

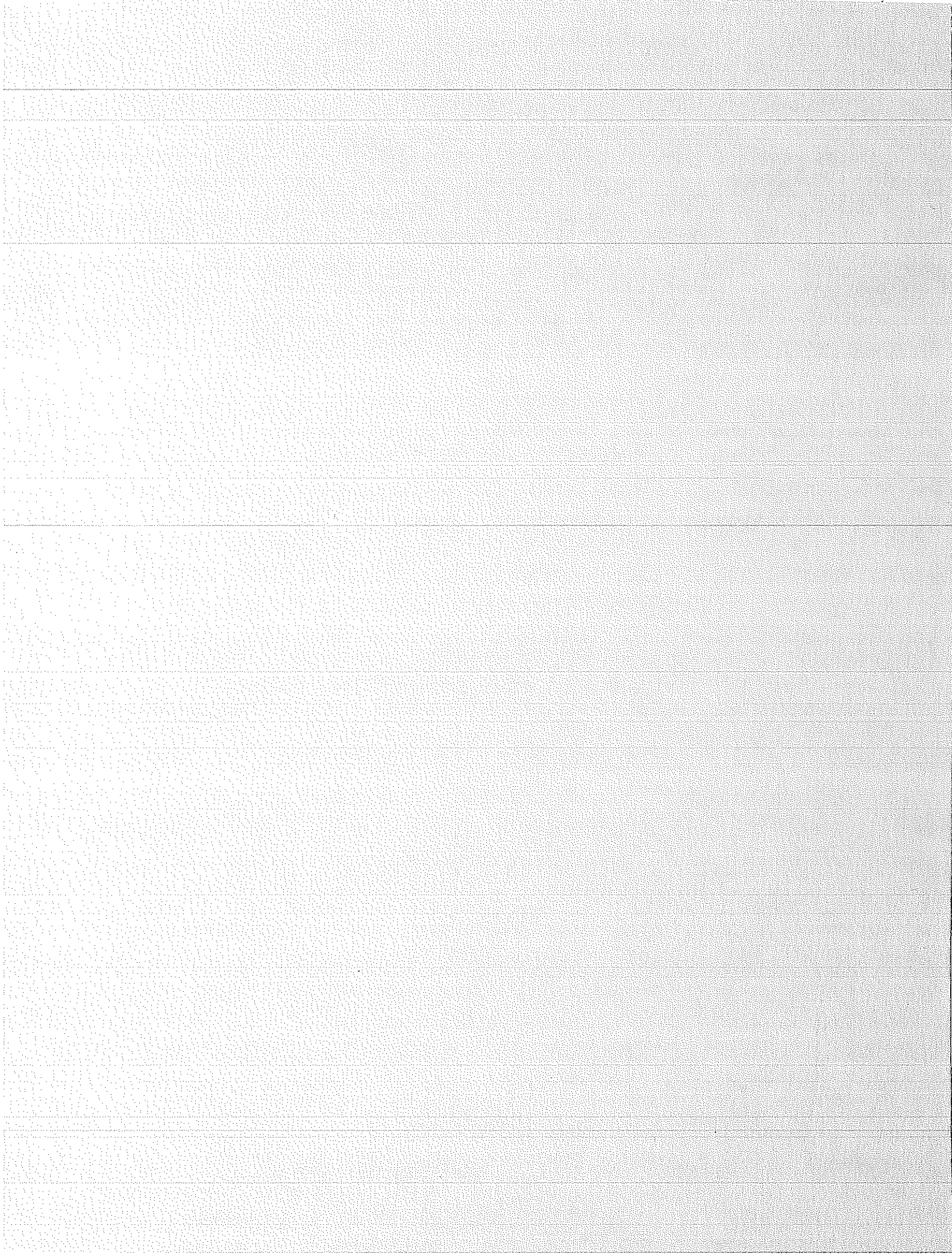
NINTH UNITED NATIONS
REGIONAL
CARTOGRAPHIC CONFERENCE
FOR ASIA AND THE PACIFIC

Wellington, New Zealand, 11-22 February 1980

Vol. I. - Report of the Conference



UNITED NATIONS



Department of Technical Co-operation for Development

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CARTOGRAPHIC CONFERENCE
FOR ASIA AND THE PACIFIC

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Vol. I.—Report of the Conference



UNITED NATIONS
New York, 1980

NOTE

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

The proceedings of the Ninth United Nations Regional Cartographic Conference for Asia and the Pacific, held at Wellington, New Zealand, from 11 to 22 February 1980, 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 Asia and the Far East were issued under the following symbols and sales codes: E/CONF.18/6 (Sales No. 55.I.29) and E/CONF.18/7 (Sales No. 56.I.23) for the First Conference; E/CONF.25/3 (Sales No. 59.I.9) and E/CONF.25/4 (Sales No. 61.I.8) for the Second Conference; E/CONF.36/2 (Sales No. 62.I.14) and E/CONF.36/3 (Sales No. 64.I.17) for the Third Conference; E/CONF.50/4 (Sales No. 65.I.16) and E/CONF.50/5 (Sales No. 66.I.3) for the Fourth Conference; E/CONF.52/4 (Sales No. E.68.I.2) and E/CONF.52/5 (Sales No. E.68.I.14) for the Fifth Conference; E/CONF.57/2 (Sales No. E.71.I.15) and E/CONF.57/3 (Sales No. E.72.I.20) for the Sixth Conference; E/CONF.62/3 (Sales No. E.74.I.7) and E/CONF.62/4 (Sales No. E.74.I.25) for the Seventh Conference; E/CONF.68/3 (Sales No. E.77.I.12) and E/CONF.68/3/Add.1 (Sales No. E.78.I.8) for the Eighth Conference.

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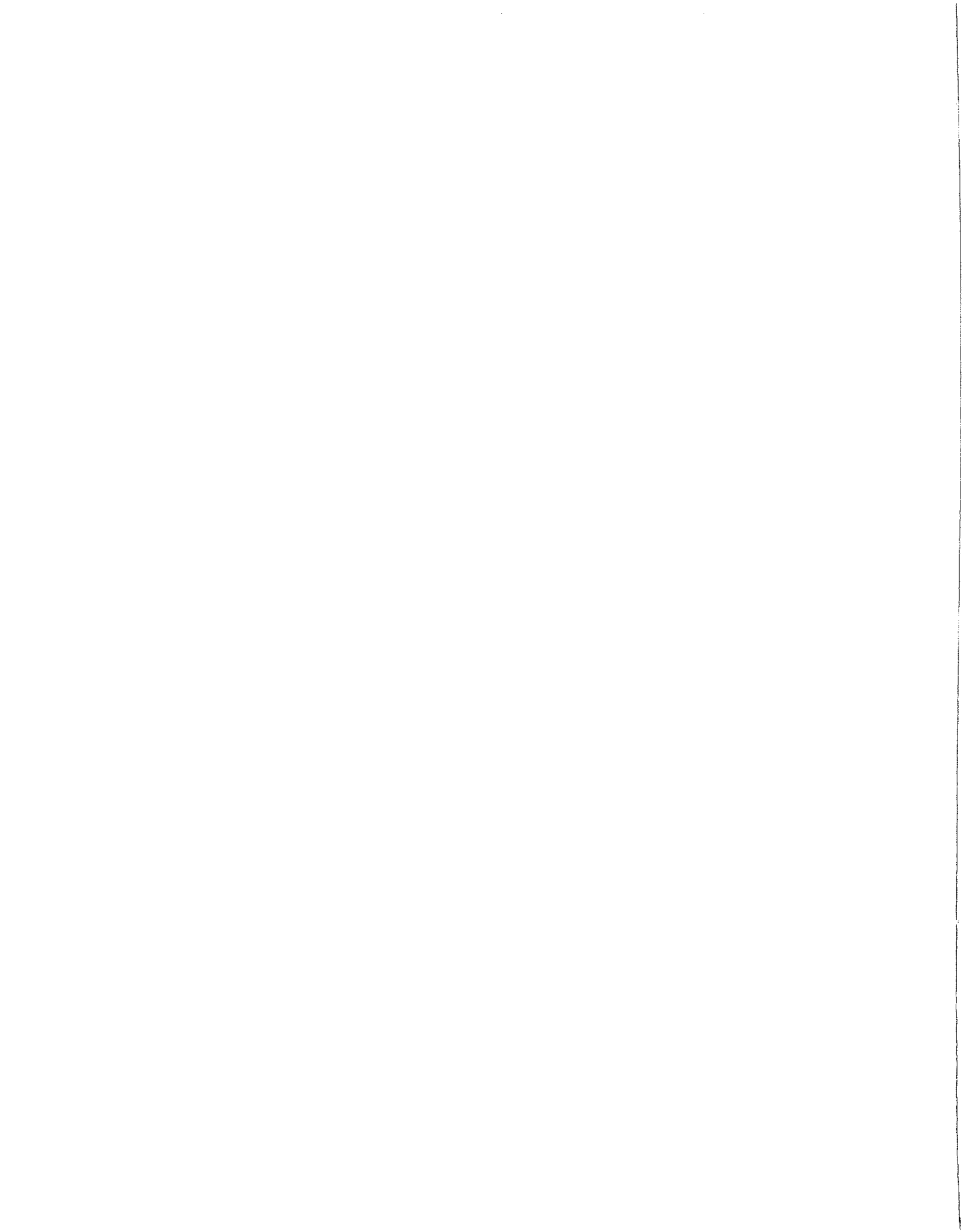
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I. ORGANIZATION OF THE CONFERENCE

A. Opening and duration of the Conference

1. The Ninth United Nations Regional Cartographic Conference for Asia and the Pacific was held at Wellington, New Zealand, from 11 to 22 February 1980. The Conference was held in accordance with resolution 2049 (LXII), adopted by the Economic and Social Council on 5 May 1977.

B. Attendance

2. The Conference was attended by 150 representatives and observers from 38 countries and seven intergovernmental and international scientific organizations.

C. Official addresses

3. His Excellency, Hon. Venn Young, Minister of Lands of New Zealand, inaugurated the Conference. The representative of the Secretary-General of the United Nations delivered an opening address on behalf of the Secretary-General.

D. Adoption of the rules of procedure

4. The Conference adopted its rules of procedure (E/CONF.72/2), the text of which is reproduced in annex III to the present report.

E. Agenda

5. The Conference, at its opening meeting, adopted the following agenda:

1. Adoption of the rules of procedure
2. Election of officers
3. Adoption of the agenda
4. Report on credentials
5. Establishment of technical committees
6. Country reports and progress made since the Eighth Conference
7. Review of the latest techniques and developments related to:
 - (a) Geodesy (including satellite) and topographic mapping (including satellite imagery and conventional photography)

- (b) Thematic and small-scale mapping (including remote sensing applications) and preparation and reproduction of maps (including automation, communication and geographical names)
 - (c) Cadastral surveying and urban mapping (including land information systems)
 - (d) Hydrographic surveying and nautical charting
8. Technical assistance (including training)
 9. Adoption of the report of the Conference

F. Technical committees

6. The Conference established four technical committees and allocated certain agenda items to them as shown below:

Committee I	Item 7 (a)
Committee II	Item 7 (b)
Committee III	Item 7 (c)
Committee IV	Item 7 (d)

Agenda items 1 to 5 and item 8 were considered at plenary meetings. The Conference decided not to discuss item 6 as a separate item but to include in the debate of the other relevant items, reports on the progress made since the Eighth Conference.

G. Election of officers

7. The Conference elected the following officers:

President:	Mr. Ian F. Stirling (New Zealand)
First Vice-President:	Mr. Tiavolo Seumanutafa (Samoa)
Second Vice-President:	Mr. Andreas Christofi (Cyprus)
Rapporteur:	Mr. A. B. Basnyat (Nepal)

8. The following officers were elected to the four committees:

Committee I

Chairman:	Mr. A. G. Bomford (Australia)
Vice-Chairman:	Mr. Yang Leiguang (China)
Rapporteur:	Mr. Jacub Rais (Indonesia)

Committee II

Chairman:	Lieutenant General Chumphon Kulkasem (Thailand)
Vice-Chairman:	Mr. Solomona Kalauni (Niue)
Rapporteur:	Mr. Oliver Castro (Philippines)

Committee III

Chairman: Major General K. L. Khosla (India)
Vice-Chairman: Mr. Nabura Takaai (Solomon Islands)
Rapporteur: Ms. Margaret Hardern (United Kingdom)

Committee IV

Chairman: Mr. Takahiro Sato (Japan)
Vice-Chairman: Mr. Hanif Khan (Fiji)
Rapporteur: Mr. Siew Chong Goh (Malaysia)

9. Chris N. Christopher, United Nations Secretariat, served as Executive Secretary of the Conference.

H. Report on credentials

10. The Conference received a report that the credentials of all participants had been submitted to the Credentials Committee and found to be in order.

I. Vote of thanks

11. At the closing meeting, the Conference adopted by acclamation a vote of thanks to the Government of New Zealand for the excellent arrangements made for the organization of the Conference and for the outstanding hospitality extended to the participants. It also expressed its affirmation to the President and the officers of the Conference for the excellent way in which they have conducted the meetings and its gratitude to the officers and staff of the United Nations Secretariat for their hard work.

II. SUMMARY OF PLENARY MEETINGS

12. The Conference considered agenda item 8 (Technical assistance including training) in plenary meetings, including national reports pertaining to the subject. Six draft resolutions were submitted to the Conference, which were subsequently adopted as resolutions 1, 2, 3, 4, 5 and 24 (for the texts of the resolutions see chap. VII below).

