on similar system-wide efforts - most notably our involvement in the development of a crisis information management strategy – we were asked by the UNGIWG chairs to provide some initial support to the UN SDI project.

As a result, I am happy to announce that we have brought one of your own colleagues on board to coordinate OICT's efforts in this regard. Mr. Suha Ulgen will be representing OICT at this week's meeting and has been tasked with working closely with the UNGIWG and its members to move forward on the SDI effort. I am certain that his experience with the group and dedication to the goals of the SDI will prove useful this week as you decide upon the direction of this project.

As his first priority, I have asked Mr. Ulgen to focus on facilitating the articulation of a unified UN Secretariat position on the UNSDI Framework. He will be working with colleagues from DFS, DSS and other UNGIWG-member Secretariat Departments towards that objective. He will then assist the UNGIWG Secretariat in further developing and updating the UNSDI Framework in accordance with outcomes from last year's UNGIWG plenary.

In closing, let me assure you that my office is fully supportive and appreciative of system-wide efforts such as this that endeavour to improve the way the UN operates and provides services to its stakeholders.

I wish you a successful plenary and look forward to hearing the outcomes of this week's meetings. Thank you very much."

12. Discussion on the proposed UN Committee of Experts on Global Geoinformation Management (UNCEGGIM)

Following the CITO statement, a brief discussion on the Committee of Experts on Global Geoinformation Management took place, with Mr. Eom explaining how this idea of a global forum for Geographic Information came to exist, and how it was meant to be a mechanism that can provide strategies and harmonization between different cartographic organizations, United Nations agencies, other key players such as GSDI, ICA, FIG, as well as various regional initiatives. This idea will be placed on the primary agenda of the United Nations Regional Cartographic Conference for Asia and Pacific, and will be addressed as a resolution to the United Nations Economic and Social Council (ECOSOC) and then to the General Assembly, making it a formal United Nations Geographic Information Management Body, which will also serve as a Secretariat advisory group.

Tapping into the UNGIWG institutional memory, Mr. Czaran re-winded back to 2003, when OGC presented the geographic information strategy paper, which was unanimously agreed upon. Mr. Czaran reminded everyone that the establishment of a Committee of Experts was one of the main recommendations of this strategy paper, and therefore it is rewarding to see this come into existence now.

13. Presenting the UNECA ACPC/ClimDev initiative as a UNSDI element

Mr. Ezigbalike gave a presentation on the CLIMDEV, a joint initiative by the African Union Commission, the UN Economic Commission for Africa, and the African Development Bank, mandated by the African Heads of Government and Ministers of Finance, Planning and the Environment. Mr. Ezigbalike pointed out the great need for such an initiative in Africa, in order to help member states who do not have adequate expertise come to terms with climate change. The initiative consists of two elements, namely the African Climate Policy Centre (ACPC) and the Climate for Development (ClimDev) database and trust fund. It aims at improving the availability and use of quality climate information and services addressing the needs of local, national and regional scaled decision makers, in support of sustainable development and achievement of the Millennium Development Goals in critical climate sensitive areas in Africa.

Some of the objectives of the African Climate Policy Centre include:

- Widely available climate information, packaging and dissemination.
- Risk, vulnerability, impact and cost/benefit analysis and assessments
- Knowledge management to provide access to information, resources, and best practices

Areas where UNGIWG might be able to help:

- Help create a spatial database of climate change vulnerability indicators in Africa

- Develop a taxonomy of datasets relevant to studying and formulating policies related to climate change
- Identify existing data and information resources and create a metadata clearinghouse to enable the discovery of these datasets.
- Upgrade the data and information resources to make the products accessible to the wider user community.

Mr. Ezigbalike concluded by stressing the importance of the support that UNGIWG can provide for the implementation of this African Region Spatial Data Infrastructure effort, and suggested that the ACPC subscribe through UNGIWG to OGC liaison too in order to get access to expertise and support on interoperability.

14. The United Nations Cartographic Section update on the United Nations Secretariat Geospatial activities

Mr. Eom gave a presentation on the United Nations Cartographic Section (UNCS), highlighting its 1953 mandate that goes beyond peacekeeping support to actual provision of geographic support to the full range of United Nations Operations.

According to Mr. Eom, the UNCS is meant to provide accurate and timely geospatial information in support of the decision-making and operational needs of the Security Council and the United Nations Secretariat, as well as to support and coordinate the GIS activities of the United Nations Peacekeeping Operations.

Mr. Eom shed a light on the DPKO Peacekeeping Missions GIS sections, and the three different kinds of major efforts underway:

1) The Geodatabase that is linked to all of the missions via a GIS support centre in Italy

2) UN Earth, a Google Earth enterprise system

3) An Image Library, for archiving and satellite imagery handling

He also showcased some satellite imagery that they had acquired on Chad and Darfur, and introduced some newly produced military standard topographic maps for the Golan Heights, as well as the United Nations world vector map. Mr. Eom also addressed the boundary issues in which they were heavily involved, and mentioned that they are building boundary information systems to allow those interested to become more knowledgeable about these issues.

15. Introduction to the Open Geospatial Consortium and defining potential UNGIWG membership privileges and conditions

Amidst ongoing discussions regarding the prospect of having UNGIWG join the Open Geospatial Consortium (OGC), Ms. Athina Trakas (OGC) gave a presentation to further inform the Plenary about OGC's raison d'être and activities, and elaborate on membership conditions and privileges. She started out by reminding the participants that FAO, UNEP and some other United Nations Organizations were members of OGC in former times, and that the Consortium is looking forward to restarting the collaboration.

