UNITED NATIONS

E

Economic and Social Council

Distr.
GENERAL

E/CN.3/1987/17
4 December 1986

ORIGINAL: ENGLISH

STATISTICAL COMMISSION
Twenty-fourth session
23 February - 4 March 1987
Item 10 of the provisional agenda*

TECHNICAL CO-OPERATION

Technical co-operation in statistics rendered by the United Nations system, other international organizations and countries

Report of the Secretary-General

SUMMARY

The present report summarizes the technical co-operation programmes in statistics of organizations of the United Nations system and several bilateral agencies outside the United Nations system for the period 1983-1986. It is intended to update the previous report on the subject, which had covered the period 1980-1984.

The report provides information on the main components of the programme of the United Nations system, namely, headquarters staff, field staff, training, equipment and miscellaneous (paras. 8-15). Information on technical co-operation activities by broad subject area, as well as a geographical breakdown of expenditure on the technical co-operation activities currently executed by the United Nations and specialized agencies is also presented (paras. 16-67).

In addition, the report presents current activities and issues in statistical training (paras. 78-87) and emerging issues in statistical data processing, including the role of microcomputers in overall statistical data processing (paras. 88-101). Points for discussion by the Statistical Commission are included (para. 102).

* E/CN.3/1987/1.

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INTRODUCTION

1. The Statistical Commission, at its twenty-third session, requested the Secretary-General to submit to it at its twenty-fourth session a report on technical co-operation in statistics, including contributions from the United Nations system, other international organizations and countries, taking into account the suggestions made by the Commission during its twenty-third session. 1/

2. The Commission's Working Group on International Statistical Programmes and Co-ordination, at its eleventh session, agreed that the report on technical co-operation in statistics rendered by the United Nations system, other international organizations and countries should include information on the role of microcomputers and minicomputers in overall data processing activities in developing countries. In addition, as detailed an analysis as possible should be included in the paper, and an effort should be made to estimate more comprehensively the training element, although it was recognized that that was a difficult undertaking.

3. The information contained in chapters I and II below and in the annex was supplied by the organizations responding to questionnaires sent from the Statistical Office of the United Nations Secretariat. The estimates provided by organizations were partly incompatible; therefore there was considerable difficulty in achieving standardization. In many cases, it seemed difficult for organizations to identify and measure separately technical assistance activities and regular work programme activities. Despite the non-compatibility and limitations of the estimates, the aggregated figures provide an indication of the overall magnitudes involved and the broad changes in them.

I. OVERALL SUMMARY

4. Table 1 presents estimates of the overall level of funding of technical co-operation in statistics by the United Nations system during the period 1983-1986. According to available data, the annual average expenditure on technical co-operation in statistics by the United Nations system was $38.4 million during the four-year period 1983-1986, that is, a 14.3 per cent decrease from an annual average expenditure of $44.8 million during the preceding four-year period, 1979-1982 ($39.9 million in 1979, $44.4 million in 1980, $47.8 million in 1981, $46.9 million in 1982). This decrease was largely the result of reduced funding by the United Nations Fund for Population Activities (UNFPA) for the support of the 1980 round of population censuses since that activity had passed its peak. However, the estimated budget for 1986 shows an increase of $10.4 million (31.4 per cent) over $33.1 million in 1983.

5. Tables 2 and 3 provide information on the overall expenditure of the United Nations system by main forms of co-operation activity, namely, staff (headquarters staff and field experts), training, equipment and miscellaneous activities. The main trends in the shares of these components of technical co-operation activity in statistics are as follows:

Table 1. Estimates of expenditure on technical co-operation in statistics: United Nations system, 1983-1986 a/

Year	Millions of United States dollars	Year-to-year percentage change	1983 = 100.0
1983	33.1	-	100.0
1984	35.0	+5.7	105.7
1985	41.8	+19.4	126.3
1986	43.5	+4.1	131.4

a/ The summary data are based on submissions by the United Nations, the International Labour Organisation, the Food and Agriculture Organization of the United Nations, the United Nations Educational, Scientific and Cultural Organization and the World Health Organization.

Table 2. Estimates of expenditure on technical co-operation in statistics by main forms of activity: United Nations system, 1983-1986 a/

(Thousands of United States dollars)

Activity	1983	1984	1985	1986
Total	33 140	34 996	41 825	43 506
Staff, total	22 352	23 947	24 994	27 513
Headquarters staff	8 096	9 391	9 573	9 377
Field experts	14 256	14 556	15 421	18 136
Training	3 905	4 293	5 650	6 301
Provision of equipment	5 614	5 196	9 813	7 933
Miscellaneous	1 268	1 560	1 368	1 759

a/ The summary data are based on submissions by the United Nations, the International Labour Organisation, the Food and Agriculture Organization of the United Nations, the United Nations Educational, Scientific and Cultural Organization and the World Health Organization (all sources of funds).

Table 3. Percentage distribution of expenditure by main forms of activity: United Nations system, 1983-1986 a/

Activity	1983	1984	1985	1986
Total	100.0	100.0	100.0	100.0
Staff, total	67.4	68.4	59.8	63.3
Headquarters staff	24.4	26.8	22.9	21.6
Field experts	43.0	41.6	36.9	41.7
Training	11.8	12.3	13.5	14.5
Provision of equipment	16.9	14.8	23.5	18.2
Miscellaneous	3.8	4.5	3.3	4.0

a/ Based on the data in table 2.

(a) The staff component (headquarters staff and field experts) constituted an average share of 67.9 per cent during the period 1983-1984, but decreased to 59.8 per cent in 1985. The estimated share in 1986 is 63.3 per cent. The expenditure for headquarters staff responsible for providing technical support towards programme formulation and technical guidance, including regional and interregional advisers, constituted an average of 24.7 per cent during the period 1983-1985, but decreased to 21.6 per cent in 1986. The expenditure for country experts or field staff executing projects in countries constituted an average of 40.5 per cent during the period 1983-1985, but is expected to increase slightly to 41.7 per cent in 1986.

(b) The training component constituted an average of 12.5 per cent during the period 1983-1985 but increased to 14.5 per cent in 1986.

(c) Provision of equipment constituted 16.9 per cent in 1983 and 14.8 per cent in 1984 but increased to 23.5 per cent in 1985. The estimate for 1986 is 18.2 per cent.

(d) Miscellaneous expenditure constituted an annual average of 3.9 per cent during the period under review.