13. Delegates were asked to answer the following three questions:

(a) Describe what sort of survey, mapping or charting tasks require technical assistance;

(b) Indicate what are the biggest problems with training;

(c) Suggest what sort of arrangements for technical assistance or for training you would like to see eventuate within the region.

14. Fiji, Kuwait, Malaysia, Nepal, Samoa and Thailand expressed the needs of technical assistance including training. China mentioned that it had covered the whole country with geodetic network and furnished the Conference with the information that China might provide the necessary assistance to other countries, if requested, through diplomatic channels or through the United Nations. India mentioned that, with the United Nations assistance, a Training Institute had been established at Hyderabad, which could provide training on different subjects of surveying and mapping if countries of the region so wished.

15. The Conference then considered 11 papers submitted under this item.

16. In the paper, entitled "Surveying education in New Zealand" (E/CONF.72/L.16), New Zealand described the system of surveying education and training. The paper included detailed descriptions of the education and training of professional surveyors and technician surveyors with curriculum.

17. New Zealand submitted also a paper entitled "New Zealand's technical training assistance in the Pacific and South-East Asian countries" (E/CONF.72/L.17), in which technical training assistance in the Pacific and South-East Asian countries was described as a fairly extensive programme.

18. The paper, entitled "Geodetic Frameworks - their relevance for development" (E/CONF.72/L.54), submitted by the United Kingdom, was discussed. This paper defined the terms "geodesy" and "geodetic surveys", compared past and present circumstances, and fundamental requirements in surveying. It further outlined future developments in fundamental geodetic survey in the 1980s.

19. The French delegate presented a paper entitled "Training of survey engineers and technicians at the French National Geographic Sciences College (ENSG) and local training" (E/CONF.72/L.56). The paper reported that the Ecole nationale des sciences géographiques, founded in 1941, had two major characteristics. The first concerned open admission to the courses which are open also to non-French students

and are followed by many young people studying for short or long periods. The second characteristic concerned the training system where a large amount of time is devoted to concrete examples. The technical courses are completed not only by practical laboratory instruction but also by training in the field. ENSG also provides local training programmes. Training course cycles and combined courses were also thoroughly described in this paper.

20. The paper entitled "SPOT, French Earth Observation Programme, present status of the programme as of February 1980: SPOT, A mission, the satellite and associated ground facilities" (E/CONF.72/L.58), also submitted by France, described the objective of Earth's observations by remote sensing from space without replacing conventional methods of statistical inventory and ground data collection. In addition to this, it described the First mission SPOT, a main and general architecture of the system with figure.

21. In the paper, entitled "The recent evolution of hydrography in relation to the new economy of the sea: co-operation with newly independent maritime States" (E/CONF.72/L.63), France defined clearly the meaning of hydrography, outlined the various hydrographic services to the mariner that this country can provide, and the new requirements in hydrography. It described further the role of the Service hydrographique et oceanographique de la Marine (SHOM) in France.

22. The representative of the Netherlands submitted the paper, entitled "Modern components in the ITC courses in aerial photography, photogrammetry and cartography" (E/CONF.72/L.71), which described the modern components in ITC courses in aerial photography, photogrammetry and in cartography.

23. The Federal Republic of Germany submitted a paper entitled "The possibilities for technical assistance" (E/CONF.72/L.84). The paper outlined various ways carried out in the Federal Republic of Germany on technical co-operation in the fields of surveying, geodesy, photogrammetry and cartography. It also gave information about organization of workshops for the continued information, exchange and technical co-operation, that is carried out in the form of technical assistance projects in surveying and mapping. The next workshop on photogrammetry will be held at Hamburg from 13 to 25 July 1980.

24. A paper entitled "Regional international periodical (RIP) on photogrammetry and remote sensing for Asia and the Pacific" (E/CONF.72/L.99) was presented by the representative of the International Society for Photogrammetry. The paper stressed the need of appropriate and internationally recognized means for publication of periodicals. It also pointed out that overflowing of printed materials on periodicals without international control would be of no help. It further urged to reduce the number of existing periodicals.

25. A paper, entitled "Training and education in surveying and mapping in Indonesia" (E/CONF.72/L.103), was submitted by Indonesia. It furnished the information in detail regarding training and education in surveying and mapping in Indonesia. The paper stressed also the importance and the national need of the surveying and mapping profession.

26. In conclusion, the delegates stressed the importance of the following:

(a) Hydrographic education and training is as important as the education and training in other kinds of survey education and training;

(b) Manpower development is a prerequisite to promote cartographic activities;

(c) Periodicals must be internationally controlled in some way, in order to reduce the quantity of printing papers and avoid duplications;

(d) In order to make full use of seminars and workshops, high-level managers and supervisors have to participate themselves;

(e) Technical assistance, including training, should be further extended within the region.

III. WORK OF COMMITTEE I: GEODESY (INCLUDING SATELLITE)
AND TOPOGRAPHIC MAPPING (INCLUDING SATELLITE IMAGERY
AND CONVENTIONAL PHOTOGRAPHY)

27. Agenda item 7 (a) was considered by Committee I. A total of 37 papers were submitted for this item, including national reports pertaining to the subject. Five draft resolutions were submitted to the Conference, which were subsequently adopted as resolutions 6, 7, 8, 9 and 10 (for the texts of the resolutions, see chap. VII below).

A. Geodesy

28. The representative of the United States of America presented a paper entitled "New developments in terrestrial and satellite survey techniques" (E/CONF.72/L.20). This paper described a number of changes in geodetic techniques during the last 10 years. Advances were made in greater accuracy and speed but at the cost of more complex instruments. In space techniques, the representative of the United States reported on the development of the NAVSTAR Global Positioning System (GPS). This system would give a three-dimensional read-out for aircrafts, ships and positioning points on the surface of the earth. It would consist of 24 satellites operational in the 1983-1987 time-frame and would overlap the continuing operation of the Navy Navigation Satellite System (NNSS).

29. A paper, entitled "Survey control system" (E/CONF.72/L.7), submitted by New Zealand, reported on the establishment and administration of the survey control system in that country. A brief history was given on the early development leading to the establishment of the Geodetic Datum 1949. The paper also described in brief the specifications for design, fieldwork, adjustment, recording and publication of survey control system as set by the Department of Lands and Survey. The primary emphasis of the survey control system was a co-ordinated and centralized administrative agency with a structure and versatility to meet a wide range of existing and changing demands.

30. In the national report on cartographic activities in New Zealand, 1977-1980 (E/CONF.72/L.8), New Zealand outlined the progress made in triangulation, rural and urban control traverses and precise levelling works for the last three years.

31. A paper submitted by Australia, entitled "Geodesy in the Division of National Mapping, Australia, 1977-1979" (E/CONF.72/L.40), gave a brief review of geodetic activities in Australia. In the field of computation and adjustment, a CHAOS computer programme, developed by Dr. Allman of the University of New South Wales, was used to readjust the geodetic data of Australia which had led to the Geodetic Model of Australia 1979 (GMA 79). In the field of Doppler survey, the National Mapping had computed more than 500 Doppler fixes using precise ephemeris data by the end of 1979. The National Mapping's Lunar Laser Ranger (LLR) at the Orroral site near Canberra, which was first test fired in 1976, provided data that had enabled National Mapping to refine the NWL-9D Doppler co-ordinates of the LLR and to make direct comparisons over continental distances

between the Doppler range-rate system processing and LLR range system processing. Comparative work was also being done with the Photographic Zenith Telescope (PZT). PZT was reported to continue its operation by National Mapping and it was one of the main contributors to the Bureau international de l'heure in Paris and the International Polar Motion Service at Misuzawa.

32. A paper, entitled "Report on activities of IAG Commission 10, Continental Networks, Sub-commission for South-East Asia and the Pacific" (E/CONF.72/L.41), was prepared by the National Mapping of Australia. It described the sub-commission's work, since its establishment in 1975, during the IAG General Assembly at Grenoble, which consisted to bring the geodetic data of the countries in the said region on a single datum, preferably the World Geodetic System 1972. The advantages of linking together national geodetic networks over an entire continent was to avoid discontinuities in mapping along international borders and to set the coastlines on a common datum with its neighbours so that median lines and sea-bed boundaries could be accurately determined, and finally to record continental drift over a period of years.

33. The national report of the United Kingdom on cartographic activities (E/CONF.72/L.53) reviewed the works carried out by the United Kingdom in the Asia and the Pacific region from 1976 to 1979. In addition to the report, the representative of the United Kingdom brought up the need of geodetic control to be extended to the coastal area so that hydrographers could use these for their needs. Even though most survey ships were equipped with satellite navigational receivers, these could be used only when satellites were passing overhead and there could be an interval of up to two hours or more. It was possible to use inertial navigational systems but these were very expensive. Therefore, survey ships would rely only on various electronic distance measuring systems with two or more stations ashore at precisely known stations.

34. Another paper, presented by the United Kingdom and entitled "Geodetic frameworks - their relevance for development" (E/CONF.72/L.54), suggested that the earlier definition of geodetic survey should be modified. The functions of geodetic survey should now be expressed as:

(a) To constitute a framework to which less precise surveys may be connected, sufficient to ensure that national mapping, cadastral surveys and general surveys for development of large areas are based on a homogeneous co-ordinate system without discontinuities harmful to the general user;

(b) In combination with the studies of other specialists, to provide data of the highest possible precision for the definition of the geoidal surface, the geophysical character of the earth and the nature and occurrence of tectonic events.

The first objective was essential to sufficient land administration and the portrayal of information pertinent to land resources on maps and plans or in digital co-ordinate format while the second objective might have immediate local, practical significance.

35. A paper presented by France and entitled "Technical questions concerning base mapping - Doppler satellite geodesy" (E/CONF.72/L.57) described the involvement of the Institut géographique national (IGN) in various joint projects,

such as the EDOC Programme (European Doppler Observation Campaign), the MEDOC Programme (Motion of the Earth by Doppler Observation Campaign) etc., as well as French contribution to Doppler survey in various countries such as Guyana, the Libyan Arab Jamahiriya and Gabon.

36. Another paper submitted by France, entitled "SPOT, French Earth Observation Programme, present status of the Programme as of February 1980: SPOT A mission, the satellite and associated ground facilities", (E/CONF.72/L.58) gave information on the French Earth Observation Programme, called "SPOT". A French satellite, SPOT A, carried with the participation of Belgium and Sweden, would be launched during the first semester of 1984. The over-all concept of the system was designed to provide high resolution imagery of the earth's surface in order to reach the best needs for environmental management purposes and in particular for basic and thematic cartography to the scale of the order of 1/100,000.

37. The Federal Republic of Germany submitted a paper, entitled "Doppler activities and experience in point-positioning at the Institut für Angewandte Geodasie (IFAG)" (E/CONF.72/L.66), in which a review was made on the projects carried out by IFAG since 1975. The projects concerned accuracy tests and the determination of point positions by Doppler techniques over large areas of Europe. A summary of the accuracy of Doppler point-positioning obtained was as follows: the reproducibility of station co-ordinates computed in a single point mode observed over 5 to 10 days was ± 2 meter standard deviation in position and height using precise ephemeris. Higher precision in the order of ± 0.2 to ± 0.4 m were attainable using simultaneous Doppler observations at several stations up to 1,000 km apart. If the distance between stations did not exceed 200 to 400 km the method was applicable to large networks yielding relative accuracy of 10^{-6} with precise or broadcast ephemeris, making the methods ideal to control large aerial triangulation blocks for mapping control. To obtain the highest accuracy of ± 0.1 to ± 0.2 m, improvement in the data processing model was strongly suggested.

38. A second paper presented by the Federal Republic of Germany, entitled "Results of analysis of data collected with advanced laser-ranging instrumentation installed at Weitzell, and the implications for South-East Asia and the Pacific" (E/CONF.72/L.68), disclosed the first detailed analysis of the result taken with the advanced laser-ranging equipment in the Federal Republic of Germany. The significance of these techniques for scientific investigations in the Pacific area was discussed and related to the world-wide geodynamics programme. Some comments were made on the integration of scientists and agencies from the area into common programmes of study and application.

39. Sweden presented a paper, entitled "The establishment of a basic national geodetic system" (E/CONF.72/L.70), in which it described the geodetic activities in the country. In 1967, a new triangulation network had been established and the measurement of a new basic levelling network had recently begun. In order to achieve both a high level of productivity and a fully acceptable degree of accuracy, considerable attention was paid to the development of rational and cost-effective methods based on the use of modern equipment. The paper also mentioned the use of motorized levelling techniques which represented a significant deviation from currently used classical methods. Motorized methods permit a high degree of flexibility in the field and can be used for precise levelling or for mapping control with a high level of productivity and economic viability. The methods described in the paper are suitable both for the establishment of fundamental networks or for the quick measurement of densification networks between Doppler fixes.