Her introduction covered the following main points:

- OGC was founded in 1994 and now comprises 385 members from industry, government and academia sectors.
- Their processes and decisions are consensus-based, defined by openness and balance of interest between industry, academia and public administration.
- They now have 28 adopted standards, some of which are also ISO standards.
- They aim at serving members and users as a global forum, and leading the development, promotion, and harmonization of open and freely available geospatial standards. These standards are documents approved by the OGC membership, providing rules, guidelines and characteristics, and are all implementable in software. Once a standard is adopted by members, it becomes freely available.

What OGC can do for UNGIWG:

- Providing support staff, expertise and support when needed.
- Providing process framework for members to efficiently work on standards.
- Facilitating the members' participation in OGC meetings.
- Providing Principal Membership which would be accessible for all UNGIWG members.
- The Principal members form a Planning Committee (PC) and plan strategic direction regarding the consortium's development of standards that need to be adopted by the market. They also discuss and vote on recommendations from the Technical Committee, and provide guidance on relationships with other standardization organizations. All documents that are published by the OGC are approved by the PC.
- Offering the opportunity to either sponsor or participate in interoperability programmes (test beds, interoperability experiments, and pilots). These are processes that aim at rapidly developing, testing and validating standards based on real world use cases identified by OGC members.

Finally, Ms. Trakas concluded by describing OGC as the facilitator of a global and highly social process to identify and address important geospatial interoperability issues and challenges in our interdependent world. Promoting interoperability indeed reduces costs, increases flexibility in support of situational awareness, analysis and decision making.

Discussion

A brief discussion ensued covering the added value of participating as a member in OGC. Mr. Czaran expressed his hope to have a United Nations pilot project in the next 6 months, and leverage OGC member organizations to help UNGIWG carry out the pilot at a relatively low cost. His suggestion was to start out with an interoperability experiment and later on push it into a test bed, where some support and help with resource availability might be needed from OGC.

16. Discussion on the way forward with the UNSDI and on the CITO/OICT involvement

Following the OGC presentation, a long exchange commenced on the current status and future outlook of the UNSDI.

Mr. Czaran provided a brief summary of what has been happening on that front for the past seven months:

- A number of discussions and teleconferences with the CITO and the Cartographic Section took place to discuss the way forward.
- The move to establish a Technical Advisory Group has been pending.
- The alternative of finding resources internally, instead of handing over the UNSDI to UNOPS and waiting for external funding has been gaining increasing consent over the past few months.

Discussion

- ❖ Mr. Ashraf Abushady (CTBTO) suggested that the logical institutional home for UNSDI should be the United Nations Cartographic Section (UNCS), and commented that it would be tedious to try and turn it into a project.
- ❖ Mr. Sartori pointed out that more focus and effort needs to be invested in both the UNSDI framework and network in terms of thinking of a practical way forward and rethinking strategies and approaches.
- ❖ Mr. Wilson indicated that UNEP is offering about 1000 geospatial data layers online at the moment, and questioned how much the other agencies are offering. He emphasized the fact that a broad spectrum of capacity exists within UNGIWG member organizations, and it is possible to double that without having to find resources or seek an institutional home. It is simply a matter of motivation and finding the will to put the data and services out in the open for anyone to connect to them using standard applications.
- ❖ Mr. Ezigbalike insisted that an incremental approach is needed whereby the agencies are asked about their conditions to making the data available, and Mr. Sartori agreed adding that a policy and internal agreement is needed for that purpose.

- ❖ Mr. Ulgen reminded the plenary that the aforementioned effort to develop an inventory was indeed a core deliverable of the framework document. Although this document was discussed two years ago, Mr. Ulgen insisted that it should be updated rather than overlooked.
- ❖ Mr. Czaran acknowledged that there is a multitude of available geospatial data layers, many of which are served via standard web services. However, when it comes to high resolution imagery and licensed datasets for example, then it is not equally easy to share. A request should therefore be sent out to members to try and compile an updated inventory as it was done in 2004, after having each agency send out a complete list of the data they hold in-house.
- ❖ Mr. Wilson pointed out that the first goal should be to get all global data that is not subject to licenses or constraints served online as map services. According to the GIVAS team, 37 monitoring mechanisms have been identified, and so the priority need is to get these institutionally joined and homogenously served, as one action.
- ❖ Ms. Kimberly Roberson asserted that whether UNGIWG has the framework or place to store the data is secondary to the will that it should have to make the data freely available. She pointed out that the system is replete with duplication on account of all the barriers existing between the organizations. She pointed out that the CITO would help overcome these barriers, but the question boils down again to whether all member organizations are willing to share information and avoid all the existing duplication in the system.
- ❖ On a more positive note, Mr. Stevens indicated that the existing duplication only shows that opportunities are being used widely, which is a good sign per se. However, surely, the next step would be to identify and prevent this duplication, and try to replace it with some more structure and organization.
- ❖ Mr. Latham noted that there has been incredible momentum over the last few years, and that plenty of Plenary decisions were made to which everyone subscribed. What is needed is commitment without having to resort to extra-budgetary funding and resources necessarily. UNGIWG now has already interoperability, adoption of standards, engagement with ISO and OGC, the support of the CITO, frameworks and home-grown tools all in place, but the problem could well lie in a possible lack of capacity to utilize these. As for the governance issue, Mr. Latham suggested that the Working Group approach the CITO and requests him to take leadership on this project or effort.
- ❖ Mr. Stevens pointed out that the framework is a living document and still forms the backbone of the Group's work within UNSDI, in terms of sharing and serving data. However the governance issue is worrying and should not fully consume the Working Group's energy, as more focus should be invested in working rather than governing.
- ❖ Finally, all agreed that the group should signal to the CITO a high level of interest in his offered support. His role in overcoming barriers to sharing data and information was great and this in itself is a crucial step for UNGIWG.
- ❖ Mr. Alspach pointed out that things are indeed moving forward on the UNSDI front, and that all agencies need to have their actions and plans on how they can contribute

to the SDI. However what is still missing is the necessary leadership which will help bring all efforts together.

