



United Nations

Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific

Bangkok, 18-22 September 2006

Report of the Conference

Department of Economic and Social Affairs

**Seventeenth United Nations
Regional Cartographic
Conference for Asia and the
Pacific**

Bangkok, 18-22 September 2006

Report of the Conference



United Nations • New York, 2006

Note

Symbols of United Nations documents are composed of capital letters combined with figures.

The proceedings of the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific, held at Bangkok from 18 to 22 September 2006, are being issued in one volume as the report of the Conference.

The proceedings of the previous United Nations regional cartographic conferences for Asia and the Pacific were issued under the following symbols and sales codes: E/CONF.18/6 (Sales No. 55.I.29) and E/CONF.18/7 (Sales No. 56.I.23) for the First Conference; E/CONF.25/3 (Sales No. 59.I.9) and E/CONF.25/4 (Sales No. 61.I.8) for the Second Conference; E/CONF.36/2 (Sales No. 62.I.14) and E/CONF.36/3 (Sales No. 64.I.17) for the Third Conference; E/CONF.50/4 (Sales No. 65.I.16) and E/CONF.50/5 (Sales No. 66.I.3) for the Fourth Conference; E/CONF.52/4 (Sales No. E.68.I.2) and E/CONF.52/5 (Sales No. E.68.I.14) for the Fifth Conference; E/CONF.57/2 (Sales No. E.71.I.15) and E/CONF.57/3 (Sales No. E.72.I.20) for the Sixth Conference; E/CONF.62/3 (Sales No. E.74.I.7) and E/CONF.62/4 (Sales No. E.74.I.25) for the Seventh Conference; E/CONF.68/3 (Sales No. E.77.I.12) and E/CONF.68/3/Add.1 (Sales No. E.78.I.8) for the Eighth Conference; E/CONF.72/4 (Sales No. E.81.I.2) and E/CONF.72/4/Add.1 (Sales No. E/F.83.I.14) for the Ninth Conference; E/CONF.75/5 (Sales No. E.83.I.18) and E/CONF.75/5/Add.1 (Sales No. E/F.86.I.11) for the Tenth Conference; E/CONF.78/4 (Sales No. E.87.I.13) and E/CONF.78/4/Add.1 (Sales No. E/F.88.I.18) for the Eleventh Conference; E/CONF.83/3 (Sales No. E.91.I.42) and E/CONF.83/3/Add.1 (Sales No. E/F.94.I.11) for the Twelfth Conference; E/CONF.87/3 (Sales No. E.94.I.19) for the Thirteenth Conference; E/CONF.89/5 (Sales No. E.97.I.12) for the Fourteenth Conference; E/CONF.92/1 (Sales No. E.01.I.2) for the Fifteenth Conference; and E/CONF.95/7 (Sales No. E.04.I.11) for the Sixteenth Conference.

E/CONF.97/7

United Nations publication

Sales No. 06.I.39

ISBN 92-1-101139-6

Copyright © United Nations 2006

All rights reserved

Printed by the United Nations Reproduction Section, New York

Contents

	<i>Page</i>
I. Organization of the Conference	1
A. Introduction	1
B. Opening of the Conference.	1
C. Attendance.	1
D. Election of officers	1
E. Objectives of the Conference.	1
F. Adoption of the rules of procedure	2
G. Adoption of the agenda.	2
H. Establishment of technical committees and election of chairmen of each committee.	2
I. Organization of work	3
J. Credentials.	3
K. Documentation	3
II. Plenary session	4
III. Technical Committee I: Geographical Information System (GIS), remote sensing and geodesy for disaster management.	13
IV. Technical Committee II: Spatial data infrastructure capacity-building and their development in Asia and the Pacific.	14
V. Technical Committee III: Geospatial fundamental data, including their collection, management and dissemination	16
VI. Resolutions adopted by the Conference.	17
A. List of resolutions	17
B. Texts of resolutions.	17
Annexes	
I. Provisional agenda for the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific.	24
II. List of documents	26
III. List of participants.	28

Chapter I

Organization of the Conference

A. Introduction

1. The Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific was held at the United Nations Conference Centre of the Economic and Social Commission for Asia and the Pacific in Bangkok from 18 to 22 September 2006. The Conference was held in accordance with Economic and Social Council decision 2004/304 of 23 July 2004.

B. Opening of the Conference

2. Mr. Peter Holland (Australia), temporary President, opened the Conference and made welcoming remarks.

3. Opening statements were made by Mr. Paul Cheung, Director of the United Nations Statistics Division, on behalf of the Secretary-General and Mr. Pathom Yamkate, Deputy Permanent Secretary, Ministry of Science and Technology of Thailand.

C. Attendance

4. The Conference was attended by 184 representatives of 30 countries and 10 specialized agencies and international scientific organizations, as well as 41 invited speakers. The list of participants is contained in document E/CONF.97/INF.2.

D. Election of officers

5. At its 1st plenary meeting, on 18 September 2006, the Conference elected the following officers by acclamation:

President:

Mr. Peter Holland (Australia)

Vice-President:

Mr. Li Weisen (China)

Rapporteur:

Mr. Yaguchi Akira (Japan)

E. Objectives of the Conference

6. At the 1st plenary meeting, on 18 September 2006, the representative of the United Nations Statistics Division made a statement on the objectives of the Conference.

F. Adoption of the rules of procedure

7. At its 1st plenary meeting, on 18 September 2006, the Conference adopted the provisional rules of procedure for the session, as contained in document E/CONF.97/2.

G. Adoption of the agenda

8. At its 1st plenary meeting, on 18 September 2006, following the statement by the Secretary, the Conference adopted its provisional agenda as contained in document E/CONF.97/1, as corrected. The agenda was as follows:

1. Opening of the Conference.
2. Election of the President and other officers of the Conference.
3. Adoption of the agenda and other organizational matters:
 - (a) Consideration and adoption of the rules of procedure;
 - (b) Adoption of the agenda;
 - (c) Establishment of technical committees and election of chairmen and other officers;
 - (d) Organization of Conference work;
 - (e) Credentials of representatives to the Conference.
4. Objectives of the Conference.
5. Report of the Permanent Committee on Geographical Information System (GIS) Infrastructure for Asia and the Pacific.
6. Conference reports:
 - (a) Reports on the implementation of resolutions of the United Nations Regional Cartographic Conferences for Asia and the Pacific;
 - (b) Country reports.
7. Invited papers.
8. Reports of the technical committees of the Conference.
9. Review of the achievements of the Conference.
10. Provisional agenda for the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific.
11. Adoption of the report of the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific.

H. Establishment of technical committees and election of chairmen of each committee

9. At its 1st plenary meeting, on 18 September 2006, the Conference established the following three technical committees and elected their chairmen:

Committee I: Geographical Information System (GIS), remote sensing and geodesy for disaster management

Chairman: Mr. Sohn Bong-Gyun (Republic of Korea)

Committee II: Spatial data infrastructure capacity-building and their development in Asia and the Pacific

Chairman: General Gopal Rao (India)

Committee III: Geospatial fundamental data, including their collection, management and dissemination

Chairman: Mr. Rudolf Matindas (Indonesia)

10. At its 5th plenary meeting, on 21 September, the Conference elected Professor Bas Kok (Netherlands) to replace General Gopal Rao (India).