II. DETAILED REPORT

6. The present section provides more detailed information on the main forms of technical co-operation activities, namely, headquarters staff, field experts, training, equipment and miscellaneous activities - discussed in the previous section for all contributing organizations of the United Nations system. Under each contributing organization, summary quantitative information on each component is provided, followed by a breakdown of expenditure by broad groupings of subjects and by region. Detailed quantitative information on the activities of the United Nations system for the period 1983-1986, including the level of expenditure and the work-months of headquarters staff and the number of field staff supporting the programme, is contained in the annex below.

7. Brief summaries of technical co-operation in statistics by bilateral agencies are provided in subsection B below.

A. United Nations system

8. The data are the aggregates of individual submissions from the statistical offices of the United Nations, the regional commissions, the International Labour Organisation (ILO), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization (WHO). The expenditure data of the Statistical Office of the United Nations Secretariat include some components attributable to demographic analysis and projections, and the data should be viewed in that context.

9. The following specialized agencies submitted written statements but not data: International Civil Aviation Organization (ICAO), World Bank and International Monetary Fund (IMF).

Headquarters staff

10. The United Nations system provided 1,268 work-months of technical support towards the formulation and execution of projects in countries at a cost of $8,096,000 in 1983, as shown in annex table 1. In 1984, the total number of work-months increased to 1,432 at a cost of $9,391,000 and in 1985 it decreased slightly to 1,348 work-months but expenditure was at almost the same level - $9,573,000. In 1986, the total number of work-months was estimated at 1,215 and expenditure at $9,377,000.

Field experts

11. Field experts are all staff employed at the country level whose duties are directly related to the execution of country projects and whose remuneration is charged to country projects. They include all country experts, consultants and volunteers in statistics, data processing and related areas.

12. In 1983, a total of 240 field experts and consultants were engaged in country projects executed by the United Nations system at a cost of $14,256,000. The number of experts increased to 274 in 1984 and to 297 in 1985. In 1986, it rose further to 355. The total cost of maintaining them amounted to $18,136,000 in 1986, representing 42 per cent of the total cost of the technical co-operation programme in statistics of the United Nations system in 1986.

Training

13. Training comprises fellowships in training institutions, observations at national statistical offices or centres, regional or headquarters offices of international or bilateral organizations and attendance at workshops, working groups and seminars located in or outside the home country.

14. In 1983, the expenditure on training of the United Nations system was $3,905,000 or 11.8 per cent of the total expenditure, and increased in 1984 to $4,293,000 and in 1985 to $5,650,000. In 1986, the expenditure on training rose further to $6,301,000. The share of the training component in the total expenditure was 13.5 per cent in 1985 and 14.5 per cent in 1986.

Equipment

15. Equipment includes computer hardware and software (either bought or rented), vehicles, cartographic and printing equipment, copying equipment and calculating machines. The annual share of the equipment component in the total expenditure of the technical co-operation programme in statistics of the United Nations system in 1983 and 1984 was low: 16.9 per cent and 14.8 per cent, respectively. It increased to 23.5 per cent in 1985 and 18.2 per cent in 1986. In absolute terms, total annual expenditure on equipment was $5,614,000 in 1983, $5,196,000 in 1984 and $9,813,000 in 1985. In 1986, it decreased slightly to $7,933,000.

1. United Nations including regional commissions

(a) United Nations Headquarters

Headquarters staff

16. The United Nations continued technical co-operation in statistics through advisory services, support for programme formulation, project execution, evaluation, training and provision of equipment. The United Nations provided 630 work-months of technical support towards the formulation and execution of country projects at a cost of $3,865,000 in 1983, as shown in annex table 1. In 1984, the total number of work-months increased to 709 and, in 1985, it was 707. In 1986, 736 work-months of technical support were provided at a cost of $5,358,000. This represents 21 per cent of total expenditure in 1986.

17. The United Nations provides the services of interregional advisers at Headquarters. There are two interregional advisers, one in demographic and social statistics and one in computer data processing. In addition, there are staff located at Headquarters who provide technical support to the technical co-operation programme on a full-time basis. These include six technical advisers in a variety of subject areas and in data processing. There are also three interregional projects, one of which is the Central Co-ordination Unit of the National Household Survey Capability Programme (NHSCP), which has four technical advisers. The Unit, in collaboration with the statistical divisions of the regional commissions concerned, provides assistance to national statistical offices in the formulation of continuing survey programmes. The second project has three technical advisers who provide technical support to population, demographic and related statistical projects. The third project is concerned with the development and distribution of software packages for computer editing and tabulation. This project has two technical advisers. In the regional commissions there were 19 regional and technical advisers in 1986: nine at the Economic Commission for Africa (ECA), six at the Economic and Social Commission for Asia and the Pacific (ESCAP) and four at the Economic and Social Commission for Western Asia (ESCWA).

Field experts

18. The United Nations technical co-operation programme in statistics, executed by the Department of Technical Co-operation for Development of the United Nations Secretariat, remains the largest within the United Nations system. In 1983, 101 field experts were engaged, at a total cost of $6,953,000. The number of experts rose to 112 in 1984 and to 140 in 1985. In 1986, the number was estimated to increase to 206, at a cost of $9,594,000. The increase in the number of experts, while expenditure per expert decreased, was the result of the policy of funding agencies of engaging short-term experts or consultants instead of resident experts on a longer-term basis.

Training

19. The expenditure on training of the United Nations at Headquarters and regional commissions together was $2,399,000 or 13.4 per cent in 1983, and $2,332,000 or 13.3 per cent in 1984. In 1985, it increased to $3,466,000 or 14.3 per cent of the total expenditure. In 1986, it was estimated to be $4,200,000 or 16.6 per cent of the total expenditure. The number of fellowships awarded under United Nations projects increased from 208 in 1983 to 267 in 1984, 313 in 1985 and 354 in 1986.

20. At Headquarters, an on-the-job statistical training project was established in 1982 as part of the United Nations regular programme of technical co-operation for the training of junior statisticians and programmers of the national statistical office of one developing country in another suitable developing country. Sixteen countries from all regions of the world benefited from the programme in 1983. The project continued in 1984 and 1985, and has been extended to 1987.

21. The Department of Technical Co-operation for Development, with technical support from the Statistical Office, has convened three interregional workshops: Workshop for Portuguese-speaking Countries on Statistics and Indicators for Women in Development, held at Praia, Cape Verde, in November 1985; Interregional Workshop on National Accounts, held at Mexico City in February 1986; and Interregional Workshop on Statistical Development in the Least Developed, Land-locked and Island Developing Countries, held at Addis Ababa in May 1986.