Mr. Ulgen suggested revisiting the framework document and the 12 non-core deliverables as well as updating it with new projects like the GIVAS one. A UNSDI network needs to be developed to keep the framework alive.

He also summarized the CITO's commitment as the following:

- The CITO sees UNGIWG as a cohesive community which he wants to empower.
- The CITO will make sure that all United Nations Secretariat agencies who are consumers of geoinformation technology come together to develop a unified position on UNSDI and study how to share information.
- He however will not be the owner of the UNSDI process, but rather the custodian who will work on facilitating and coordinating it.

Finally, Mr. Eom commented that the Cartographic Section is very much willing to provide more contribution and have their global infrastructure and a lot of their datasets shared and utilized by the community.

17. Transitioning to Special Interest Groups

The question of whether there should be a transition to more informal Special Interest Groups was raised up again. Various participants asked the co-chairs about the difference between a Task Group and a Special Interest Group, and were provided with the following explanation:

- Special Interest Groups are communities of practice among the members of the Working Group, and open to associates as well, an informal subset of a network of actors, exchanging information on a specific issue.
- These will be groups with mailing lists, no chairs, and a moderator who volunteers to manage the mailing lists and lead the discussions as needed.

Advantages of having a Special Interest Group approach:

- Bringing back the grassroots sense of a community to UNGIWG
- Building a deeper sense of network.
- Overcoming time-bound issues and problems of stagnation and renewal.

18. Google Map Maker Presentation

Following the brief Special Interest Group discussion, the group broke out for lunch. During the break, Ms. Jessica Pfund gave an interactive presentation on Google Map Maker to which many participants assisted.

Available for 170 countries, Google Map Maker is a form of consensus based collaborative mapping, with a website that is separate from the Google Maps and Google Earth data source (mapmaker.google.com). It allows people to zoom in to see the Google imagery, draw on top of it, and ultimately getting this data pushed back onto Google Maps as well, following the necessary quality checks.

Pfund gave a detailed demonstration on how Google Map Maker works, showcasing for example the rating system which allows one to rate other users' work, in addition to some other innovative features. She also talked about a pilot project to allow all the Map Maker data available for Africa to be downloaded for UN and non-profit use, and mentioned that any imagery or data to supplement Google archives would be welcome from the United Nations organizations in that regard, even if outdated.

19. Demonstrations on Interoperability and Web Map Services in UNGIWG

19.1 United Nations Interoperability Demo (UNEP)

Mr. Wilson gave the first presentation, reflecting and showcasing the ongoing work of the United Nations Environment Programme (UNEP). He introduced the publish-find-bind model, which challenges the normal causal design model when it comes to geospatial services on the internet, and creates a relationship between requestors and providers without the need for any portal in between. Hence, the providers are allowed to publish their data allowing the requesters to directly bind to the service providers. He also presented briefly on the different layers and available catalogue services.

Mr. Wilson also presented an online demonstration using the "uDig" client, an Open Source, standards- based, GIS software tool, and demonstrated access to different layers of real data coming from distributed services around the world in real-time. He also suggested a list of agencies who might become willing players in serving their data with some more encouragement from UNGIWG. In addition to the online demonstration, Mr. Wilson also presented the Global Risk Data Platform, a multi-agency effort to share geospatial data and information on global risk from natural hazards. Users can visualise, download or extract data on past hazardous events, human & economical hazard exposure and risk from natural hazards. It covers tropical cyclones and related storm surges, drought, earthquakes, biomass fires, floods, landslides, tsunamis and volcanic eruptions.

19.2 Global Risk Data Platform (UNEP/GRID – UNHCR)

Mr. Yvon Orand (UNHCR) gave a presentation on the UNHCR GeoPortal, presenting it as one which uses open source solutions, allows access to public geographic information and also facilitates data exchange through the internet. Mr. Orand introduced the portal as consisting of base data layers from Google, satellite imagery background or street maps, and

allowing the user to update, receive and edit maps through the system. This portal is currently a reference tool to UNHCR offices and refugee camps. It will be made public as soon as all GIS experts in the field obtain access to be able to update these layers.

19.3 Open Source WebGIS (ITHACA)

Mr. Paolo Pasquali (ITHACA) introduced ITHACA and their SDI and WebGIS applications to the Plenary. He started out by introducing ITHACA as a research centre and non-profit association founded by the Politecnico di Torino to support and help develop the WFP SDI, providing applications for flood early warning, drought early warning, and early impact analysis, as well as developing WebGIS applications.

However the main focus is the SDI project, where datasets are being collected and placed in their database, and WFP personnel are working on editing the common geodatabase. Mr. Pasquali demonstrated how streaming and propagation of the data is being done from one database to another replica. He also showcased their Open Source architecture and their "Django" framework, a high level Python Web Framework that encourages rapid development and clean pragmatic design.

