

FOURTH UNITED NATIONS
REGIONAL
CARTOGRAPHIC CONFERENCE
FOR THE AMERICAS

New York, 23–27 January 1989

Vol. I. Report of the Conference



UNITED NATIONS

Department of Technical Co-operation for Development

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CARTOGRAPHIC CONFERENCE
FOR THE AMERICAS**

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NOTE

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

The proceedings of the Fourth United Nations Regional Cartographic Conference for the Americas, held in New York from 23-27 January 1989, are being issued in two volumes, as follows:

Volume I. Report of the Conference

Volume II. Technical papers

The proceedings of the previous United Nations regional cartographic conferences for the Americas were issued under the following symbols and sales codes: E/CONF.67/3 (Sales No. E.77.I.13) and E/CONF.67/3/Add.1 (Sales No. E/F/S.79.I.14) for the First Conference; E/CONF.71/3 (Sales No. E.81.I.4), E/CONF.71/3/Add.1 (Sales No. E/F/S.82.I.14) for the Second Conference, and E/CONF.77/3 (Sales No. E.85.I.14) and E/CONF.77/3/Add.1 (Sales No. E/F/S.88.I.19) for the Third Conference.

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I. ORGANIZATION OF THE CONFERENCE

A. Terms of reference

1. The Fourth United Nations Regional Cartographic Conference for the Americas, convened in accordance with Economic and Social Council decision 1985/124 of 28 May 1985, was held at United Nations Headquarters from 23 to 27 January 1989.

B. Opening of the Conference

2. ~~The Under-Secretary-General for Technical Co-operation for Development welcomed the participants and noted the support of so many Governments, not only from the region but also from other parts of the world. After reviewing the activities of his Department since the Third Conference, he stated that the world-wide use of digital and computerized systems had led to remarkable progress especially in the use of land information systems. That new concept, along with the introduction of the global positioning systems and emphasis on their applications in developing countries, should be the main theme of the Fourth Conference.~~

3. The Executive Secretary of the Conference thanked the Under-Secretary-General for his opening address and added his welcome.

C. Attendance

4. The Conference was attended by 120 representatives or observers of 39 countries, 2 specialized agencies and 7 intergovernmental and international scientific organizations. The list of participants appears as annex I to the present report.

D. Agenda

5. The Conference adopted its agenda as contained in document E/CONF.81/1. The agenda as adopted appears as annex II to the present report.

E. Adoption of the rules of procedure

6. At its 1st plenary meeting, the Conference adopted its rules of procedure as contained in document E/CONF.81/2. The rules of procedure as adopted appear as annex III to the present report.

F. Election of officers

7. The Conference elected the following officers:

President: Fred Campbell (Canada)

First Vice-President: C. E. R. Williams (Saint Vincent and the Grenadines)

Second Vice-President: E. E. Rutsch (Argentina)

Rapporteur: Richard D. Sanchez (United States of America)

G. Organization of work

8. The Conference adopted the organization of work as proposed by the Secretariat, and decided that papers presented under agenda item 4, entitled "Country reports and progress made since the Third Conference", would be discussed under each related technical item. In addition, the Conference requested the Executive Secretary to provide facilities for the delegations to hold an exhibition of maps and related cartographic products. The Executive Secretary stressed the fact that that was a very delicate and sensitive subject and that such an exhibition could only take place if there was a clear understanding that the sole responsibility of the content of the exhibited products rested entirely with the delegations exhibiting their products, that the Secretariat was in no way responsible for the content of the exhibited material, and that the fact that the material was exhibited on United Nations premises did not imply any endorsement or acceptance by the United Nations. The Conference agreed with that statement.

H. Credentials of representatives to the Conference

9. The Credentials Committee, composed of the President, the two Vice-Presidents and the Rapporteur, with the Executive Secretary ex officio, reported that the credentials of all representatives had been found to be in order.

I. Establishment of technical committees

10. The Conference established five technical committees and the following officers were nominated and subsequently elected to the technical committees:

Committee I (Agenda items 5 (a) and (c))

Chairman: Z. A. Jiwani (Canada)

Vice-Chairman: Edgar M. Derblay (Mauritius)

Rapporteur: Frank Maloney (United States of America)

Committee II (Agenda items 5 (d), (e) and (f))

Chairman: Carlos Galindo Contreras (Mexico)

Vice-Chairman: Herrmann Seeger (Federal Republic of Germany)

Rapporteur: Sonia Luiza Terron (Brazil)

Committee III (Agenda items 5 (g) and (h))

Chairman: Paulo César Teixeira Trino (Brazil)

Vice-Chairman: Alain Couzy (France)

Rapporteur: David McArthur (Canada)

Committee IV (Agenda items 5 (b), (i), and (j))

Chairman: Gottfried Konecny (Federal Republic of Germany)

Vice-Chairman: Claro Omar Mejias (Argentina)

Rapporteur: Marco Antonio Gonçalves Bompert (Brazil)

Committee V (Agenda item 6)

Chairman: Lowell Starr (United States of America)

Vice-Chairman: Newton Issac da Silva Carneiro, Jr. (Brazil)

Rapporteur: B. J. Garvan (United Kingdom)

J. Documentation

11. A list of the documents submitted to the Conference appears as Annex IV to the present report. The technical papers are to be published in volume II of the proceedings of the Conference.

K. Closing of the Conference

12. The Conference, at its final meeting on 27 January 1989, expressed appreciation to the President for the excellent manner in which he had conducted the meetings and to the Bureau. The Conference also expressed its heartfelt thanks and appreciation to the officers of the Conference, the Executive Secretary, and the staff of the United Nations.

13. In recognizing the success of the United Nations regional cartographic conferences for the Americas held during the past 14 years, the Conference noted that it had to a great extent been brought about by the efforts and able organization of the Executive Secretary, Max de Henseler, who was about to retire after 30 years of service in the United Nations. The Conference expressed appreciation and thanks to Mr. de Henseler for his services and the hope that his established style of organization would be continued.

14. On behalf of the Under-Secretary-General of the Department of Technical Co-operation for Development, the Assistant to the Under-Secretary-General and the Director of the Technical Resources and Energy Division addressed the Conference to express his satisfaction at the successful completion of the Conference and stated that the Department would spare no effort to cast its activities within the framework provided by the resolutions adopted at the Conference.

II. SUMMARY OF PROCEEDINGS OF THE PLENARY MEETINGS

Agenda items 1-3 and 7-9

15. The Conference considered in plenary meetings agenda items 1-3 and 7-9. Agenda item 4, entitled "Country reports and progress made since the Third Conference", was referred to Committees I to V for presentation and discussion during their meetings.

Technical assistance and transfer of appropriate and affordable technology

16. Under agenda item 7, three documents were presented on technical assistance and transfer of appropriate and affordable technology (E/CONF.81/L.4, E/CONF.81/L.8 and E/CONF.81/L.20).

17. In the paper on United Nations technical co-operation activities in surveying, mapping and charting, with specific emphasis on the Americas (E/CONF.81/L.20), presented by the Secretariat, disappointment was expressed at the further decline in absolute terms of involvement in the region since the Third United Nations Regional Cartographic Conference for the Americas, held at the United Nations in 1985. Some discussion took place and speculation arose regarding the reason for that state of affairs, including an observation regarding lack of public awareness of the programme. Although a process by which requests could be made to the United Nations was not discussed, the representative of the Department of Technical Co-operation for Development encouraged inquiries from delegations.

18. In addressing himself to costs of computer systems, the representative made reference to the high unit costs of certain types of equipment, needs and regular servicing. He noted that powerful microcomputers might alleviate the situation, but indicated that a longer period of donor involvement was required.

19. During the discussion that followed, the delegate from the United Kingdom of Great Britain and Northern Ireland expressed support for the ideas and concern expressed in the paper by the Secretariat. It was noted that the overall decline in the level of activity in the Americas was perhaps a result of the lack of awareness of the programmes available to the countries of the region. The observer of the International Civil Aviation Organization (ICAO) expressed similar concerns and reiterated his ideas, which had been presented on the previous day in the ICAO paper, concerning the support required for production of aeronautical charts and publications. Following this discussion, the President requested that the various parties develop a draft resolution for the consideration of the Conference at the next plenary session. The parties agreed; the resolution was tabled for discussion, and the final version appears in chapter VIII of the present report.

20. The second paper submitted under agenda item 7, by Norway (E/CONF.81/L.4), provided an account of the United Nations Interregional Seminar on Introduction of Modern Mapping Techniques, held at Honefoss, Norway, in 1988. The Seminar was aimed at participants on a senior technical level representing national surveying and mapping establishments or specialists directly involved in national programmes for the creation of such establishments. The Norwegian Mapping Authority had provided all conference facilities and practical demonstration, while the Norwegian

Association for Cartography, Geodesy, Hydrography and Photogrammetry took care of all logistic needs. A volume containing the proceedings of the Seminar and the technical papers has been completed for the convenience of the participants and other interested parties.

21. The third paper (E/CONF.81/L.8) was presented by the observer of the International Hydrographic Organization (IHO), updating the programme of technical support outlined at the Third Conference in 1985. ^{1/} It stated that IHO was taking steps to build up a repository of current specific information on hydrographic training and technical assistance programmes made available by member States of IHO to developing countries in accordance with paragraph 4 of its technical resolution K4.3, and that further information papers would be published.

22. ~~While IHO had the means to provide expert advice to developing countries it could not do so unless approached.~~

23. Under agenda item 8, on future United Nations regional cartographic conferences, no papers were presented. Representatives from the United States of America, the United Kingdom, the Union of Soviet Socialist Republics, Argentina, Brazil and observers from the International Cartographic Association (ICA) and the International Society for Photogrammetry and Remote Sensing (ISPRS) addressed the need to review the cause of low participation and arrive at solutions prior to the next meeting.