Equipment

22. The provision of equipment continued to be an important component of technical co-operation in statistics rendered by the United Nations. The expenditure on equipment was $3,960,000 in 1983 and $3,413,000 in 1984. In 1985, it increased to $7,786,000 and in 1986 it was $5,091,000.

Expenditure by subject area

23. Technical co-operation projects under execution by the Department of Technical Co-operation for Development, with substantive support provided by the Statistical Office, covered a wide variety of statistical subjects and capabilities. As shown in annex table 2 in terms of expenditure, projects in demographic and social statistics, including population censuses, had the largest share of the total expenditure. In 1983, expenditure relating to demographic and social statistics

was $7,059,000. It increased slightly to $7,137,000 in 1984. As the 1990 round of the World Population and Housing Census Programme began in 1985, the expenditure increased further to $8,544,000 in 1985 and to $9,656,000 in 1986. These expenditures included not only expenditure on advisory services and training but also expenditure on equipment such as computers for the data processing of population censuses.

24. Expenditure on data processing projects not directly related to population census projects was the second largest component at $4,630,000 in 1986. Expenditure in 1986 of $2,370,000 was made on multi-sector statistics projects, which include statistical training, $2,144,000 on national accounts, finance and price statistics projects, and $2,023,000 on other economic statistics projects. Expenditure on projects relating to sampling and surveys was $1,402,000 in 1986.

Expenditure by region

25. A regional breakdown of the expenditure by the United Nations, shown in annex table 3, indicates that expenditure on country projects in the ECA region was $7,915,000 in 1986, an increase of $1,927,000 (or 32.2 per cent) over $5,988,000 in 1983. Expenditure in the ESCAP region in 1986 was $6,189,000, an increase of $2,990,000 (or 93.5 per cent) over $3,199,000 in 1983. Expenditure in the ESCWA region was $5,790,000 in 1986, an increase of $496,000 (or 9.4 per cent) over $5,294,000 in 1983. Expenditure in the ECLAC region in 1986 was $2,742,000, an increase of $1,438,000 (or 102.8 per cent) over $1,304,000 in 1983.

(b) Economic and Social Commission for Asia and Pacific

26. ESCAP provided technical co-operation in various subject areas to developing countries in the region at a cost of $625,000 in 1983, $892,000 in 1984, $748,000 in 1985 and $852,000 in 1986. In 1986, of total ESCAP expenditure of $852,000, $193,000 (22.7 per cent) was allocated to the support of population censuses and surveys, $169,000 (19.8 per cent) to national accounts, $171,000 (20.1 per cent) to household surveys, $135,000 (15.9 per cent) to data processing, and $99,000 (11.6 per cent) to energy statistics.

27. Traditionally, ESCAP has taken a great interest in the development of population and housing census capabilities in the region. The ESCAP Statistical Division will convene, in 1986 and 1987, working groups on the World Population and Housing Census Programme, 1985-1994. These meetings will update or modify existing regional recommendations for use during the 1985-1994 census decade. The Statistical Division also assisted countries through the provision of advisory services in data processing of population censuses and surveys.

28. In the review and revision of the System of National Accounts (SNA) targeted for 1990, the ESCAP Statistical Division will convene a meeting in 1986 on the review and development of national accounts; the recommendations will constitute the region's input to the revision of SNA.

29. The ESCAP Statistical Division, in association with the Statistical Institute for Asia and the Pacific, convened an expert group meeting on developing statistics

of household economic activities in September 1985. The meeting reviewed country practices, identified a strategy for data collection, and recommended further work for improvement.

30. In support of the global NHSCP programme, the ESCAP Statistical Division, in co-operation with the Central Statistical Organization of the Government of India, conducted four-month training courses on household survey methodology and related electronic data processing at New Delhi. So far, two courses on survey methodology and two on electronic data processing have been conducted, providing training to 68 statisticians from the region. A fifth training course, on survey methodology, began in February 1986 with 18 trainees.

(c) Economic Commission for Latin America and Caribbean

31. The expenditure of ECLAC on technical co-operation in statistics was $129,600 in 1983, $102,250 in 1984 and $116,300 in 1985. Expenditure in 1986 is expected to be $411,400 but this figure could be reduced if present financial restrictions continue. The ability of ECLAC to provide technical co-operation has been significantly limited during the reporting period owing to serious financial constraints.

32. In spite of the difficulties, efforts have been made to satisfy the most urgent needs of countries. Advisory services were rendered on a continuous basis to 15 countries in the region in specific fields of statistics, such as household surveys, national accounts methodologies, foreign trade indexes and the upgrading of national statistical systems in general.

33. ECLAC participated as associated executing agency in the Guatemala Project for the Development of the National Statistical System, executed by the Department of Technical Co-operation for Development of the United Nations Secretariat. In connection with NHSCP, two country projects - one in Costa Rica and the other in Honduras - have been successfully sponsored with the financial support of the Inter-American Development Bank, and ECLAC has been entrusted with the responsibility of associated executing agency. Activities for the Honduras project were expected to start in April 1986; for the Costa Rica project, they were expected to start by May.

(d) Economic Commission for Africa

34. ECA provided technical co-operation for support of activities in demographic surveys and population censuses, statistical training, household surveys, and national accounts statistics. ECA expenditure was $1,075,000 in 1983, $1,281,000 in 1984, $1,352,000 in 1985 and $1,393,000 in 1986. In 1986, of the total expenditure of $1,393,000, $770,000 (55.3 per cent) was allocated to the support of demographic surveys and population censuses, $279,000 (20.0 per cent) to statistical training, $215,000 (15.4 per cent) to household surveys and $129,000 (9.3 per cent) to national accounts statistics.

35. The team of regional advisers in demographic statistics monitored and provided

technical support to population censuses, demographic surveys and civil registration systems and vital statistics programmes of member States of ECA. About 60 advisory missions were undertaken each year during the period 1983-1986. Technical guidance was provided to household survey programmes in Benin, Cameroon, Djibouti, Mauritania, Somalia, the Sudan and Zambia. Advisory services were provided to various countries for the purpose of improving national accounts statistics.

36. ECA provided statistical training to African countries in the framework of the Statistical Training Programme for Africa (STPA). Advisory missions were undertaken for the purpose of assisting countries in the introduction or implementation of in-service training programmes at national statistical offices, or middle-level training at the national level. Eighteen African countries had been visited by the end of 1984. Assistance was also provided to countries in the formulation of project documents for the introduction of in-service training programmes. In this respect, two countries, the Gambia and Mozambique, were assisted. Assistance was also provided to STPA centres in the form of consultants to lecture on specific applied statistics topics and the participation of training advisers in advisory board meetings of some of the centres.