Discussion

- ❖ Following the three presentations, Mr. Suha Ulgen expressed his satisfaction with the promising UNSDI-related initiatives. He reckoned that the UNSDI as it has been conceptualized by the Working Group will probably be a combination of thematic SDIs (humanitarian, health, environment, etc.). Thematic SDIs are on the rise now, and it is the task of UNGIWG to bring them together in a framework that would rightly accommodate them.
- ❖ Mr. Chris Nicholas then commented that UNGIWG could help steer these thematic areas within the OGC framework as well, where both open source and vendor products are going to have some influence.
- ❖ Mr. Carlos Veloso elaborated on the WFP SDI, indicating that the information will be available to other partners as soon as they finish with the testing period. He indicated that the data has been developed to cater to the needs of WFP, taking into consideration their presence in 80 countries around the world, and fulfilling their urge to act with speed in terms of logistics and communications, with the final objective of saving time, lives and dollars.

19.4 ESRI Presentation

Mr. Marten Hogeweg (ESRI) gave another demonstration that fit well under the overall thematic umbrella of the previous presentations. The idea was to allow the end user to consume services without needing a broker in-between, but rather working through data feeds received from different sources. The user will be able to find data that is being served through other service sites, and search for it without having to actually go through the other website.

He also introduced a polygon selection system tool developed to provide up-to-date and useful imagery and other types of data sources. Users can digitize polygons, and reach back into a catalogue that would tell them where they can find imagery for the particular area that they have selected. They can download the polygon, upload the SHP files into the Geoeye catalogue service for example, where it then searches its catalogue of commercial satellite imagery and presents the users with a set of imagery that they can download or purchase and acquire.

20. Other Plenary Presentations

20.1 Globalstar Presentation

Mr. Trevor Burns gave a presentation on Globalstar services to demonstrate how satellite communications in all its different forms can integrate into what UNGIWG members try to achieve in their everyday projects. Mr. Burns firstly introduced the participants to Globalstar, describing it as the largest provider of Mobile Satellite Services, with 42 satellites orbiting the Earth. They provide satellite voice services and satellite phones that are already used by a number of United Nations agencies in their work in the field.

Globalstar also provides data modems and personal tracking units, which allow staff to communicate from remote environments back to the command centre or headquarters. Globalstar is working on ensuring coverage over most of the populated world, and has already started working with UNHCR, FEMA, and the United Nations Envoy to Iraq, among others.
The personal tracker acquires the GPS position from a commercial satellite, transmits its position, status and information to the Globalstar commercial satellites and then to their data centre, delivering it into all of the clients' different systems or applications, in any possible format. Hence, people in the field can now communicate their well-being or track missing shipments owing it to the remote telecommunication, equipment tracking and monitoring, and personal communication and tracking capacities provided that Globalstar is offering.

20.2 Satellite Imagery System Contract for the UN Secretariat and Vendor Updates: MDA Geospatial Services

Mr. Clay Atcheson (MacDonald Dettwiler) presented on the MDA Geospatial Services, providing a brief overview on what they have done in the past year. The contract that commenced in October 2008 has been renewed, allowing them to work with the United Nations to support peacekeeping missions, and cater to the tremendous surge in satellite imagery consumers. Mr. Atcheson mentioned however that many are still not aware of the contract's existence and the facility of purchasing data in a timely manner for the support of any mission.

He also mentioned that new sensors have been added to the contract, such as Worldview-1, Radarsat 2, Geoeye 1, and that it has become much easier to acquire data, overcoming the biggest challenge of tasking satellites in a timely manner, by providing more opportunities in that regard.

20.3 Presentation on the Global Address Coding System (The Munich Orientation Convention)

The Global Address Coding System presentation was the last in line for the day. It dealt with a new universal addressing scheme proposed and was presented by Mr. Henrique Köhler (Munich Orientation Convention). Titled "United Orientations", this natural orientation system targeted people and audiences who were not very conversant with the classical orientation and geographical coordinate systems. The new invention made use of a vertical pointing method consisting of inserting symbols of existing surfaces and then doing a search by applying logical orientation. It also introduced some new orientation tools such as the WatchRose, a metric alternative to longitude and latitude and Natural Cartography which consists of logical positioning codes.

Copenhagen Climate Change Conference participation
Following the presentations, the Plenary briefly discussed the possibility of participating in the Copenhagen Climate Change Conference in December as UNGIWG, and arranging for certain organizations to present on issues related to climate change. It was also decided to set up a small group to deal with the way forward regarding the GIVAS issue.

21. Report to the Plenary on the UNSDI side meeting

During the morning session of the last Plenary day, Mr. David Stevens briefed the participants on the outcome of an afternoon side meeting that was held on Tuesday 20th October, covering the way forward with the UNSDI efforts:

- The Co-chairs decided to implement the framework document and build upon what has been agreed in the previous year, rather than revisit the whole framework. It was also crucial to use the internal resources of UNGIWG and tie each and every member organization's work plan to the future of the UNSDI.
- It also became evident that there exists an opportunity to bring the group together in terms of a test bed and showcase, into one system with one specific purpose. For that reason, a time-bound Task Group needs to exist, to demonstrate the institutional and technical readiness of member Agencies and Programmes to publish discoverable pilot- and open web services as a basis for an ongoing multipurpose infrastructure useable by the entire United Nations family. The outcome of this effort will provide reference implementation for developing use cases for the ClimDEV / ACPC work for example, as well as a version zero of the implementation of the envisioned UNSDI

geospatial data repository. Therefore this showcase will be an opportunity to bring together all UNSDI elements that the group has available so far.

- It was also decided to work also with the CITO and involve him in the process from the very beginning.
- Concerning the potential hosting institution for an implementation team, the group reckoned that the opportunity to figure out where it would be best to host the UNSDI would only come after developing the aforementioned case study.

21.1 Discussion and vote on the transition to Special Interest Groups

Following Mr. Stevens' briefing, Mr. Lorant Czaran reminded the Plenary that they have had the following 5 Task Groups as of the last meeting:

- Core Datasets
- Remote Sensing
- Map Production Guidelines
- Interoperability
- GNSS.