24. It was suggested that a steering committee be established to guide the form, content and agenda of future conferences, and that this Committee should meet with the Secretariat at least one and a half years in advance to map out each forthcoming conference.

25. It was also suggested that conferences should be more focused, with the papers being submitted well in advance for distribution to all potential participants, and that the Secretariat should communicate directly with the appropriate contacts in each country in order to make them aware as soon as possible of the date and location of conferences and elicit their participation and fields of interest. It was also pointed out that the interests of the countries must be taken into consideration in the planning of all such meetings as early as possible in the planning process, and that the appropriate forum for this notification would be the proposed committee.

26. A strong desire was expressed for the conferences to continue, as they were seen as excellent forums for the dissemination of technical information and advances in the sciences related to cartography.

27. Lastly, it was suggested that a questionnaire be circulated to the Member countries, together with the notification to be circulated to the agencies.

28. Following this lengthy discussion, the President suggested that resolution 1 of the Third United Nations Regional Cartographic Conference for the Americas be

^{1/} See Third United Nations Regional Cartographic Conference for the Americas, New York, 19 February-1 March 1985, vol. II, Technical papers (United Nations publications, Sales No. E/F/S.88.I.19).

appropriately modified to reflect the concerns and suggestions of the delegates as expressed during the discussion. 2/

29. The President requested that participants in the foregoing discussion draft a resolution for the consideration of the Conference. The resulting resolution, as approved by the Conference, appears as resolution 1 (see chap. VIII).

2/ Ibid., vol. I, Report of the Conference, chap. VII.

III. WORK OF COMMITTEE I: REVIEW OF THE LATEST TECHNOLOGY IN
CARTOGRAPHIC DATA ACQUISITION, WITH SPECIAL EMPHASIS ON
POTENTIAL APPLICATIONS IN DEVELOPING COUNTRIES

30. Committee I considered the following topics: conventional and satellite geodesy, including global positioning systems (item 5 (a)); and topographic and large-scale surveying and mapping (item 5 (c)). The Committee reviewed six papers dealing with these topics. Three draft resolutions were submitted to the Conference and subsequently adopted by the Conference as resolutions 12, 14 and 15 (for the text of the resolutions, see chap. VIII below).

A. Conventional and satellite geodesy

31. Hungary submitted a paper entitled "A unified world geodetic network based on the use of GPS" (E/CONF.81/L.2). The paper described some properties of the NAVSTAR and GLONASS Global Positioning Systems. It was suggested that a unified geodetic network be established based on use of the two systems, and that the United Nations should support that endeavour.

32. Canada presented a paper entitled "On the impact of the active control system on survey control networks" (E/CONF.81/L.18). That system would consist of a number of automated stations across the country consisting of microcomputer-controlled GPS receivers, which would continuously record carrier phase and pseudo-range observations from all visible satellites. The data would be used for the computation of precise orbital ephemerides, for the computation and broadcasting of differential corrections for navigation purposes and for verifying the integrity of the GPS satellite constellation.

33. The United Nations Secretariat presented a paper entitled "Satellite positioning systems in the 1990s" (E/CONF.81/BP.4). The presentation was an excellent overview of the transit system, the NAVSTAR Global Positioning System and commercial positioning systems. The paper concluded by stating that satellite positioning systems in the 1990s would make great contributions to the welfare of mankind.

34. The Federal Republic of Germany presented a paper entitled "GPS activities in the Federal Republic of Germany and the implications for practical surveying" (E/CONF.81/INF.6). The paper addressed the need, within the Federal Republic of Germany, for 1 centimetre precision requirements for all kinds of boundary-related surveying and described how GPS activities were being utilized to meet that accuracy.

35. Poland presented a paper entitled "Classical geodetic measurements in the GPS epoch" (E/CONF.81/INF.10). The paper pointed out the dramatic change brought to geodesy by the emergence of satellite navigation positioning methods. The paper further stated that satellite and classical methods could be regarded as complementary, each of them serving different purposes.

B. Topographic and large-scale surveying and mapping

36. The United Nations Secretariat presented a paper entitled "Status of world topographic and cadastral mapping; Part I: Topographic mapping and geodetic network" (E/CONF.81/BP.3). The paper addressed the results of the survey on the status of world topographic mapping (years 1968, 1975, 1980 and 1987) and on the status of world cadastral mapping (years 1980 and 1987).

IV. WORK OF COMMITTEE II: CARTOGRAPHIC DATA MANIPULATION

37. Committee II considered the following topics: hydrographic surveying and nautical charting (item 5 (d)); cadastral surveying and mapping (item 5 (e)); and small-scale and thematic mapping, national and regional atlases and the like (item 5 (f)). Two draft resolutions were submitted to the Conference and subsequently adopted as resolutions 10 and 13 (for the text of the resolutions, see chap. VIII below).

A. Hydrographic surveying and nautical charting

38. The United States of America presented a paper entitled "Use of multispectral imagery in support of hydrographic chart production and verification of navigational hazards at the Defense Mapping Agency (DMA)" (E/CONF.81/L.21). The paper explained the use of a rear-projecting optical drafting system and a recently procured image processing system on the exploitation of LANDSAT and other forms of multispectral imagery. Those systems were considered of great value in support of the hydrographic chart compilation programme at DMA. Their output was used to support production of coastal charts, combat charts and pre-survey planning graphics and for verification of navigational hazards.

39. The United States of America presented a paper entitled "Reconciling the navigational grid with the inertial navigation system" (E/CONF.81/L.23). The paper explained the differences found between the directional angles computed by the inertial navigation system and those measured from the navigation charts in use for the polar regions. The paper also described the observations made with two projections (the Subpolar Lambert Conformal Conic Projection, with standard parallels chosen to give the least deviation from true scale over the chart, and the Polar Transverse Mercator Projection, with the true scale on 90° E and 90° W), and, analysing separately charts for polar and subpolar regions, proposed a method for polar region charting. The method presented suggests gnomonic projection for production of polar charts, although it sacrificed the conformality inherent in the currently used projections.

40. The paper submitted by IHO, entitled "Input from the International Hydrographic Organization" (E/CONF.81/L.7), presented an overview of the new publications, updated publications and programmes of IHO implemented since the Third Conference for the Americas and related to hydrographic surveying and nautical charting, geographical names, education, training, research and technical assistance. The paper referred to each of the published and updated publications of the organization (with a summarized explanation of some of them). On the subject of hydrographic surveying and nautical charting, it covered the advances made in some of the chart series, mentioning also the proposal for creation of the IHO centre for digital bathymetry.

B. Cadastral surveying and mapping

41. No papers were submitted on agenda item 5 (e).

C. Small-scale and thematic mapping, national and regional atlases and the like

42. The paper "Report of the Meeting of the United Nations Ad Hoc Group of Experts on the International Map of the World in the Millionth Scale (IMW), 9-11 December 1986" (E/CONF.81/L.10) was submitted by the Secretariat, presenting the findings and recommendations that had emanated from the Meeting.
43. The Federal Republic of Germany presented a paper entitled "Digital large-block mosaic of LANDSAT-MSS imagery of Antarctica" (E/CONF.81/L.13). The paper presented the results of a project that used a method based only on digital processing for the rectification and absolute orientation of digitally recorded satellite image data when sufficient ground control was not available for vast areas.
44. The observer from ICAO introduced a paper entitled "Aeronautical charts" (E/CONF.81/L.5), which drew attention to the agreed standardized specifications for the 17 required types of charts. The paper described possibilities for technical assistance in cartographic projects and training, and mentioned the availability of a chart manual and a chart catalogue. The need was stressed for countries to accord the necessary priorities to the production of aeronautical charts, and participants were exhorted to give their support in that matter.
45. The paper presented by Poland, entitled "A short review of cartographic activities in Poland" (E/CONF.81/INF.15), dealt with map production, with emphasis on thematic maps and atlases. It included the report of a test survey aimed at the preparation of a topographic map at 1:200,000 scale in desert and semi-desert areas by remote sensing. It mentioned the Polish experience in preparation of cartographic school supplies, emphasizing the usefulness of a tool-like plastic relief maps.
46. The paper "Seasonal vegetation monitoring with AVHRR data for grasshopper and locust control in West Africa" (E/CONF.81/L.31), presented by the United States of America, dealt with the importance of monitoring programmes using satellite data, in particular those data obtained with high resolution advanced radiometer of the National Oceanic and Atmospheric Administration (NOAA) in grasshopper and locust control.

V. WORK OF COMMITTEE III: INFORMATION SYSTEMS

47. The work of Committee III encompassed the following topics: Development and application of digital cartographic data bases, including digital terrain modelling (item 5 (g)); land/geographic information systems (item 5 (h)). One draft resolution was submitted to the Conference and subsequently adopted as resolution 2 (for the text of the resolution, see chap. VIII below).

A. Development and application of digital cartographic data bases, including digital terrain modelling

48. ~~The International Hydrographic Organization (IHO) presented a paper entitled "Proposal for the creation of an IHO centre for digital bathymetry" (E/CONF.81/L.9). It described the proposal to centralize the storage of bathymetric data in an international archive at the National Geophysical Data Center at Boulder, Colorado, United States of America. The representatives of Argentina and Brazil expressed their disagreement with the proposal. The observer of IHO agreed that the views of those delegations should be taken into account.~~

49. The Federal Republic of Germany presented a paper entitled "Preparation and production of digital maps for power supply companies" (E/CONF.81/L.14). The paper addressed the difficulties and tasks involved in producing a digital data base.