(e) Economic and Social Commission for Western Asia

37. ESCWA provided technical co-operation in statistics mainly for the support of activities in household surveys, data processing, population statistics, national accounts statistics and industrial statistics. In 1986, of the total expenditure of $876,000, $431,000 (49.2 per cent) was allocated to activities on household surveys, $215,000 (24.5 per cent) to data processing, $115,000 (13.1 per cent) to population statistics, $104,000 (11.9 per cent) to national accounts, and $11,000 (1.3 per cent) to industrial statistics.

38. Advisory services were provided for the improvement of methodology as follows: labour force surveys in Democratic Yemen, Jordan and the Syrian Arab Republic; household income and expenditure surveys in Bahrain, Jordan, the Syrian Arab Republic and Yemen; a migration survey in Jordan; an agricultural survey in Yemen; a survey on the participation of women in development in Democratic Yemen; data processing in Bahrain, Democratic Yemen, Iraq, Jordan, the Syrian Arab Republic and Yemen. ESCWA organized training courses in the following subjects during the period 1983-1986: household income and expenditure surveys (1984); labour force surveys (1984); data processing (1986); and sampling techniques (1986). ESCWA also participated in lecturing at training courses organized by the Arab Institute for Training and Research in the fields of industrial statistics, index numbers and population statistics.

2. International Labour Organisation

39. ILO expenditure on technical co-operation in statistics was $603,000 in 1983, $710,000 in 1984, $541,000 in 1985 and $848,000 in 1986 (see annex table 1).

40. In 1986, ILO had four regional advisers, two in the ECA region, one in the

ESCAP region and one in the ECLAC region, at a cost of $518,000. In addition, two staff members at headquarters provided support for programme formulation, technical guidance and evaluation in 1986 at a cost of $164,000. Another two short-term consultants were assigned to country projects, providing 14 work-months of advisory services at a cost of $151,000.

41. ILO technical co-operation was mainly related to two major categories of activities (see annex table 2): NHSCP and labour statistics. Expenditure on NHSCP activities was $352,000 in both 1983 and in 1984, but in 1985 it decreased slightly to $264,000. It was $270,000 in 1986. Expenditure on activities in labour statistics was $176,000 in both 1983 and 1984, and $88,000 in 1985. It increased to $270,000 in 1986.

3. Food and Agriculture Organization of the United Nations

42. FAO provided technical co-operation in food and agriculture statistics, forestry statistics and fisheries statistics. FAO expenditure on technical co-operation in statistics was $5,893,000 in 1983, $6,698,000 in 1984, $6,535,000 in 1985 and its estimate for 1986 was $7,081,000, as shown in annex table 1.

43. In 1986, FAO provided 114 work-months of headquarters staff, including regional advisers, towards programme formulation, support, technical guidance and evaluation, at a cost of $781,000; the number of field experts assigned to country projects in 1986 was 94, at a cost of $4,270,000.

44. Annex table 2 shows that expenditure on food and agriculture statistics was $4,205,000 in 1986, followed by $2,345,000 on forestry statistics and $530,000 on fisheries statistics.

45. A breakdown by region (see annex table 3) shows that expenditure on projects in the ECA region was $3,948,000, the largest in 1986, followed by $2,084,000 in the ESCAP region, $779,000 in the ECLAC region and $269,000 in the ESCWA region.

46. Emphasis in recent years in technical co-operation in food and agriculture statistics has been on the development of national information systems. In this context, FAO is promoting the 1990 World Census of Agriculture which is expected to improve and provide a frame for national information systems on food and agriculture.

47. Work on assisting in developing methodologies in food and agriculture statistics has been oriented towards the application of modern techniques such as aerial photography and remote-sensing. Methodology for a survey of harvested consumption fuelwood has been developed through project co-operation in three countries.

48. Training activities in food and agriculture statistics are oriented towards practical field work and organized for a group of countries at a time in co-operation with regional statistical institutions. An important area of training in forestry statistics is in the assembling and analysis of recent inventory data. A computer system called FIDAPS has been developed and disseminated for inventory processing. FAO expenditure on training was $669,000 in 1986.

49. In the field of data processing, emphasis has been given to the promotion of the use of microcomputers and available software (such as CENTS, SUDS and dBase II and III). Data processing equipment has been installed in several countries. FAO expenditure on equipment, including on data processing equipment, was $929,000 in 1986.

4. United Nations Educational, Scientific and Cultural Organization

50. UNESCO provided technical co-operation in education statistics, science and technology statistics, and culture and communication statistics. Estimates of expenditure on technical co-operation in statistics as a whole was $1,103,000 in 1983, $1,204,000 in 1984, $1,189,000 in 1985 and $1,075,000 in 1986, as indicated in annex table 1.

51. In 1986, UNESCO provided 40 work-months of support, at an estimated cost of $248,000, towards programme formulation and technical guidance by headquarters staff, including two regional advisers. The number of field experts in 1986 was 13, at a cost of $642,000.

52. As shown in annex table 2 in 1986, expenditure on education statistics was $883,000, whereas expenditure on science and technology statistics was $50,000 and on culture and communication statistics, $50,000.

53. UNESCO expenditure on technical co-operation in statistics by region (see annex table 3), shows that, in 1986, expenditure in the ESCWA region was $399,000; in the ECA region, $380,000; in the ESCAP region, $135,000; and in the ECLAC region, $50,000.

54. The most significant activity during recent years has been statistical training. The statistical training provided by UNESCO during the period 1983-1986 mainly took the form of short training courses organized in member States in the three statistical areas falling within the field of competence of UNESCO. These courses, lasting one to two weeks, could encompass participants from one country (national courses) or from a region or subregion. They were financed from the UNESCO regular budget and from extrabudgetary resources. For example, over the past few years the Swedish International Development Authority has been providing funds for financing national training courses in education statistics for Portuguese-speaking and English-speaking African countries and for some countries in Latin America. The training courses were conducted by staff members of the UNESCO Office of Statistics, sometimes with the assistance of outside consultants.

5. International Civil Aviation Organization

55. During the period 1983-1986, ICAO provided advisory services on aviation statistics to member States, principally by air transport economists located in ICAO regional offices. Some country or regional projects of the United Nations Development Programme (UNDP) required the assistance of air transport economists and other experts who, in many cases, provided technical guidance and consultation to develop and improve aviation statistics programmes within States.

