

THE
AGENCY'S TECHNICAL
CO-OPERATION ACTIVITIES
IN 1982

Report by the Director General

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P R E F A C E

Following its usual practice, the Board of Governors has requested the communication to the General Conference of the material it used in reviewing the Agency's technical co-operation activities in 1982; this material is accordingly reproduced in the present document. The review was carried out pursuant to paragraph 19 of the Revised Guiding Principles and General Operating Rules to Govern the Provision of Technical Assistance by the Agency.^{1/}

^{1/} INFCIRC/267.

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LIST OF ABBREVIATIONS

Agency	International Atomic Energy Agency
CC	Convertible currencies
CEC	Commission of the European Communities
FAO	Food and Agriculture Organization of the United Nations
IAEA	International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development
NCC	Non-convertible currencies
SIDA	Swedish International Development Authority
TACF	Technical Assistance and Co-operation Fund
UN-DNRE	Division of Natural Resources and Energy, United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFSSTD	United Nations Financing System for Science and Technology for Development
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization

Byelorussian SSR	Byelorussian Soviet Socialist Republic
Central African R.	Central African Republic
Dem. Kampuchea	Democratic Kampuchea
Dem. P.R. Korea	Democratic People's Republic of Korea
German D.R.	German Democratic Republic
Germany, F.R.	Federal Republic of Germany
Iran, I.R.	Iran Islamic Republic
Korea, R.	Republic of Korea
Libyan A.J.	Libyan Arab Jamahiriya
St. Kitts	St. Kitts-Nevis-Anguilla
Syrian A.R.	Syrian Arab Republic
Ukrainian SSR	Ukrainian Soviet Socialist Republic
USSR	Union of Soviet Socialist Republics
U.A. Emirates	United Arab Emirates
UK	United Kingdom of Great Britain and Northern Ireland
U.R. Cameroon	United Republic of Cameroon
U.R. Tanzania	United Republic of Tanzania
USA	United States of America

Note: All sums of money are expressed in US dollars and have been rounded off to the nearest hundred or thousand dollars in most instances. Percentages have also been rounded off in statistical tables and figures.

PART I. S U M M A R Y A N D K E Y P O I N T S

1. From January to September 1982, the rate of implementation for the total programme was as high as that reached in 1981. During the last quarter, however, implementation slowed down, largely due to circumstances beyond the Secretariat's control. Nevertheless, delivery from the Technical Assistance and Co-operation Fund was 30% above the 1981 level.

2. A decline in earmarkings - reflecting the backlog of assistance still to be provided - had been registered in 1981 for the first time in the history of the Technical Assistance and Co-operation Fund. The rate of increase in expenditures from the Fund in 1982 was not sufficient to reduce earmarkings further. In fact, they rose by \$1.7 million, reaching a level of \$9 million.

3. Total resources for technical co-operation activities continued to rise in 1982; however, the 12.5% increase over the previous year's level is less than that registered in 1981 over the 1980 level (17%). In all, \$27.6 million was available for technical co-operation in 1982. In view of decreasing resources for UNDP and in-kind assistance, growth in the Technical Assistance and Co-operation Fund and in extrabudgetary resources will be necessary if overall programme growth is to be sustained. Together, these two sources now represent 74% of the Agency's technical co-operation resource base.

4. A record amount of about \$4.5 million was received for 1982 in the form of extrabudgetary contributions. The number of donors for footnote-a/ projects doubled, from five in 1981 to ten in 1982. As further contributions in respect of 1981 projects were received during 1982, more than 80% of the funds necessary for 1981 footnote-a/ projects was available by the end of 1982. Also, 72% of the funds for the footnote-a/ projects approved in 1982 had been provided by year-end.

5. Total programme expenditures rose by nearly 10%, reaching the \$23 million mark. In addition to actual expenditures, a considerable portion of 1982 funds was obligated for expenditure in the following year. This brought total commitments incurred in 1982 to more than \$25.7 million, a 7.3% increase over the 1981 figure.

6. After the downward trend in the number of expert man-months delivered had been arrested in 1981, 1982 saw a welcome increase of more than 13% over the previous year's level. Similarly, the number of assignments undertaken rose sharply. Missions by staff members accounted for 31% of all 1982 expert assignments.

7. Traditionally, about one third of the resources available in a given year has gone for training activities. In 1982, however, the share of training dropped to less than 30% of the total. This was in part due to a significant reduction in the volume of in-kind assistance, 95% of which is designated for training.