He then called for a discussion on the way forward with these Task Groups and whether they should all migrate to Special Interest Groups. The suggestions came out as follows:

- For Interoperability, it was suggested that it would not be very feasible to have a 1-member Special Interest Group.
- There existed a clear need to transform the Core Datasets and the Remote Sensing Task Groups into Special Interest Groups.
- As for the Map Production Guidelines TG, it could also be transformed into one, if the members and lead of that Group were in agreement. It was suggested to ask Ms. Akiko Harayama for some thoughts on the issue and clarification on how to proceed from that point.
- The GNSS Task Group was suspended during the last meeting, but they should be given the choice to transition to a Special Interest Group.
- It was also suggested to send a letter to the membership asking if they would like to move forward with that decision.

Discussion

- ❖ Mr. John Latham expressed his consent to transition the Core Datasets Task Group, provided that it will not be used as a basis for initiating new or pilot projects simply because it happens to be their responsibility. There needs to be some guidelines on how the SIG should operate, what constitutes a pilot project, and how it is time bound, to ensure that operational rules and standards prevail. It is very crucial that the Core Datasets Task Group continues to interact as a community through the Special Interest Group process. However the group needs to be more engaging in that process and

have an appropriate data model behind them. He also suggested that they place the previous documentation about what constitutes a core dataset into the SIG process, so that they could have a clear definition of what is meant by core datasets.

❖ Mr. David Stevens reminded the Plenary of what is meant by a Special Interest Group and an ad-hoc time bound Task Group. As he had explained before, the Special Interest Group resembles a community of practice, consisting of United Nations members and associates who maintain a virtual exchange of information and discussions, and thus strengthen the United Nations network. However, when it becomes evident that one needs more specific tasks addressed, then a specific Task Group can be proposed, with a clear definition of what has to be produced.

❖ Mr. Kyong-Soo Eom stressed the importance of having this new form of interaction, as it has been virtually absent among Task Groups ever since they came to exist. He also insisted that all members should participate in revising the results or outcomes of a certain Task Group or Special Interest Group before having them submitted more formally.

❖ Mr. Lorant Czaran stated that any concrete tasks coming out of a Special Interest Group would automatically lead to the formation of a Task Group, created to achieve concrete tasks in concrete time frames. It will all pass through an acceptance process and will be discussed through the relevant mailing list. So, he suggested the following:

Actions:

- The plenary should agree to transition the three aforementioned Task Groups into Special Interest Groups, and call upon them to create their mailing lists, invite other members to join, and set up of their own work plan and any suggestions on specific tasks that they envision carrying out in the next coming years.
- A message should also be sent out to invite the UNGIWG mailing list members to join the SIG lists.
- Communication mechanisms should be used to enhance discussions and allow everyone to catch up on the latest updates. Mr. Czaran reminded the group that wikis exist for the Task Groups to use, and that the UNGIWG mailing list itself has an archive which allows the members to read messages dating back to 2002.

Further suggestions:

❖ Mr. Ulgen reminded the participants that the initiative to produce a global addressing scheme is high on the agenda, and suggested that a number of the UNGIWG members come together to form a Special Interest Group to tackle that issue.

❖ Mr. Czaran suggested following up on the talks with ISO/TC 211 about taking the SALB coding scheme into the ISO standardization process.

❖ Mr. Latham stressed the need to harmonize work on the hydrology issue, especially with the availability of the new Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) elevation data sets, and suggested creating a SIG or

TG on the coastlines data layer. He also pointed out that getting some help from Google might fast-track their work, and wondered whether Google are capable of releasing high resolutions imagery to the United Nation for disaster management purposes. He announced that FAO and Google have a separate independent collaboration on H1N1, and emphasized the importance of having a consistent position with Google and Open Street Map and maintain an equitable playing field so that all private sector organizations and foundations will also have equal access to data from the United Nations.

❖ Mr. Czaran stated that the Secretariat has been investing efforts in getting NGA to release the coastlines data set that they produced at 100,000, and requested that NGA generalizes it at 1 million scale too to fit the UN international boundaries dataset. In terms of high resolution imagery, the Secretariat has been revisiting Google, and trying to identify some mechanism that would allow the shared purchase of the imagery, given the serious restrictions in terms of licensing and no direct access to their imagery.

21.2 Discussion on Possible Testbeds and Interoperability Experiments (OGC)

Mr. Czaran informed the participants on the difference between an Interoperability Experiment and a Testbed:

- An interoperability *experiment* is carried out with a limited number of OGC members supporting it and has a relatively reduced cost. The United Nations can also find sponsors to cover these necessary costs. It does not normally last longer than 6 months, and usually produces a quick outcome, whereby the OGC membership tries to come up with a quick solution to the set of requirements and problems that it has been given.
- A *testbed* is a more engaging and longer process, which usually involves multiple OGC members and can have an initial distributed cost of over 100,000 US Dollars. It can last up to a year and a half, but the results are often well worth the wait.

Hence, Mr Czaran suggested the following:

- It would be easy to reach agreement on an interoperability experiment, and called upon UNGIWG to aim to request OGC at their December Plenary to support one specific issue and identify a sponsor for it too.
- After being accepted as OGC members at the elevated level, UNGIWG will have to also commit to hosting an OGC Plenary meeting in Bonn, Vienna, or Addis Ababa.

22. Closed Session for United Nations agencies

A closed meeting was scheduled following the lunch break on the third day to discuss, amend, and then decide or vote on the new Special Interest Group transition as well as other pending issues such as the UNSDI, and the CITO involvement with that process.