56. The statistical staff at ICAO headquarters provided technical support and consultation to the ICAO Technical Assistance Bureau on projects and project proposals in which a significant amount of statistical data collection or analysis is involved.

57. Although during the period under review no formal courses in statistics were organized at aviation training centres, some short courses were conducted through ICAO regional offices at either the regional or the country level in cases where a need was expressed by one or more States. Such courses normally last about one week and are conducted by ICAO statistical offices or regional air transport offices. In addition, ICAO experts carrying out assignments in countries often spend a considerable amount of time training counterparts who can follow up the work when the expert leaves.

6. World Health Organization

58. WHO has continued to render technical co-operation in health statistics. As shown in annex table 2, expenditure in 1983 was $7,717,000. It increased to $8,861,000 in 1984 and $9,376,000 in 1985. In 1986 it is estimated to be $9,238,000. The estimate of total work-months in 1986 of technical support for programme formulation, technical guidance, including regional advisers, was 253 at a cost of $2,308,000 (see annex table 1). The number of field experts in 1986 was 40 at a cost of $3,479,000. In 1986, expenditure on training was $1,250,000 and on equipment, $1,901,000.

59. The regional breakdown of WHO expenditure shown in annex table 3 indicates that, in 1986, expenditure in the ESCAP region was $3,233,000, the largest of the regions, followed by $2,310,000 in the ECA region, $1,986,000 in the ECLAC region and $1,709,000 in the ESCWA region.

60. In accordance with the plan of action for implementing the Global Strategy for Health for All by the Year 2000, approved by the World Health Assembly in 1982, member States carried out the first monitoring of progress in 1983 and the first evaluation of achievements in 1985. These experiences were very positive in drawing attention to the persisting deficiencies in information support in member States. It is anticipated that an increasing number of countries will ask for WHO collaboration in developing their information support capabilities, which will involve training as an important element.

61. Target groups for training include health service personnel at central and senior levels, middle level and at the periphery. During the biennium 1984-1985, WHO staff and consultants participated actively in teaching and evaluating several of the regional and national training courses. Materials and curricula are being developed for the practical training of each target group.

62. Inadequate capacity for data processing causes a serious bottleneck in many developing countries. Improvements in this respect through the acquisition and use of appropriate computer hardware and software have been included in WHO technical co-operation activities with a number of countries. Demands from countries are expected to grow in this area.

63. During the past five years, remarkable progress has been observed in the use of microcomputers in health statistics and epidemiology work, as these computers have become increasingly powerful and yet are cost-effective. Microcomputers are useful, not only for carrying out statistical computations but also in the organization and presentation of statistical information.

7. World Bank

64. The Bank's technical assistance directly rendered takes two forms: loans and credits to member countries and technical assistance provided by staff on mission to member countries. Such assistance is often multiple-sector in scope and the amount is not disaggregated by sector. Staff of the Bank undertook statistical missions to countries, mostly to review the national accounts. Several of the missions were concerned with reviewing the overall functioning of statistical systems. In the course of the work of these missions, medium-term statistical work programmes were developed, advice on the reorganization of the system was provided, priority areas were identified, and recommendations were made on obtaining the services of longer-term advisers and consultants to address the issues and work programmes identified. In several instances, these activities led to the preparation of technical assistance project proposals, which were then funded either by other donor agencies or by the Bank itself through its technical assistance loans and credits.

65. In the area of external debt statistics, for which the Bank has a prime responsibility at the international level, the Bank mounts technical missions to countries requiring assistance in establishing or improving debt recording systems. The assistance extends to training local officials in both the technical aspects of debt reporting and in the computerization of such systems.

8. International Monetary Fund

66. The provision of technical assistance in statistics constitutes a major part of the work of the Fund's Bureau of Statistics, which makes such assistance available through missions to member countries and visits by national staff to Fund headquarters. The primary focus of the technical assistance programme has been on assisting member countries to improve the currentness and scope of the data base needed for monitoring economic and financial developments in the country.

67. During 1984-1985, staff of the Bureau of Statistics participated in 87 technical assistance missions to 58 countries and to the Andean Reserve Fund. In addition, staff of the Bureau assisted the Arab Monetary Fund and the Eastern Caribbean Central Bank in conducting two regional seminars, one on balance-of-payments statistics and the other on government finance statistics. Seven officials from member countries visited the Bureau for training in the various fields of statistics.

B. Bilateral agencies

68. Responses outlining technical co-operation in statistics were received from: Denmark, the German Democratic Republic, Hungary, India, Italy, Sweden and the United States of America.

1. Denmark

69. Denmark provided technical advisory service in statistics and data processing equipment to a flood-modelling project in the ESCAP region, costing $200,000 for the period 1981-1987.

2. German Democratic Republic

70. The German Democratic Republic continued to provide technical co-operation in statistics to Cuba and Mozambique by sending advisers during the period 1983-1985. A number of courses in statistics and data processing were held in the German Democratic Republic.

3. Hungary

71. In 1985, Hungary acted as host to a seminar on the use of statistical software packages for population estimates, in which representatives of 23 developing countries participated. Costs for participants were funded from UNFPA and local costs, including computer equipment, were paid by the Central Statistical Office of Hungary.

4. India

72. India provided limited technical co-operation in statistics, mainly in the form of expert services and education and training in statistics to the countries of Asia and Africa under the Colombo Plan, the Special Commonwealth African Assistance Plan and the Indian Technical Economic Co-operation Programme.

73. An important development in the field of technical co-operation in statistics was the institution of international training programmes on sampling and household survey methodology and electronic data processing, under the aegis of NHSCP, and another such programme on techniques of estimating output of food crops, for participants from countries of Africa and Asia.

5. Italy

74. Italy provided technical co-operation in the area of statistical training in both informatics and agricultural statistics. Particular emphasis has been given to the data collection and data processing of agricultural statistics.

6. Sweden

75. Sweden had limited development assistance in the field of statistics. In past years, an average of two statisticians have been assigned to developing countries.

7. United States of America

76. The United States of America continued to provide a wide range of technical co-operation in statistics to various countries through such governmental bodies as the National Agricultural Statistics Service, the Bureau of the Census, the Bureau of Economic Analysis, the Bureau of Labor Statistics and the National Center for Health Statistics. The total expenditure is estimated at $13,852,000 in 1986, an increase of $3,649,000 over $10,203,000 in 1983.