50. Canada presented a paper entitled "Development of a geodetic information system using a structured data modelling approach" (E/CONF.81/L.19). The paper described the development of a geodetic information system, developments to date, including project planning, data modelling and prototype systems. Emphasis was placed on information engineering technology.

51. The United States of America presented a paper entitled "The Aeronautical Chart Automation Project data base concept" (E/CONF.81/L.25) on the implementation of the aeronautical chart automated production system. This system, when implemented, will provide for rapid response to new requirements, validation and maintenance of aeronautical data and the automation of many functions.

52. The United States of America also presented a paper entitled "Digital cartographic data standards: the United States' experience" (E/CONF.81/L.28). ~~The paper discussed a proposed standard consisting of definitions of terms, data transfer specifications, data quality and a list of cartographic entities and attributes (features).~~

53. The Federal Republic of Germany presented a paper entitled "A topographic-cartographic information system for small-scale applications in the Federal Republic of Germany" (E/CONF.81/INF.8). The concept was introduced, and the methods used to develop and implement the data bases were described.

B. Land/geographic information systems

54. A background paper submitted by the Secretariat entitled "Land information management into the 1990s" was presented (E/CONF.81/BP.1). The paper described some of the significant advances made over the past five years. The concept of

land information management networks was introduced; the paper also stressed the need for education in the field of geographic information systems.

55. The United Nations Secretariat presented a background paper entitled "Une banque de données localisées - Pourquoi? Comment?" (Localized data bank: why and how) (E/CONF.81/BP.2). The basic need for geographical and land information systems was presented and practical techniques and principles to arrive at the goals were discussed.

56. Canada presented a paper entitled "Preparing your organization for GIS/LIS: avoiding surprises when hardware/software arrives" (E/CONF.81/L.17). The paper discussed the methods and procedures for determining GIS/LIS information users' requirements and the need to undertake pilot projects to demonstrate the technology. The presentation also addressed the demand for short- and long-term education, for involvement of top management in GIS/LIS implementation and for standards.

57. The United States of America presented a paper entitled "A 'geocadastre' for New Orleans and southern Louisiana" (E/CONF.81/L.24). The paper introduced the concept of a "geocadastre" for land data system development, which included aspects of a conventional multi-purpose cadastre plus the addition of other data elements, such as geological, hydrological and gravity information.

58. A paper entitled "A process for evaluating geographic information systems" (E/CONF.81/L.29) was also presented by the United States of America. The paper discussed a report on suggested guidelines for assisting agencies in identification of potential activities and appropriate tools that comprised a GIS solution. The paper presented an overview of GIS technology and discussed related standards and guidelines, software function, hardware and bench-marking.

VI. WORK OF COMMITTEE IV: REMOTE SENSING, REVISION
AND REPRODUCTION

59. Committee IV considered the following items of the agenda: remote sensing for cartography (item 5 (b)); change detection and map revision (item 5 (i)); and reproduction and printing (item 5 (j)). The Committee reviewed six papers dealing with items 5 (b) and 5 (i). No paper was submitted under item 5 (j). Three draft resolutions were submitted to the Conference, and subsequently adopted as resolutions 4, 5 and 16 (for the text of the resolutions, see chap. VIII).

A. Remote sensing for cartography

60. The Secretariat presented a background paper entitled "Remote sensing for cartography" (E/CONF.81/BP.5). The paper described remote sensing tools of interest to cartographers, reviewed the cartographic requirements for mapping from space, compared sensor tests and product costs and presented future developments worldwide.

61. A paper submitted by Hungary, entitled "Use of LANDSAT-TM imagery in 1:100,000 topographic map compilation" (E/CONF.81/L.3), discussed the process of map-making using satellite imagery, including the problem of image transformation and colour separation as well as map compilation and printing of the new Hungarian satellite map at scale 1:100,000. The paper compared two variants of the satellite image map preparation and concluded that the described technology was suitable for the rectification of the topographic map content, as well as compilation and issue of new types of photo maps.

62. The United Kingdom of Great Britain and Northern Ireland submitted a paper entitled "Line mapping from satellites in the Ordnance Survey" (E/CONF.81/L.11), which reported on the use of SPOT images in the topographic mapping programme of Yemen carried out by the Overseas Surveys Directorate of the Ordnance Survey. The paper described the production of 1:100,000 series mapping. The concept of the paper had been stimulated by frequent encounters with administrators, financiers and economists, many of whom believed, from the promotional efforts of colleagues and friends in France and the United States of America, that mapping from SPOT and LANDSAT imagery was very much faster and very much cheaper than by conventional means. The Ordnance Surveys had no worries about accuracy and were easily producing contours at 40-metre intervals (dictated by terrain, not imagery limits); and the method was both faster and cheaper. But advantages in data capture would be offset to some degree by greater time lost in field completion to ensure that all required detail was included where source features were not likely to have been visible in the imagery.

63. The Union of Soviet Socialist Republics submitted a paper entitled "Application of remote sensing of the Earth to exploration and mapping for economic potential in the USSR" (E/CONF.81/INF.18). The paper described the services provided by the Scientific Research and Industrial Centre ("Priroda") of the General Administration of Geodesy and Cartography, which is responsible for research in space, natural science and provision of space data for branches of the USSR economy, as well as for foreign consumers. It emphasized that the best results from application of remote-sensing data were obtained in the integrated inventory of natural resources, and it called for international co-operation in studying the natural potential of the Earth from space.

64. A paper entitled "Evaluation of digital land cover mapping of Viedma, Argentina, using merged LANDSAT-TM and SPOT panchromatic data" (E/CONF.81/L.26) was presented by the United States of America describing the evaluation results of the project implemented with the co-operation of the United States Geological Survey and the Instituto Geográfico Militar de Argentina in the area of the proposed new capital district of Argentina. The study concluded that attempts to classify level II and level III land use/land cover categories by digital techniques were not completely successful, suggesting that visual image interpretation analysis of merged LANDSAT-TM and SPOT panchromatic data might prove more useful for land-cover mapping or other thematic applications where detail was essential. Recommendations were made for future projects and follow-up studies.

B. Change detection and map revision

65. France submitted a paper entitled "Méthode de suivi de l'évolution de l'urbanisation aux environs de Paris de 1974 à 1987" (E/CONF.81/INF.22). The paper reported on an operational technique for observing changes taking place in an urban area, designed to locate, analyse and keep count of the buildings through a remote process. Owing to satellite imagery, planners now have a regular, up-to-date land-use map, containing essential information and setting out new perspectives for land planning.

C. Reproduction and printing

66. No paper was submitted under this item.

VII. WORK OF COMMITTEE V: REVIEW OF THE LATEST DEVELOPMENTS
RELATED TO POLICIES AND MANAGEMENT OF NATIONAL MAPPING
AND CHARTING PROGRAMMES

67. Committee V considered papers on policy and management of national mapping and charting programmes, submitted by the delegates under agenda item 6. These papers related to modernization of cartographic methods; national programmes and organizational issues; a directory of national/international agencies and institutions; geographical names; and training. The Committee reviewed 13 papers and submitted 5 draft resolutions, which were subsequently adopted by the Conference as resolutions 6 to 10 (for the text of the resolutions, see chap. VIII below).

68. The observer of the International Institute for Aerospace Survey and Earth Sciences (ITC) presented a report entitled "Entering the 21st century: strategies for national surveying and mapping" (E/CONF.81/INF.11). The report was the outcome of an international Seminar held on 10 April 1988 and sponsored by the Government of the Netherlands. The purpose of the Seminar was to identify strategic issues facing third world countries. The next seminar is scheduled for October 1989; the ITC observer will explore the possibilities of United Nations support for the seminar within the framework of the programme of technical co-operation for development.

A. Managerial and technical aspects of national programmes

69. The United States submitted two papers which address the subject of modernizing the National Mapping Program of the United States Geological Survey. The first paper (E/CONF.81/L.32) discussed the overall organizational issues associated with the transition from a conventional analog programme to a programme centred on a national digital cartographic data base. The paper discussed six management issues:

- (a) Implementing new technology;
- (b) Developing and implementing standards;
- (c) Accommodating changing requirements;
- (d) Dissemination services;
- (e) Communications and co-ordination;
- (f) Training.

70. The second paper (E/CONF.81/L.27) described in detail the modernization programme termed "Mark II", which is in progress at the United States Geological Survey to accomplish the first issue described in document E/CONF.81/L.32. The Mark II process is designed to provide the requirements of the National Mapping Program until the year 2000.

71. The Secretariat of the United Nations presented a conference room paper (E/CONF.81/CRP.2), which provided a directory of national and international agencies and institutions involved in survey mapping and charting. The paper was

an updated version of previous directories, which now included hydrographic agencies as well as international organizations dealing with matters related to cartography. The Executive Secretary requested the delegates to continue to provide updated information so that the currency of the document could be maintained.

72. The representative of France presented a paper entitled "Management considerations in automating a mapping unit" (E/CONF.81/INF.14), which pointed out that differences between computer-aided disciplines and computer-aided cartography did not permit classical criteria to be used to assess the opportunities offered by technological changes in cartographic production. The paper provided considerations that must be addressed: economical, technical, scientific and psychological. Automated cartography could be considered successful when data bases were being used in operational ways. The automated-cartographer could not remain a craftsman only, yet he need not be a computer scientist, but rather a geographic information expert, able to integrate a wide range of computer-aided disciplines.