22.1 On the Special Interest Groups

The Special Interest Groups ToR was primarily read out to the Plenary, after which some technical and wording alterations to the text were suggested and implemented on the spot. The final draft was then unanimously voted upon and approved by the participating agencies. Mr. David Stevens then suggested that they review the effectiveness of the Special Interest Group structure in the next Plenary.

22.2 On the UNSDI

Mr. Suha Ulgen brought the UNSDI issue up again, and suggested the following:

- Talking about the UNSDI framework instead of the UNSDI project from now on.
- Creation of a time bound Task Group to work on revising the framework within the three upcoming months. Mr. Ulgen added that the candidates for the TG membership should coordinate with their leading agencies to ensure that the work gets done.

22.3 Further Suggestions and Actions

The participants also decided on the following actions:

- Talking to the CITO and clarifying what are his expectations as well as requesting his involvement and support.
- Co-drafting a note to the CITO expressing gratitude for his support letter to UNGIWG
- Consider sending a note of gratitude and a brief update on recent UNGIWG activities to the previous Co-chairs.
- Send note to membership on FAO distance learning initiative to take place from 26 to30 October, as it happens to be a UNSDI deliverable as well.

22.4 Recommendations for the UNGIWG Plenary 2010

- Venue: The possible choices were narrowed down to Beirut, Lebanon or Addis Ababa, Ethiopia, or a North-African UNECA-affiliated Centre as alternative.
- As for the theme of the next plenary, both the "Humanitarian" and "Security" ones were suggested as possible options.
- Many participants expressed their wish to have more closed sessions in the upcoming Plenary.
- All agreed that more education and research institutes should be invited to the 2010 Plenary

Annex 1: Meeting Agenda

Day 1: Monday, 19 October 2009	
Time	**Activity**
08:30- 09:30	Registration
09:30- 10:15	Plenary Meeting Moderator: Mr. David Stevens • Welcome by Co-chairs • Logistics, information on the week's events • Report from the UNGIWG Secretariat • Discussion, approval of Plenary agenda
10:15- 10:45	Coffee break
10:45 - 12:15	Plenary Meeting Moderator: Dozie Ezigbalike • Reports from Task Groups and following discussions. Task Groups: Core Datasets (International Boundaries and Coastlines, Administrative Boundaries), Remote Sensing, Map Production Guidelines, Interoperability. • Discussion of proposed new SIG vs. TG structure
12:15 - 13:20	Lunch break • OpenStreetMap presentation – optional.
13:20 - 14:45	Plenary Meeting Moderator: Mr. Lorant Czaran • Statements from guests or newly-joining agencies (UNFCCC, IFAD...)

	• Progress report on UNSDI development/ bottom-up approach (Co-chairs and Secretariat)
14:45 - 15:10	Coffee break
15:10 - 17:30	Plenary Meeting (Video connection to UNHQ) Moderator: Lorant Czaran • Opening Statement by the CITO • Introduction to GIVAS by EOSG and following discussion • Proposed Committee on Experts on Geoinformation (UNCE-GGIM) – Introduction and discussion on UNGIWG involvement • UNECA's ACPC/CLIMDEV as a UNSDI element implementation • Update on UN Secretariat Geospatial Activities (UN Cartographic Section) • Discussion and wrap-up

Day 2: Tuesday, 20 October 2009	
Time	**Activity**
09:00 - 09:30	Registration continues
09.00 - 10.45	Plenary Session • Open Geospatial Consortium membership and updates • Debate on guidelines and criteria for UNGIWG/UNSDI process (including projects approach & way forward)
10:45 - 11:15	Group Photo / Coffee break
11:15 - 12:30	Plenary UNSDI debate continues

Time	Activity
	• TG transition to SIG • What can the SIGs do in support of UNSDI and GIVAS?
12:30 - 13:45	Lunch break Google Mapmaker Party at 12:40, optional attendance

13:45 - 15:30	Plenary
	Moderator: Dozie Ezigbalike
	• Demonstrations on interoperability and web services in UNGIWG: towards a United Nations environment and security data platform as part of UNSDI, and supporting GIVAS.
	   o United Nations interoperability demo (UNEP leads)
	   o Global Risk Data Platform (UNEP/GRID - UNHCR)
	   o Open Source WebGIS at ITHACA
	   o Other case studies.
	• Introduction to Globalstar
	• Satellite Imagery System Contract and vendor updates (UNCS, MDA, others)
	• A short introduction to the Global Address Coding System idea.

15:30 - 15:50	Coffee break
15:50 - 17:30	Plenary Meeting (phone connection to UNHQ if needed) Moderator: Lorant Czaran • Discussion on Kiosk presence at COP15 • Proposed ways to support the GIVAS initiative, Task group, document for sharing with EOSG and for discussion drafted

Day 3: Wednesday, 21 October 2009	
Time	**Activity**
8:30 - 11:00	Registration for the UN-SPIDER Workshop
09:00 - 10:20	UNGIWG Plenary continues Moderator: Lorant Czaran

	• SIG way forward and plans for 2009-2010 • Tasks identifications, identify partner support for tasks • Second review of Action List • OGC Interoperability Experiment / Testbed ideas • Discussion
10:20 - 10:45	Coffee break

10:45 - 12:50	Joint Meeting with UN-SPIDER Workshop participants:
	
	 Moderator: Joerg Szarzynski, UN-SPIDER Bonn Office
	
	 Welcome notes:
	
	   - Ambassador Rüdiger LÜDEKING, permanent Mission of Germany at the United Nations, Vienna
	