8. Expenditures for equipment passed the \$10 million mark for the first time in 1982. The equipment component represented 50% of the total assistance delivered.

9. Over the past few years, assistance to projects in the fields of nuclear physics, prospecting, mining and processing of nuclear materials and general atomic energy development - especially support to centres and laboratories for applied nuclear research - has been increasing. This trend continued during 1982.

10. Further progress was made in programming and utilizing non-convertible currencies, with relatively equitable distribution of these funds over the various regions.

11. Further experience during 1982 has shown that a judicious degree of over-programming, needed to ensure timely implementation of the programme, does not unduly strain the resources available.

12. A significant development in 1982 was the initiation of a technical co-operation policy review by the Technical Assistance and Co-operation Committee. This review was completed by the Board of Governors in June 1983.

13. During the year, further steps were taken to establish an Evaluation Unit in the Department of Technical Co-operation; also, a fellowship evaluation survey was initiated and is still in progress. The results of the survey and related recommendations will be included in an evaluation report to be submitted to the Technical Assistance and Co-operation Committee at its 1983 session.

14. Computerized monitoring of the Fellowship Programme was introduced in 1982. Further improvements, including strengthened financial controls of the various funds handled by the Agency, were also introduced.

PART II. REVIEW OF THE AGENCY'S
TECHNICAL CO-OPERATION
ACTIVITIES

A. SCOPE AND NATURE OF THE AGENCY'S
TECHNICAL CO-OPERATION ACTIVITIES

15. In the report for 1981, this section contained a description of the complex structure of technical co-operation in the Agency, including the relationships between resources and activities.* Although no such description is presented in this report, the conceptual format underlying last year's analysis has been retained. Accordingly, resources available to the Agency from the various funds are dealt with first, followed by a review of the utilization of funds for the different programmes that constitute technical co-operation in the Agency.

16. In the present report, this section addresses an aspect of the programme not reported on in the past, chiefly due to the fact that comprehensive data were not at hand. New information is becoming available thanks to the gradual expansion of the computerized programme monitoring system. If the featuring of particular aspects is found useful, other aspects of the programme can be highlighted here in future reports.

17. It has long been an established principle that responsibility for the quality of technical assistance provided by the Agency devolves on all Departments of the Secretariat. However well organized the services of the Department of Technical Co-operation in administering the Agency's assistance may be, success in technology transfer depends to a very large extent on inputs provided by the "technical-substantive" Departments of the Secretariat.

18. These Departments are intimately involved in all aspects of technical co-operation: programming, project identification and formulation, implementation, monitoring (particularly of outputs) and evaluation. In 1982, 90 Agency staff members, in addition to their other duties, assumed responsibility for numerous technical co-operation projects in their capacity as "technical officers". Technical officers contribute to the success of technical co-operation activities by, for example, providing technical advice

* See, in particular, paras 26-28 in document GC(XXVI)/INF/206.

and support for projects, appraising new requests for assistance, technically evaluating fellowship applications, undertaking or participating in technical and programming missions, serving as lecturers for training courses, preparing and reviewing technical reports, reviewing fellowship reports, and participating in evaluation activities.