I. Organization of work

11. At its 1st plenary meeting, on 18 September 2006, the Conference approved its proposed organization of work as contained in document E/CONF.97/1.

J. Credentials

12. At the 7th plenary meeting, on 22 September 2006, the President of the Conference reported that, in accordance with rule 3 of the rules of procedure of the Conference, the credentials of representatives had been reviewed and found to be in order.

K. Documentation

13. A list of the documents submitted to the Conference appears as annex II to the present report.

Chapter II

Plenary session

1. At its 1st plenary meeting, on 18 September 2006, the Conference began its consideration of agenda item 5 (Report of the Permanent Committee on Geographical Information System (GIS) Infrastructure for Asia and the Pacific (PCGIAP). Peter Holland, temporary President of the Conference, made opening remarks. Following the introductory statements (see chap. I, sect. B) and the election of the President and other officers (see chap. I, sect. D), Mr. Holland, in his capacity as President of PCGIAP, presented a summary of the activities of the Committee during the past three years (2003-2006) (E/CONF.97/3), highlighting the meetings, membership, representation and various contributions that the Committee had made to the spatial data infrastructure (SDI) community in general. The presentation affirmed the Committee's dedication and resolve to continue contributing to and working within the framework of the United Nations Regional Cartographic Conferences for Asia and the Pacific and sincere thanks were extended to all the parties concerned who had made possible the Committee's excellent outcomes of the past three years.

2. At the same meeting, Pengfei Cheng, Chair of the PCGIAP Working Group on Regional Geodesy (WG1), introduced three major projects under way that had been specifically developed in response to the resolutions adopted by the sixteenth United Nations Regional Cartographic Conference for Asia and the Pacific, held in Okinawa, Japan, from 14 to 18 July 2003, namely, the Asia Pacific Regional Geodetic Project (APRGP), the Geodetic adjustment techniques and datum change parameters project, and the Regional geoid and absolute gravity project, each of which had contributed to the establishment of the overall regional geodetic network. Recognizing the importance of the studying and monitoring of earthquakes and tsunami and the sharing of tide gauge data, the report called for strengthened APRGP campaigns and broader participation by the member nations (E/CONF.97/3/Add.1).

3. Also at the 1st plenary meeting, Gholam Reza Fallahi, Chair of the PCGIAP Working Group on Regional Fundamental Data (WG2), presented an overview of activities undertaken during the three-year period 2003-2006 (E/CONF.97/3/Add.2). Two of the most significant undertakings were the Pan-Asia Pacific framework data sets project and the Asia Pacific Spatial Data Infrastructure (APSDI) project, for which separate task forces had been established for specific activities. A pilot project for an initial APSDI clearinghouse portal was started and a workshop to promote establishment of geo-spatial clearing-house nodes had been organized. A special project for development of seamless data sets for the tsunami-affected area had also been launched.

4. At the same meeting, Ian Williamson, Chair of the PCGIAP Working Group on Cadastre (WG3), reported on key activities undertaken since the sixteenth United Nations Regional Cartographic Conference for Asia and the Pacific held in 2003 (E/CONF.97/3/Add.3). In response to the resolution calling for development of a cadastral template and a better understanding of marine environment administration, workplans had been developed and implemented, specifically corresponding to the three components, Cadastre template, Marine cadastre, and Integration of built (cadastral) and natural (topographic) environmental data sets within national SDI

initiatives. As part of the third project, an international workshop was to be held within the framework of the seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific in Bangkok.

5. Also at the 1st plenary meeting, Woo Sug Cho, Vice-Chair of the PCGIAP Working Group on Institutional Strengthening (WG4), presented a summary of a short course for Committee members held in October 2005 in Hyderabad, India (E/CONF.97/3/Add.4). With the aim of creating and raising awareness among the stakeholders on the role and functioning of national spatial data infrastructure, the course had covered various topics including the concept of SDI with demonstrations, and encompassed technical as well as legal and financial aspects. It also provided opportunities for visiting leading technical and educative centres in India.

6. At the same meeting, in consideration of agenda item 6 (Conference reports), Amor Laaribi, United Nations Statistics Division, presented a report (E/CONF.97/4) jointly prepared by the United Nations Statistics Division and PCGIAP, on the follow-up actions taken on each one of the five resolutions adopted at the Sixteenth United Nations Regional Cartographic Conference. Relevant actions had been taken by the PCGIAP Working Groups and plans were implemented as necessary.

7. At its 2nd plenary meeting, on 18 September 2006, the Conference began its consideration of agenda item 7 (Invited papers). Craig Williams, of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), made a keynote speech and presented his paper entitled "Data preparedness and emergency response: no good decisions without good information" (E/CONF.97/6/IP.1). The critically important data in the emergency relief community including United Nations agencies and non-governmental organizations were presented as a basis for accurate understanding of urgent needs and making the right decisions for prompt action. The paper discussed so-called p-codes (p-codes), or gazetteers of the settlements and administrative units of a country or affected region, which had proved relevant in the recent disasters of Pakistan and Indonesia.

8. At the same meeting, Milan Konecny, President of the International Cartographic Association (ICA), presented a paper entitled "Capacity-building for geo-information development: highlighting issues and influencing factors" (E/CONF.97/6/IP.2). The paper, stressing the need for and importance of capacity-building, summarized basic approaches, difficulties facing developing countries and the forms of support provided by the Association. Key factors for geo-information development are policy, resources and technology, which should be addressed through strengthened cooperation of all the sectors and players concerned.

9. Also at the 2nd plenary meeting, Stig Enemark, Vice-President of the International Federation of Surveyors (FIG), presented a paper entitled "Supporting institutional development in land administration" (E/CONF.97/6/IP.3). Land administration was introduced as a process and a framework indispensable for the achievement of sustainable development. In this regard, the need for capacity-building and institutional development was highlighted, including creation and adoption of a comprehensive policy and a holistic approach to land administration.

10. At the same meeting, Bas Kok, Chair of the Legal and Economic Working Group of the Global Spatial Data Infrastructure Association (GSDI), presented a paper entitled "Supporting capacity development for global spatial data

infrastructures” (E/CONF.97/6/IP.4). An overview of the Association’s activities was presented, highlighting its capacity-building efforts, including its Grant Programme, and various successful projects undertaken through the Legal and Economic Working Group. With a view to addressing the increasingly important issue of natural disasters in the Asia and the Pacific region, a joint GSDI/PCGIAP workplan has been proposed for 2008 in the region.

11. Also at the 2nd plenary meeting, D. R. Fraser Taylor, Chairperson of the International Steering Committee for Global Mapping (ISCGM), presented a paper entitled “Global mapping and disaster management: the importance of participation and partnership in the creation of global map” (E/CONF.97/6/IP.5). The paper introduced the concept, progress and vision of the project, and called for further participation and partnership. It also identified the potential value and contribution of Global Map in the field of disaster management and territorial information linkage.