	   - Ambassador Neville GERTZE, Permanent Mission of Namibia, Berlin, Germany
	
	   - Margitta WÜLKER-MIRBACH, German Federal Ministry of Economics and Technology, Bonn
	
	   - Johann-Dietrich WÖRNER, Chairman of the Executive Board, German Aerospace Center (DLR)
	
	   - David Stevens, Programme Coordinator, UN-SPIDER/UNOOSA, Vienna, Austria
	
	 Keynote Plenary Presentations
	
	   - Luc GNACADJA, Executive Director- United Nations Convention to Combat Desertification, Bonn, Germany
	
	   - Debarati GUHA-SAPIR, Executive Director- Centre for Research on the Epidemiology of Disasters, Brussels
	
	 Introductory presentation on the UN-SPIDER Programme

	- Lorant CZARAN, Head, UN-SPIDER Bonn Office
13:00 - 14:00	Lunch break Lunch Presentation (ESRI Professional Services and GeoPortal team): SDI, Infrastructure or Platform
14:00 - 15:15	Plenary Meeting (Closed Meeting) (2705) Moderator: Lorant Czaran • UNSDI - way forward (TAG, Board, Institutional Home issues), linkages with other relevant Offices such as OICT; • Governance process, nominations • Discussion
15:15 - 15:40	Coffee break
15:40 - 16:45	Closing Plenary Meeting (Closed Meeting) (2705) Moderator: Lorant Czaran • Decide on venue for the next UNGIWG Plenary • Any Other Business • Closure of Meeting
18:30 - 21:00	Reception at the Old City Hall (hosted by DLR and the Mayor of Bonn)

Annex 2: List of Participants

Last Name	First Name	Organization	E-mail
Abdalla	Jihad	UNICEF	jabdalla@unicef.org
Abushady	Ashraf	CTBTO	ashraf.abushady@ctbto.org
Alspach	Andrew	OCHA	alspach@un.org
Atcheson	Charles Clay	MacDonald Dettwiler	catcheson@mdacorporation.com
Backhaus	Robert	UNOOSA	Robert.backhaus@unoosa.org
Bellissemo	Dan Anthony	ERDAS	dan.bellissemo@erdas.com
Bray	Helen	United Nations	bray@un.org
Burns	Trevor	Globalstar	Trevor.Burns@globalstar.com
Busza	Eva	UN EOSG/GIVAS	busza@un.org
Chaveroux	Julien	Universite Paris VIII	j.chaveroux@gmail.com
Claire	Inderjit	RMSI Private Limited	inderjit.claire@rmsi.com
Criloux	Guillaume	UNDFS/UNCS	criloux@un.org
Czaran	Lorant	UNOOSA	czaran@unoosa.org
De Vos	Sophie Marie	IFAD	s.devos@ifad.org
Eom	Kyoung-Soo	UNDFS/UNCS	eom@un.org
Epler	Natalie	UNOOSA	Natalie.epler@unoosa.org
Ephrem	Beyene	eSystems Africa	comegmariam@yahoo.com
Ezigbalike	Chukwudozie	UNECA	Ezigbalike.uneca@un.org
Farrell	David	CIMH	dfarrell@cimh.edu.bb
Gebremichael	Berhane	UNDP	berhane.gebremichael@undp.org
Gennai	Emanuele	ESRI	egennai@esri.com
Giuliani	Gregory	UNEP	giuliani@grid.unep.ch
Grose	Kevin	UNFCCC	kgrose@unfccc.int
Halilu	Ahmad Shaba	National Space Research Development Agency, Nigeria	drhalilu@yahoo.com

Harayama	Akiko	UNOCHA	harayama@un.org
Hascicek	Yusuf	UNOOSA	yhascicek@turksat.tr
Hogeweg	Marten	ESRI	mhogeweg@esri.com
Hossini	Wilma	UNU-EHS	hossini@ehs.unu.edu
Ikhuoria	Isi	RECTAS	edrectas@rectas.org
Jedemann	Max	UNU-EHS	jedemann@ehs.unu.edu
James	Godstime	National Space Research and Development Agency, Nigeria	godstime@presidency.com
Kasdano	Michele	UNOOSA	Michele.Kasdano@unoosa.org
Kinfemichael	Meron	UNECA	mmichael@uneca.org
King	Gary	Globalstar	gary.king@globalstar.com
Köhler	Henrique	Munich Orientation Convention	volksnav@volksnav.de
Kucinskas	Algis	ENSAPLV	algis.kucinskas@noos.fr
Latham	John Stephenson	UNFAO	john.latham@fao.org
Lienlaf	Ivan	SNIT – Chile	ivanlienlaf@gmail.com
Linsoussi	Come	University of Bonn	Agossa.come@linsoussi.org
Nicholas	Chris	UNOOSA	Chris.nicholas@unoosa.org
Opadeyi	Jacob	University of the West Indies	Jacob.opadeyi@sta.uwi.edu
Orand	Yvon	UNHCR	orand@unhcr.org
Payne	Karen	University of Georgia/ ITOS	kpayne@uga.edu
Pfund	Jessica	Google	jpfund@google.com
Remetey-Fülöpp	Gabor	HUNAGI	gabor.remetey@gmail.com
Richard	Jean Philippe	UNEP	jean-philippe.richard@grid.unep.ch
Roberson	Kimberly	UNHCR	roberson@unhcr.org
Sakulski	Dusan	UNU-CUSA	sakulski@ehs.unu.edu
Sartori	Giorgio	UNWFP	giorgio.sartori@wfp.org
Schafer	Zazie	UN EOSG/GIVAS	schafer@un.org