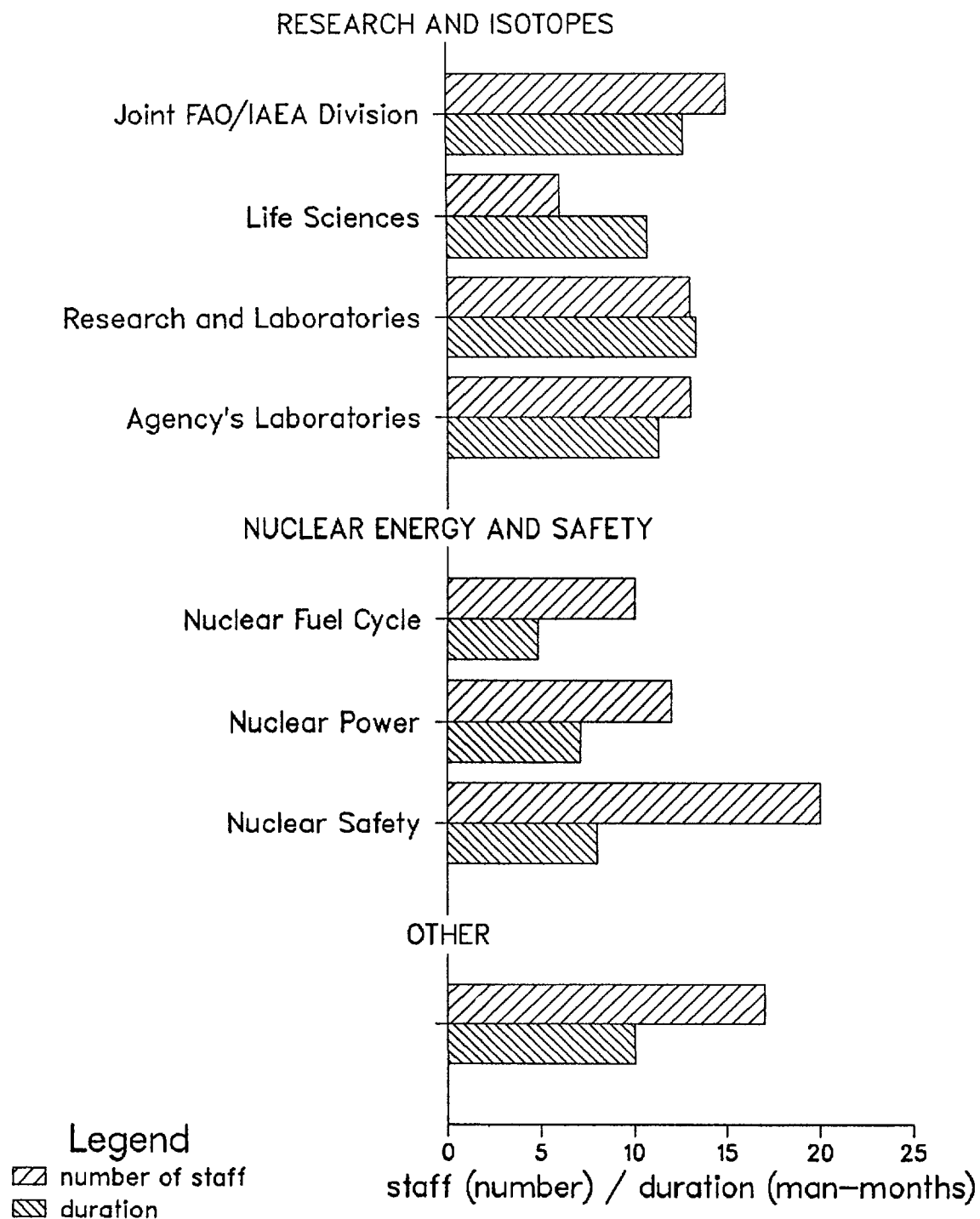
19. The Departments most involved in technical co-operation activities, outside the Department of Technical Co-operation itself, are the Department of Research and Isotopes and the Department of Nuclear Energy and Safety. The table below shows the number of operational projects in 1982 that were supported by each Department and Division, together with the number of technical officers involved.

Department/Division	Number of projects	Number of technical officers
RESEARCH AND ISOTOPES		
Joint FAO/IAEA Division	127	16
Life Sciences	91	7
Research and Laboratories	222	14
Agency's Laboratories	23	9
Monaco Laboratory	1	1
Sub-Total	464	47
NUCLEAR ENERGY AND SAFETY		
Nuclear Fuel Cycle	89	9
Nuclear Power	21	11
Nuclear Safety	72	16
Scientific and Technical Information	1	1
Sub-Total	183	38
OTHER	8	6
TOTAL	655	90

The number of projects per technical officer was particularly high in the Divisions of Research and Laboratories, Life Sciences and Nuclear Fuel Cycle, and also in the Joint FAO/IAEA Division.

20. During 1982, Agency staff members carried out 293 assignments in support of technical co-operation activities. On 89 of these, they acted as lecturers; in 204 cases they provided expert advice within the framework of technical co-operation projects. As can be seen in Table 3A, missions by Agency staff members accounted for 31% of all expert assignments in 1982.

Relative distribution of duration number of technical co-operation assignments by division



21. Assignments carried out by staff of the Department of Research and Isotopes represented slightly more than 60% of the total time spent by Agency staff on technical co-operation missions. The corresponding figure for the Department of Nuclear Energy and Safety is roughly 25%. The average assignment duration was under 15 days. Assignments undertaken by technical officers in the Division of Life Sciences and by staff of the Agency's Laboratories were, on the whole, longer than average, and those carried out by staff of the Division of Nuclear Safety shorter. The figure above gives assignment data for all Divisions.