B. Policies and practices concerning cartographic product distribution

73. No papers were submitted under this item.

C. Map specifications

74. The delegate of the Union of Soviet Socialist Republics presented a paper on the problems involved in perfecting a system of cartographic products (E/CONF.81/INF.23). The paper considered the concept of a "map system" and gave a classification of maps according to their main purpose. Guidelines for devising such a system and a list of steps involved in unification of maps were also presented.

D. Management and standardization of geographical names

75. The representative of the United States of America presented a paper (E/CONF.81/L.22), on a joint programme by the Defense Mapping Agency (DMA) and the Pan American Institute for Geography and History (PAIGH) on gazetteers and geographic names emphasizing that standardization of geographic names was particularly important for map and chart production. In October 1987 representatives of several PAIGH member countries attended a course on geographic names.

76. A paper entitled "The Geographic Names Information System: a toponymic research tool" (E/CONF.81/L.30) was presented by the United States of America. The paper summarized the development of the Geographic Names Information System of the United States Geological Survey, which was approved by the United States Board of Geographic Names as a single unbiased source of geographical names in the United States. The system was also used to generate products such as gazetteers, standard listings and specific information for specialized applications.

77. A paper entitled "Organization and planning of work on standardization of geographical names in the USSR" (E/CONF.81/INF.28) was presented. It stated that in the USSR, standardization was regulated by special acts issued by legislative bodies. A permanent interdepartmental commission was the main link ensuring realization of that. Such work was planned and carried out according to guidelines and instructions on standardization for domestic and foreign geographical names, using both the Cyrillic and Roman alphabets. The results were reflected in the publication of gazetteers, informational bulletins, and map and atlas indexes.

78. The representative of the IHO drew attention to its publication, in November 1988, of BP0008 "Gazetteer of geographical names of undersea features", which listed all names approved for use on the General Bathymetric Chart of the Oceans (GEBCO) and small-scale international chart series and gave guidance on how new names should be submitted for approval for future use on all charts and maps of ocean areas. The IHO reported that work had been resumed on a fourth edition of the IHO special publication No. 23, Limits of oceans and seas, which should be available by the end of 1989.

E. Education, training and research

79. The representative of the United Kingdom presented a paper entitled "Training in survey and mapping for overseas students in the United Kingdom" (E/CONF.81/L.6). The paper pointed out the gaps that existed in the continuum of training in survey and mapping and in the transition between technical staff and manager. The United Kingdom had filled those gaps in technical training by making training in cartography and photogrammetry available at the Ordnance Survey and, for management, at the North-East London Polytechnic (see E/CONF.81/L.5 for details of available training).

80. The Federal Republic of Germany presented a paper (E/CONF.81/L.12) on the completion of the School on Topography, Cadastre and Geodesy (Escuela de Topografía, Catastro y Geodesia (ETCG)), which was founded with the help of the Federal Republic of Germany. ETCG planned to give training to technicians and to middle management, because effective work in surveying, mapping and cadastre was not possible without trained middle managers. ETCG provided a good example of "on-site" technical assistance.

81. Canada presented a paper, "Training course in toponymy" (E/CONF.81/L.15). The course, which was sponsored by the United Nations, was held in Canada as host country, during August 1988 for representatives of 14 countries* where French is used for government administration. Participants were informed of the most recent methods and techniques for gathering of place names, the processing and conversion of data, and solving problems connected with toponymy.

82. The representative of the German Democratic Republic presented a paper on the United Nations Interregional Training Course in Large-scale Mapping Operations for Planning and Cadastral Purposes (E/CONF.81/L.33), describing the training course held in the German Democratic Republic in July/August 1986. The objective of the

* Benin, Bolivia, Côte d'Ivoire, Gabon, Haiti, Madagascar, Mali, Morocco, Niger, Saudi Arabia, Senegal, Togo, Tunisia and Zaire.

course was to assist countries in the task of developing procedures for constructing and maintaining large-scale maps.

83. The course papers have been printed in two volumes and are available in both English and French.

84. Poland submitted a paper (E/CONF.81/INF.16) entitled "Short-term training as a quick way of acquiring technical staff for national geodetic services".

85. The ITC observer explained their mandate for training of survey and mapping personnel coming mostly, but not exclusively, from developing countries. The types of programmes offered by ITC were explained. A current trend to phase out lower level courses was noted and a new multidisciplinary programme, entitled "Geo-Informatics", was being introduced at post-graduate level. Recognizing the transition to digital systems, ITC was also introducing a post-graduate course in Geographic Information Systems (GIS). The ITC intended to maintain its present educational programme in nautical charting, provided that there was enough interest in that particular subject.

86. The IHO observer summarized the methods of standardizing the training of hydrographic surveyors on an international basis. The methods were described in a new IHO special publication (No. 47), Training Courses in Hydrography and Nautical Cartography, which gave details of all such courses and was available in 24 countries in 12 different languages. He also drew attention to the availability of training in hydrographic surveying from the International Maritime Organization (IMO).

VIII. RESOLUTIONS ADOPTED BY THE CONFERENCE

A. List of resolutions

1. Fifth United Nations Regional Cartographic Conference for the Americas
 2. Background papers for future Conferences
 3. Technical assistance to developing countries related to national mapping standards
 4. Technical co-operation in cartography in the region
-
5. Standards for aerial photography
 6. Guidelines in technical assistance contracting
 7. Geographical names of undersea features
 8. Standardization of geographical names
 9. Training course in toponymy
 10. Hydrographic surveying and nautical charting
 11. Training in hydrographic surveying and nautical charting
 12. Statistical information on mapping
 13. Development of world-wide digital cartographic data base
 14. Global positioning system
 15. Common geodetic reference systems
 16. Remote sensing for cartography
-
17. Vote of thanks

B. Texts of resolutions

1. Fifth United Nations Regional Cartographic Conference for the Americas

The Conference,

Noting that the participants in the Fourth United Nations Regional Cartographic Conference for the Americas considered the meeting to have been highly successful and that it was therefore desirable for conferences for this region to continue,

Noting further the general desire to increase the effectiveness of the conferences and realizing the need for the active involvement of the countries of the region in the preparation of the agenda of each conference and in the conference itself,

1. Recommends that the Fifth United Nations Regional Cartographic Conference for the Americas should be convened in 1993 and that the duration of the Conference should be five working days;

2. Also recommends that a technical steering committee, consisting of one member each from North America, Central America, the Caribbean and South America, should be established to design, in consultation with countries of the region, the substantive content of the Fifth Conference. The Committee would be chaired by the Chief of the Cartography Unit of the Department of Technical Co-operation for Development of the United Nations Secretariat. The Committee would meet, at no expense to the United Nations, eighteen months prior to the convening of the Fifth Conference;

3. Further recommends that the Secretariat, following the meeting of the Technical Steering Committee, should issue a call for papers for the Fifth Conference and urge every country to provide the papers well in advance of the Conference and, where possible, in the three official languages.

2. Background papers for future Conferences

The Conference,

Recognizing that background papers presented at the Fourth United Nations Regional Cartographic Conference for the Americas were most informative and effective in establishing a background for subsequent discussions on related agenda items,

Noting that the Cartography Unit of the Department of Technical Co-operation for Development should be commended for having introduced the concept of presenting background papers at the United Nations Regional Cartographic Conferences and for providing the necessary resources to facilitate its accomplishment,

Recommends that:

(a) The United Nations should continue to sponsor the preparation of background papers for future United Nations regional cartographic conferences;

(b) The selection of authors for the background papers should be accomplished in collaboration with the international scientific and professional organizations;

(c) Financial resources should be allocated by the United Nations, within existing resources, for this purpose.

3. Technical assistance to developing countries related to national mapping standards

The Conference,

Noting that, while the value of surveying and mapping activities is well recognized in general terms, individual projects for which technical assistance is requested (whether from the United Nations Development Programme or from other multilateral or bilateral agencies) require individual cases to be fully justified for appropriate funding to be granted,

Urges Member countries to prepare overall strategies to cover both medium and long-term surveying and mapping programmes, including map, chart and aeronautical chart production, and to co-ordinate these programmes with strategic financial planning within their administration, so that the United Nations Development Programme and other potential co-operating agencies may respond expeditiously to requests for assistance that may emerge from their financial appraisals.

4. Technical co-operation in cartography in the region

The Conference,

Noting that technical co-operation in surveying and mapping for the Americas is currently declining,

Recognizing that remote sensing activities in cartographic applications are of importance to the region,

Recognizing further that the Pan American Institute of Geography and History carries out technical co-operation in cartographic applications in the region,

Recommends that the United Nations Secretariat and the Pan American Institute of Geography and History establish mutual co-operation in that area.

5. Standards for aerial photography

The Conference,

Noting

(a) That the United Nations recommended standards for aerial photography are already many years old,

(b) That there has been considerable progress in the development of films, cameras and platforms for both aerial and space surveys,

Recalling resolution 5 on specifications for aerial photography of the

Recommends that the United Nations Secretariat should undertake this study in consultation with appropriate scientific bodies as soon as possible and give it the widest distribution.

6. Guidelines in technical assistance contracting

The Conference,

Recognizing that most developed countries are increasingly turning to automated methods of cartographic production and the creation of digital data bases,

Further recognizing that the large capital investments associated with such developments are beyond the financial resources of most developing countries,

Noting that many future mapping requirements may have to be satisfied by means of funding for external contracts rather than by provision of technical assistance for development of in-house resources,

Recommends that the United Nations develop guidelines to assist developing countries in awarding contracts and protecting their proprietary rights.