12. At the same meeting, John C. Trinder, First Vice-President of the International Society for Photogrammetry and Remote Sensing (ISPRS), presented a paper entitled “State-of-the-art in spatial information for disaster management” (E/CONF.97/6/IP.6). The paper demonstrated the increasingly significant role of spatial data for monitoring and damage assessment of an earthquake, a catastrophe that has hit the region repeatedly, and discussed how photogrammetry, remote sensing and spatial information sciences can best contribute to disaster management and to recovery works based on international collaboration and coordination.

13. At its 3rd plenary meeting, on 19 September 2006, the Conference continued its consideration of the item. Olaf Magnus Østensen, Chairman of ISO/TC 211, presented a paper entitled “The contribution of international standards to spatial data infrastructure and disaster management” (E/CONF.97/6/IP.7). The paper described interoperability as a key to any effective international operation including environmental and disaster management, for which standards were imperative. It referred to the formalized SDI proposed directive of the European Union (EU) known as INSPIRE (Infrastructure for spatial information in the Community) and presenting a way forward. The paper called for further standardization efforts at all levels.

14. At the same meeting, Bebas Purnawan, PCGIAP Working Group 2 Taskforce Coordinator, presented a paper entitled “Towards the creation of a regional dataset for the tsunami-affected area” (E/CONF.97/6/IP.8). As a response to the unprecedented disaster caused by the earthquake and tsunami in the region, PCGIAP Working Group 2 had launched a project entailing the development of a seamless data set for the affected area in collaboration with the Second Administrative Level Boundaries (SALB) project and the International Steering Committee for Global Mapping (ISCGM), which was to be continued so as to eventually cover the entire PCGIAP region. The paper considered its process, specifications, participating countries and progress, as well as future efforts.

15. Also at the 3rd plenary meeting, Altaf Musani (World Health Organization (WHO)), presented a paper entitled “Launch of the WHO/EMRO Atlas of Disaster Risk: Volume 1 — Exposure to Natural Hazards” (E/CONF.97/6/IP.9). In an effort to achieve disaster preparedness based on GIS, the WHO Regional Office for the Eastern Mediterranean (WHO/EMRO) had initiated a project of developing an Atlas of Disaster Risk, which would be published in three volumes. The paper

summarized its first volume entitled “Exposure to natural hazards”, which featured five hazards: floods, landslides, heat index, windstorms and earthquakes. Potential links with other initiatives were suggested for further data-sharing among the stakeholders.

16. At the same meeting, Kemueli Masikerei, Chair of the PCGIAP Pacific Islands Group, presented a paper entitled “Issues from the Pacific islands on disaster preparedness” (E/CONF.97/6/IP.10). The paper outlined natural disasters in the Pacific islands, and mitigation/preparedness efforts pursued at all levels ranging from the national to the global. The paper listed issues to be addressed, which included prioritization, project management, data collection, training, exercises, planning and legislation, and community awareness/education, among others.

17. Also at the 3rd plenary meeting, Luis Alegria, Vice-President of the Permanent Committee for the Spatial Data Infrastructure of the Americas (PC-IDEA), presented a paper entitled “PC-IDEA and the regional and the national spatial data infrastructures in the Americas” (E/CONF.97/6/IP.11). The paper gave an overview of PC-IDEA activities during the nine years following its establishment in 1997 pursuant to a resolution adopted by the United Nations Regional Cartographic Conference for the Americas. Forthcoming events, including a workshop entitled “Spatial data infrastructure in terms of the needs of Latin America” and the Ninth International Conference of the Global Geo-Spatial Data Infrastructure (GSDI 9), to be held in November 2006 in Santiago, were also mentioned.

18. At the same meeting, Ian Williamson, University of Melbourne, Australia, presented a paper entitled “Spatially enabling Governments: a new vision for spatial information” (E/CONF.97/6/IP.12). The paper introduced a new concept of SDI that was evolving towards *iLand*, a system where integrated, interactive spatial information was available on the Internet, replacing *eLand* administration as part of *eGovernment*. It is an innovative solution with respect to addressing the emerging need of modern Governments for more accurate, comprehensive and integrated information. It has the ability to transform the way government and private sector organizations do business.

19. Also at the 3rd plenary meeting, Chaiwat Promthong of the Royal Thai Survey Department presented a paper entitled “Deformation of geodetic network in Thailand due to crustal movement” (E/CONF.97/6/IP.13). The earthquake of 26 December 2004 off the coast of North Sumatra had resulted in large co- and post-seismic motions throughout South-East Asia, which caused considerable deformation of the geodetic network in Thailand. Displacements have been determined through Global Positioning System (GPS) campaigns and efforts continue to update the deformed geodetic network.

20. At the same meeting, Shigeru Matsuzaka, Geographical Survey Institute of Japan, presented a paper entitled “GPS network experience in Japan and its usefulness for disaster management” (E/CONF.97/6/IP.14). The paper reviewed the development of the GPS Earth Observation Network System (GEONET), a dense nationwide GPS network of Japan consisting of more than 1,220 stations, and its contributions in the field of disaster management. A new monitoring project aiming at disaster prevention and mitigation has been proposed for the Asia and the Pacific region.

21. Also at the 3rd plenary meeting, Samad Abu, Department of Survey and Mapping, Malaysia, presented a paper entitled “2004 Sumatra earthquake and tsunami: rate of positions displacement experienced by Malaysia” (E/CONF.97/6/IP.15). Deformation caused by the two Sumatran earthquakes of December 2004 and March 2005 had been significant. The coordinates’ time series of the Malaysian permanent stations from 1999 to 2006 were analysed to determine the relative change in time and implications for the future surveying and mapping activities.

22. At its 4th plenary meeting, on 19 September, the Conference continued consideration of agenda item 7. Chaerul Hafidin, National Coordination Agency for Surveys and Mapping of Indonesia, presented a paper entitled “Crustal deformation monitoring in Indonesia: current status and future plan” (E/CONF.97/6/IP.16). The paper stressed the importance of continuous monitoring and realization of short-term earthquake and tsunami prediction for the Asian and Indian Ocean regions and zones of active seismicity and volcanic activities. Locations of continuous GPS observation were proposed for the collection of precise crustal deformation data.

23. At the same meeting, Bill Shepherd, Environmental Systems Research Institute (ESRI), presented a paper entitled “The Role of GIS services, data and portals in disaster management: planning, response and recovery” (E/CONF.97/6/IP.17). The paper described how and why GIS was effective in disaster management at all stages from planning to response and recovery. Examples of an extensive and successful application of GIS, as in response to wildfire and Hurricane Katrina, were introduced. It was noted that lessons learned were essential for further development.

24. Also at the 4th plenary meeting, Kazuo Ohta, Japan Aerospace Exploration Agency (JAXA), presented a paper entitled “ALOS mission and related activities in JAXA to support disaster management and sustainable development” (E/CONF.97/6/IP.18). The paper described the launch of the Advanced Land Observing Satellite (ALOS) called Daichi on 24 January 2006, including details of its objectives, notably cartography and disaster management, mission instruments, the data distribution concept and other data services. The paper also focused on its unique capabilities which could support disaster management efforts at all levels.