B. Photogrammetry (including remote sensing orthophotomapping)

40. A paper on aerial photography in New Zealand (E/CONF.72/L.9) described the role of the Department of Lands and Survey in providing for New Zealand's requirements of aerial photography for national topographical mapping and for resource assessment purposes, in co-ordinating the aerial survey requirements of all government departments and in maintaining a comprehensive and well-documented national library of aerial photographs. The scope of application of aerial photography in the work of government departments was detailed and comment was made on New Zealand's involvement in aerial survey in the South Pacific.
41. Australia submitted a paper, entitled "High altitude wide angle photography" (E/CONF.72/L.72), which highlighted the potential of wide angle photography at a nominal scale of 1:84,000 flown along the same flight lines as the original lower level super-wide angle photography, particularly in areas of large terrain elevations where super wide angle photography was not ideal. This approach would enable the retention and utilization of much of the established control. This paper also informed the experience on the use of KODAK 2443 color infra-red film.
42. In its report on activities during 1977-1979 (E/CONF.72/L.39) Australia reported on the progress made in the field of air photography and topographic mapping, carried out by the Division of National Mapping, the Royal Australian Survey Corps and the mapping organization of the various States.
43. In its paper, entitled "Aerophotographic cameras of TES-type used for topographic survey" (E/CONF.72/L.86) the Union of Soviet Socialist Republics described the development of aerial cameras and the progress made in the USSR in eliminating chromatic and monochromatic aberrations and geometric distortions, in respect to exposure time. Four types of aerial cameras were presented, designed for different types of topography and different scales of photography.
44. A paper, entitled "APR-Laser System" (E/CONF.72/L.60), submitted by the French Government, reported the new system for airborne recording of field profiles perfected by IGN in 1979, with a view to establishing vertical control of small scale photogrammetric surveys in desert area. The APR-Laser System replaced the APR-Radar system, currently used, that could not be mounted in a pressurized aircraft. The new system had been implemented for mapping at 1:100,000 scale and it allowed to obtain measurement precisions of about one metre.
45. France presented also a paper, entitled "Métrologie" (E/CONF.72/L.64), in which the methods of geodetic metrology (determination of about 10 points with an accuracy of a millimetre) and photogrammetric metrology (determination of several hundreds of points with an accuracy of a centimetre) were described; the paper further outlined the applications of geodetic metrology to the study of stability of dams and the monitoring of other engineering constructions. It also showed applications of the photogrammetric metrology to civil engineering, industry and physical planning studies as well as to historical monument surveys.
46. A paper entitled "Remote sensing of New Zealand environment" (E/CONF.72/L.6), submitted by New Zealand, reported on the involvement of the country in the Landsat Programmes since 1973. A Remote Sensing Section at the Physics and

Engineering Laboratory was formed to cope with this task. Comparison had also been made between airborne multispectral photography and satellite imagery. New multispectral sensors were being investigated and one based on Charged Coupled Devices (CCD) had been flight tested. The range of application of remote sensing so far explored was in cartography, land use, planning, geology, forestry, agriculture, hydrology, coastal and marine studies.

47. The United States, in its paper entitled "Test results of a high-precision analytical photogrammetric system" (E/CONF.72/L.25), reported on the possible application of high precision photogrammetric system for densification of geodetic ground control with sufficient accuracy, rapid and relatively low cost. Final adjustment data for the optimum case showed a root-mean-square difference between geodesy and photogrammetry of 0.046 metres for 225 points. This represented a ratio of photo scale to error (in metre) of 516,158 or five times improvement over that reported in previous experiments.

48. A paper entitled "The European remote sensing mission on Spacelab 1" (E/CONF.72/L.82), submitted by the Federal Republic of Germany, dealt with the efforts to conduct a photogrammetric camera experiment on the first European Spacelab mission for mapping purposes. Spacelab would be launched on space shuttle by NASA in April 1982. Spacelab, built by the European Space Agency, would carry about 40 experiments from Europe and the United States, and among them, the following two earth observations financed by the Federal Republic of Germany:

(a) The photogrammetric camera experiment;

(b) The microwave remote sensing experiment which would carry a German-built coherent side looking imaging radar into space.

Using a Zeiss RMK 30/23 camera at an altitude of 250 kilometre, the mission expected a photographic resolution of 20 metre on the ground.

49. On orthophotomapping, Australia presented a paper entitled "Orthophotomapping for draining of agricultural lands in Fiji" (E/CONF.72/L.50) and another she entitled "Orthophotomapping - a digital companion" (E/CONF.72/L.42). The first paper described an orthophotomapping project in Fiji using two different scales of photography:

(a) A high level colour photography at 1:32,000 scale to produce 1:5,000 scale orthophoto maps

(b) Low level B and W photography to produce the two-metre contour lines and spot levels.

The second paper endeavoured to present orthophotomapping in the context of an information system as a support to digital mapping procedures.

50. The International Society of Photogrammetry presented an information paper, entitled "The 14th Congress of the International Society for Photogrammetry, July 1980, Hamburg" (E/CONF.72/L.94). All interested photogrammetrists

and remote sensing experts were invited to participate. Arrangements had also been made to convene a joint meeting of representatives of the International Federation of Surveyors (FIG), the International Cartographic Association (OCA) and the International Union of Geodesy and Geophysics (IUGG). About 30 Governments of developing countries were to be invited by the Government of the Federal Republic of Germany.

51. Australia presented two papers dealing with overseas mapping projects under the Australian technical assistance entitled "Survey of sugar lands in Fiji" (E/CONF.72/L.26) and "Mapping for water supplies at Tanjung Karang, Teluk Betung and Kota Bumi in Sumatra, Indonesia" (E/CONF.72/L.44).

52. The paper entitled "The application of survey and remote sensing techniques in coastal and marine areas carried out at the University of Hannover" (E/CONF.72/L.83), presented by the Federal Republic of Germany, summarized the methods investigated and the results of practical applications obtained in the following four project areas:

- (a) Determination of the geodetic reference surface at sea;
- (b) Methods to determine point positions and heights in coastal areas at sea;
- (c) Topographic surveys of tidal lands, shallow water areas and on continental shelf;
- (d) Thematic surveys of tidal lands and of water areas with respect to ecological mapping, sedimentation surveys and the tracing of pollutants.

53. China presented three papers: "Report on the progress of surveying and mapping in the People's Republic of China" (E/CONF.72/L.79), which dealt mainly with surveying and mapping organizations in China, the works on geodetic survey, aerial photography and small scale mapping as well as China's participation in international academic activities with regard to surveying and mapping; "An introduction to the adjustment of astro-geodetic net of the People's Republic of China" (E/CONF.72/L.80), which outlined the basic plan of adjustment of China's geodetic network, as a whole, as well as the definition of geodetic datum; and "Photogrammetry in China" (E/CONF.72/L.81), which summarized China's technical development of making topographic maps at basic scales of 1:10,000, 1:50,000 and 1:100,000 by means of aerophoto-grammetry; electronic computers were utilized to solve aerial triangulation by analytical method. In spite of this, China reported, the production cycle for map production was a rather long duration. Therefore, China was planning to make use of advance technology from developed countries to speed up the plotting works.

54. The Scientific Committee on Antarctic Research presented an information paper entitled "Report on the activities of the SCAR Working Group on Geodesy and Cartography" (E/CONF.72/L.97). This paper described the problems of taking aerial photography at high altitude from long-range high-flying aircraft and, with the absence of natural features over wide expanses of the ice, future series mapping would have to be made from Landsat imageries. However, Landsat imagery was not available south of 81°. The report also mentioned the possible use of the World Geodetic System 1972 or the Geodetic Reference System 1980 to replace the International spheroid as reference surface for Antarctic work.

55. A paper entitled "Automation in computer assisted cartography" (E/CONF.72/L.49), submitted by Australia, described briefly the AUTOMAP system, which had been used at the Royal Australian Survey Corps since 1976. It was a digital cartographic facility designed to replace some of the labour intensive activities in map making, and so increase map production without an increase in personnel. A by-product of the process was a digital data bank from which derivative mapping could be produced.

56. Also in the field of digital mapping, France presented a paper, entitled "Field digital models" (E/CONF.72/L.115), as experienced at the Institut Géographique national (IGN). The digital knowledge of the relief allowing to rectify automatically aerial photographs and even space images permitted to establish regular photomaps quickly and at low cost. On the other hand, field digital model constituted, for the engineer disposing of a computer, a kind of digital map, which represented a more flexible tool than the traditional paper document. IGN developed the digitalization of the French relief on the one hand, and the processes of computation and utilization of field digital models, which could be obtained from digitalization, on the other hand. The various techniques of processing and graphical output were also described.

57. In its national report on "cartographic activities in Indonesia, 1976-1979" (E/CONF.72/L.89), Indonesia described the extensive use of Doppler techniques for mapping and geodetic control. The paper also gave the definition of the new datum, called the Indonesian Datum 1974 (ID-74). For the survey and demarcation of the international boundary between Indonesia and Malaysia, a joint Doppler survey had been undertaken since 1979 and was to be continued in 1980. Indonesia was planning to establish a national Zero Order Network of Doppler stations which would tie the low separated geodetic systems in the country and would provide junction stations in a world geodetic system to be used for the neighbouring countries as common geodetic systems for delineation of common boundaries, land as well as seaward boundaries. Indonesia also reported on the planning of releveing of the 4,500 km of precise level networks in Java, starting in 1980.

58. Australia presented three short papers: "Topographic mapping" (E/CONF.72/L.33), "Revision of the National Topographic Map Series" (E/CONF.72/L.28) and "Revision cycle forecast model" (E/CONF.72/L.34). The papers dealt with the status of topographic mapping at various scales in Australia, a map revision policy and map revision model, respectively. The latter was an attempt to rationalize the problem of setting priorities for the orderly, sequential revision of published maps.

59. Democratic Kampuchea submitted a paper entitled "Topography and cartography in Democratic Kampuchea" (E/CONF.72/L.100). It described the achievement made so far in the production of topographic maps at scales of 1:100,000 and 1:50,000 covering the whole country. The National Geographic Service (NGS) of Kampuchea reported that it had not enough highly qualified specialists and technicians, but nonetheless NGS had constantly improved and diversified its activities and services.

IV. WORK OF COMMITTEE II: THEMATIC AND SMALL-SCALE MAPPING
(INCLUDING REMOTE SENSING APPLICATIONS) AND PREPARATION
AND REPRODUCTION OF MAPS (INCLUDING AUTOMATION,
COMMUNICATION AND GEOGRAPHICAL NAMES)

60. Agenda item 7 (b) was considered by Committee II. The Committee discussed 26 papers submitted under this item, including national reports pertaining to the subject. Five draft resolutions were submitted to the Conference and were subsequently adopted as resolutions 11, 12, 13, 14 and 15 (for the texts of the resolutions, see chap. VII below).

61. The paper, presented by the delegate of the United States and entitled "Development of an integrated cartographic information system in the United States" (E/CONF.72/L.1), described the problems that are now encountered in finding where cartographic data are located. This led to the development of a centralized source system, which will reduce information search time, greatly reduce or eliminate duplication of collection projects, and allow more people to have access to the cartographic information available.

62. Another paper, also submitted by the United States, was entitled "The national ocean survey's aeronautical obstruction data: Photogrammetric Verification Programme" (E/CONF.72/L.2). It explained the purpose and scope, programme development and the photogrammetric methods and equipment used to attain the goal of making air navigation safe. The representative of Australia informed the Committee that, in his country, photogrammetric heighting of aerodrome obstructions is checked by field measurement.

63. The paper, entitled "Aeronautical chart automation: concept and status" (E/CONF.72/L.3), was also presented by the United States. It discussed and explained the requirements of the project so that a computer assisted system could be developed in order to meet the increasing demands for aeronautical charts. The system concept had been completed now and subsequent papers might be published on the development of its progress.

64. In its paper, entitled "A photomechanical method of black-and-white image enhancement" (E/CONF.72/L.5), the representative of the United States described how the method provides for the adjustment of the contrast as well as the density within each individual area, and prints those areas at a level of enhancement which is ideally suited to the particular user's requirement for a specific cartographic operation.

65. The paper entitled "Aeronautical charting" (E/CONF.72/L.10), presented by the representative of New Zealand, reported on how their aeronautical charts are designed, prepared, drawn, printed and disseminated. It also discussed the liaison between organizations concerned, the joint civil-military charting and international co-operation. The representatives of the United States and the Federal Republic of Germany also informed the Committee on their aeronautical charting.

66. In another paper, entitled "Derived mapping" (E/CONF.72/L.11), the representative of New Zealand reported on basic topographic maps, the mapping base from which the greater part of New Zealand derived mapping is produced. The derivations fall into maps wholly compiled from reductions of or extractions from the basic series and maps for which a base drawing is derived from the series to be fleshed out with additional and often thematic information. The representative of Australia suggested that thematic mapping should be overlaid or produced in the standard base map.

67. The paper submitted by New Zealand, entitled "Map distribution in New Zealand" (E/CONF.72/L.12), described the general responsibilities, role and organization of work carried out by the National Map Centre including maintenance of exchange agreements world-wide and stock totals for service and sale purposes. The representative of the United Kingdom suggested that all efforts should be made so that the maps are actually put to practical use.

68. The paper entitled "Process color printing of maps/charts" (E/CONF.72/L.19), submitted by the United States, described the process color printing by using the four basic colors in combination and tone values with the use of dot screens. The advantages and disadvantages of the process were analysed and explained.

69. The paper submitted by Australia, entitled "Thematic mapping in Australia" (E/CONF.72/L.27), reported on the various thematic maps produced in Australia, such as those in geology and geophysics, land use, nature conservation reserves, forestry, vegetation and other several atlases.

70. Australia submitted another paper entitled "Four colour reproduction", (E/CONF.72/L.30), giving information on the trend in Australia of four-colour reproduction of maps using process colours and four-colour printing press to reduce costs.

71. The paper, entitled "Map accuracy" (E/CONF.72/L.31), submitted by Australia, described the methods employed by Natmap, Australia, in the checking of maps, which should conform to the national mapping specifications. Upon request of the Chairman of the Committee, the representatives of the United States, Sweden and the United Kingdom explained the methods used in checking maps in their countries.

72. The paper, entitled "Topographic maps - layout and folding" (E/CONF.72/L.32), submitted by Australia reported on the introduction by the National Mapping of a new format to increase map scales and reduce printing costs by improving the layout and fold. Another introduction of printing adjoining maps of a series back to back is being tested.