22. With computerized monitoring of the Fellowship Programme, quantitative data will be available in future on the distribution of work associated with the technical evaluation of fellowship applications and fellowship reports. These are important elements for the success of the Fellowship Programme.

23. The foregoing paragraphs illustrate the fact that responsibility for technical co-operation is shared by various Agency Departments. Complementarity in the work carried out by these Departments is essential for ensuring the quality of the Agency's technical co-operation activities.

B. RESOURCES: \$27 597 000

24. The total resources made available to the Agency in 1982 for technical co-operation activities amounted to roughly \$27.6 million. This represents an overall increase of 12.5% over the 1981 level. At the same time, the resource profile changed. The Technical Assistance and Co-operation Fund and extrabudgetary funds, taken together, accounted for approximately three quarters of the total resources available to the Agency for technical co-operation in 1982. For the first time in seven years, the value of in-kind contributions decreased; at \$2.5 million, in-kind contributions represented only 9% of total 1982 resources. As anticipated in last year's report, assistance financed by UNDP declined further in 1982. Total UNDP funds amounted to \$4.6 million, a decrease of about 10% as compared with the previous year.

25. Further real growth in the technical co-operation programme will thus depend on the Technical Assistance and Co-operation Fund and a sustained increase in extrabudgetary contributions. The relatively high resource level in 1982 would not have been reached without increases both in voluntary contributions to the Fund and in extrabudgetary resources.

26. The performance of the individual funds during 1982 is discussed in more detail below.

1. Technical Assistance and Co-operation Fund: \$15 999 000

27. While the Technical Assistance and Co-operation Fund had in the past accounted for about half of the available resources, its share rose to 58% in 1982. This was due to a marked increase in total income for 1982. The increase in the Fund's resources over the past three years is shown in the table below.

Programme year	TACF resources (\$)	Annual increase (%)
1980	10 632 000	20.8
1981	12 926 000	21.6
1982	15 999 000	23.8

Voluntary contributions made available in 1982 in non-convertible currencies exceeded the 1981 level by about 28%.

28. Although pledges received for 1982 fell short of the target of \$16 million by 6.9%, the resources available for technical co-operation nearly coincided with the target amount. This was due to the receipt of \$1.1 million as miscellaneous income, which virtually made up for the shortfall in pledges. However, as at 31 December 1982, an amount of about \$1 million in pledged contributions was still outstanding; it is hoped that those Member States which have not already paid their contributions will do so in 1983. Furthermore, 38 Member States had, as at the same date, neither made a pledge nor a contribution to the Technical Assistance and Co-operation Fund for 1982. If it is still possible for some of these countries to make pledges for 1982, this would permit the performance levels for the Fund that generally prevailed until 1980, when the amounts actually available exceeded the annual targets, to be attained.

29. Total miscellaneous income in 1982 amounted to roughly \$1.5 million, up \$223 000 from 1981. Of this amount, \$440 000 had to be deducted for exchange losses, leaving a net balance of \$1.1 million. Of the total amount received as miscellaneous income, \$1 134 000 was interest income and \$408 000 was assessed programme costs. Assessed programme costs are charged, in local currency, to each recipient country at a rate of 8% of the value of technical assistance actually delivered to that country each year. There have been considerable delays in the payment of these costs; in 1982, cumulative arrears amounted - for the first time - to nearly \$1 million. Assessed programme costs are treated as programme resources, their receipt enabling the Agency to provide assistance that would otherwise not be possible. It would therefore

be helpful for the programme if those Member States which have not yet done so would pay the outstanding amounts as soon as possible.

30. The total resources of the Technical Assistance and Co-operation Fund were insufficient to meet all the requests received from Member States. After the apportionment of money to the Reserve Fund and the Fellowship and Training Course Programmes, \$11.2 million was expected to be available for assistance in the form of experts and equipment. This allowed for the approval of 210 projects for which funds would be available. While 45 project proposals with an estimated value of \$4.7 million had to be rejected for technical reasons and 28 requests valued at approximately \$1.9 million were met from previously approved assistance or consolidated with other requests, there were still 46 technically sound and feasible project proposals that had to be included in the footnote-a/ category since the \$3 952 000 required to implement them was not immediately available from the Technical Assistance and Co-operation Fund. Of these projects, 80% (representing 72% of the required funds) had been made operational by year-end, mainly through extrabudgetary resources received for this purpose.