25. At the same meeting, Steeve Ebener, United Nations WHO Second Administrative Level Boundaries data set project (SALB), presented a paper entitled “Data preparedness in Asia: where we are with SALB 10 months after the last PCGIAP Executive Board Meeting?” (E/CONF.97/6/IP.19). The project had been initiated to provide free access to historic change tables and GIS format maps for each United Nations Member State, which were vitally important at the initial stage of any relief effort. Efforts continue towards achieving complete coverage for the Asia and Pacific region with support from PCGIAP.

26. Also, at the 4th meeting, Kartlos Edilashvili, World Agency of Planetary Monitoring and Earthquake Risk Reduction (WAPMERR), presented a paper entitled “Disaster reduction experience in developing countries: some concrete examples” (E/CONF.97/6/IP.20). The work of WAPMERR involves reducing risk due to disaster and rescue planning after disasters. To achieve these goals, WAPMERR adopted a method of real-time loss estimation, a message regarding which had been posted in real time after the Sumatra earthquake in March 2005. The importance of unified and standardized data development was stressed.

27. At the same meeting, Wu Guoxiang, Economic and Social Commission for Asia and the Pacific (ESCAP), presented a paper entitled “An overview of UNESCAP’s space applications programme and activities on disaster reduction” (E/CONF.97/6/IP.21). Efforts for space technology promotion and networking at regional level are under way through the Regional Space Applications Programme (RESAP). Building upon past experiences, it will continue to develop and implement various regional cooperative mechanisms on the use of space technology for disaster reduction.

28. Also at the 4th meeting, Jesper Moller, United Nations Children’s Fund (UNICEF), presented a paper entitled “Geospatial applications in support for disaster management and sustainable development” (E/CONF.97/6/IP.22). DevInfo, a general-purpose database system, was introduced with a focus on its application before and after an emergency and on its features in support of the Millennium Development Goals-based information management. The importance of standardization and harmonization was also highlighted in terms of providing timely and quality data under difficult circumstances.

29. At the same meeting, Elizabeth Seaman, Ordnance Survey and Map Action, presented a paper entitled “The dynamic role of location information and technology in a fragile world” (E/CONF.97/6/IP.23). The paper considered the information required in the various stages of the disaster management cycle, and the roles of national mapping organizations and emergency mapping agencies, focusing on an example of the work of Map Action, a United Kingdom-based international non-governmental organization. A new European research project entitled “Orchestra”, which sought to create information architecture to support risk management, was introduced.

30. Owing to the closure of the United Nations Conference Centre at ESCAP, no meeting was held on Wednesday, 20 September 2006.

31. At its 5th plenary meeting, on 21 September, the Conference, owing to the large number of papers to be considered under item 7, agreed to hear the presentations thereof in two parallel workshops: Workshop 1 on “The use of geo-information for mitigating large-scale disaster and attaining sustainable development” and Workshop 2 on “The integration of built and natural environment data sets within national SDI initiatives”.

32. At Workshop 1 (PCGIAP-ICA-International Steering Committee for Global Mapping (ISCGM)), on 21 September, David Stevens, United Nations Office for Outer Space Affairs (UNOOSA), presented a paper entitled “Establishing the United Nations Platform for Space-based Information for Disaster Management and Emergency Response” (E/CONF.97/6/IP.24). In respect of implementing the Platform, the paper pointed out the existence of shortages in the current situation and emphasized the role of national mapping agencies. It was noted that: (a) there were limited mechanisms in place for making data rapidly available; (b) in order to facilitate data sharing, the relation between specific thematic databases and NSDI should be strengthened, while taking into account existing international data standards; (c) a web portal should be developed so that users could identify where data or networks of excellence existed and where support could be found; (d) costs of satellite imagery should be reduced, particularly at the time of disaster; and (e) standards for information extraction from satellite imagery should be developed.

33. At the same Workshop, John Trinder, ISPRS, presented a paper entitled "Determining sustainability indicators by remote sensing" (E/CONF.97/6/IP.26). In order to monitor and evaluate the progress of sustainable development, there was a need to develop early warning indicators. Remote sensing technology could be used to produce some of the indicators for biomass changes, land-use and land cover changes and agricultural crop estimation. The Canadian experience in indicator-making was introduced. The role of national mapping organizations in establishing data policy for copyright, protection of personal information and classified data in the context of the special data used as indicators was emphasized.

34. Also at Workshop 1, Naoki Minamiguchi, Food and Agriculture Organization of the United Nations (FAO) Regional Office for Asia and the Pacific, presented a paper entitled "The use of geospatial data for food insecurity and agricultural drought monitoring and assessment by the FAO GIEWS and Asia FIVIMS" (E/CONF.97/6/IP.27). The Global Information and Early Warning System (GIEWS), developed by FAO, has been operating for nearly 20 years, utilizing the imagery of a low-resolution and high-frequency orbiting satellite. Based on the experience of GIEWS, the Food Insecurity and Vulnerability Information and Mapping System (FIVIMS) had been launched. Its application to the Asian region in particular was explained along with remote sensing technology such as the Cold Cloud Duration (CCD), providing a proxy for rainfall, and the Normalized Difference Vegetation Index (NDVI), estimating crop production.

35. At the same Workshop, Wang Liang, Chinese Academy of Surveying and Mapping, presented a paper entitled "On the establishment and applications of natural disaster spatial information systems for government agencies" (E/CONF.97/6/IP.30). The paper discussed the natural disaster spatial information system established by the Chinese Government as a stable foundation for ensuring provision in time of comprehensive disaster information and facilitating informed decision-making. Core data of this system consist of topographic maps, digital elevation models, geographical names, satellite imagery and 1:50,000 raster maps (only of important areas). The system, with its improved quality and functions, has served well the central Government's purpose.

36. Also at Workshop 1, Vladimir S. Tikunov, Vice-President of the International Cartographic Association (ICA), presented a paper entitled "Geo-information system for developing scenarios of global demographic processes (Sustainable development of Russia: case study)" (E/CONF.97/6/IP.31). Emphasis was placed on the need for atlas-type geo-information, which could be used in producing indicators for sustainable development. Demographic indicators are of special importance, as population size and growth are critical variables. The paper introduced an innovative series of dynamic demographic maps that presented the various scenarios in an interesting and informative manner.

37. At the same Workshop, six more papers were presented on development and use of geo-information. The presenters were Saranpong Pramsane, Royal Thai Survey Department (E/CONF.97/6/IP.32), Muhammad Shafiqul Islam, Survey of Bangladesh (E/CONF.97/6/IP.33), Gholamreza Fallahi, National Cartographic Centre of the Islamic Republic of Iran (E/CONF.97/6/IP.34), Hiromichi Maruyama, Geographical Survey Institute of Japan (E/CONF.97/6/IP.35), Milan Konecny, ICA (E/CONF.97/6/IP.36) and Bebas Purnawan, National Coordinating Agency for Surveys and Mapping of Indonesia (BAKOSURTANAL) (E/CONF.97/6/IP.37).