7. Geographical names of undersea features

The Conference,

Noting that the International Hydrographic Organization has issued its publication BP008, entitled "Gazetteer of geographical names of undersea features shown (or which might be added) on the General Bathymetric Chart of the Oceans (GEBCO) and on the IHO small-scale INT chart series",

Recognizing that it is desirable that only approved names should be used internationally for undersea feature names,

1. Recommends that the Gazetteer should be brought to the attention of scientists and other authors of published articles that include reference to undersea features;

2. Further recommends that national mapping and charting authorities ensure that only the approved names included in the Gazetteer should appear on their published charts covering areas beyond their continental shelf.

3/ Eleventh United Nations Regional Cartographic Conference for Asia and the Pacific, Bangkok, 5-16 January 1987, vol. I, Report of the Conference, chap. VII.

8. Standardization of geographical names

The Conference,

Recalling the past geographic names standardization activities of the Pan American Institute of Geography and History,

Recognizing the success of the Fifth United Nations Conference on the Standardization of Geographic Names, held at Montreal, Canada, from 18 to 31 August 1987,

Further recognizing that the Pan American Institute of Geography and History, with the support of the United States Defense Mapping Agency, sponsored a course on geographical names in 1987,

Taking into account the importance of the standardization of geographical names in national mapping programmes,

1. Endorses the efforts of the Pan American Institute of Geography and History;
2. Recommends that countries recognize the importance of standardization in the region;
3. Urges national cartographic agencies to co-operate to achieve this standardization.

9. Training course in toponymy

The Conference,

Recognizing that past courses in toponymy sponsored by the United Nations have been successful, and considering that a need for further training exists among Spanish-speaking Member States in the Americas,

Recommends that the United Nations seek appropriate funding for such a course to be held in the region.

10. Hydrographic surveying and nautical charting

The Conference,

Noting the contents of the draft update of the status of hydrographic surveying and nautical charting world-wide prepared jointly by the International Hydrographic Organization and the Department of Technical Co-operation for Development of the Secretariat of the United Nations, 4/

4/ E/CONF.81/INF.9.

Recognizing that large areas of continental shelves and exclusive economic zones remain inadequately, or not at all, surveyed and that there has been disappointingly little improvement in the last decade,

Recognizing also that the lack of adequate surveys and nautical charts seriously retards the economic development of a maritime country in respect of the safety of shipping, the protection of the marine environment and coastal ecology, the improvement of port facilities, the development of fishery and offshore hydrocarbon and other non-renewable marine resources, the growth of tourism and recreational boating activities and the delimitation of offshore maritime boundaries,

Observing the role and initiatives taken by the International Hydrographic Organization in the field of technical assistance,

Noting that member States of the International Hydrographic Organization are engaged in a concerted effort to promote regional co-operation and technical assistance in hydrographic surveying and nautical charting through the establishment of regional charting groups and regional hydrographic commissions,

A

1. Expresses its appreciation for the preparation of the draft updated report on the status of hydrographic surveying and nautical charting world-wide;
2. Requests the International Hydrographic Organization to complete its work on this report and to forward it as soon as possible to the Department of Technical Co-operation for Development of the United Nations Secretariat;
3. Also requests the United Nations to ensure wide distribution of the completed report to the various United Nations organizations, including the International Maritime Organization, the Food and Agriculture Organization of the United Nations, the Intergovernmental Oceanographic Commission and the United Nations Development Programme and other aid-giving agencies, with the request that it be given wide distribution to their members;
4. Strongly recommends that the United Nations Development Programme and other aid-giving agencies should give significantly higher priority to hydrographic surveying and nautical charting projects;
5. Recommends that the United Nations Development Programme, in conjunction with the International Hydrographic Organization, should arrange regional workshops and seminars on the benefits accruing from improved national hydrographic capabilities for decision makers and high-level managers.

B

1. Strongly recommends that Governments of the region should establish or strengthen their hydrographic surveying and nautical charting capabilities in order to strengthen their national economies;

2. Invites Governments of the coastal States of the Americas to consider ways to use the established regional charting groups of the International Hydrographic Organization as the basis on which to develop regional hydrographic commissions;

3. Further invites the Governments of the coastal States of the Americas:

(a) To co-operate with other Governments having little or no hydrographic capabilities, as appropriate, in the collection and dissemination of hydrographic data;

(b) To promote, in consultation with and with the assistance of the International Hydrographic Organization, support for Governments requesting technical assistance in hydrographic matters.

11. Training in hydrographic surveying and nautical charting

The Conference,

Recognizing that the International Hydrographic Organization has determined that there are very substantial requirements for hydrographic surveys to be undertaken in many developing countries to support navigation, fishery and mineral resource activities,

Noting that training courses in hydrographic surveying and nautical charting are available in several countries,

Urges the United Nations to give strong support by awarding fellowships to developing countries to study hydrographic surveying and nautical cartography at appropriate approved establishments.

12. Statistical information on mapping

The Conference,

Recognizing the efforts and application devoted over the last 20 years by Professor Brandenberger and his colleagues at Laval University, Quebec, Canada, to the gathering of statistics on behalf of the Cartography Unit of the United Nations Department of Technical Co-operation for Development for publication in World Cartography,

Noting that the imminent wide-spread use of satellite positioning systems will render most statistics relating to geodetic control points much less meaningful,

Further noting that current statistics may be ambiguous - for example, because of fluctuation in currencies - and consequently affect the cost of map production, in relation to requirements in manpower and equipment,

Suggests that the Cartography Unit with the help of a group of experts, conduct a study of user needs among States members of the United Nations, with a view to recasting questionnaires sent out in connection with future surveys

gathering statistical information, so as to achieve the greatest value to users, including the cartography departments of the contributing nations, in the 1990s and beyond.

13. Development of world-wide digital cartographic data base

The Conference,

Recognizing that there is a need to embrace advanced technology and support the generation of a world-wide digital cartographic data base at about 1:1,000,000 scale,

Taking note of the findings of the Ad Hoc Group of Experts on the International Map of the World on the Millionth Scale which met at United Nations Headquarters from 9 to 11 December 1986, 5/

1. Endorses the recommendations of the Group;
2. Recommends that the United Nations play a role in monitoring the development of world-wide small-scale digital data bases.

14. Global positioning system

The Conference,

Noting the world-wide significance of the global positioning system,

Further noting the availability of the necessary technical information to utilize this system,

Expresses its thanks to the United States of America for making this technology available to the civil world community.

15. Common geodetic reference systems

The Conference,

Noting the increased use of satellite positioning systems,

Noting the growing importance of global digital data bases,

Recognizing the use of these tools in precise surveying, vehicle navigation and global change detection,

Further recognizing the varied accuracy requirements inherent in the use of these tools,

5/ E/CONF.81/L.10.

Recommends that the United Nations examine ways to determine each country's requirements for utilizing a common global reference system.

16. Remote sensing for cartography

The Conference,

Noting that operational remote sensing programmes of use to cartography have been introduced by the United States LANDSAT program and the MFK 6 multispectral camera operation from Sojuz-Saljut of the USSR,

Noting further that operational cartographic satellite sensors such as the ~~Systeme probatoire d'observation de la terre (SPOT)~~ of France and the camera systems KATE and KFA of the USSR have recently considerably improved the cartographic usability of space images,

Recognizing that satellite remote sensing of sufficient quality constitutes a useful tool to complete world mapping needs, particularly in the developing countries,

Recommends to the Governments sponsoring sensor developments by both digital and photographic means to take into consideration the needs of world cartography and quality requirements in sensor development, to achieve better usability of such images and assure further important technical developments in processing them into final cartographic products in analog or digital representation.

17. Vote of thanks

The Conference

1. Expresses its heartfelt thanks and appreciation to the Secretary-General of the United Nations for the thoughtful arrangements made in organizing the Fourth United Nations Regional Cartographic Conference for the Americas, and for the hospitality extended to all the participants;

2. Expresses its appreciation to the President of the Conference for the ~~excellent manner in which the Conference was conducted;~~

3. Expresses its gratitude to the Executive Secretary and his staff, and all those from the United Nations Secretariat whose efforts so greatly assisted the conduct of the Conference.

Annex I

LIST OF PARTICIPANTS

A. States Members of the United Nations or members of the specialized agencies

ALGERIA

Representatives

Mr. Hocine DJOUDI, Ambassador, Permanent Representative to the United Nations

Ahmed DJOGHLAF, First Secretary, Permanent Mission of Algeria to the United Nations

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A. Missouri SHERMAN-PETER, Minister Counsellor, Permanent Mission of the Bahamas to the United Nations

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BARBADOS

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Robin GITTENS

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Representatives

Antonio Jose Vallim GUERREIRO, Counsellor, Head of Delegation

Carlos Sergio DUARTE, First Secretary, Permanent Mission of Brazil to the United Nations

Jacob Ennes DA SILVA FILHO, Executive Secretary of the Commission for Cartography

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Representatives

B. E. FURMSTON, Director of Overseas Surveys, Ordnance Survey

B. J. GARVAN, British liaison officer (Geographic), Directorate General of Military Survey

F. M. SHARP, Regional survey adviser in the Caribbean

UNITED STATES OF AMERICA

Representative

Lowell STARR, Chief, National Mapping Division, United States Geological Survey

Alternate

Bradford THOMAS, Office of the Geographer, Department of State

Advisers

Charles D. HALL, Deputy Director, Programs, Production and Operations, Defense Mapping Agency

Frank MALONEY, Chief, Aeronautical Charting Division, National Ocean Service, National Oceanic and Atmospheric Administration

Gary W. NORTH, Assistant Division Chief for Information and Data Services, National Mapping Division, United States Geological Survey