73. In the paper entitled "Australian standard format and codes for the exchange of digital mapping and charting data on magnetic tape" (E/CONF.72/L.35) the representative of Australia informed the Committee that a standard for the format was being finalized for use of organizations that wish to exchange data on magnetic tape. Each user needs two programmes, one to convert from his working format to the standard and another to convert from the standard into his own preferred working format.

74. Australia submitted a paper, entitled "LANDSAT in Australia" (E/CONF.72/L.38), presenting LANDSAT imagery uses in Australia. In general, LANDSAT imagery is used in Australia by agriculturists, geologists, foresters, hydrologists and, to some extent, in mapping in such areas as the Great Barrier Reef and for Reconnaissance map series off South Australia and Antarctica.

75. The paper, entitled "The application of LANDSAT data to the management of pastoral areas in Western Australia" (E/CONF.72/L.45), was submitted by Australia for information only.

76. France submitted a paper entitled "Technical questions concerning map production; tourist maps produced by the Institut géographique national, France" (E/CONF.72/L.59). This paper emphasized that tourist maps should be planned and designed to the satisfaction of the user, that is, that the information of interest to the user should be overprinted in striking colours with symbols and representations that could be easily identified and understood.

77. The paper submitted by France, entitled "Maintenance of the topographic base map of the national territory" (E/CONF.72/L.61), outlined how these base maps are maintained by using several methods suited to the local conditions in their revision and updating to preserve its original qualities in both form and substance.

78. The Federal Republic of Germany submitted a paper entitled "Interpretation of satellite imagery for determination of land use data" (E/CONF.72/L.65). It discussed the experiments made in the Federal Republic of Germany, reported on the results obtained, and stressed that despite difficulties in the processing systems, satellite imagery was beneficial in regional policy and planning programmes and environmental protection requirements. With the increased demands of data for required planning purposes, satellite data processing is at present the best solution.

79. The Federal Republic of Germany submitted a paper entitled "Thematic atlases: a contribution to the solution of regional planning problems" (E/CONF.72/L.67). The paper discussed the information on regional facts and data that has to be presented via illustrations and tables to be easily understood not only by the experts but also by the layman. It outlined the themes that had to be presented so that a sound regional planning framework could be attained.

80. The paper, entitled "Application of interactive graphic systems in cartography" (E/CONF.72/L.78), submitted by the Federal Republic of Germany, explained and discussed the system, its application to cartography such as automation of processing of topographic maps, large-scale cadastral maps in local co-ordinate system transformed into the national co-ordinate system and others. The system can be used by developing countries in the production and revision of topographic map series with the available hardware and the further development of existing software problems if developing countries are willing to contribute and help in the development of solution concepts.

81. The paper entitled "Report of the United Nations Group of Experts on Geographical Names for Asia, South-East Division" (E/CONF.72/L.91), presented by Asia, South-East Division, reported on the activities undertaken in their last meeting held at Kuala Lumpur, Malaysia, from 14 to 18 April 1977, such as the review of the two maps of South-East Asia (political and physical, including

marine and submarine features), concise and regional gazeteers, newsletter and other matters related to geographical names.

82. Malaysia submitted a country report, entitled "United Nations Group of Experts on Geographical Names for Asia, South-East Division: country report, Malaysia" (E/CONF.72/L.92), which reported on a Malaysia-Indonesia joint declaration adopting a standard form of spelling for their respective national languages. It also reported that the two maps of South-East Asia, political and physical, third and second edition, respectively, and the Concise and Regional Gazeteers, both first edition, have been printed.

83. The paper, entitled "The International Cartographic Association: information paper" (E/CONF.72/L.95), presented by the International Cartographic Association reported on the activities of the Association which is now composed of 55 member countries. The aims of the Association are the following:

- (a) Advancement of the study of cartographic problems;
- (b) Instigation and co-ordination of cartographic research;
- (c) Dissemination of cartographic knowledge;
- (d) Organization of international conferences, seminars, exhibition etc.

84. Indonesia submitted a paper, entitled "Remote sensing application changes of forest cover detected through aerial photography: a case study of the Province of Lampung Sumatra" (E/CONF.72/L.101), which discussed the use of aerial photography in detecting changes in forest cover. Black-and-white infra-red photography at scale 1:50,000, taken in 1969, and standard panchromatic photography at scale 1:100,000, taken in 1976, were used to analyse the change.

85. A paper entitled "The New Zealand Land Inventory Handbook: an aid to land use planning" (E/CONF.72/L.111) indicated the form and range of information which are available as an aid to land use planning and other purposes.

86. A paper, entitled "The Regional Economic Atlas of Asia and the Far East" (E/CONF.72/L.113), submitted by Thailand, presented the status of the Atlas. At present, 10 out of the 15 proposed topics had been published, but owing to difficulties and problems encountered, the project had to be terminated. Thailand recommended that the project be transferred and entrusted to an international organization for its early completion and publication.

V. WORK OF COMMITTEE III: CADASTRAL SURVEYING AND URBAN
MAPPING (INCLUDING LAND INFORMATION SYSTEMS)

87. Agenda item 7 (c) was considered by Committee III. The Committee considered 15 papers submitted under this item, including national reports relevant to the subject. Five draft resolutions were submitted, which were subsequently adopted as resolutions 16, 17, 18, 19 and 20 (for the texts of the resolutions see chap. VII below).

88. New Zealand presented four papers. In the first, entitled "Street maps" (E/CONF.72/L.13), the development of street map production in New Zealand was reviewed and the current methods of production were outlined. Street maps are now drawn and revised in 12 district offices with the photomechanical processes being completed at Wellington.

89. The second New Zealand paper, entitled "Private sector surveying in New Zealand" (E/CONF.72/L.14), outlined the legislation requirements to be met by all New Zealand surveyors prior to practicing. It pointed out that of the 556 surveyors currently practicing in New Zealand, approximately 50 per cent were in private practice. It also described the historical reasons for the combined surveyor/engineer/architect practices to be found in New Zealand and noted the effects on the profession of recent boom and recession conditions.

90. The third New Zealand paper, entitled "Cadastral survey records" (E/CONF.72/L.18), referred to the integration of cadastral survey records, from survey plan, through record map to published cadastral mapping. Survey plans are the basic cadastral record and the integration, update and rapid retrieval of the information on these are achieved by the production of cadastral record maps, which are updated daily. These latter form the base for the production of NZMS 261 (1:50,000) Cadastral Map Series, which is the counterpart of NZMS 260 Topographic Map series. The two series form a useful tool for economic development, planning and land use activities.

91. The fourth New Zealand paper, entitled "Land inventory mapping" (E/CONF.72/L.21), described the development in policy, methods and presentation of land use and inventory mapping. It outlined progress to date and possible future developments in such series as Land Tenure and Holdings, Existing Land Use, Wildlife, Rock Types and Surface Deposits, Soils and Forest and Shrub Types.

92. Australia presented four papers and, in introducing them emphasized the increasing complexity of land registration in Australia since 1977. To cope with this, several States now have land title records stored on computer. Two papers prepared by the Queensland Department of Primary Industries, entitled "Land resource information systems for rural uses" (E/CONF.72/L.43) and "Regional land evaluation" (E/CONF.72/L.46), were presented for information. They outlined the use of computer based land information systems in rural areas and the use of land evaluation systems for different land use areas, respectively.

93. The third Australian paper, entitled "Application of orthophotomaps in the development of a visual register of land title in New South Wales" (E/CONF.72/L.47),

outlined a method of producing cadastral maps capable of being overprinted on a topographic base, as a basis for development in areas where the cadastral survey is unrelated to the geodetic framework. It was noted that this method had been used successfully in New South Wales to produce topo-cadastral maps rapidly, and should therefore be a useful method for developing countries.

94. The development of cadastral mapping in Queensland was outlined in the fourth Australian paper, entitled "Cadastral mapping - Queensland" (E/CONF.72/L.51). Future developments will be closely involved with computerization for graphic displays, disc storage and flat bed plotting.

95. In a very detailed paper, entitled "Application of computer technology in processing of cadastral surveying and mapping data" (E/CONF.72/L.62), France reported the results of its experiences in data bank management in two areas:

(a) In developed countries, where the updating and matching of topographic and cadastral maps is to be integrated;

(b) In developing countries, where large scale maps are not available but the level of development justifies the investment.

The need for establishing simple, flexible systems and the avoidance of sophisticated equipment was stressed.

96. The Federal Republic of Germany presented a paper entitled "Development of real estate-oriented information system in rural and urban areas" (E/CONF.72/L.76). This paper described the setting-up of such a system to make available real estate oriented data for the needs of law, administration, planning, statistics and economy, in order to satisfy the demands made on a modern land information system. In setting up the system it should be made flexible so that later data could be added. The system presupposes the existence or simultaneous development of geodetic fundamentals for the area.

97. Japan presented a paper entitled "A system providing access to national survey data" (E/CONF.72/L.22). This paper described a computerized system set up by the Geographic Survey Institute, Japan, to cope with the custody and retrieval of vast quantities of survey-related information for use in development planning, administrative activities and research work in many fields. Five types of data are stored: control points, aerial photographs, geographical names and digital national land information. Information can be retrieved by instructing the system through the keyboard of the display system or by outlining the area of interest on the relevant topographic map laid on the digitizer board.

98. Kuwait presented its national report on cartographic activities in Kuwait (E/CONF.72/L.93), which summarized developments in the following fields: geodetic control point system, cadastral surveying and mapping, and aerial photographic coverage. Future developments will be largely concerned with underground utilities mapping for drinking water, gas, rain water, sewage and electric power in order to eliminate the problems of location and storage of large quantities of underground utilities data.

99. Mexico presented a paper entitled "The Mexican experience in the establishment of a geographic information system" (E/CONF.72/L.90). It described a system

being implemented by DETENAL to provide cartographic coverage of Mexico at scales from 1:5,000,000 to 1:50,000 (plus some areas at 1:20,000 and 1:10,000) covering the following subjects: topography, geology, hydrology, land use, soils, potential land use and tourism. The basic aim of this system is to enable developing countries to rationalize the utilization of their resources.

100. In a paper, entitled "Application of photogrammetry to cadastral surveys and to land management in general" (E/CONF.72/L.55), the Netherlands described a system of using photogrammetric methods for cadastral surveys in areas where property boundaries are defined by small natural features. In a suitable area this method may be considerably cheaper and faster than conventional methods and therefore may be relevant to developing countries.

101. The main points in the 14 papers mentioned above were developed in later discussions and led to the drafting of five resolutions.

102. Discussions focused first on the importance of workshops in cadastral surveying to enable those involved to exchange views and to keep abreast of new developments.

103. Many delegates stressed the need for a strong private surveying practice in order to widen interest in surveying and mapping, to lessen Government expenditure, to provide an independent voice on survey topics, and to help to provide the data for updating cadastral records.

104. Delegates also stressed the need for a co-ordinated land information system to which all organizations could relate their data. It was recommended that developing countries should organize data collection in such a global form that it could ultimately be drawn for development planning.

105. The Indonesian report on cadastral mapping in Indonesia (E/CONF.72/L.112) described the objectives of land registration in the country with respect to security of ownership. The application of photogrammetry, particularly the use of photomap as legal document on which the boundaries were plotted, was also described.

VI. WORK OF COMMITTEE IV: HYDROGRAPHIC SURVEYING AND
NAUTICAL CHARTING

106. Agenda item 7 (d) was considered by Committee IV, which reviewed papers submitted under this item and relevant papers submitted under agenda item 6. A drafting committee composed of the representatives of Australia, Japan, Malaysia, New Zealand, the Philippines and Thailand and the observer for the International Hydrographic Organization, was formed and three draft resolutions were submitted to the Conference, which were subsequently adopted as resolutions 21, 22 and 23 (for the texts of the resolutions, see chap. VII below).

107. The papers presented were grouped and discussed under three subitems as follows:

- (i) New techniques in hydrographic surveying and nautical charting (E/CONF.72/L.24, L.48, L.83 and L.88)
- (ii) Need for hydrography (E/CONF.72/L.15, L.29, L.37, L.63), with country reports (E/CONF.72/L.8, L.23, L.39, L.53, L.73 and L.110)
- (iii) International co-operation in hydrography and charting (E/CONF.72/L.87, L.96, L.102, L.104) with country reports (E/CONF.72/L.4, L.75 and L.89)

108. Under subitem (i) (New techniques in hydrographic surveying and nautical charting) four papers were discussed. The first two papers dealt with the automation of chart production. The paper entitled "National ocean survey automated information system" (E/CONF.72/L.24), presented by the United States, outlined the effort to automate the processes required to create and maintain nautical charts. The system utilizes the latest advancements in data management, interactive graphics and management reporting. The paper entitled "Autochart" (E/CONF.72/L.48) presented by Australia, described the Autochart system, which has provided the hydrographer with a more cost-effective solution to increasing production and maintenance capacity to meet his national obligation, than it would otherwise have been required. However, it was pointed out that developing countries should not attempt to venture into complete automation without first going into manual compilation of charts by trained specialist hydrographic cartographers. The paper, entitled "The application of survey and remote sensing techniques in coastal and marine areas carried out at the University of Hannover (E/CONF.72/L.83), presented by the Federal Republic of Germany, summarized the results of practical significance obtained in the following four project study areas by the application of survey and remote sensing techniques in coastal and marine areas:

- (a) Determination of the geodetic reference at sea;
- (b) Methods to determine point position and heights in coastal areas and at sea;
- (c) Topographic surveys of tidal lands, shallow water areas and on the continental shelf;

- (d) Thematic survey of tidal lands and water areas with respect to ecological mapping, sedimentation surveys and the tracing of pollutants.