Status, strategies, institutional issues, activities, regional/global partnerships, and the role of national mapping organizations involved in development and use of geo-information for disaster management were emphasized by the representatives of the five national mapping organizations, while ICA reiterated the need for and role of mobile and adaptable cartography and geo-information in early warning and crisis management.

38. At the parallel meeting of Workshop 2, on 21 September, Ian Williamson, Chair of PCGIAP WG3, and Abbas Rajabifard, Research Coordinator of WG3, Presented a paper entitled “Integration of built and natural environmental data sets within national SDI initiatives” (E/CONF.97/6/IP.38 and IP.39). The paper described the background, plans, outcomes and methodology of the project, whose major aim was defined as the development of a model and framework and associated tools for data integration. The Workshop was organized to investigate data integration in the region by identifying problems, similarities and difference in all aspects of the undertaking among the nations involved.

39. At the same Workshop, Hossein Mohammadi, University of Melbourne, presented a paper entitled “The development of a framework and associated tools for the integration of multi-sourced spatial data sets” (E/CONF.97/6/IP.44). The paper presented a research framework for investigating and better understanding issues of integration of data from diverse sources, which created serious inconsistencies at all levels ranging from the institutional to the policy level. The framework and tools provided an environment in which use of data could achieve its maximum potential.

40. Also at Workshop 2, reports on SDI and data integration activities were presented for seven countries: Denmark, by Stig Enemark, Aalborg University (E/CONF.97/6/IP.40); Japan, by Kazuhiko Akeno, Geographical Survey Institute (E/CONF.97/6/IP.41); Australia, by Andrew Binns, Melbourne University (E/CONF.97/6/IP.42); Malaysia, by Ahmad Fauzi bin Nordin, Department of Survey and Mapping, Malaysia (E/CONF.97/6/IP.43); Brunei Darussalam, by Hj Mohd Jamil bin Hj Mohd Ali, Survey Department of Brunei Darussalam (E/CONF.97/6/IP.45); Indonesia, by M. Arief Syafi'i, BAKOSURTANAL (E/CONF.97/6/IP.46); and New Zealand, by Stephen D. Walsh, Land Information New Zealand (E/CONF.97/6/IP.47). Each country report identified the issues both technical and non-technical to be addressed, and challenges affecting the jurisdiction as well as current status and future plans of the integration. The Philippines and Singapore also introduced their respective efforts based on an integration template developed as part of the international case studies by PCGIAP WG3.

41. Following the adjournment of the 6th plenary meeting, on 21 September, Technical Committees I, II and III met in parallel sessions in order to consider various issues and work on the texts of draft resolutions to be submitted to the Conference plenary for consideration and adoption.

42. At the 7th meeting, on 22 September, the Conference considered agenda item 8 (Reports of the technical committees of the Conference). John Trinder, Vice-Chairman of Committee I; Bas Kok (Netherlands), Chairman of Committee II; and Rudolf Matindas (Indonesia), Chairman of Committee III, presented oral reports on the work of their Committees and introduced draft resolutions, which were

circulated in informal papers. The Conference agreed to include the reports of the three Committees in the final report of the Conference (see chaps. III, IV and V).

43. At the same meeting, the Conference discussed draft proposals recommended by the Committees and adopted five draft resolutions (see chap. VI, resolutions 1-5).

44. At the 8th and last meeting of the Conference, on 22 September, the discussion of the remaining draft proposals continued in the plenary. The two remaining draft resolutions were adopted by consensus (see chap. VI, resolutions 6 and 7).

45. At the same meeting, the representative of the Russian Federation made a statement concerning the upcoming Twenty-third International Cartographic Conference, to be held in Moscow in 2007.

46. Also at the 8th meeting, the Conference, in reviewing the achievements of the Conference under agenda item 9, heard a statement by John Trinder (ISPRS).

47. At the same meeting, following the statement by the representative of Australia, the Conference adopted the provisional agenda for the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific, which was circulated in an informal paper (see annex I).

48. Also at the 8th meeting, under agenda item 11, the Conference adopted the draft report, circulated in an informal paper, as presented by the Rapporteur, Mr. Yaguchi Akira (Japan), and authorized the Rapporteur to finalize it.

49. At the same meeting, the President of the Conference, Peter Holland, made a statement and declared the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific closed.

Chapter III

Technical Committee I: Geographical Information System (GIS), remote sensing and geodesy for disaster management

At its 7th plenary meeting, on 22 September 2006, the Conference considered agenda item 8 (Reports of the technical committees of the Conference). John Trinder (ISPRS), Vice-Chairman of Technical Committee I, presented an oral report on the work of Committee I (Geographical Information System (GIS), remote sensing and geodesy for disaster management). In its work, Committee I, had done the following:

(a) Considered a presentation made by Gottfried Konecny (Germany) describing substantial contributions to disaster management by Germany. The contributions especially included the provision of large sets of data after the tsunami in December 2004;

(b) Also considered views on recommendations for the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific (PCGIAP) presented by John Manning (Australia);

(c) Discussed the following points:

(i) Continuous GPS monitoring for crustal motion and earthquake prediction;

(ii) Remote sensing applications in cooperation with the United Nations Environment Programme (UNEP) Global Environment Outlook (GEO) and the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (SPIDER);

(iii) The Russian/Chinese earthquake prediction technique;

(iv) Sea level change due to global warming impacting on the Asian and Pacific region;

(v) A solution with respect to receiving remote sensing data in the Pacific islands region;

(vi) Web-based spatial data for disaster management;

(vii) Capacity-building for GIS, remote sensing and geodesy;

(viii) Advanced Land Observing Satellite (ALOS) data;

(d) Considered draft resolutions for adoption by the Conference that would provide guidance to Working Group 1 between the Seventeenth and Eighteenth United Nations Regional Cartographic Conferences for Asia and the Pacific.

Chapter IV

Technical Committee II: Spatial data infrastructure capacity-building and their development in Asia and the Pacific

1. At the 7th plenary meeting, on 22 September 2006, Bas Kok (Netherlands), Chair of Technical Committee II, presented an oral report on the work of Technical Committee II (spatial data infrastructure capacity-building and their development in Asia and the Pacific). The work of Committee II covered:

(a) Issues concerning SDI capacity-building and their development in Asia and the Pacific and the formulation of resolutions that would be presented to the Conference for adoption;

(b) Issues that went beyond capacity-building and had not been taken up by other technical committees. Indeed, Committee II discussed a resolution that might have encroached on other areas and decided that this could be streamlined in the plenary discussion if there were overlaps;

(c) Three proposed draft resolutions that emanated from the discussions; two from PCGIAP Working Group 3 (on Cadastre) and one involving the work of PCGIAP Working Group 1 (on regional Geodesy) and Working Group 2 (on regional fundamental Data). The resolutions were the result of the prior consideration and deliberations of those persons who proposed them. They were not the outcome of spur-of-the-moment or impromptu thinking and had their basis as well as their rationale. They were accepted at a Committee II meeting and were then put forward for consideration by the plenary.