77. Table 4 shows a breakdown of expenditure into the following different fields in 1986: agricultural statistics ($2,650,000), demographic statistics ($2,300,000), data processing ($2,698,000), economic statistics and national accounts ($2,726,000), health statistics ($281,000) and labour statistics ($254,000). The expenditure covered advisory services and programme formulation, as well as equipment provided to various countries. Training courses continued to be held in population and demographic statistics and health, energy, agriculture, national accounts, price and labour statistics.

Table 4. Estimates of expenditure on technical co-operation in statistics by subject area: United States of America, 1983-1986

(Thousands of United States dollars)

Subject area	1983	1984	1985	1986 a/
Total	10 203	10 308	12 120	13 852
Agricultural statistics	493	507	900	2 650
Demographic statistics	1 820	1 770	2 270	2 300
Data processing	2 051	2 122	2 648	2 698
Economic statistics and national accounts	2 233	2 421	2 700	2 726
Health statistics	189	209	334	281
Labour statistics	457	447	300	254
Other b/	2 540	2 383	2 520	2 493

a/ Data are based on estimates.

b/ Including expenditure not attributable to a specific field.

III. ISSUES IN STATISTICAL TRAINING

78. One of the major issues that continue to plague national statistical offices in developing countries is the constant attrition of the personnel trained in the areas of statistics and statistical data processing. This persistent problem is well recognized by all those concerned with the task of improving the efficiency of national statistical offices, especially in the statistically less developed countries. In order to cope with this problem, or at least to check the damage inflicted by it, it has been repeatedly recommended that training in statistics and statistical data processing should be a continuous programme, despite the fact that trained persons are often lured away by more attractive service conditions in other sectors. Indeed, the Statistical Commission, at its twenty-third session, urged that the Statistical Office should make every effort to ensure that the highest attention would be given to the training component in allocating resources to technical co-operation programmes. 2/

79. Often, however, the national statistical offices of statistically less developed countries cannot spare the services of a staff member who is eligible for specialized training for even a short period of three or four months. There is a perennial shortage in those countries of experienced people to assume the responsibilities of senior staff members temporarily away from the office. Moreover, staff at lower levels do not generally meet the criteria of the selection process for specialized training courses.

80. One solution seems to be the organization and conducting of basic statistics courses at the national level for several years at the beginning for statistical office personnel as well as for the personnel engaged in statistical work in other government offices. Successful students, with sound basic training and sufficient practical experience, would then qualify for specialized training and could undertake it without impairing the smooth functioning of the national statistical office. The programme of organizing and conducting training courses in basic statistics and data processing has been successfully adopted in several countries. However, with regard to specialized training at a higher professional level, it is generally considered that the organization of such training exclusively for the senior officials of national statistical offices of statistically less developed countries would be too expensive and, in some cases, unrealistic.

81. The organizers of training courses in statistics and data processing sometimes face difficulty in obtaining academic recognition for the programme by the appropriate authorities in the country. Unless the Government formally accepts the status of the courses and recognizes the awarded diploma as proof of an educational qualification of a technical nature, to be taken into consideration at the time of promotion or for the award of a fellowship, there will be little incentive to pursue the courses. In order to obtain recognition, several countries have involved the educational authorities of the Government as well as educational centres, if necessary, at the preparatory stages of designing courses that cater specifically to the needs of the national statistical office.

82. The importance of the training of trainers for the development and continuity of a statistical training programme is well recognized. However, as yet this type of training is mostly given on the job in the technical co-operation projects

dealing with statistical training. Ideas have been put forward recently to attach competent nationals of statistically less developed countries as cadre-teachers in the subregional statistical training centres in developing countries. Possibilities are being explored to secure financing for the experimental implementation of the programme on a modest scale.

A. Current activities

83. National and subregional statistical training centres continued training at appropriate levels with either their own resources or direct and indirect assistance from international organizations and statistically more developed countries. During 1985-1986, more than 45 countries received such assistance.

84. Systematic training of primary level statisticians and data processing personnel, as well as census/survey cartographic assistants and field enumerators, continued during the past two years through relevant technical co-operation projects. Seminars and workshops were held in several countries both in specific areas, such as training of civil registration personnel, and in general areas, such as the organization of statistical services. These activities have been particularly important by not only improving a specific system of data collection within a country but also diffusing general knowledge of the role and importance of statistics in development planning, thereby educating the public.

B. Technical co-operation among developing countries

85. A project for on-the-job training of statisticians and data processing personnel, initiated by the Department of Technical Co-operation for Development of the United Nations Secretariat as an activity to promote technical co-operation among developing countries, continued during 1985-1986. Under this project, 21 fellows from 7 countries received on-the-job training in various areas of statistics and data processing.

86. Two workshops were organized during 1986: the first of these, the Interregional Workshop on National Accounts, was held at Mexico City in February 1986. In line with the objectives of the Workshop, 10 participants were selected from countries with marginal development in national accounting, located in the developing regions of the world. In order to transfer to participants both theoretical knowledge of concepts and practical experience in their applications, the Workshop included, in addition to the staff members of the Statistical Office of the United Nations Secretariat and four regional commissions, three national accounting experts from developing countries with advanced statistical and national accounts experience. Participants agreed that very useful results had been achieved, far beyond the original aim of the Workshop, which was to transfer technical knowledge in national accounting to statistically less developed countries. While that objective had been accomplished, the Workshop proved to be fruitful also in the exchange of views among developing countries and in getting feedback from those countries on their specific analytical needs related to the statistical problems encountered in the implementation of SNA.

87. The second workshop, the Interregional Workshop on Statistical Development in the Least Developed, Land-locked and Island Developing Countries, was held at Addis Ababa in May 1986. It was sponsored by the Department of Technical Co-operation for Development, supported by the Commonwealth Fund for Technical Co-operation, and ECA acted as host. The Workshop was organized following a recommendation by the Statistical Commission at its twenty-third session, and aimed at identifying the special problems that impede statistical development in the least-developed, land-locked, and island developing countries and suggesting ways and means of solving those special problems and achieving the long-term objectives of maintaining a viable national statistical organization and statistical capability. In addition to international organizations and national agencies, several United Nations specialized agencies and regional commissions and 16 selected developing countries participated in the discussions. The Workshop made a series of recommendations, which may be considered as a set of guidelines for all concerned with the task of improving statistical organizations in these countries. The Commission has before it at its present session a report giving details of the Workshop (see E/CN.3/1987/3).