109. Under subitem (ii) (Need for hydrography), four papers were discussed together with relevant sections of six country reports. A paper entitled "The history and development of the New Zealand Hydrographic Office (E/CONF.72/L.15), presented by New Zealand, outlined the growth and development of the hydrographic service during the 30 years of its existence. It also offered some suggestions and directions which might be of interest to those countries contemplating the establishment of a hydrographic service. In its paper (E/CONF.72/L.29), Australia outlined the programme and work for bathymetric mapping of the Australian continental shelf between the 20-metre isobath closest to the shore line and the 300-metre isobath. Another paper (E/CONF.72/L.37), also presented by Australia, described the work of the section in the Division of National Mapping, created in 1977, to handle maritime boundary matters. A paper, entitled "The recent evolution of hydrography in relation to the new economy of the sea: co-operation with newly independent maritime States (E/CONF.72/L.63), presented by France, outlined the increasing importance of hydrography not only in matters of navigation but in all aspects of off-shore exploration, exploitation and sea-bed engineering. It discussed the best means of co-operation with young maritime countries for the training of qualified personnel, the creation of competent national organizations, and programmes of work. It also outlined how and what the French Navy Hydrographic and Oceanographic Department can offer in the field of training in hydrography and oceanography. In strongly supporting this paper, the United Kingdom drew attention to the need for all maritime States to join the International Hydrographic Organization and to establish hydrographic offices as recommended in the report of the Group of Experts on Hydrographic Surveying and Nautical Charting (E/CONF.71/L.1, para.62). It was further emphasized that all maritime States, including those without hydrographic offices, should establish at least a simple system for reporting to an established hydrographic office all their coastal changes and navigational dangers so that charts may be kept up to date and so that warnings to shipping may be disseminated through the world-wide Radio Navigational Warning System.

110. Under subitem (iii) (E/CONF.72/L.87), International co-operation in hydrography and charting, four papers and three country reports were discussed. A paper presented by Japan (E/CONF.72/L.87), described the common datum chart project undertaken jointly by Indonesia, Japan, Malaysia and Singapore. The project was carried out to enhance further the safety of navigation in the Malacca and Singapore Straits. A paper, presented by the International Hydrographic Organization and the International Federation of Surveyors (E/CONF.72/L.36), contained syllabi of standards of competence for hydrographic surveyors. Educational and training institutions are recommended to adopt the standards for their course syllabi and submit them to the Advisory Board for seeking international recognition. Australia supported what had been said but went on to stress the fundamental necessity of further sea experience before a graduate of a category A hydrographic surveying course could be considered fully qualified to direct hydrographic operations. During the discussion it was agreed that most established surveying organizations considered that about seven years employment in a predominantly sea-going environment was the minimum required before sufficient experience would be gained to direct all types of operations. Documents E/CONF.72/L.102 and L.104 presented by Indonesia, described the co-operative efforts of the four nations, namely, Indonesia, Japan, Malaysia and

Singapore, in carrying out joint projects in hydrographic surveying and tidal and current studies in the Malacca and Singapore Straits. It also outlined the co-operative efforts between the United States and Indonesia in carrying out hydrographic surveys and magnetic surveying in the Lombok and Makasar Straits.

111. All papers discussed were presented personally by delegates of sponsoring countries, highlighting the important points dealt with in the papers. Specific questions were promptly and satisfactorily answered but where a definite answer could not be given, delegates involved offered to provide an answer as soon as possible. Numerous useful information, comments and related experiences in various fields were also put forth for the benefit of participants in the Conference.

VII. RESOLUTIONS ADOPTED BY THE CONFERENCE

A. List of resolutions

1. United Nations Interregional Cartographic Conference
2. Co-operation in Pacific region mapping programmes
3. Regional periodicals on photogrammetry and remote sensing
4. Technical assistance and training programmes
5. Education and training in land and hydrographic surveying
6. Air photography of control stations
7. Automated cartography
8. Doppler satellite position fixing
9. The Geoid in Asia and the Pacific
10. Doppler satellite observations to define maritime zone boundaries
11. Establishment of a working group of experts on space cartography
12. Technical assistance in remote sensing
13. Regional Economic Atlas for Asia and the Pacific
14. Thematic and small-scale mapping
15. Geographical names
16. Advisory panel on cadastral surveying and mapping
17. Workshops on cadastral surveying, mapping and land information
18. Cadastral survey systems
19. Registration of surveyors
20. National land information system
21. Report of the United Nations Group of Experts on Hydrographic Surveying and Nautical Charting
22. Study on hydrographic surveying and nautical charting
23. Standard of competency for hydrographic surveyors
24. Vote of thanks

B. Texts of resolutions

1. United Nations Interregional Cartographic Conference

The Conference,

Recognizing the importance of the regional cartographic conferences which have been taking place in Asia and the Pacific, the Americas and Africa since 1955, the last three of them having been held within the last seven months,

Noting the duplication which takes place in these conferences and the tremendous effort taken by many Governments, States Members of the United Nations, to attend all of them,

Noting further the efforts and the cost burden placed on both the Governments of the host countries and the United Nations in organizing and conducting such conferences, as well as the processing of voluminous documentation at the current regional cartographic conferences,

1. Recommends nevertheless that a Tenth Regional Cartographic Conference for Asia and the Pacific, designed specially to benefit the developing countries within the region, should be held in 1983;

2. Further recommends that States Members of the United Nations and members of the specialized agencies, international, professional and scientific societies and organizations should co-ordinate their efforts with the United Nations in order to avoid a conflict of calendars with respect to the organizing and holding of international meetings on cartography.

22 February 1980

2. Co-operation in Pacific region mapping programmes

The Conference,

Recognizing the importance of mapping and charting and surveying for economic and social development of all countries,

Noting that modern mapping and charting techniques demand large capital investments,

Further noting that some countries in the Pacific region cannot afford or fully utilize the resources needed for adequate mapping and charting programmes,

Recommends that the United Nations should urge Governments of those countries to co-operate by sharing resources and arranging joint mapping and charting programmes.

22 February 1980

3. Regional periodicals on photogrammetry and remote sensing

The Conference,

Being aware that dissemination of information is of vital importance for the well being of any technical field,

Recognizing that a periodical is a most appropriate means for providing information continuously,

Believing that any country should have professional periodicals to which they owe allegiance,

Recognizing further that individual periodicals for each country are not practical,

Noting the work being done by the International Society for Photogrammetry on the concept of regional international periodicals on photogrammetry and remote sensing,

Invites Professor Jacob Rais of Indonesia to investigate the feasibility of the project.

22 February 1980

4. Technical assistance and training programmes

The Conference,

Recognizing the needs of developing countries for training assistance at all levels and in various aspects of survey and mapping activity,

Noting that such training has proved to be most effective when provided in keeping with the practices, requirements and resources of the recipient country,

1. Recommends that, wherever possible, training programmes and courses should be provided within the recipient country in accordance with local practices, customs and capacities, and should include on-the-job training and execution of real projects;

2. Further recommends that, wherever survey or mapping projects are undertaken under technical aid programmes, there should be joint participation on the project, counterpart training should be provided as part of the assistance, and the agreement between donor and recipient countries should document these essential requirements.

22 February 1980

5. Education and training in land and hydrographic surveying

The Conference,

Considering the urgent demand for education and training at all levels of land and hydrographic surveying,

Recognizing that such training at all levels is most effective when carried out in the trainee's own country or, failing that, in a neighbouring country,

Having noted the progress made by some countries and groups of countries in the region since the Eighth United Nations Regional Cartographic Conference for Asia and the Far East 1/ in developing such regional training facilities,

1. Recommends that other countries of the region, which do not already have ready access to such training facilities in their near vicinity, should consider how they can develop them as a matter of great urgency;
2. Urges those countries that are able to do so to assist countries to establish centres for the training of land and hydrographic surveying in staffing and equipping them;
3. Requests the United Nations to examine the possibility of holding a seminar in Bahrain with a view to establishing such a training centre in the north-west part of the region.

22 February 1980

6. Air photography of control stations

The Conference,

Noting the fundamental importance of permanent survey marks in all stages of surveying and mapping,

1. Recommends that all countries in the region should review their current practices for the monumentation of horizontal and vertical control stations with a view to ensuring that substantial permanent marks are always placed;
2. Further recommends that documentation practices for recording the position of control stations should be reviewed;
3. Urges that air photographs of control stations should be taken at suitable scales so that, even if the marks are destroyed, their co-ordinates could be used to control mapping photography.

22 February 1980

7. Automated cartography

The Conference,

Recognizing the complexities of automated cartographic systems requiring experts for installation, operation and maintenance of these systems,

1/ See Eighth United Nations Regional Cartographic Conference for Asia and the Pacific, Bangkok, 17-28 January 1977, vol. I, Report of the Conference (United Nations publication, Sales No. E.77.I.12).

Recognizing further that automation is being increasingly and rapidly applied to various aspects of cartographic production,

Noting that considerable studies and progress in cartographic automation is underway in international technical associations such as the International Cartographic Association, the International Federation of Surveyors and the International Society for Photogrammetry,

1. Recommends that the countries of Asia and the Pacific should:

- (a) Participate in the activities of international technical organizations;
- (b) Contribute their views and recommendations;
- (c) Take advantage of increased production efficiencies that these new systems can provide;
- (d) Standardize automated data formats for the exchange of digital cartographic data;

2. Further recommends that the countries manufacturing automation systems should ensure that proper training, maintenance and technological support is established and available in both Asia and the Pacific, as well as in countries in other regions, in order to ensure effective operation of these systems.

22 February 1980

8. Doppler satellite position fixing

The Conference,

Recognizing the great benefits to cartography arising from the use of Doppler satellites for position fixing,

Noting the contribution of the Government of the United States of America in creating the Navy Navigation Satellite System and making the ephemerides of the satellites so widely available,

- 1. Expresses its thanks to the Government of the United States of America;
- 2. Recommends that it should continue to offer assistance to all countries of the region.

22 February 1980

9. The Geoid in Asia and the Pacific

The Conference,

Recognizing the great value of Doppler satellites for determining the horizontal position of control points,

Noting that vertical control of similar accuracy would be available if there were an adequate geoid map of the region showing the heights of the geoid above the World Geodetic System 1972 or some similar datum,

Noting further that the height of the geoid above the spheroid is directly determined when adequate Doppler observations are computed with the precise ephemeris at points whose height above mean sea level has already been determined, and that such measurements can be used to control maps of the geoid determined from gravity measurements,

Recommends that all countries in the region should make precise Doppler fixes at a network of points not more than one thousand kilometres apart whose height above sea level is known, and, on request, supply these observations to the Division of National Mapping, Canberra, Australia, or to any organization attempting to produce a geoid map of the region.

22 February 1980

10. Doppler satellite observations to define maritime zone boundaries

The Conference,

Recognizing the importance of unambiguous and accurate definitions of territorial waters, fishing zones, exclusive economic zones and other maritime boundaries,

Noting that boundaries are defined with reference to islands or headlands whose position on a world-wide datum can be determined accurately and relatively easily from Doppler satellite observations,

1. Recommends that developing nations seek technical assistance to make Doppler observations to enable their maritime zone boundaries to be accurately defined:
2. Also recommends that this work should be undertaken as soon as possible;
3. Further recommends that countries in the region, from whom technical assistance for making Doppler observations is sought, should make every effort to provide this assistance as rapidly and freely as possible.

22 February 1980

11. Establishment of a working group of experts on space cartography

The Conference,

Recognizing the increasing contributions of satellite techniques to geodesy and thematic mapping,

Considering that until now there has been minimal contribution of satellite techniques to topographic mapping of conventional scales and contour intervals,

Appreciating that several countries are planning new programmes to produce imagery and geodetic data from space systems,

Believing strongly that such programmes should be complementary rather than competitive in nature,

Recommends:

(a) That the United Nations, through the Cartography Section of the Department of Technical Co-operation for Development, should establish a working group of experts on space cartography;

(b) That countries having major commitments to the development of space systems should be invited to participate in the working group;

(c) That Governments of participating countries should provide the necessary financial support for their representatives;

(d) That the terms of reference of the working group of experts on space cartography should be:

(i) To encourage Governments to ensure that national space cartographic programmes are co-ordinated and complementary;

(ii) To assume, in so far as possible, that the benefits of space cartographic systems are made available to all nations;

(iii) That space cartographic activities are in accordance with the principles established by the United Nations Committee on the Peaceful Uses of Outer Space;

(e) That the working group of experts on space cartography should prepare, for presentation, reports to future United Nations cartographic conferences.

22 February 1980

12. Technical assistance in remote sensing

The Conference,

Recognizing that many developing countries in Asia and the Pacific do not have facilities for processing and interpreting remote sensing data, particularly from space systems,

Believing that such data may be of considerable value to these developing countries,

Appreciating that some countries in the region will have laboratories and facilities for utilizing remote sensing data,

Recommends:

(a) That countries having such facilities should endeavour to make their capabilities known within the region;

(b) That bilateral or multilateral arrangements should be made for co-operative use of laboratories and facilities:

(c) That countries operating remote sensing acquisition systems should be prepared to develop and disseminate index maps of coverage.