2. The first resolution concerned marine administration. In this regard:

(a) The resolution was in fact the outcome of the PCGIAP Working Group 3 International Workshop on Marine Administration held in Malaysia in 2004;

(b) Committee II acknowledged that the cadastre did not stop at the water's edge and that there was a continuum from land to sea or marine spaces. Hence, it was important to include the development of a marine administration component as part of a seamless SDI that covers both land and marine jurisdictions. This formed the essence of the first recommendation;

(c) Apart from that, Committee II believed that there was still work to be performed by Working Group 3 in regard to the marine cadastre and hence felt that Working Group 3 should continue investigations on marine cadastre, marine SDI and the spatial dimension of marine administration and ocean governance. Considering that there was still much more information on marine cadastral practice that should be contributed by Member States, Committee II also agreed that Member States should continue to be encouraged to complete the Marine Cadastre Template, which had been published on the website address, given in the proposed resolution.

3. In respect of the second resolution:

(a) The resolution reflected the emphasis placed by Committee II on the need for PCGIAP to move forward and embrace the idea of serving the interests of Governments with regard to their carrying out their responsibility for ensuring sustainable development. In this regard, emphasis should be put on the need for SDI

to support spatially enabled government, in order that it might receive appropriate support from the government itself;

(b) The resolution took into consideration previous important decisions taken at various forums which included the Sixteenth United Nations Regional Cartographic Conference for Asia and the Pacific and the Eighth United Nations Regional Cartographic Conference for the Americas where it had been acknowledged that there was a need for natural and built environmental data sets to be integrated, apart from the difficulties and advantages of the said integration work;

(c) Committee II agreed that the outcomes of the Seventeenth United Nations Regional Cartographic Conference workshop on data integration should be taken into consideration so that they could serve as a basis for formulating the recommendations contained in the resolution. Hence, the two outcomes of the workshop were noted, namely (i) that integration was an important component in the delivery of solutions to real-world problems; and (ii) that Spatial data infrastructures served as a platform supporting spatially enabled government.

4. In the first recommendation that followed Committee II deliberations, member nations were encouraged to develop a good understanding of data integration and related issues. With such an understanding, the countries would be able to pursue the work of establishing the needed platform for supporting spatially enabled government and designing the Spatial data infrastructures required to further support spatially enabled government.

5. Committee II also recommended that PCGIAP should help member nations to build or re-engineer their Spatial data infrastructures and that this should be carried out through examining the concept and related issues.

6. The third proposed resolution discussed in Committee II concerned disaster management. It was considered that:

(a) The disasters that had occurred in the Asia and the Pacific region required aid and support from various organizations including data that would help in decision-making apart from planning relief efforts;

(b) The proposed resolution should therefore concern the need to encourage collaboration between all concerned so that the required data sets would be ready and made readily available for disaster management;

(c) This would include collaboration between Working Groups 1 and 2 of PCGIAP as well as with ISO/TC 211 (International Organization for Standardization/Technical Committee 211), the International Steering Committee for Global Mapping (ISCGM) and WHO. Apart from that, Committee II also agreed that PCGIAP should encourage initiatives to build capacity in data development.

Chapter V

Technical Committee III: Geospatial fundamental data, including their collection, management and dissemination

1. At the 7th plenary meeting, on 22 September 2006, Rudolf Matindas (Indonesia), Chair of Technical Committee III (Geospatial fundamental data, including their collection, management and dissemination), presented an oral report on the work of Committee III. The work of Committee III covered the following topics:

(a) Encouraging the support of member States in the Asia and the Pacific region for the Global Map and United Nations Geographic Information Working Group Second Administrative Level Boundaries (SALB) projects, by the ongoing provision of geospatial data and related information as required;

(b) Further capitalizing on the ongoing development of geographical information and a spatial data infrastructure in Timor-Leste;

(c) Calling on all Governments of the Asia and the Pacific region countries to continue to support national geographical information and databases;

(d) The need to appropriately manage the volume of remote sensing materials currently being retrieved by national mapping agencies and other geo-data-related organizations.

2. After brief discussions of each topic, three draft resolutions were discussed and submitted for consideration and action by the plenary.

Chapter VI

Resolutions adopted by the Conference

A. List of resolutions

1. Mitigating large-scale disaster
2. Regional geodesy
3. Marine administration
4. Spatial data infrastructure support
5. Fundamental data
6. Timor-Leste spatial data infrastructure
7. Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific

B. Texts of resolutions

1. Mitigating large-scale disaster

The Conference,

Bearing in mind that there is a need for more effective and efficient use of geo-information by decision makers for disaster monitoring, assessment and management, and for the realization of improved environmental and sustainable development decision-making, and considering the challenges of the lack of adequate resources facing national mapping offices,

Recommends that:

(a) The Permanent Committee on Geographical Information System (GIS) Infrastructure for Asia and the Pacific, national mapping offices and organizations involved in the development of geo-information take the following actions:

- (i) Collect and provide geo-information on affected areas;
- (ii) Apply best practices in the development of appropriate geo-databases and applications;
- (iii) Use remote sensing imagery with other data sets in regional applications;
- (iv) Coordinate their activities in promoting the wider use of geo-information for disaster monitoring and management with the International Steering Committee for Global Mapping and United Nations activities, in particular including those on the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (SPIDER) initiated by the United Nations Office for Outer Space Affairs, accessing the Advanced Land Observing Satellite and new remote sensing imagery sources, investigating geospatial portal technology on mobile platforms and advising countries on the availability and use of web-based spatial data for disaster management;

(v) Consider acquiring additional funds through donor agencies for disaster preparedness, mitigation and management, especially in support of the activities of the national mapping offices;

(b) Organizations involved in the development of geo-information, such as the International Steering Committee for Global Mapping, collaborate with regional and global initiatives, such as various United Nations programmes and the Group on Earth Observations, which are users of geo-information, and promote the use of geo-information;

(c) Organizations active in the geo-information field, such as the International Cartographic Association, the International Society for Photogrammetry and Remote Sensing, and other members of the Joint Board of Geospatial Information Societies, promote geo-information to decision makers and raise their awareness of its benefits;

(d) The Permanent Committee consider appropriate mechanisms to enable representatives from developing countries to attend a workshop on monitoring earthquake and tsunami hazards at the time of the planned Permanent Committee-Global Spatial Data Infrastructure Association meeting to be held in Fiji in 2008.