Richard D. SANCHEZ, Programs Manager for the Americas, Office of International Activities, United States Geological Survey

Kathryn L. RIES, International Affairs Office, National Ocean Service National Oceanic and Atmospheric Administration

Kevin CHARLES, Adviser, United States Mission to the United Nations

Joseph MERANTE, Adviser, Permanent Mission of the United States of America to the United Nations

VENEZUELA

Representatives

Vincente VALLENILLA, Minister Counsellor, Permanent Mission of Venezuela to the United Nations

Enrique RONDON, First Secretary, Permanent Mission of Venezuela to the United Nations

Alberto ARMAS, Second Secretary, Permanent Mission of Venezuela to the United Nations

B. Specialized agencies

International Civil Aviation Organization (ICAO)

Observer

D. HUDDLESON, Acting Chief, Aeronautical Information and Charts Section

~~United Nations Educational, Scientific and Cultural Organization (UNESCO)~~

Observer

J. MEHAN, Acting Director, Liaison Office with the United Nations in New York

C. International Scientific Organizations

Intergovernmental Oceanographic Commission (IOC)

Victor SEDOV, Senior Technical Assistant, IOC Secretary for Ocean Mapping

International Cartographic Association (ICA)

D. R. F. TAYLOR, President, ICA Faculty of Graduate Studies, Carleton University, Ottawa

International Federation of Surveyors (FIG)

Juha TALVITIE, President

International Hydrographic Organization (IHO)

Sir David HASLAM, President

George WALKER, United States Naval Oceanographic Office

International Society for Photogrammetry and Remote Sensing (ISPRS)

Kennert TORLEGARD, President Royal Institute of Technology, Stockholm

Gottfried KONECNY, First Vice-President

International Union of Geodesy and Geophysics (IUGG)

Juhani KAKKURI, Director, Geodetic Institute of Finland

D. Other organizations represented by observers

International Institute for Aerospace Survey and Earth Sciences (ITC)

J. C. MULLER, Chairman, Cartography

E. Representatives of United Nations Secretariat units

Department of Technical Co-operation for Development (DTCD)

XIE Qmei, Under-Secretary-General

Nicky BEREDJICK, Deputy to the Under-Secretary-General and Director, Natural Resources and Energy Division

Hugo GUTZWILLER, Technical Advisor

Consultants

Arthur J. BRANDENBERGER, Laval University, Quebec, Canada

Frederick J. DOYLE, International Union for Surveys and Mapping

Jean GATEAU, Technical Advisor, France

Sanjib GHOSH, Laval University, Quebec, Canada

Gottfried KONECNY, Vice-President, International Society for Photogrammetry and Remote Sensing

F. Secretariat of the Conference

Executive Secretary

Mr. Max C. DE HENSELER, Chief
Cartography Unit
Department of Technical Co-operation for Development

Deputy Executive Secretary

Mr. Dmitry S. VOTRIN
Cartography Unit
Department of Technical Co-operation for Development

Annex II

AGENDA

1. Opening of the Conference.
2. Election of the President.
3. Organizational matters:
 - (a) Adoption of the rules of procedure;
 - (b) Adoption of the agenda;
 - (c) Election of officers other than the President;
 - (d) Organization of work;
 - (e) Credentials of representatives to the Conference;
 - (f) Establishment of technical committees.
4. Country reports and progress made since the Third Conference.
5. Review of the latest technology in cartographic data acquisition, manipulation, storage and presentation, with special emphasis on potential applications in developing countries:
 - (a) Conventional and satellite geodesy, including Global Positioning Systems;
 - (b) Remote sensing for cartography;
 - (c) Topographic and large-scale surveying and mapping;
 - (d) Hydrographic surveying and nautical charting;
 - (e) Cadastral surveying and mapping;
 - (f) Small-scale and thematic mapping, national and regional atlases and the like;
 - (g) Development and application of digital cartographic data bases, including digital terrain modelling;
 - (h) Land/geographic information systems;
 - (i) Change detection and map revision;
 - (j) Reproduction and printing.

6. Review of the latest developments related to policies and management of national mapping and charting programmes:
 - (a) Managerial and technical aspects of national programmes;
 - (b) Policies and practices concerning cartographic products distribution;
 - (c) Map specifications;
 - (d) Management and standardization of geographical names;
 - (e) Education, training and research.

7. Technical assistance and transfer of appropriate and affordable technology.
8. Future United Nations regional cartographic conferences.
9. Adoption of the report of the Conference.

Annex III

RULES OF PROCEDURE

I. REPRESENTATION AND CREDENTIALS

Composition of delegations

Rule 1

1. Each State participating in the Conference shall be represented by a head of delegation and such other accredited representatives, alternate representatives, experts and advisers as may be required.

2. The head of a delegation may designate an alternative representative or an adviser to act as a representative.

Submission of credentials

Rule 2

The credentials of representatives and the names of alternate representatives and advisers shall be submitted to the Executive Secretary of the Conference, if possible not later than 24 hours after the opening of the Conference. The credentials shall be issued by the head of the State or Government or by the Minister for Foreign Affairs.

Examination of credentials

Rule 3

The Bureau of the Conference shall examine the credentials and report thereon to the Conference without delay.

Provisional participation in the Conference

Rule 4

Pending a decision of the Conference upon their credentials, representatives shall be entitled to participate provisionally in the Conference.

II. OFFICERS

Elections

Rule 5

The Conference shall elect a President, two Vice-Presidents and a Rapporteur from the representatives of the States participating in the Conference. These officers shall constitute the Bureau of the Conference.

Acting President

Rule 6

1. If the President finds it necessary to be absent from a meeting or any part thereof he shall designate a Vice-President to take his place.
2. A Vice-President acting as President shall have the same powers and duties as the President.

Voting rights of the President

Rule 7

The President, or a Vice-President acting as President, shall not vote, but may designate another member of his delegation to vote in his place.

III. SECRETARIAT OF THE CONFERENCE

Duties of the Executive Secretary

Rule 8

1. The Executive Secretary of the Conference appointed by the Secretary-General of the United Nations shall act in that capacity in all meetings of the Conference and its subsidiary organs. He may designate another member of the secretariat to act in his place at these meetings.
2. The Executive secretary shall direct the staff required by the Conference.

Duties of the secretariat

Rule 9

The secretariat of the Conference shall, in accordance with these rules:

- (a) Interpret speeches made at meetings;

- (b) Receive, translate and circulate the documents of the Conference;
- (c) Publish and circulate the report of the Conference;
- (d) Make and arrange for the keeping of sound recordings of meetings;
- (e) Arrange for the custody of the documents of the Conference in the archives of the United Nations;
- (f) Generally perform all other work that the Conference may require.

Statements by the secretariat

Rule 10

The Executive Secretary of the Conference, or any member of the secretariat designated by him for that purpose, may, subject to rule 15, make statements concerning any question under consideration.

IV. CONCLUSIONS OF THE CONFERENCE

Report

Rule 11

The Conference shall adopt a report, the draft of which shall be prepared by the Rapporteur.

V. CONDUCT OF BUSINESS

Quorum

Rule 12

The President may declare a meeting open and permit debate to proceed when at least one third of the representatives of the States participating in the Conference are present. The presence of representatives of a majority of such States shall be required for any decision to be taken.

General powers of the President

Rule 13

1. In addition to exercising the powers conferred upon him elsewhere by these rules, the President shall preside at the plenary meetings of the Conference; he shall declare the opening and closing of each meeting, direct the discussions, ensure observance of these rules, accord the right to speak, put questions to the

vote and announce decisions. He shall rule on points of order. The President, subject to these rules, shall have complete control of the proceedings and over the maintenance of order thereat. The President may propose to the Conference the closing of the list of speakers, a limitation on the time to be allowed to speakers and on the number of times the representative of each participant in the Conference may speak on a question, the adjournment or the closure of the debate and the suspension or the adjournment of a meeting.

2. The President, in the exercise of his functions, remains under the authority of the Conference.

Points of order

Rule 14

During the discussion of any matter, a representative may at any time raise a point of order, which shall be immediately decided by the President in accordance with these rules. A representative may appeal against the ruling of the President. The appeal shall be immediately put to the vote, and the President's ruling shall stand unless overruled by a majority of the representatives present and voting. A representative may not, in raising a point of order, speak on the substance of the matter under discussion.

Speeches

Rule 15

1. No one may address the Conference without having previously obtained the permission of the President. Subject to rules 14, 16 and 19 to 22, the President shall call upon speakers in the order in which they signify their desire to speak.

2. Debate will be confined to the question before the Conference and the President may call a speaker to order if his/her remarks are not relevant to the subject under discussion.

3. The Conference may limit the time allowed to speakers and the number of times participants may speak on a question. ~~Permission to speak on a motion to set such~~ limits shall be accorded only to two representatives in favour of and to two opposing such limits, after which the motion shall be immediately put to the vote. In any event, with the consent of the Conference, the President shall limit each intervention on procedural matters to five minutes and on other matters to 15 minutes by representatives of States and to 10 minutes by other participants.

Precedence

Rule 16

The presiding officer or rapporteur of a committee may be accorded precedence for the purpose of explaining the conclusions arrived at by the committee.

Closing of the list of speakers

Rule 17

During the course of a debate, the President may announce the list of speakers and, with the consent of the Conference, declare the list closed. When there are no more speakers, the President shall, with the consent of the Conference, declare the debate closed. Such closure shall have the same effect as closure pursuant to rule 20.