22 February 1980

13. Regional Economic Atlas for Asia and the Far East

The Conference,

Noting the progress made by the Government of Thailand in the compilation of maps for the Regional Economic Atlas for Asia and the Far East and, in particular, of the population distribution map which was published in 1979,

Recognizing that the compilation of a regional atlas should not be solely entrusted to a national mapping institution which does not have the experts of the various fields of thematic mapping, the position to secure the assistance of all countries concerned or the funds to produce and distribute the atlas maps satisfactorily,

Recognizing further the need for the dissemination of maps to the various Governments and departments concerned so that the Regional Economic Atlas for Asia and the Far East will be utilized according to its aim as a tool of regional planning in the economic and social development of the region as a whole,

1. Expresses its appreciation for the work undertaken by the Government of Thailand;

2. Recommends that the completion of the atlas project should be now entrusted to the international scientific and professional organizations;

3. Further recommends that the maps so far published should be disseminated to the various Governments and departments concerned.

22 February 1980

14. Thematic and small-scale mapping

The Conference,

Noting with satisfaction the progress made by member States of the region in the preparation of thematic maps to promote social and economic development,

Recognizing that the small-scale maps are compiled from the larger-scale series,

Recognizing further the importance and necessity of a basic map coverage as a prerequisite in planning for development,

Urges that all countries in the region should continue to maintain their basic map coverage up to date.

22 February 1980

15. Geographical names

A

The Conference,

Recalling resolution 15 on linguistic/geographical divisions adopted by the Eighth United Nations Regional Cartographic Conference for Asia and the Far East, 2/

Recognizing the enthusiasm of active member States in the Asia, South-East Division led by Malaysia as the Divisional Representative, to continue with the unfinished task of standardizing all geographical names in the Division,

Expressing the wish that the effort accomplished thus far towards the successful implementation of the resolution mentioned above should not be further frustrated by silence from the non-participating member States,

1. Urges all countries in the region to explore all possible means to rid themselves of obstacles, if any, that may be of hindrance to their active involvement in the cartographic activities of the region, in general, and the work of the Divisional Group of Experts on Geographical Names, in particular:
2. Further urges all States Members of the United Nations to continue giving their support and co-operation to their respective divisional representatives of the United Nations Group of Experts on Geographical Names, be it in the form of bilateral contacts or group representations, for the common benefit of all mankind.

B

The Conference,

Recognizing the interest shown by countries in the Pacific region to participate in the work of the United Nations Group of Experts on Geographical Names,

1. Recommends that the United Nations Divisional Group of Experts on Geographical Names for Asia, South-East Division should be enlarged and renamed as the Asia, South-East and Pacific Division to accommodate the countries of the Pacific region;
2. Further recommends that Malaysia should continue to represent the new Division as its Divisional Chairman.

2/ Ibid., chap. VII.

The Conference,

Noting the absence of a composite map of the world depicting standardized names of countries, major cities and important geographical features,

Recognizing that such a map is valuable and necessary to reflect the success of an idea initiated and supported by the participants of the present Conference,

Recommends to the United Nations Group of Experts on Geographical Names that it should consider the compilation and publication of such a map.

22 February 1980

16. Advisory panel on cadastral surveying and mapping

The Conference,

Reaffirming the need for an adequate system of land registration as a basis for economic and social development,

Noting resolution 2⁴ of the Seventh United Nations Regional Cartographic Conference for Asia and the Far East 3/ concerning the establishment of an advisory panel to advise the United Nations on action to be taken in respect of the recommendations contained in the report of the Ad Hoc Group of Experts on Cadastral Surveying and Mapping, 4/

Noting further resolution 3 of the Eighth United Nations Regional Cartographic Conference for Asia and the Pacific, 2/ in which the Conference recommended that the advisory panel should be established shortly,

Recognizing the importance of land registration in all countries, particularly the developing ones,

1. Recommends that the United Nations Economic and Social Council should give strong support to the recommendations of the present Conference for the establishment of the advisory panel on cadastral surveying and mapping;

2. Strongly recommends that the United Nations should take immediate action to set up the advisory panel, in accordance with the resolutions of the Seventh and Eighth United Nations Regional Cartographic Conferences mentioned above.

22 February 1980

3/ Seventh United Nations Regional Cartographic Conference for Asia and the Far East, Tokyo, 15-27 October 1973, vol. I, Report of the Conference (United Nations publication, Sales No. E.74.I.7), chap. VII.

4/ Ibid., vol. II, Technical Papers (United Nations publication, Sales No. E.74.I.25), p. 275.

17. Workshops on cadastral surveying,
mapping and land information

The Conference,

Reaffirming the need for land information as basis for economic and social development,

Noting the need for continued information exchange on the management level to implement land information systems,

Noting further that the United Nations has held workshops on cadastral surveying, mapping and land information in co-operation with the Federal Republic of Germany at Berlin (West) in 1974 and at Hannover in 1978.

Recommends that such workshops should be continued on a regular basis preferably at two-year intervals.

22 February 1980

18. Cadastral survey systems

The Conference,

Noting that, while some countries in the region have relatively advanced cadastral systems, others have extensive problems of land occupancy without any adequate system of records,

Noting further that in such countries the lack of such a system severely hampers development,

Recommends that all cadastral survey systems should be based as far as practical on an accurate control framework, such as a national plan and co-ordinate system, and that the survey methods used and the accuracy required for fixing the boundaries of individual plots should be related to the precision of identification of those boundaries, to the value of the land and to the urgency of the work.

22 February 1980

19. Registration of surveyors

The Conference,

Recognizing:

(a) The importance of sound land tenure systems to economic and social development,

(b) The need for protection of community interests in land ownership,

(c) The need for sound survey practices to make land registration systems effective,

Noting that many countries have systems of statutory control which include the registration of surveyors,

Recommends that countries with or intending to have land registration systems should register all surveyors who carry out surveys for registration of land and should exercise statutory control of surveying practice.

22 February 1980

20. National land information system

The Conference,

Recognizing that national land information systems are essential to planned development and management,

Noting that co-ordination and direction is necessary to develop integrated data bases providing compatible information suited to multipurpose usage,

Noting further that a rational system must incorporate legal and economic data related to the defined land parcel unit with the attendant physical resource data located in geographic mode,

Recommends to the Governments of the region that the principal survey and mapping agencies should provide co-ordination and criteria for the integration of land information within one national system.

22 February 1980

21. Report of the United Nations Group of Experts on Hydrographic Surveying and Nautical Charting

The Conference,

Noting with great satisfaction that the United Nations convened a second meeting of the Group of Experts on Hydrographic Surveying and Nautical Charting in response to resolution 10 of the Eighth United Nations Regional Cartographic Conference for Asia and the Far East, 2/

Taking note of the report of the Group of Experts on its second meeting, 5/

1. Strongly endorses the recommendations contained in the report; 5/

5/ E/CONF.71/L.1.

2. Recommends that representatives at the present Conference should bring the report 5/ to the attention of the appropriate ministers in their respective countries with a view to their early compliance, where applicable, with the recommendations contained therein;

3. Requests the United Nations Secretariat to keep the status of hydrographic surveying and nautical charting under constant review and, if possible, to have the report of the Group of Experts on Hydrographic Surveying and Nautical Charting brought up to date at least every three years.

22 February 1980

22. Study on hydrographic surveying
and nautical charting

The Conference,

Noting that the Cartography Section of the Department of Technical Co-operation for Development, in response to recommendation VII contained in the report of the United Nations Group of Experts on Hydrographic Surveying and Nautical Charting, 5/ had initiated action to undertake a detailed study of the status of hydrographic surveying and bathymetric charting of the States Members of the United Nations, in co-operation with the International Hydrographic Organization,

Recognizing that this study will greatly assist national authorities, particularly in the developing countries, in assessing the adequacy of surveys in their maritime economic zones for resource exploitation and the study of international maritime transport,

Recognizing further that the study will contribute substantially in identifying sea areas in urgent need of resurvey for the safety of shipping,

1. Recommends that States Members of the United Nations should co-operate in completing this detailed study, either individually or in co-operation with another Member State having traditional responsibility for hydrographic surveying and nautical charting of their coastal waters;

2. Requests the United Nations to report the results of this study to Member States as soon as possible and not later than the end of 1981.

22 February 1980

23. Standard of competency for
hydrographic surveyors

The Conference,

Noting that the Advisory Board on Training of the International Hydrographic Organization and the International Federation of Surveyors has published Standards of Competency for Hydrographic Surveyors for use in educational and training programmes,

Realizing the need for basic internationally accepted standards for training courses conducted in various institutions in both the commercial and governmental sectors of the hydrographic profession,

Recognizing the advantage of adopting uniform international syllabi for training courses,

Recommends that educational and training institutions in the region should adopt the above-mentioned standards for their course syllabi and submit them to the Advisory Board on Training of the International Hydrographic Organization and the International Federation of Surveyors for seeking international recognition.

22 February 1980

24. Vote of thanks

The Conference,

1. Expresses its heartfelt thanks to the Government of New Zealand for the excellent arrangements made for the organization of the Ninth United Nations Regional Cartographic Conference for Asia and the Pacific and for the outstanding hospitality extended to the participants;

2. Also expresses its appreciation to the President and the officers of the Conference for the excellent way in which they have conducted the meetings.

3. Further expresses its gratitude to the officers and staff of the United Nations Secretariat for their hard work.

22 February 1980

Annex I

LIST OF PARTICIPANTS

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

AUSTRALIA

Representative: Mr. Anthony Gerald Bomford, Director, Division of National Mapping

Alternates: Mr. William Douglas Kennedy, Commonwealth Surveyor-General, Australian Survey Office
Captain Michael Calder, Hydrographer, Royal Australian Navy
Colonel John Nathaniel Rickards Hillier, Director of Survey-Army

Advisers: Mr. Charles Keith Waller, Deputy Director, Mapping Department of Mapping and Surveys, Queensland
Mr. John Richard Coleman, Executive Surveyor, Department Crown Lands and Survey, Victoria
Mr. Ken Burrows, Chief Cartographer, Royal Australian Navy
Mr. Laurence Frederick Kearton, Principal Cartographer Department of Mapping and Surveys, Queensland

BAHRAIN

Representative: Mr. Majeed Asghar, Director of National Survey

Alternate: Mr. Taher Ageel Saleh, Superintendent of Land Administration

BRUNEI

Observer: Mr. Abd Ghani Hasi Ahmad, Senior Cartographer

CHINA

Representative: Mr. Yang Leiguang, Deputy Director of the State Bureau of Survey and Cartography

Alternates: Mr. Zhang Xiaorong, Engineer
Mr. Lu Qiankun, Engineer
Mr. Lin Fengtong, Engineer
Mr. Zhang Ruilian, Deputy Division-Chief, Ministry of Foreign Affairs

CYPRUS

Representative: Mr. Andreas Christofi, Head of Surveying and Mapping

Alternate: Mr. Panos Ioannides, Land Consolidation Officer
Head of the Cartographic Section

DEMOCRATIC KAMPUCHEA

Representative: Mr. Mumm Thiounn, Chairman of the National Commission of Sciences and Technology

Alternate: Mr. Bun Ret Pech, Permanent Representative to the Economic and Social Commission for Asia and the Pacific

Adviser: Mr. Bun Kim Khay Chheak from the Ministry of Foreign Affairs

EGYPT

Representative: Mohamed Assad Abdel Hamid Fahmy, Chairman of Egyptian Authority of Survey

Alternates: Safei Eddin Khalil Hassan, Director of Aerial Survey Department
Kamal Abd-El Meguid Desouky El Sharabasy, Director of Geodetic Department

FIJI

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Department of Lands and Surveys

Alternate: Mr. Tahir Mohammed, Cartographer/Photogrammetrist
Department of Lands and Surveys

FINLAND

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FRANCE

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Alternate: Mr. Bernard Marty, Director of IGN Foreign Department

Advisers: Mr. André Pannetier, IGN Engineer
Mr. Christian Veillas, Centre national d'études spatiales (CNES)

GERMANY, FEDERAL REPUBLIC OF

Representative: Mr. Walter Satzinger, Director, of Institut für
Augewaudle Geodasie, Frankfurt

Alternate: Mr. Gottfried Leopold A. Konecny, Professor at University,
Hanover

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Mr. Karl-Heinz Bastian, Head State Survey Office, Koblenz
Mr. Aloys Heupel, Professor at University, Bonn
Mr. Roland Fladner, Surveying Engineer, Legau
Mr. Dietrich Berling, Representative, C. Zeiss, Oberkochen

HONG KONG

Observer: Mr. John Dalgleish, Chief Land Surveyor

INDIA

Representative: Major General K. L. Khosla, Surveyor General

INDONESIA

Representative: Mr. Jacub Rais, Deputy Chairman of National Mapping Agency

Alternates: Mr. K. J. Villanueva, Head of Department of Geodesy
Bandung Institute of Technology
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and Evaluation of Resources of the National Mapping Agency
Mr. Lukman Azis, Head of Cartographic Section of the Department
of Geodesy, Bandung Institute of Technology
Mr. Leo Nardy, Chief Photogrammetrist, Private Surveyor
Mr. Suryono Brotosudirjo, Head of Agrarian Office of Central Java
Mr. Hannief Djohan, Member of the Indonesian Embassy, Wellington

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Hydrographic Department
Mr. Koichi Sawada, First Secretary of Embassy

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Mr. Tadao Hoya, Deputy Director, Second Research Division, International Engineering Research Institute, International Engineering Consultants Association

KUWAIT

Representative: Mr. Mansour Al Nassar, Director Survey Department
Alternate: Mr. Abdul Aziz Al-Khars, Chief of Cartographic Section

LIBYAN ARAB JAMAHIRIYA

Observer: Mr. Mohamed Ghariani, Ministry of Planning

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Major Abdul Rahman Bin Ismail, Deputy Assistant Director National Mapping (Military)
Mr. Aaron Liew Hon Lun, Director, Lands and Surveys, Sabah
Mr. P. M. Sowdas, Assistant Director, Lands and Survey, Sabah
Mr. Said Haji Bujang, Assistant Director of Lands and Surveys, Sarawak
Mr. Goh Siew Chong, Chief Hydrographer, Royal Malaysian Navy