2. Extrabudgetary funds: \$4 474 000

31. Although the level of the extrabudgetary resources made available to the Agency was substantially higher for 1982 than for 1981, the percentage increase was lower. This is seen in the table below.

<u>Programme year</u>	<u>Extrabudgetary resources (\$)</u>	<u>Annual increase (%)</u>
1980	2 673 000	1.4
1981	3 624 000	35.6
1982	4 474 000	23.5

However, it should be pointed out that, in addition to the \$4.5 million for 1982, resources totalling \$4.9 million were made available for future years. For 1982 and future years, therefore, there was a record inflow of extrabudgetary resources amounting to more than \$9 million.

32. The year 1982 saw both an expansion of the extrabudgetary resource base and an increase in the number of donors. In 1981, the three largest donor countries supplied about 80% of the extrabudgetary resources, whereas the three largest donors accounted for some 60% in 1982. Australia, Austria France and Saudi Arabia joined the ranks of donors of extrabudgetary resources. In addition, Spain made a contribution in support of a hard-core project, which resulted in savings for the Technical Assistance and

Co-operation Fund and enabled the Secretariat to initiate a project for which no funds had been available.

33. In 1982, the United States of America was again the largest single contributor of extrabudgetary resources, providing 30.6%. The Federal Republic of Germany made a substantial contribution, its share of the total amounting to 15.2%. Italy further improved its position among donors of extrabudgetary resources, ranking third, with 14.6% in 1982; also, it contributed \$4.2 million in respect of future years. In addition, Sweden, the United Kingdom, Finland and Japan made sizeable extrabudgetary contributions. The origin of the extrabudgetary resources received for 1982 is indicated in the table below.

Donor	Resources for 1982 programme year received in prior years (\$)	New resources for 1982 programme year (\$)	Total for 1982 programme year (\$)	Resources for future years made available in 1982 (\$)
USA	-	1 369 600	1 369 600	-
Germany, F.R.	-	679 945	679 945	-
Italy	300 000	351 000	651 000	4 200 000
Sweden	174 871	388 718	563 589	177 365
United Kingdom	108 000	300 000	408 000	-
Finland	-	117 778	117 778	-
Japan	-	103 641	103 641	-
Saudi Arabia	-	50 000	50 000	-
Belgium	-	40 816	40 816	-
France	-	20 000	20 000	-
Australia	-	7 571	7 571	-
Austria	-	-	-	493 976
Funds in trust ^{a/}	-	461 884	461 884	-
TOTAL	582 871	3 890 953	4 473 824	4 871 341

^{a/} Furnished by Member States to finance assistance for themselves.

34. Most extrabudgetary contributions were made in respect of projects that had been approved by the Board but for which no immediate financing was available (footnote-a/ projects). Contributions made by Member States in support of such projects increased by 41% over the 1981 amount. While only five countries provided funds for 1981 footnote-a/ projects, ten countries were able to do so for 1982.

35. Thanks to such contributions, it has been possible to make an increasing number of footnote-a/ projects operational in recent years. Their value in 1982 was almost \$1 million higher than that in 1981, the year in which the highest annual increase in footnote-a/ funding was recorded.

Year	Approved footnote-a/ projects (\$)	Footnote-a/ projects made operational (\$)	Share of footnote-a/ projects made operational (%)
1980	2 627 500	1 670 700	63.6
1981	2 331 600	1 877 000	80.5
1982	3 952 000	2 837 800	71.8

36. Approximately one sixth of the extrabudgetary resources was made available for Special Programme activities in 1982. New resources were received from Italy for an interregional project which is being executed by the International Centre for Insect Physiology and Ecology, Kenya; under this project, research is being carried out on microorganisms which degrade cellulose. In addition, new resources were received from Sweden for an on-going agricultural project in India and for a large-scale tsetse eradication project in Nigeria supported by Belgium, the Federal Republic of Germany, Italy and Sweden; the latter project also had in-kind support from the United Kingdom. Not included in the extrabudgetary resources mentioned in the table following paragraph 33 are \$63 092 donated by Australia and \$74 763 by Japan for research projects administered by the Department of Research and Isotopes within the framework of the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) for countries in the Asia and Pacific region.