Right of reply

Rule 18

1. Notwithstanding rule 17, the President shall accord the right of reply to a representative of any State participating in the Conference who requests it. Any other representative may be granted the opportunity to make a reply.
2. Statements made under this rule shall normally only be permitted at the end of the day whenever two meetings have been scheduled that are devoted to the consideration of the same item.
3. The representatives of a State may make no more than two statements under this rule at a given meeting on any item. The first shall be limited to five minutes and the second to three minutes; representatives shall in any event attempt to be as brief as possible.

Adjournment of debate

Rule 19

A representative may at any time move the adjournment of the debate on the question under discussion. Permission to speak on the motion shall be accorded only to two representatives in favour of and to two opposing the adjournment, after which the motion shall, subject to rule 22, be immediately put to the vote.

Closure of debate

Rule 20

A representative may at any time move the closure of the debate on the question under discussion, whether or not any other representative has signified his/her wish to speak. Permission to speak on the motion shall be accorded only to two representatives opposing the closure, after which the motion shall, subject to rule 22, be immediately put to the vote.

Suspension or adjournment of the meeting

Rule 21

Subject to rule 33, a representative may at any time move the suspension or the adjournment of the meeting. No discussion on such motions shall be permitted and they shall, subject to rule 22, be immediately put to the vote.

Order of motions

Rule 22

The motions indicated below shall have precedence in the following order over all proposals or other motions before the meeting:

- (a) To suspend the meeting;
- (b) To adjourn the meeting;
- (c) To adjourn the debate on the question under discussion;
- (d) To close the debate on the question under discussion.

Submission of proposals and substantive amendments

Rule 23

Proposals and substantive amendments shall normally be submitted in writing to the Executive Secretary of the Conference, who shall circulate copies to all delegations. Unless the Conference decides otherwise, substantive proposals shall be discussed or put to the vote no earlier than 24 hours after copies have been circulated in all languages of the Conference to all delegations.

Withdrawal of proposals and motions

Rule 24

A proposal or a motion may be withdrawn by its sponsor at any time before voting on it has commenced, provided that it has not been amended. A proposal or a motion thus withdrawn may be reintroduced by any representative.

Decisions on competence

Rule 25

Any motion calling for a decision on the competence of the Conference to adopt a proposal submitted to it shall be put to the vote before a vote is taken on the proposal in question.

Reconsideration of proposals

Rule 26

When a proposal has been adopted or rejected, it may not be reconsidered unless the Conference, by a two thirds majority of the representatives present and voting, so decides. Permission to speak on a motion to reconsider shall be accorded only to two speakers opposing reconsideration, after which the motion shall be immediately put to the vote.

VI. DECISION-MAKING

General agreement

Rule 27

The Conference should make best endeavours to ensure that the work of the Conference and the adoption of its report are accomplished by general agreement.

Voting rights

Rule 28

Each State participating in the Conference shall have one vote.

Majority required

Rule 29

1. Subject to rule 27, decisions of the Conference shall be taken by a majority of the representatives present and voting.
2. If a vote is equally divided, the proposal or motion shall be regarded as rejected.

Meaning of the phrase "representatives present and voting"

Rule 30

For the purpose of these rules, the phrase "representatives present and voting" means representatives casting an affirmative or negative vote. Representatives who abstain from voting shall be regarded as not voting.

Method of voting

Rule 31

Except as provided in rule 38, the Conference shall normally vote by show of hands, except that a representative may request a roll-call, which shall then be taken in the English alphabetical order of the names of the States participating in the Conference, beginning with the delegation whose name is drawn by lot by the President. The name of each State shall be called in all roll-calls, and its representative shall reply "yes", "no" or "abstention".

Explanations of vote

Rule 32

Representatives may make brief statements consisting solely of an explanation of their votes, before the voting has commenced or after the voting has been completed. The President may limit the time to be allowed for such explanations. The representative of a State sponsoring a proposal or motion shall not speak in explanation of vote thereon, except if it has been amended.

Conduct during voting

Rule 33

After the President has announced the commencement of voting, no representatives shall interrupt the voting except on a point of order in connection with the process of voting.

Division of proposals

Rule 34

A representative may move that parts of a proposal be voted on separately. If a representative objects, the motion for division shall be voted upon. Permission to speak on the motion shall be accorded only to two representatives in favour of and to two opposing the division. If the motion is carried, those parts of the proposal that are subsequently approved shall be put to the vote as a whole. If all operative parts of the proposal have been rejected, the proposal shall be considered to have been rejected as a whole.

Amendments

Rule 35

A proposal is considered an amendment to another proposal if it merely adds to, deletes from or revises part of that proposal. Unless specified otherwise, the word "proposal" in these rules shall be considered as including amendments.

Order of voting on amendments

Rule 36

When an amendment is moved to a proposal, the amendment shall be voted on first. When two or more amendments are moved to a proposal, the Conference shall vote first on the amendment furthest removed in substance from the original proposal and then on the amendment next furthest removed therefrom and so on, until all the amendments have been put to the vote. Where, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted upon.

Order of voting on proposals

Rule 37

1. If two or more proposals, other than amendments, relate to the same question, they shall, unless the Conference decides otherwise, be voted on in the order in which they were submitted. The Conference may, after each vote on a proposal, decide whether to vote on the next proposal.
2. Revised proposals shall be voted on in the order in which the original proposals were submitted, unless the revision substantially departs from the original proposal. In that case the original proposal shall be considered as withdrawn and the revised proposal shall be treated as a new proposal.
3. A motion requiring that no decision be taken on a proposal shall be put to the vote before a vote is taken on the proposal in question.

Election

Rule 38

All elections shall be held by secret ballot, unless the Conference decides otherwise.

Rule 39

1. When one or more elective places are to be filled at one time under the same conditions, those candidates, in a number not exceeding the number of such places, obtaining in the first ballot a majority of the votes cast and the largest number of votes, shall be elected.

2. If the number of candidates obtaining such majority is less than the number of places to be filled, additional ballots shall be held to fill the remaining places.

VII. SUBSIDIARY BODIES

Committees

Rule 40

The Conference may establish such committees as may be necessary for the performance of its functions. Items relating to the same category of subjects may be referred to the committee dealing with that category of subjects.

Officers and procedure

Rule 41

The rules relating to officers (chapter II), the secretariat of the Conference (chapter III), the conduct of business of the Conference (chapter V), decision-making (chapter VI) and languages and records (chapter VIII) shall be applicable, mutatis mutandis, to the proceedings of committees, except that:

(a) Each committee shall elect a presiding officer and such other officers as it may require;

(b) A committee may dispense with certain language interpretation facilities if there is no objection on the part of the delegations directly concerned.

VIII. LANGUAGE AND RECORDS

Languages of the Conference

Rule 42

English, French and Spanish shall be the languages of the Conference.

Interpretation

Rule 43

1. Speeches made in a language of the Conference shall be interpreted into the other such languages.
2. A representative may speak in a language other than a language of the Conference if he/she provides for interpretation into one such language.

Languages of resolutions and other formal decisions

Rule 44

All resolutions and other formal decisions of the Conference shall be published in the languages of the Conference.

Languages of reports

Rule 45

Any reports submitted by the Bureau or by the committees established in accordance with rule 40, as well as the report of the Conference referred to in rule 11, shall be published in the languages of the Conference.

Records of meetings

Rule 46

1. There shall be neither verbatim nor summary records of meetings.
2. Sound recordings of meetings of the Conference and of its committees shall be made and kept in accordance with the practice of the United Nations.

IX. PUBLIC AND PRIVATE MEETINGS

General principles

Rule 47

The plenary meeting of the Conference and the meetings of its committees shall be held in public unless the body concerned decides otherwise.

X. OBSERVERS

Representatives of the specialized agencies and other intergovernmental organizations

Rule 48

1. Representatives designated by the specialized agencies and other intergovernmental organizations invited to the Conference may participate as observers in the deliberations of the Conference and its committees.
2. Upon the invitation of the presiding officer of the Conference body concerned ~~and subject to the approval of that body, such representatives may make oral~~ statements on questions within the scope of their activities.

Representatives of non-governmental organizations

Rule 49

1. Non-governmental organizations invited to the Conference may designate representatives to sit as observers at public meetings of the Conference and its committees.
2. Upon the invitation of the presiding officer of the Conference body concerned and subject to the approval of that body, such observers may make oral statements on questions in which they have a special competence.

Written statements

Rule 50

Written statements related to the work of the Conference submitted by the designated representatives of the organizations referred to in rules 48 and 49 shall be distributed by the secretariat to all delegations in the quantities and in the languages in which the statements are made available to the secretariat for distribution.

XI. AMENDMENT AND SUSPENSION OF THE RULES OF PROCEDURE

Method of amendment

Rule 51

These rules of procedure may be amended by a decision of the Conference taken after the Bureau has reported on the proposed amendment.

Method of suspension

Rule 52

Any of these rules may be suspended by the Conference provided that 24 hours notice of the proposal for the suspension has been given, which may be waived if no reresentative objects. Any such suspension shall be limited to a specific and stated purpose and to a period required to achieve that purpose.