MEXICO

Representative: Mr. Jorge F. Vaca, Director of Cartographic Production

NEPAL

Representative: Mr. Arjun Bahadur Basnyat, Director General, HMG Survey Department
Alternate: Mr. Shanta Bhakta Manandhar, Assistant Director of HMG Geodetic Survey Branch

NETHERLANDS

Representative: Mr. Jan Visser, Head Photogrammetry ITC

NEW ZEALAND

Representatives: Mr. Ian Stirling, Surveyor General
Mr. Warren N. Hawkey, Assistant Surveyor General

Alternates: Mr. Douglas Jeffery, Director (Surveys)
Mr. Robert Burns, Director (Draughting)
Mr. Raymond Evins, Assistant Hydrographer (Civil)
Miss Dorothy Elisabeth Paulay, Second Secretary

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Mr. Howard W. Hunter, Survey Board of New Zealand
Mr. Peter J. Hunt, University Lecturer
Mr. George H. S. Sadler, Director of Mapping
Mr. Robert Charles Barrett, Chief Photogrammetrist
Mr. John Desmond Meadows, Divisional Cartographer
Mr. Geoffrey Dawsett Aitken, Divisional Cartographer
Mr. Barry Keith Bradley, Divisional Cartographer
Mr. Dirk Rincke Rinckes, Assistant Director of Surveys
Mr. Bruce M. Sinclair, Executive Officer, Map Centre
Mr. Anthony John Bevin, Assistant Director (Surveys)

Observers: Mr. Piet Van Asch, Managing Director
Mr. Robert Edwards McLean, Chief Surveyor
Mr. Stephen David Walsh, Scientist Land Resources
Mr. Robert James Armstrong, Chief Surveyor, NZ Forest Service
Mr. Osborne Meredith Pearson, Chief Draughtsman, NZ Forest Service
Mr. Edgar Gerald Boyack, Nautical Adviser, Ministry of Transport
Mr. Graham Colin Derby, Superintendent, Aeronautical Information Services
Mr. Frank Easdale, President, NZ Institute of Surveyors
Mr. George A. Thorn, President, NZ Cartographic Society
Mr. Thomas D. Mackenzie, Fields Director
Mr. Graham Francis Jeune, Chief Cartographer

NIUE

Representative: Mr. Solomona M. Kalauni, Secretary for Justice, Lands and Survey

OMAN

Representative: Mr. Salim Khalfan Al-Baramy, Under-Secretary, Ministry of Land

Alternate: Mr. Thabit Nasser Al-Riyamy, Director of Town Planning and Survey

Advisers: Mr. Anwar Alasfoor, Town Planner
Mr. Salem Ahmed Alghassani, Director Planning and Survey

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Alternate: Mr. Jacek Gadomski, Department Manager, Polservice

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Representative: Mr. Jose Lourenco, Head of Cartographic Research Department, Macau

Alternate: Mr. Manuel Inacio Godinho Novais Leite, Deputy Marine Department, Macau

SAMOA

Representative: Mr. Tiavolo Seumanutafa, Chief Survey Draughtsman

SAUDI ARABIA

Observers: Mr. Ahmed Shamekm Ahmed, Riyadh University
Dr. Mohamed El Amin El Baseir, University of Islamic Iman

Observers: Mr. Fasuzan Al Fasuzan
Mr. Ali Abu-Bakr, Riyad University

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Representative: Mr. Nabura Tekaaai, Acting Surveyor General

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Alternate: Mr. Ian Brook, Head of Division, Swedsurvey, Overseas Agency of
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SYRIAN ARAB REPUBLIC

Representative: Mr. Ibrahim Kourzom, Deputy Director, Surveying Department

Alternate: Mr. Mohammad Adnan Rifai, Secretary of Council of Sciences

THAILAND

Representative: Lieutenant General Chumphon Kulkasem, Director of Survey,
Royal Thai Survey Department

Alternates: Rear Admiral Sukasem Na Lampang, Assistant Director,
Hydrographic Department
Mr. Chootragool Suwankate, Surveyor General, Department of Land
Mr. Somvhang Tandalak, University Professor, Chulalongkorn
University
Colonel Rian Hiranbumroong, Chief of Plans and Projects Division,
RTSD
Mr. Winya Sinchermsiri, Director, Survey and Mapping Branch,
National Energy Authority
Colonel Pinit Thawornkul, Chief of Logistics Section,
Plans and Projects Division, RTSD
Mr. Amporn Promprasit, Soil Surveyor, Land Development Department
Commander Komol Jittjumnong, Chief of Hydrographic Survey Section,
Hydrographic Department
Mr. Gomet Hongpakdi, Chief of Aerial Triangulation Section,
Irrigation Department
Major Sanong Mingsamon, Geodesist, RTSD
Captain Ratchai Phadungwai, Cartographer, RTSD

UNION OF SOVIET SOCIALIST REPUBLICS

Representative: Mr. Nikolai Makarenko, Deputy Director, Scientific and Research Institute of Geodesie, Air Surveying and Cartography

Alternate: Mr. Vadim Postnov, Ministry of Foreign Affairs Treaty and Legal Department, Adviser

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Representative: Mr. Bentley Edwin Furmston, Deputy Director, Directorate of Overseas Surveys

Alternate: Rear Admiral David Haslam, Hydrographer of the Navy

Advisers: Lieutenant Colonel Noel Charles, R. E. Assistant Director, Military Survey
Margaret Elizabeth Hardern, Map Research Officer, Military Survey

UNITED STATES OF AMERICA

Representative: Mr. Lawrence Ayers, Deputy Director Programme, Production/Operations, Defence Mapping Agency

Alternate: Mr. Elvyn Arthur Stoneman, Consultant, Office of the Geographer, Department of State

Advisers: Mr. Walter J. Chappas, Associate Director, Aero Charting NOS
Mr. Douglas Dickson, Co-ordinator for Maps and Publications, Department of State
Mr. Doyle G. Frederick, Associate Chief, Topographic Division, US Geological Survey

B. Members of the United Nations represented by observers

HOLY SEE

Mr. Petrus Aart Van der, St. Patrick's College, Wellington

SWITZERLAND

Mr. Manfred Duddek, Consulting Engineer

C. International Scientific Organizations

International Cartographic Association (ICA)

Mr. D. McCormack
Chief Cartographer DSIR
New Zealand

International Geographical Union (IGU)	<p>Professor R. G. Lister, University of Otago, Dunedin, New Zealand (IGU Working Group Member on Transformation of the Rural Habitat of Developing Countries)</p> <p>Mr. David Winchester, Lecturer in Geography and Cartography Victoria University, Wellington</p>
International Hydrographic Office (IHO)	<p>Commodore A. H. Cooper, Head Technical Section, C/o International Hydrographic Bureau B.P. 345-MC, Monaco</p>
International Society for Photogrammetry (ISP)	<p>Dr. Frederick J. Doyle, ISP Secretary-General US Geological Survey Reston, Va., USA</p> <p>Mr. Jürgen Hothmer Chairman W.G. VI/6 ISP</p>
International Union of Geodesy and Geophysics (IUGG)	<p>Dr. W. I. Reilly, Chairman, New Zealand National Committee for IUGG</p>
Scientific Committee on Antarctic Research (SCAR)	<p>Mr. A. G. Bomford, Director, Division of National Mapping, Queanbeyan, NSW</p>
Fédération internationale des géometres (FIG)	<p>Sir Holmes Miller Wellington</p>

Annex II

LIST OF DOCUMENTS

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E/CONF.72/L.5	A photomechanical method of black-and-white image enhancement (submitted by the United States)	7 (b)
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E/CONF.72/L.22	A system providing access to national survey data (submitted by Japan)	7 (c)
E/CONF.72/L.23	Cartographic work in Japan (submitted by Japan)	6
E/CONF.72/L.24	National Ocean survey automated information system (submitted by the United States)	7 (b) and (d)
E/CONF.72/L.25	Test results of a high-precision analytical photogrammetric system (submitted by the United States)	7 (a)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.26	Survey of Sugar Lands, Fiji (submitted by Australia)	7 (a)
E/CONF.72/L.27	Thematic mapping in Australia (submitted by Australia)	7 (b)
E/CONF.72/L.28	Revision of the National Topographic Map Series (submitted by Australia)	7 (a)
E/CONF.72/L.29	Bathymetric mapping by the Division of National Mapping, Australia 1977-1979 (submitted by Australia)	7 (d)
E/CONF.72/L.30	Four-colour reproduction (submitted by Australia)	7 (b)
E/CONF.72/L.31	Map accuracy (submitted by Australia)	7 (b)
E/CONF.72/L.32	Topographic maps - layout and folding (submitted by Australia)	7 (b)
E/CONF.72/L.33	Topographic mapping (submitted by Australia)	7 (a)
E/CONF.72/L.34	Revision cycle forecast model (submitted by Australia)	7 (a)
E/CONF.72/L.35	Australian standard format and codes for the exchange of digital mapping and charting data on magnetic tape (submitted by Australia)	7 (b)
E/CONF.72/L.36	High Altitude Wide Angle Photography (submitted by Australia)	7 (a)
E/CONF.72/L.37	Maritime boundaries (submitted by Australia)	7 (a)
E/CONF.72/L.38	Landsat in Australia (submitted by Australia)	7 (b)
E/CONF.72/L.39	Report on activities during 1977-1979 (submitted by Australia)	6
E/CONF.72/L.40	Geodesy in the Division of National Mapping, Australia, 1977-1979 (submitted by Australia)	7 (a)
E/CONF.72/L.41	Report on activities of IAG Commission 10, Continental Networks Sub-commission for South-East Asia and the Pacific (submitted by Australia)	7 (a)
E/CONF.72/L.42	Orthophotomapping - A digital data companion (submitted by Australia)	7 (a)
E/CONF.72/L.43	Land resource information systems for rural uses (submitted by Australia)	7 (c)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.44	Mapping for water supply schemes at Tanjungkarang Telukbetung and Kota Bumi, Sumatra (submitted by Australia)	7 (a)
E/CONF.72/L.45	The Application of LANDSAT data to the management of pastoral areas in Western Australia (submitted by Australia)	7 (b)
E/CONF.72/L.46	Regional land evaluation (submitted by Australia)	7 (c)
E/CONF.72/L.47	Application of orthophotomaps in the development of a visual register of land title in New South Wales (submitted by Australia)	7 (c)
E/CONF.72/L.48	Autochart (submitted by Australia)	7 (a)
E/CONF.72/L.49 and Add.1	Automation in computer assisted cartography (submitted by Australia)	7 (a)
E/CONF.72/L.50	Orthophotomapping for draining of agricultural lands in Fiji (submitted by Australia)	7 (a)
E/CONF.72/L.51	Cadastral mapping - Queensland (submitted by Australia)	7 (c)
E/CONF.72/L.52	Cancelled	
E/CONF.72/L.53	United Kingdom report on activities (submitted by the United Kingdom)	6
E/CONF.72/L.54	Geodetic frameworks - their relevance for development (submitted by the United Kingdom)	8
E/CONF.72/L.55 and Add.1	Application of photogrammetry to cadastral surveys and to land management in general (submitted by the Netherlands)	7 (c)
E/CONF.72/L.56	Training of survey engineers and technicians at the National Geographic Sciences College (ENSG) and local training (submitted by France)	8
E/CONF.72/L.57	Technical questions concerning base Mapping Doppler satellite geodesy (submitted by France)	7 (a)
E/CONF.72/L.58	SPOT, French Earth Observation Programme, present status of the Programme as of February 1980: SPOT, A mission, the satellite and associated ground facilities (submitted by France)	7 (a)
E/CONF.72/L.59	Technical questions concerning map production; tourist maps produced by the Institut géographique national, France (submitted by France)	7 (b)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.60	APR-Laser System (submitted by France)	7 (<u>a</u>)
E/CONF.72/L.61	Maintenance of the topographic base map of the national territory (submitted by France)	7 (<u>b</u>)
E/CONF.72/L.62	Application of computer technology in processing of cadastral surveying and mapping data (submitted by France)	7 (<u>c</u>)
E/CONF.72/L.63	The recent evolution of hydrography in relation to the new economy of the sea: co-operation with newly independent maritime States (submitted by France)	7 (<u>d</u>)
E/CONF.72/L.64	Métrologie (submitted by France)	7 (<u>a</u>)
E/CONF.72/L.65 and Add.1	Interpretation of satellite imagery for determination of land use data (submitted by the Federal Republic of Germany)	7 (<u>b</u>)
E/CONF.72/L.66	Doppler activities and experiences in point-positioning at the Institut für Angewandte Geodasie (submitted by the Federal Republic of Germany)	7 (<u>a</u>)
E/CONF.72/L.67	Thematic atlases: a contribution to the solution of regional planning problems (submitted by the Federal Republic of Germany)	7 (<u>b</u>)
E/CONF.72/L.68	Results of analyses of data collected with advanced laser-ranging instrumentation installed at Weitzell, and the implications for South-East Asia and the Pacific (submitted by the Federal Republic of Germany)	7 (<u>a</u>)
E/CONF.72/L.69	Performance figures for the geodetic engineer works (submitted by the Federal Republic of Germany)	8
E/CONF.72/L.70	The establishment of a basic national geodetic system (submitted by Sweden)	7 (<u>a</u>)
E/CONF.72/L.71	Modern components in the ITC courses in aerial photography, photogrammetry and cartography (submitted by the Netherlands)	8
E/CONF.72/L.72	Country report (submitted by the Federal Republic of Germany)	6
E/CONF.72/L.73	Progress report on cartographic activities in Thailand 1977-1979 (submitted by Thailand)	6
E/CONF.72/L.74	Cartographic activities in Malaysia 1977-1979 (submitted by Malaysia)	6