IV. ISSUES IN STATISTICAL DATA PROCESSING

A. Current activities

88. United Nations technical co-operation activities in statistical data processing started considerably more strongly in the period 1985-1986, than in the preceding biennium. UNDP and UNFPA continued to fund the bulk of the activities, which were, as usual, centred on the provision of expert services and data processing equipment within countries, as well as foreign training programmes and other forms of technical support. However, in early 1986, the programme was subjected to a marked and sudden curtailment as a result of financial difficulties experienced by UNFPA.

89. The average number of statistical data processing projects supported by the Statistical Office of the United Nations Secretariat during the period 1983-1986 was 50. Substantive technical support to country projects is provided by four full-time technical advisers based at Headquarters. They assist in formulating projects, and provide technical backstopping and evaluation services during a project's lifetime. The interregional adviser in computer methods, attached to the Statistical Office, is available for short-term missions, not necessarily project-related. Three regional advisers in data processing provide substantive technical support from a base in one of the regional commissions.

90. While training continued to receive major emphasis in the technical assistance programme, it was not always easy to identify suitable training opportunities, especially when a working language other than English was required. Training requirements remained quite varied, ranging from basic keyboard entry skills to computer centre management, and from an introduction to statistical software packages to mastery of systems programmer abilities. Owing to the variation in local conditions, countries use a wide range of mainframe and minicomputer facilities for statistical computing, which further complicates a unified approach to training. Fortunately, such diversity is less apparent in the microcomputer facilities now becoming increasingly available.

91. Training can be delivered through study abroad or in the recipient country. In the latter case, a special consultant may be hired to teach, or the services of a resident field expert may be used. The many advantages of this last approach need hardly any elaboration. The field expert is in a position to provide training to many students, he/she can schedule the courses for maximum relevance to the work anticipated and continues to be available for consultation and demonstration even after training has been concluded. During the period 1985-1986, 35 field experts provided technical support and training to the data processing projects backstopped by the Statistical Office. There was a tendency for the period of assignment of field experts to become shorter, as some countries needed less prolonged assistance, and funding constraints were felt.

92. The Software Development Project funded by UNFPA and executed by the Department of Technical Co-operation for Development, broadened its range of available software. Apart from supporting the packages XTALLY (or its COBOL version COXTALLY) for tabulation, and UNEDIT for data editing, the project now also distributes a range of demographic programmes. Among these are EAWESPOP for fertility analysis (developed by the East-West Population Institute), MORTPACK for mortality analysis (Population Division of the United Nations Secretariat), RAPID for population projections (Futures Group) and a comprehensive set of demographic programmes developed by the United States Bureau of the Census for mainframes and adapted for microcomputers by Westinghouse Social Sciences.

B. New issues in statistical data processing

1. Microcomputer systems in statistical data processing

93. Microcomputers are finding their way in increasing numbers into the statistical offices of developing as well as developed countries. They are more and more taking over the role of dedicated data entry equipment in the data capture of returns from censuses and surveys. Specialized software packages providing real-time error checking and "help" facilities for data entry are coming into existence. The advantages of microcomputers for data capture lie in the greater intelligence compared with traditional key punch equipment, attractive pricing and flexibility in use, once a major data entry operation has been concluded.

94. However, microcomputers are also making inroads into the more calculation-intensive data processing tasks usually reserved for minicomputers and mainframe computers, such as hot-deck imputation and tabulation. For example, the 1986 Census of Population and Housing in Burkina Faso, a country with about 8 million inhabitants, is to be fully processed on microcomputers. Such application of microcomputers was earlier held back by limitations in input/output capabilities as well as in processing power. Tne newer IBM-PC/AT type of machines combine increased CPU speed with the ability to control open-reel magnetic tape units and lineprinters in the lower capacity range.

95. Software has ranged from statistical packages for microcomputers that often seemed rather primitive to availability of most well-known mainframe packages in versions compatible with larger microcomputers. Systems such as BMDP, SPSS, SAS and P-STAT, are now adapted to operate on microcomputers, although in most cases

the capabilities are still considerably scaled down from those of the mainframe environment. An important contribution has also been made by the International Statistical Programs Centre of the United States Bureau of the Census, which has adapted the editing package CONCOR and the tabulation package CENTS4 to operate on IBM microcomputers with at least a 10 Mb fixed disk.

96. Another major advantage of using microcomputers is the reduced vulnerability of the equipment to technical failure. Not only are microcomputers more tolerant of environmental conditions than larger systems are, but the availability of a number of essentially independent systems means that a few breakdowns will not lead to complete paralysis of the data processing operation. However, competent maintenance continues to be of major importance, and users will have to take more responsibility for it, as suppliers are often not in a position to provide it on an immediate and cost-effective basis.

2. New printing methods

97. Non-impact printing technologies have made significant strides in recent years. Most promising are ink-jet printing and laser beam writers. The latter are now gaining general acceptance, and are available for high capacity mainframe printers as well as in the form of smaller and relatively cheap systems to be used with microcomputers. Both technologies allow an essentially unlimited number of characters and fonts, and can print a continuum of different sizes. Text can be mixed with graphics and even digitized pictures. Accordingly, output can be produced in a form that is "camera-ready" and requires no further processing before being subjected to photo-offset or any other reproduction technology.

98. Neither ink-drop nor laser technology are without at least some difficulties. For ink-drop methods the paper quality can be rather critical, as good printing can only be obtained through paper that allows the ink to spread just enough to link individual dots into solid characters, while conserving sufficient crispness in character borders. Initial problems with ink clots blocking ink nozzles have largely been resolved. Laser printers usually require frequent replacement of cartridges containing ink and of the print drum. The associated cost compares unfavourably with expenditure on ribbons in conventional impact-printing. Uneven maintenance will result in problems also found with photocopying equipment: inadequate blackness and smudging. All non-impact printers, of course, exclude the use of multiple-copy forms.

3. Networking

99. Local area networks and other forms of networking are issues that, although not really new, are now developing into technical realities of great potential. While statistical computing is not among the areas in which these techniques have found immediate and widespread application, the advantages of shared resources and easy data communication are obvious, in particular when equipment and data require sharing. Networking can also solve some of the incompatibility problems between a growing variety of data supports and formats. Establishing a statistical data base, either as a central facility or in a distributed form, will almost

necessarily lead to the consideration of networking as a further step towards more sophisticated data management.