2. Regional geodesy

The Conference,

Recognizing the importance of establishing a homogeneous geodetic network as the basis for the Asia and the Pacific regional spatial data infrastructure as well as for geodetic activities concerning disaster management of the region,

Noting the progress made by the Permanent Committee on Geographical Information System (GIS) Infrastructure for Asia and the Pacific Working Group on Regional Geodesy in establishing a precise regional geodetic framework as the base layer in a regional spatial infrastructure,

Considering that the Global Earth Observation System of Systems ten-year implementation plan, endorsed by more than sixty countries at the Third Earth Observation Summit in Brussels in 2005, is in progress,

Considering also the frequent outbreaks of natural disasters caused by, in particular, earthquakes, volcanic eruptions and tsunamis in the region,

Realizing the need to establish a geodetic framework in the Asia and the Pacific region to contribute to the disaster prevention/mitigation programme through associated technology transfer and information exchange,

Bearing in mind the limited financial resources and the limited availability of equipment and expertise in observation and processing of acquired geodetic data,

Recommends that the regional geodetic framework continue to be maintained and enhanced through integration of national geodetic networks and through appropriate linkages to global reference frames over the next three years through the following activities:

(a) Enhancing the regional geodetic infrastructure in order that it may contribute to monitoring, warning and post-event reconstructions through cooperative observations of crustal deformation and plate motion, and information

exchange, including tide gauge networks and placement of new Global Positioning System key sites;

(b) Encouraging the transfer of Global Positioning System technology to nations in need through annual campaign observations, and the development and sharing of analysis techniques in the geodesy workshop activities mentioned below;

(c) Promoting the application of new geodetic adjustment techniques and datum change transformation parameters for regional spatial data integration and for geo-referencing cadastral and statistical information;

(d) Interacting with International Association of Geodesy Commissions 1 and 2 on the status of the regional geodetic reference frames and geoid determination using absolute gravity, and satellite, airborne and terrestrial gravity;

(e) Reviewing the status of geodetic networks in individual countries and upgrading Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific website information;

(f) Supporting the expansion of continuous Global Positioning System installations in areas of earthquake and tsunami hazards and strongly encouraging nations to make such data readily available on a weekly basis for shared scientific study and warning systems in relation to tectonic events.

3. Marine administration

The Conference,

Noting that the majority of national spatial data infrastructures and cadastral initiatives are related to only the land environment and that most countries in the region have an extensive marine jurisdiction and related administrative responsibilities,

Noting also the requirements and obligations imposed upon countries under the United Nations Convention on the Law of the Sea¹ with respect to supporting the management of their marine environment,

Acknowledging that the marine environment and particularly the coastal zone are critically important for food production and sustainable development within Asia and especially the Pacific island countries,

Recognizing the outcomes of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 3 International Workshop on Marine Administration, held in Malaysia in 2004, which recommended that a marine cadastre be defined as a management tool that spatially describes, visualizes and realizes formally and informally defined boundaries and associated rights, restrictions and responsibilities in the marine environment as a data layer in a marine spatial data infrastructure, allowing them to be more effectively identified, administered and accessed,

Recommends that:

(a) All countries in the Asia-Pacific region with a marine jurisdiction and administrative responsibilities be encouraged to include the development of a

¹ United Nations, *Treaty Series*, vol. 1833, No. 31363.

marine administration component (including a marine cadastral component) as part of a seamless spatial data infrastructure that covers both land and marine jurisdictions so as to ensure a continuum across the coastal zone;

(b) The Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific through Working Group 3 continue investigations regarding marine cadastre, marine spatial data infrastructure, and the spatial dimension of marine administration and ocean governance, and particularly encourage member nations to complete the Marine Cadastre Template available from www.marineadministration.org.

4. Spatial data infrastructure support

The Conference,

Noting the outcomes of Agenda 21² and the Bogor Declaration of the United Nations Interregional Meeting of Experts on the Cadastre held in Bogor, Indonesia, from 18 to 22 March 1996,³ that promote the importance of efficient and effective national spatial data infrastructures and land administration systems as key factors in support of sustainable development and environmental management,

Noting also the resolutions and deliberations of the Sixteenth United Nations Regional Cartographic Conference for Asia and the Pacific and the Eighth United Nations Regional Cartographic Conference for the Americas on the need to integrate land administration, cadastre and land registration functions with topographic mapping programmes within the context of a wider national strategy for spatial data infrastructures,

Mindful of the benefits and difficulties of integrating natural and built (including legal, cadastral, economic and demographic data) environmental data sets with a view to providing an understanding of the real world and supporting decision-making for sustainable development,

Recognizing the outcomes of the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific workshop on integration of natural and built environmental data which concluded that, first, such integration was an important component in the delivery of technical, economic and social solutions to real-world problems in government, business and the community at large; and second, that spatial data infrastructures served as an enabling platform supporting spatially enabled government in supporting strategies such as e-government,

Recommends that:

- (a) Member nations develop a better understanding and pursue the principles of:
 - (i) The integration of natural and built environmental data sets in support of sustainable development;

² *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

³ Text available from www.fig.net.

(ii) A spatially enabled platform to support the integration of natural and built environmental data by exploring related conceptual, institutional, policy, legal and technical issues;

(iii) Designing spatial data infrastructures to support spatially enabled government;

(b) The Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific, through Working Group 3 for the period 2006-2009, assist member nations in building or re-engineering their spatial data infrastructures to support the role of spatially enabling government by examining the concept and associated institutional, technical, policy, legal, socio-economic and capacity issues.

5. Fundamental data

The Conference,

Recalling that the Asia and the Pacific region is a potential area for disasters, for example, earthquakes and tsunami,

Recalling also the importance of generating a seamless data set covering the entire Asia and the Pacific region,

Noting the significant interest expressed by the participating countries and the results obtained so far in the context of the pilot project for the generation of a set of seamless data layers for the tsunami-affected area,

Noting also the strong support for the pilot project emanating from the eleventh meeting of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific, held in Bali, Indonesia, from 18 to 21 May 2005, and the meeting of the Executive Board of the Permanent Committee, held in Bandar Seri Begawan, Brunei Darussalam, on 26 November 2005,

Welcoming the efforts of the Global Map project and those of the United Nations Geographic Information Working Group (UNGIWG) Second Administrative Level Boundaries (SALB) project in the generation of global seamless data sets including those for Asia and the Pacific,

Recognizing that the availability of fundamental data sets, such as national administrative divisions, are crucial for the analysis and management of socio-economic phenomena,

Recognizing also that the Government of the Russian Federation adopted, in August 2006, the concept of spatial data collection and development,

Recommends that:

(a) Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 2 on Regional Fundamental Data, jointly with Permanent Committee Working Group 1 on Regional Geodesy, extend and improve the above-mentioned pilot project in collaboration with the International Steering Committee for Global Mapping, the United Nations Geographic Information Working Group (UNGIWG) Second Administrative Level Boundaries (SALB) project and other, similar initiatives;

(b) The Permanent Committee, through Working Group 4 on institutional strengthening in collaboration with Working Group 2, encourage efforts in capacity-building in data development, in particular the training programmes provided by the Geographical Survey Institute funded by the Japan International Cooperation Agency;

(c) The Permanent Committee encourages close collaboration between its Working Group 2 with International Organization for Standardization Technical Committee 211 in the development of an International Organization for Standardization metadata standard profile for Asia and the Pacific;

(d) Countries in the Asia and the Pacific region, particularly through their national mapping organizations and notably with the help of the Permanent Committee, support and participate actively in the Second Administrative Level Boundaries project and the Global Map project by providing the necessary data and information required by those projects, and take full advantage of participating in the Global Map and SALB projects for capacity-building so as to help establish national and regional spatial data infrastructures in the region;

(e) Countries in the Asia and the Pacific region continue their efforts to create and support national geo-information databases and spatial data infrastructures and undertake this work in the most efficient and effective way by avoiding duplication of effort.