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.75	Report of the cartographical and hydrographical activities in Macau (submitted by Portugal)	6
E/CONF.72/L.76	Development of a real estate-oriented information system in rural and urban areas (submitted by the Federal Republic of Germany)	7 (c)
E/CONF.72/L.77	Post-graduate training in geodesy - a prerequisite for the infrastructural development of a country (submitted by the Federal Republic of Germany)	8
E/CONF.72/L.78	Application of interactive graphic systems in cartography (submitted by the Federal Republic of Germany)	7 (b)
E/CONF.72/L.79	Report on the progress of surveying and mapping in the People's Republic of China (submitted by China)	6
E/CONF.72/L.80	An introduction to the adjustment of astro-geodetic net of the People's Republic of China (submitted by China)	7 (a)
E/CONF.72/L.81	Photogrammetry in China (submitted by China)	7 (a)
E/CONF.72/L.82	The European remote sensing mission on Spacelab 1 (submitted by the Federal Republic of Germany)	7 (a)
E/CONF.72/L.83	The application of survey and remote sensing techniques in coastal and marine areas carried out at the University of Hannover (submitted by the Federal Republic of Germany)	7 (a) and (d)
E/CONF.72/L.84	The possibilities for technical assistance by the Federal Republic of Germany (submitted by the Federal Republic of Germany)	8
E/CONF.72/L.85	Progress report on cartographic activities in Switzerland (submitted by Switzerland)	6
E/CONF.72/L.86	Aerophotographic cameras of TES-type used for topographic survey (submitted by USSR)	7 (a)
E/CONF.72/L.87	Joint production of the common datum charts of the Straits of Malacca and Singapore (submitted by Japan)	7 (d)
E/CONF.72/L.88	The marine geodetic network around Japan. A new project of JHD (submitted by Japan)	7 (d)
E/CONF.72/L.89	Cartographic activities in Indonesia 1976-1979 (submitted by Indonesia)	6
E/CONF.72/L.90	The Mexican experience in the establishment of a geographic information system (submitted by Mexico)	7 (c)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.91	Report of the United Nations Group of Experts on Geographical Names for Asia, South-East Division (submitted by the South-East Asia Division)	7 (<u>b</u>)
E/CONF.72/L.92	United Nations Group of Experts on Geographical Names for South-East Asia Division: country report, Malaysia (submitted by Malaysia)	7 (<u>b</u>)
E/CONF.72/L.93	Cartographic activities in Kuwait (submitted by Kuwait)	7 (<u>c</u>)
E/CONF.72/L.94	The 14th Congress of the International Society for Photogrammetry, July 1980, Hamburg (submitted by the International Society of Photogrammetry)	7 (<u>a</u>)
E/CONF.72/L.95	The International Cartographic Association: information paper (submitted by the International Cartographic Association)	7 (<u>b</u>)
E/CONF.72/L.96	Standards of competence for hydrographic surveyors (submitted by IHO and FIG)	7 (<u>d</u>)
E/CONF.72/L.97	Report on the activities of the SCAR Working Group on Geodesy and Cartography (submitted by the Scientific Committee on Antarctic Research)	7 (<u>a</u>)
E/CONF.72/L.98	National report (submitted by Egypt)	6
E/CONF.72/L.99	Regional international periodical (RIP) on photogrammetry and remote sensing for Asia and the Pacific (submitted by the International Society for Photogrammetry)	8
E/CONF.72/L.100	Topography and cartography in Democratic Kampuchea (submitted by Democratic Kampuchea)	6
E/CONF.72/L.101	Remote sensing application changes of forest cover detected through aerial photography. A Case study of the Province of Lampung Sumatra, Indonesia (submitted by Indonesia)	7 (<u>b</u>)
E/CONF.72/L.102	Hydrographic surveying and charting hydro-oceanographic activities in Indonesia for the period 1977-1979 (submitted by Indonesia)	7 (<u>d</u>)
E/CONF.72/L.103	Training and education in surveying and mapping in Indonesia (submitted by Indonesia)	8
E/CONF.72/L.104	Magnetic survey in the Sunda, Lombok and Makassar Straits, Indonesia (submitted by Indonesia)	7 (<u>a</u>)

<u>Document No.</u>	<u>Title</u>	<u>Agenda item</u>
E/CONF.72/L.105	A Joint report on the survey and demarcation of the international boundary between Indonesia (Kalimantan) and Malaysia (Sabah-Sarawak) (submitted by Indonesia and Malaysia)	6
E/CONF.72/L.106	Cartographic activities in Nepal (submitted by Nepal)	6
E/CONF.72/L.107	Rapport sur les activités cartographiques en République arabe syrienne (submitted by the Syrian Arab Republic)	6
E/CONF.72/L.108	A brief report on the progress made in the field of surveying and mapping in Cyprus during the past three years (submitted by Cyprus)	6
E/CONF.72/L.109	Progress report (submitted by Fiji)	6
E/CONF.72/L.110	Country report (submitted by the Philippines)	6
E/CONF.72/L.111	The New Zealand Land Inventory Handbook. An aid to land use planning (submitted by New Zealand)	7 (<u>b</u>)
E/CONF.72/L.112	Report on cadastral mapping in Indonesia (submitted by Indonesia)	7 (<u>c</u>)
E/CONF.72/L.113	The Regional Economic Atlas of Asia and the Far East (submitted by Thailand)	7 (<u>b</u>)
E/CONF.72/L.114	Report on cartographic activities in Solomon Islands (submitted by Solomon Islands)	6
E/CONF.72/L.115	Field digital models (submitted by France)	7 (<u>a</u>)

Annex III

RULES OF PROCEDURE

Chapter I

REPRESENTATION AND CREDENTIALS

Rule 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.

Rule 2

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

Rule 3

The President and the Vice-Presidents shall examine the credentials and report to the Conference without delay.

Rule 4

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

Chapter II

OFFICERS

Rule 5

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

Rule 6

The President shall preside over the plenary meetings of the Conference. He shall not vote but may designate another member of his delegation to vote in his place.

Rule 7

If the President is absent from a meeting or any part thereof, a Vice-President designated by him shall preside. A Vice-President acting as President shall have the same powers and duties as the President.

Chapter III

SECRETARIAT

Rule 8

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. He may appoint a deputy to take his place at any meeting.

Rule 9

The Executive Secretary or his representative may at any meeting make either oral or written statements concerning any question under consideration.

Rule 10

The Executive Secretary shall provide and direct such staff as is required by the Conference. He shall be responsible for making all necessary arrangements for meetings and generally shall perform all other work which the Conference may require.

Chapter IV

CONDUCT OF BUSINESS

Rule 11

Representatives of a majority of the States participating in the Conference shall constitute a quorum.

Rule 12

In addition to exercising the powers conferred upon him elsewhere by these rules, the President shall declare the opening and closing of each plenary meeting of the Conference, shall direct the discussion at such meetings, accord the right to speak, put questions to the vote and announce decisions. He shall rule on points of order and, subject to these rules of procedure, shall have complete control over the proceedings.

Rule 13

The President may, in the course of the discussions, propose to the Conference the closure of the list of speakers or the closure of the debate. He may also propose the suspension or the adjournment of the meeting or the adjournment of the

debate on the item under discussion. He may also call a speaker to order if his remarks are not relevant to the matter under discussion.

Rule 14

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

Rule 15

During the discussion on any matter, a representative may, at any time, raise a point of order, and the point of order shall be immediately decided by the President in accordance with the rules of procedure. 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 representatives present and voting. A representative raising a point of order may not speak on the substance of the matter under discussion.

Rule 16

During the discussion of any matter, a representative may move the adjournment of the debate on the item under discussion. Any such motion shall have priority. In addition to the proposer of the motion, one representative shall be allowed to speak in favour of, and one representative against, the motion.

Rule 17

During the course of the debate, the President may announce the list of speakers and with the consent of the Conference declare the list closed. The President may, however, accord the right of reply to any representative if, in his opinion, a speech delivered after he has declared the list closed makes this desirable. When the debate on an item is concluded because there are no other speakers, the President shall declare the debate closed. Such closure shall have the same effect as closure by decision of the Conference.

Rule 18

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

Rule 19

1. No one may address the Conference without having previously obtained the permission of the President. Subject to rules 15, 16, 17 and 18, the President shall call upon speakers in the order in which they signify their desire to speak.

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

3. The Conference may limit the time allowed to speakers and the number of times the representative of each State 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 put to the vote immediately. In any event, the President shall limit interventions on procedural questions to a maximum of five minutes. When the debate is limited and a speaker exceeds the allotted time, the President shall call him to order without delay.

Rule 20

Proposals and amendments shall normally be introduced in writing and handed to the Executive Secretary of the Conference, who shall circulate copies to the delegations. As a general rule, no proposal shall be discussed or put to the vote at any meeting of the Conference unless copies of it have been circulated to all delegations not later than the day preceding the meeting. The President may, however, permit the discussion and consideration of amendments or motions as to procedure even though these amendments or motions have not been circulated or have only been circulated the same day.

Rule 21

A proposal, amendment or 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.

Rule 22

When a proposal or an amendment 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 the motion to reconsider shall be accorded only to two speakers opposing the motion, after which it shall be immediately put to the vote.

Chapter V

VOTING

Rule 23

Each State participating in the Conference shall have one vote, and the decisions of the Conference shall be made by a majority of the representatives present and voting.

Rule 24

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

Rule 25

The Conference shall normally vote by show of hands, but any representative may request a roll-call. A roll-call shall be taken in the English alphabetical order of the names of the delegations at the Conference, beginning with the delegation whose name is drawn by lot by the President.

Rule 26

After the President has announced the beginning of the vote, no representative shall interrupt the vote except on a point of order in connexion with the actual conduct of voting. Explanations of their votes by representatives may, however, be permitted by the President either before or after the voting. The President may limit the time to be allowed for such explanation.

Rule 27

Parts of a proposal shall be voted on separately if a representative requests that the proposal be divided. Those parts of the proposal which have been approved shall then be put to the vote as a whole; if all the operative parts of a proposal have been rejected, the proposal shall be considered rejected as a whole. For the purpose of this rule, the word "proposal" shall be considered as including amendments.

Rule 28

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 first vote 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. When, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter amendment shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted upon. A proposal is considered an amendment to another proposal if it merely adds to, deletes from or revises part of that proposal.

Rule 29

If two or more proposals relate to the same question, the Conference shall, unless it decides otherwise, vote on the proposals in the order in which they have been submitted. The Conference may, after each vote on a proposal, decide whether to vote on the next proposal.

Rule 30

All elections shall be decided by secret ballot unless otherwise decided by the Conference.

Rule 31

If, when one person or one delegation is to be elected, no candidate obtains the required majority in the first ballot, a second ballot shall be taken, which shall be restricted to the two candidates obtaining the largest number of votes.

In the case of a tie in the first ballot among the candidates obtaining the second largest number of votes, a special ballot shall be held for the purpose of reducing the number of candidates to two. In the case of a tie among three or more candidates obtaining the largest number of votes, a second ballot shall be held; if a tie results among more than two candidates, the number shall be reduced to two by lot.

Rule 32

If a vote is equally divided upon matters other than elections, a second vote shall be taken after an adjournment of the meeting for 15 minutes. If this vote also results in equality, the proposal shall be regarded as rejected.

Chapter VI

LANGUAGES

Rule 33

English and French shall be the languages of the Conference.

Rule 34

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

Chapter VII

SOUND RECORDINGS

Rule 35

Plenary meetings and committee meetings of the Conference shall have sound recordings and such recordings shall be kept by the Secretariat in English only.

Chapter VIII

PUBLICITY OF MEETINGS

Rule 36

The plenary meetings of the Conference and the meetings of its committees shall be held in public unless the body concerned decides that exceptional circumstances require that a particular meeting be held in private.

Chapter IX

COMMITTEES

Rule 37

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 subject.

Rule 38

Each committee shall elect its own Chairman, Vice-Chairman, and Rapporteur.

Rule 39

In so far as they are applicable, these rules shall apply to the proceedings of the committees. A committee may dispense with certain language interpretations.

Chapter X

SPECIALIZED AGENCIES, OTHER INTERGOVERNMENTAL ORGANIZATIONS AND NON-GOVERNMENTAL ORGANIZATIONS

Rule 40

Observers of specialized agencies invited to the Conference may participate, without the right to vote, in the deliberations of the Conference and its committees, upon the invitation of the President or the Chairman, as the case may be on questions within the scope of their activities.

Written statements of such specialized agencies shall be distributed by the Secretariat to the delegations at the Conference in the languages and in the quantities that such statements are made available to the Secretariat.

Rule 41

Other intergovernmental organizations and non-governmental organizations invited to the Conference may participate in the deliberations of the Conference and its committees and upon the invitation of the President or the Chairman of a committee, as the case may be, may make oral statements on subjects in which these organizations have a special competence.

Written statements of such organizations on subjects in which they have a special competence and which are related to the work of the Conference shall be distributed by the Secretariat in the languages and in the quantities that the statements are made available in the Secretariat.

Chapter XI

AMENDMENTS

Rule 42

These rules of procedure may be amended by a decision of the Conference.

كيفية الحصول على منشورات الأمم المتحدة
يمكن الحصول على منشورات الأمم المتحدة من المكتبات ودور التوزيع في جميع أنحاء العالم . استلم عنها من المكتبة التي تتعامل معها
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