Selg	Fabian	University of Koln	mailfabs@gmail.com
Smith	Nate	USAID/OFDA	nsmith@ofda.gov
Stevens	David	UNOOSA	david.stevens@unoosa.org
Stumpf	Peter	UNOOSA	peter.stumpf@unoosa.org
Sudhoff	Sandra	OpenStreetMap (CartONG)	S_sudhoff@cartong.org
Szarzynski	Joerg	UNOOSA	Joerg.szarzynski@unoosa.org
Terborgh	Carmelle	ESRI	cterborgh@esri.com
Tomuta	Elena	UNCTBTO	elena.tomuta@ctbto.org
Tomaszewski	Brian	Rochester Institute of Technology, New York	bmtski@rit.edu
Trakas	Athina	OGC	atrakas@opengeospatial.org
Ulgen	Suha	UNOICT	ulgen@un.org
Van Damme	Olivier	UNITAR	olivier.vandamme@unitar.org
Veloso	Carlos	UNWFP	carlos.veloso@wfp.org
Venema	Jan Cees	UNSDI-NCO	jcvenema@unsdi.nl
Wilson	Mick	UNEP	mick.wilson@unep.org
Witt	Yannick	UNU-EHS	witt@ehs.unu.edu
Wytzisk	Andreas	52 North, Inc.	wytzisk@52north.org
Zaccheddu	Pier- Giorgio	BKG- Germany	pier.zaccheddu@bkg.bund.de

Annex 3: List of Acronyms

ACPC: African Climate Policy Centre
ASTER – GDEM: Advanced Spaceborne Thermal Emission and Reflection Radiometer-Global Digital Elevation Model
CartONG: Humanitarian Mapping NGO
CEB: UN System Chief Executives Board
CEOS: Committee on Earth Observation Satellites
CITO: Chief Information Technology Officer
CODIST-1: Committee on Development Information, Science and Technology
COPUOS: Committee on the Peaceful Uses of Outer Space
CTBTO: Comprehensive Nuclear-Test-Ban Treaty Organization
DPKO: Department of Peacekeeping Operations
DRC: Democratic Republic of Congo
ECE: UN Economic Commission for Europe
ECOSOC: United Nations Economic and Social Council
ESRI: Environmental Systems Research Institute
FAO: Food and Agriculture Organization of the United Nations
FEMA: Federal Emergency Management Agency
FIVIMS: Food Insecurity and Vulnerability Information and Mapping Systems.
GA: General Assembly
GAUL: Global Administrative Units Layers
GEO: Group on Earth Observations
GIS: Geographic Information System
GIST: Geospatial Information Support Team
GIVAS: Global Impact and Vulnerability Alert System
GMES: Global Monitoring for Environment and Security
GNSS: Global Navigation Satellite Systems
GPS: Global Positioning System
GSDI: Global Spatial Data Infrastructure (Association)
HOT: Humanitarian OpenStreetMap Team
HUNAGI: Hungarian National Geographic Information Association
IAM: Inter-Agency Meeting
ICA: International Cartographic Association
ICT: Information and Communication Technologies
INSPIRE: Infrastructure for Spatial Information in the European Community
IT: Information & Technology
ITU: International Telecommunication Union
ISO: International Organization for Standardization
ISO/TC: International Organization for Standardization Technical Committee
ITHACA: Information Technology for Humanitarian Assistance Cooperation and Action
KML: Keyhole Markup Language
MDA: MacDonald Dettwiler and Associates
MoU: Memorandum of Understanding
NGA: (U.S.) National Geospatial Agency
NGO: Non Governmental Organization
NMA: National Mapping Agency
OFDA: The Office of U.S. Foreign Disaster Assistance
OGC: Open Geospatial Consortium

OSM: Open Street Map
RS: Remote Sensing
SALB: Second Administrative Level Boundaries
SDI: Spatial Data Infrastructure
SIG: Special Interest Group
TG: Task Group
ToR: Terms of Reference
UN: United Nations
UNDFS/UNCS: United Nations Department of Field Support/ Cartographic Section
UNDPKO: United Nations Department of Peace Keeping Operations
UNDP: United Nations Development Programme
UNECA: United Nations Economic Commission for Africa
UNECE: United Nations Economic Commission for Europe
UNEP: United Nations Environment Programme
UNEP/ DEWA: United Nations Environment Programme/ Division of Early Warning and Assessment
UNEP- GRID: United Nations Environment Programme - Global Resource Information Database
UNFCCC: United Nations Framework Convention on Climate Change
UNGIWG: United Nations Geographic Information Working Group
UNHCR: United Nations High Commissioner for Refugees
UNICEF: The United Nations Children's Fund
UNITAR: United Nations Institute for Training and Research
UNOCHA: United Nations Office for the Coordination of Humanitarian Affairs
UNODC: United Nations Office on Drugs and Crime
UNOG: United Nations Office in Geneva
UNOICT: United Nations Office of Information and Communication Technology
UNOLA: United Nations Office of Legal Affairs
UNOOSA: United Nations Office for Outer Space Affairs
UNOPS: United Nations Office for Project Services
UNITAR/UNOSAT: UNITAR Operational Satellite Applications Programme
UNOV: United Nations Office at Vienna
USAID: United States Agency for International Development
UNSD: United Nations Statistics Division
UNSDI: United Nations Spatial Data Infrastructure
UN-SPIDER: United Nations Platform for Space-based Information for Disaster Management and Emergency Response
UNU: United Nations University
UNU-CUSA: United Nations University - Cooperation Unit for Southern Africa
VHR: Very High Resolution
WFP: (United Nations) World Food Programme

WHO: (United Nations) World Health Organization