100. On the negative side, one must realize that networking is more complicated from a technical point of view than operating several stand-alone systems. Financial and staff resources, badly needed in other areas, may end up supporting maintenance of the network. One node out of action could mean that other nodes cannot access resources they require. Careful design, including hardware redundancy and fail-proof back-up schedules, are a necessary condition for successful network management.

101. Awareness of up-to-date computer techniques, available software resources and training opportunities continues to be a problem in developing countries. Too often the intention to keep abreast of these issues falls victim to the pressures of work and the scarcity of funds for subscription to professional publications and attendance at seminars. Even although efforts are being made to allow developing countries to benefit from the dialogue between more advanced countries, there is little indication that the technological gap in statistical computing is closing.

V. POINTS FOR DISCUSSION

102. The Commission may wish to:

(a) Comment on the overall technical co-operation programme in statistics, including its scope and composition;

(b) Review the emerging issues in statistical training and statistical data processing;

(c) Discuss the adequacy and format of the present report and the scope of future reports on this subject.

Notes

1/ Official Records of the Economic and Social Council, 1985, Supplement No. 6 (E/1985/26), para. 111.

2/ Ibid., para. 107.

Annex

TECHNICAL CO-OPERATION PROGRAMME IN STATISTICS, 1983-1986: UNITED NATIONS SYSTEM

Table 1. Expenditure by organization and main form of activity

(Thousands of United States dollars)

Organization and year	Total	Headquarters staff		Field experts		Training	Equipment	Miscellaneous
		Work-months	Cost	Number	Cost			
United Nations system								
1983	33 140	1 268	8 096	240	14 256	3 905	5 614	1 268
1984	34 996	1 432	9 391	274	14 556	4 293	5 196	1 560
1985	41 825	1 348	9 573	297	15 421	5 650	9 813	1 368
1986 a/	43 506	1 215	9 377	355	18 136	6 301	7 933	1 759
United Nations b/								
1983	17 824	630	3 865	101	6 953	2 399	3 960	647
1984	17 523	709	4 627	112	6 441	2 332	3 413	710
1985	24 184	707	4 898	140	7 394	3 466	7 786	640
1986 a/	25 264	736	5 358	206	9 594	4 200	5 091	1 021
International Labour Organisation								
1983	603	72	515	1	88	-	-	-
1984	710	84	614	1	88	8	-	-
1985	541	60	438	1	88	15	-	-
1986 a/	848	72	682	2	151	15	-	-
Food and Agriculture Organization of the United Nations								
1983	5 893	87	571	95	3 952	460	532	378
1984	6 698	105	726	115	4 156	648	576	592
1985	6 535	106	718	100	3 960	669	735	453
1986 a/	7 081	114	781	94	4 270	669	929	432
United Nations Educational, Scientific and Cultural Organization								
1983	1 103	54	290	11	704	96	8	5
1984	1 204	64	366	12	688	135	7	8
1985	1 189	55	329	16	621	220	12	7
1986 a/	1 075	40	248	13	642	167	12	6
World Health Organization								
1983	7 717	425	2 855	32	2 559	950	1 114	238
1984	8 861	470	3 058	34	3 183	1 170	1 200	250
1985	9 376	420	3 190	40	3 358	1 280	1 280	268
1986 a/	9 238	253	2 308	40	3 479	1 250	1 901	300

a/ Data are based on the 1986 budget.

b/ Including regional commissions.

Table 2. Expenditure by organization and subject area

(Thousands of United States dollars)

Organization and subject area	1983	1984	1985	1986 a/
United Nations system, total b/	30 821	32 480	37 064	40 066
United Nations				
Multi-sector statistics	2 974	2 405	2 090	2 370
National accounts, finance and prices	824	1 218	1 179	2 144
Other economic statistics	2 182	1 745	2 841	2 023
Demographic and social statistics	7 059	7 137	8 544	9 656
Sampling and surveys	615	1 048	1 110	1 402
Data processing	2 003	1 719	5 935	4 630
International Labour Organisation				
Household surveys	352	352	264	270
Labour statistics	176	176	88	270
Food and Agriculture Organization of the United Nations				
Food and agriculture statistics	3 298	3 868	4 080	4 205
Forestry statistics	2 225	2 100	2 025	2 345
Fisheries statistics	370	730	430	530
United Nations Educational, Scientific and Cultural Organization				
Education statistics	977	1 072	1 020	883
Science and technology statistics	21	15	32	50
Culture and communication statistics	28	3	50	50
World Health Organization				
Health statistics	7 717	8 861	9 376	9 238

a/ Data are based on the 1986 budget.

b/ Excluding Headquarters, regional and interregional advisers, technical guidance and programme formulation, ILO programme formulation, UNESCO programme formulation.

Table 3. Expenditure by organization and region

(Thousands of United States dollars)

Organization and region	1983	1984	1985	1986 a/
United Nations system				
Total b/	30 932	32 567	39 110	40 496
ECA region	11 232	12 215	12 292	14 913
ESCAP region	6 923	6 211	10 173	11 750
ESCWA region	7 033	6 669	9 178	8 167
ECLAC region	5 744	7 472	7 467	5 666
United Nations				
Total b/	15 785	15 374	21 805	22 636
ECA region	5 988	6 128	6 264	7 915
ESCAP region	3 199	2 358	6 058	6 189
ESCWA region	5 294	4 498	7 123	5 790
ECLAC region	1 304	2 390	2 360	2 742
International Labour Organisation				
Total b/	528	528	352	578
ECA region	264	264	176	360
ESCAP region	88	88	88	109
ESCWA region	88	88	-	-
ECLAC region	88	88	88	109
Food and Agriculture Organization of the United Nations				
Total b/	5 893	6 698	6 535	7 080
ECA region	2 923	3 750	3 552	3 948
ESCAP region	1 898	1 873	2 044	2 084
ESCWA region	289	190	190	269
ECLAC region	783	885	762	779
United Nations Educational, Scientific and Cultural Organization				
Total b/	1 010	1 106	1 042	964
ECA region	282	301	425	380
ESCAP region	120	120	108	135
ESCWA region	359	475	378	399
ECLAC region	174	210	131	50
World Health Organization				
Total b/	7 716	8 861	9 376	9 238
ECA region	1 775	1 772	1 875	2 310
ESCAP region	1 772	1 772	1 875	3 233
ESCWA region	1 003	1 418	1 500	1 709
ECLAC region	3 395	3 899	4 126	1 986

a/ Data are based on the 1986 budget.

b/ Excluding expenditures not attributable to individual regions.