6. Timor-Leste spatial data infrastructure

The Conference,

Recognizing the positive and separate efforts of the Government of Timor-Leste and the Department of Peacekeeping Operations of the United Nations Secretariat to develop geographical information and a spatial data infrastructure in Timor-Leste,

Recognizing also the efforts of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific to establish a regional spatial data infrastructure and multi-country data sets, and the efforts undertaken internationally to improve the geographical information knowledge base in Timor-Leste,

Recommends that the Government of Timor-Leste, member countries of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific, the Department of Peacekeeping Operations of the United Nations Secretariat and other international entities, collaborate, as appropriate, in developing this spatial data infrastructure so as to maximize its value.

7. Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific

The Conference,

Noting the progress made in the work on the spatial data infrastructure, at the national, regional and global levels, by States Members of the United Nations,

Noting also the essential role played therein both by the present United Nations Regional Cartographic Conference for Asia and the Pacific and by the

Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific,

Noting further that the Permanent Committee was established in 1994 pursuant to resolution 16 adopted by the Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific, held in Beijing,⁴

Noting that the Permanent Committee has expressed the wish to hold its meeting in conjunction with the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific,

Recognizing the necessity of continuing this important work,

Recommends to the Economic and Social Council that the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific be convened in 2009.

⁴ *Thirteenth United Nations Regional Cartographic Conference for Asia and the Pacific, Beijing, 9-18 May 1994*, vol. I, *Report of the Conference* (United Nations publication, Sales No. E.94.I.19), chap. VI, sect. B.

Annex I

Provisional agenda for the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific

1. Opening of the Conference.
2. Election of the President and other officers of the Conference.
3. Adoption of the agenda and other organizational matters:
 - (a) Adoption of the rules of procedure;
Documentation
Provisional rules of procedure of the Conference
 - (b) Adoption of the agenda and organization of work of the Conference;
Documentation
Annotated provisional agenda and proposed organization of work
 - (c) Establishment of technical committees and election of the Chairperson of each committee;
 - (d) Credentials of representatives to the Conference.
4. Objectives of the Conference.
5. Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific.
Documentation
Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific on its activities since the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific
6. Report on the implementation of resolutions adopted at the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific.
Documentation
Report on the implementation of resolutions adopted at the Seventeenth United Nations Regional Cartographic Conference for Asia and the Pacific
7. Conference papers:
 - (a) Country reports;
 - (b) Invited papers on achievements and developments in geographical information in addressing national, regional and global issues including:
 - (i) Strategy, policy, economic and institutional issues;
 - (ii) Spatial data infrastructure and spatially enabled Government;
 - (iii) Geospatial data collection, management and dissemination;
 - (iv) Best practices and applications;
 - (v) Disaster management.

8. Reports of the technical committees of the Conference.
9. Provisional agenda for the Nineteenth United Nations Regional Cartographic Conference for Asia and the Pacific.

Documentation

Provisional agenda for the Nineteenth United Nations Regional Cartographic Conference for Asia and the Pacific

10. Adoption of the report of the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific.

Documentation

Draft report of the Eighteenth United Nations Regional Cartographic Conference for Asia and the Pacific

Annex II

List of documents

<i>Number</i>	<i>Title/country</i>
E/CONF.97/1	Provisional annotated agenda and proposed organization of work
E/CONF.97/2	Provisional rules of procedure
E/CONF.97/INF.1	Note on documentation for the Conference: note by the Secretariat
E/CONF.97/INF.2	Provisional list of documents
E/CONF.97/INF.3	List of participants
E/CONF.97/3	Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific
E/CONF.97/3/Add.1	Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 1: Regional Geodesy
E/CONF.97/3/Add.2	Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 2: Regional Fundamental Data
E/CONF.97/3/Add.3	Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 3: Cadastre
E/CONF.97/3/Add.4	Report of the Permanent Committee on Geographical Information System Infrastructure for Asia and the Pacific Working Group 4: Institutional Strengthening
E/CONF.97/4	Report on the actions taken on resolutions of the Sixteenth United Nations Regional Cartographic Conference for Asia and the Pacific
E/CONF.97/5/CRP.1	Country report on cartographic activities in Thailand (submitted by Thailand)
E/CONF.97/5/CRP.2	Problems and experience in surveying and mapping (submitted by Malawi)

<i>Number</i>	<i>Title/country</i>
E/CONF.97/5/CRP.3	GIS policy in Japan and efforts taken by the National and Regional Planning Bureau, Ministry of Land, Infrastructure and Transport (submitted by Japan)
E/CONF.97/5/CRP.4	Country report on cartographic activities in Japan, 2003-2006 (submitted by Japan)
E/CONF.97/5/CRP.5	Detection of crustal deformation of the northern Pakistan earthquake by satellite data (submitted by Japan)
E/CONF.97/5/CRP.6	Promotion of the Global Mapping project (submitted by Japan)
E/CONF.97/5/CRP.7	Technical cooperation in surveying, mapping and charting by Japan (submitted by Japan)
E/CONF.97/5/CRP.8	The Official Malacca and Singapore Straits Electronic Navigational Chart (submitted by Japan)
E/CONF.97/5/CRP.9	Country report on cartographic activities in Singapore, 2003-2005 (submitted by Singapore)
E/CONF.97/5/CRP.10	Status of surveying and mapping in Nepal (submitted by Nepal)
E/CONF.97/5/CRP.11	Current status of surveying, charting and mapping at the national level (submitted by Australia)
E/CONF.97/5/CRP.12	National report of Cyprus (submitted by Cyprus)
E/CONF.97/5/CRP.13	Surveying and mapping in Sri Lanka (submitted by Sri Lanka)
E/CONF.97/5/CRP.14	Surveying and mapping in the Philippines (submitted by the Philippines)
E/CONF.97/6/IP.1-IP.48	Invited papers ^a

^a The complete list of the invited papers before the Conference has been issued in document E/CONF.97/INF.2, available from <http://unstats.un.org/unsd/geoinfo/17thunrccapdocuments.htm>.

Annex III

List of participants^a

A. States Members of the United Nations

Australia, Bangladesh, Brunei Darussalam, Cambodia, Canada, China, Cyprus, Fiji, Finland, Germany, India, Indonesia, Iran (Islamic Republic of), Jamaica, Japan, Jordan, Lao People's Democratic Republic, Malaysia, Nepal, New Zealand, Oman, Philippines, Republic of Korea, Russian Federation, Singapore, Sri Lanka, Thailand, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, Viet Nam

B. Non-member State

Holy See

C. Specialized agencies and other entities

International Civil Aviation Organization, World Food Programme, World Health Organization, United Nations Office for the Coordination of Humanitarian Affairs

D. International scientific organizations

Global Spatial Data Infrastructure Association (GSDI), International Cartographic Association (ICA), International Federation of Surveyors (FIG), International Society for Photogrammetry and Remote Sensing (ISPRS), International Steering Committee for Global Mapping (ISCGM), ISO/TC 211

E. Invited speakers^a

^a The complete list of all participants, including invited speakers, has been issued in document E/CONF.97/INF.3, available from: <http://unstats.un.org/unsd/geoinfo/17thunrccapdocuments.htm>.