Annex IV

LIST OF DOCUMENTS

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/1	Provisional agenda	3 (b)
E/CONF.81/2	Rules of procedure	3 (a)
E/CONF.81/INF.1	Documentation for the Conference	3 (d)
E/CONF.81/INF.2	Provisional list of documents	3 (d)
E/CONF.81/INF.3	Provisional list of participants	3 (d)
E/CONF.81/INF.4	Annotated provisional agenda	3 (d)
E/CONF.81/INF.5	Aeronautical charts (submitted by the International Civil Aviation Organization)	5 (f)
E/CONF.81/INF.6	GPS activities in the Federal Republic of Germany and the implications for practical surveying (submitted by the Federal Republic of Germany)	5 (a)
E/CONF.81/INF.7	National report (submitted by the Federal Republic of Germany)	4
E/CONF.81/INF.8	A topographic-cartographic information system for small-scale applications in the Federal Republic of Germany (submitted by the Federal Republic of Germany)	5 (g)
E/CONF.81/INF.9 and INF.9/Corr.1	World-wide hydrographic surveying and status of nautical charting (submitted by the United Nations Secretariat)	5 (d)
E/CONF.81/INF.10	Classical geodetic measurements in the GPS epoch (submitted by Poland)	5 (a)
E/CONF.81/INF.11	Twenty-first century strategies for National Surveying and Mapping: report of the Executive Workshop (submitted by the International Institute for Aerospace Survey and Earth Sciences)	6
E/CONF.81/INF.12	Informe de los Estados Unidos Mexicanos (submitted by Mexico)	4
E/CONF.81/INF.13	Reseña de las actividades cartograficas en Chile (submitted by Chile)	4

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/INF.14	Management considerations in automating a mapping unit (submitted by France)	6 (a)
E/CONF.81/INF.15	A short review of cartographic activities in Poland (submitted by Poland)	6
E/CONF.81/INF.16	Short-term training as a quick way of acquiring the technical staff for national geodetic services (submitted by Poland)	6 (e)
E/CONF.81/INF.17	The activities of the General Mapping Authority (submitted by Turkey)	5 (a), (g)
E/CONF.81/INF.18	Application of remote sensing of the Earth to exploration and mapping for economic potential in the USSR (submitted by the Union of Soviet Socialist Republics)	5 (b)
E/CONF.81/INF.19	V/O "Sojuzkarta" on the international market (submitted by the Union of Soviet Socialist Republics)	7
E/CONF.81/INF.20	The status of cartographic activities in the United States (submitted by the United States of America)	4
E/CONF.81/INF.21	Report of progress in surveying and mapping in China, 1985-1988 (submitted by China)	4
E/CONF.81/INF.22	Méthode de suivi de l'évolution de l'urbanisation aux environs de Paris de 1974 à 1987 (submitted by France)	5 (i)
E/CONF.81/INF.23	Ways to perfect the system of cartographic products (submitted by the Union of Soviet Socialist Republics)	6 (c)
E/CONF.81/INF.24	National report of the USSR (submitted by the Union of Soviet Socialist Republics)	4
E/CONF.81/INF.25	Objectives, structure and content of the <u>General Scientific and Geographic Reference Atlas of the World</u> (submitted by the Union of Soviet Socialist Republics)	5 (f)
E/CONF.81/INF.26	On-line computer-aided topographic survey technique (submitted by the Union of Soviet Socialist Republics)	5 (c)
E/CONF.81/INF.27	Project of the data bank of the automated system of small-scale cartography (submitted by the Union of Soviet Socialist Republics)	5 (g)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/INF.28	Organization and planning of work on standardization of geographical names in the USSR (submitted by the Union of Soviet Socialist Republics)	6 (d)
E/CONF.81/INF.29	Information network and cadastre (submitted by the Union of Soviet Socialist Republics)	5 (e)
E/CONF.81/L.1	National and cadastral mapping in Zambia (submitted by Zambia)	4
E/CONF.81/L.2	A unified world geodetic network based on the use of GPS (submitted by Hungary)	5 (a)
E/CONF.81/L.3	Use of LANDSAT-TM imagery in 1:100,000 topographic map compilation (submitted by Hungary)	5 (b)
E/CONF.81/L.4	United Nations Interregional Seminar on the Introduction of Modern Mapping Techniques, Honefoss, Norway (submitted by Norway)	7
E/CONF.81/L.5	United Kingdom report on cartographic activities in the Americas (submitted by the United Kingdom)	4
E/CONF.81/L.6	Training in survey and mapping for overseas students in the United Kingdom (submitted by the United Kingdom)	6 (e)
E/CONF.81/L.7	Input from the International Hydrographic Organization (submitted by the International Hydrographic Organization)	4
E/CONF.81/L.8	Technical assistance (submitted by the International Hydrographic Organization)	7
E/CONF.81/L.9	A proposal for the creation of an IHO Center for Digital Bathymetry (submitted by the International Hydrographic Organization)	5 (g)
E/CONF.81/L.10	Report of the Meeting of the United Nations <u>Ad Hoc</u> Group of Experts on the International Map of the World on the Millionth Scale (IMW), 9-11 December 1986 (submitted by the United Nations Secretariat)	5 (f)
E/CONF.81/L.11	Line mapping from satellites in the Ordnance Survey (submitted by the United Kingdom)	5 (b)
E/CONF.81/L.12	Completion of the Escuela de Topografía, Catastro y Geodesia (ETCG) (submitted by the Federal Republic of Germany)	6 (e)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/L.13	Digital large-block mosaic of LANDSAT-MSS imagery of Antarctica (submitted by the Federal Republic of Germany)	5 (f)
E/CONF.81/L.14	Preparation and production of digital maps for power supply companies (submitted by the Federal Republic of Germany)	5 (g)
E/CONF.81/L.15	Training course in toponymy (submitted by Canada)	6 (d), (e)
E/CONF.81/L.16*		
E/CONF.81/L.17	Preparing your organization for GIS/LIS: avoiding surprises when hardware/software arrives (submitted by Canada)	5 (h)
E/CONF.81/L.18	On the impact of the active control system on survey control networks (submitted by Canada)	5 (a)
E/CONF.81/L.19	Development of a geodetic information system using a structured data modelling approach (submitted by Canada)	5 (g)
E/CONF.81/L.20	United Nations technical co-operation activities in surveying, mapping and charting, with special emphasis on the Americas (submitted by the United Nations Secretariat)	7
E/CONF.81/L.21	Use of multispectral imagery in support of hydrographic chart production and verification of navigational hazards at the Defense Mapping Agency (DMA) (submitted by the United States of America)	5 (d)
E/CONF.81/L.22	Joint program of the Defense Mapping Agency and the Pan American Institute for Geography and History on gazetteers and geographic names (submitted by the United States of America)	6 (d)
E/CONF.81/L.23	Reconciling the navigational grid with the inertial navigation system (submitted by the United States of America)	5 (d)
E/CONF.81/L.24	A "geocadastre" for New Orleans and southern Louisiana (submitted by the United States of America)	5 (h)

* Withdrawn for technical reasons.

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/L.25	The Aeronautical Chart Automation Project data base concept (submitted by the United States of America)	5 (g)
E/CONF.81/L.26	Evaluation of digital land-cover mapping of Viedma, Argentina, using merged LANDSAT-TM and SPOT panchromatic data (submitted by the United States of America)	5 (b)
E/CONF.81/L.27	Modernization of United States Geological Survey Mapping System (submitted by the United States of America)	6 (a)
E/CONF.81/L.28	Digital cartographic data standards: the United States experience (submitted by the United States of America)	5 (g)
E/CONF.81/L.29	A process for evaluating geographic information systems (submitted by the United States of America)	5 (h)
E/CONF.81/L.30	The Geographic Names Information System: a toponymic research tool (submitted by the United States of America)	6 (d)
E/CONF.81/L.31	Seasonal vegetation monitoring with AVHRR data for grasshopper and locust control in West Africa (submitted by the United States of America)	5 (f)
E/CONF.81/L.32	Organizational issues in the transition of the United States Geological Survey's National Mapping Program into the next decade (submitted by the United States of America)	6 (a)
E/CONF.81/L.33	United Nations Interregional Training Course in Large-scale Mapping Operations (submitted by the German Democratic Republic)	6 (e)

Background papers

E/CONF.81/BP.1	Land information management into the 1990s (submitted by the United Nations Secretariat)	5 (h)
E/CONF.81/BP.2	Une banque de données localisées - Pourquoi? Comment? (submitted by the United Nations Secretariat)	5 (i)
E/CONF.81/BP.3	Status of world topographic and cadastral mapping; Part I: Topographic mapping and geodetic network (submitted by the United Nations Secretariat)	4

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.81/BP.4	Satellite positioning systems in the 1990s (submitted by the United Nations Secretariat)	5 (a)
E/CONF.81/BP.5	Review of the latest technology in satellite mapping: remote sensing for cartography (submitted by the Secretariat)	5 (b)
<u>Conference room papers</u>		
E/CONF.81/CRP.1	Tentative allocation of agenda items to the plenary and committees, and provisional schedule (submitted by the Secretariat)	3 (b)
E/CONF.81/CRP.2	Directory of national and international agencies and institutions involved in surveying, mapping and charting (submitted by the Secretariat)	6 (a)
<u>Other documents distributed</u>		
ESA/RT/C/GN 10	Report of the UN Group of Experts on Geographical Names on the work of its Twelfth Session	
ESA/RT/C/GN 11	Report of the UN Group of Experts on Geographical Names on the work of its Thirteenth Session	
ST/ESA/SER.L/18	World Cartography, volume XVIII	
ST/ESA/SER.L/19	World Cartography, volume XIX	
E/CONF.77/3	Third UN Regional Cartographic Conference for the Americas, volume I: Report of the Conference	
E/CONF.77/3/Add.1	Third UN Regional Cartographic Conference for the Americas, volume II: Technical Paper	
E/CONF.78/4	Eleventh UN Regional Cartographic Conference for Asia and the Pacific, volume I: Report of the Conference	
E/CONF.79/5	Fifth UN Conference on the Standardization of Geographical Names, volume I: Report of the Conference	
E/CONF.79/L.19	Toponymic Guidelines for Map and other Editors (United States of America)	

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