37. The funds-in-trust amount of \$461 884 given in the table following paragraph 33 represents extrabudgetary resources received from Member States to finance technical assistance activities for themselves. The considerable increase is due to the receipt of \$433 800 from Thailand in support of the project "Radioisotope production facility" (THA/4/008); this amount is to be used for the acquisition of equipment for a radioisotope production facility, mainly for applications in the medical field, under a turn-key arrangement. Other contributors of funds in trust were Brazil (\$20 000), the Islamic Republic of Iran (\$5085), and Spain (\$2999).

3. Assistance in kind: \$2 493 000

38. The value of in-kind assistance decreased by 10.6%, from \$2 788 000 in 1981 to \$2 493 000 in 1982. With this decline, the first in seven years, the in-kind share of the total programme fell below the 10% mark.

Year	In-kind resources (\$)	Annual change (%)	In-kind share of total resources (%)
1980	2 628 000	30.4	12.5
1981	2 788 000	6.1	11.4
1982	2 493 000	-10.6	9.0

39. Although in the past almost all in-kind resources (95%) have been provided in the form of fellowships and cost-free lecturers for Agency training courses, increased in-kind contributions of expert services and equipment are expected in the coming years. Several Member States have expressed interest in supporting footnote-a/ projects through such contributions. This development is welcomed as it will permit projects for which no funding would otherwise be available to become operational. Special arrangements will have to be made in such cases to ensure that (i) technical support by Agency staff will be possible in a timely fashion during project implementation and (ii) adequate information on delivered inputs flows back to the Agency.

40. An additional resource, not reflected in the statistical data, is the value of lecturers and facilities made available by the governments of countries where regional and interregional training courses were held (see Annex II). The number of such training courses held in developing countries has steadily grown (from three in 1980 to eight in 1981, reaching 11 in 1982), with an increase in the number of cost-free lecturers and facilities provided by developing countries. Without the valuable assistance of countries hosting the Agency's courses it would not have been possible to mount these training activities.

4. UNDP: \$4 631 000

41. As expected in the light of UNDP's deteriorating resource base, resources made available by UNDP decreased further in 1982.

Year	UNDP resources (\$)	UNDP share of total Agency resources (%)
1980	5 018 000	23.9
1981	5 186 000	21.1
1982	4 631 000	16.8

As pointed out in this connection in the 1980 and 1981 technical co-operation reports, the Agency exercises no control over the amount of UNDP resources made available to it, nor does UNDP itself determine shares for individual executing agencies. It is the government of each recipient country that establishes priorities within the framework of its "country programme".

42. In 1982, countries receiving UNDP assistance experienced increasing difficulties in programming resources and apportioning them to individual projects. At the time when UNDP's Governing Council established Indicative Planning Figures (IPFs) for the 1982-86 period, annual increases in resources of the order of 14% were anticipated. Since these increases did not seem realistic in the light of the pledges made for 1980 and 1981, programming for the 1982-86 cycle was initially reduced to 80% of the IPFs. There was no sign of recovery at the 1983 Pledging Conference, held in November 1982, and programming is now being carried out on the assumption that only 55% of the anticipated resources will be available for the current five-year cycle.

43. This means that very few new projects became operational in 1982. Moreover, extreme difficulties were experienced in reallocating funds not spent in one year to the subsequent year. The reduction in resources was felt most strongly at the country level; in the majority of cases the programmable resources authorized by UNDP headquarters had been fully committed before the need for rephasing inputs for on-going projects arose. Consequently, the reallocation of unspent funds from a previous year was often in competition with some activity already envisaged that would otherwise have to be cancelled or postponed.

44. All these difficulties notwithstanding, the Agency's de facto share of UNDP's total resources has not decreased in recent years. Contrary to expectations, two large-scale projects to be executed by the Agency, with budgets totalling \$3.16 million over six years, were approved by UNDP in 1982. The first project is designed to increase food production in Indonesia through the application of radiation and isotope techniques in agriculture. The second one, to be executed in the Islamic Republic of Iran, is aimed at introducing radiation sterilization technology, particularly in the production of medical supplies. If the Agency's present share of UNDP resources is to be maintained, new projects will have to be approved in 1983.

45. The \$4.6 million provided by UNDP in 1982 includes an amount of almost \$200 000 from the United Nations Financing System for Science and Technology for Development (previously the Interim Fund for Science and Technology for Development), which is administered by UNDP.

46. Under UNDP's Sectoral Support Programme, the Agency received, in 1980 and 1981, funds for financing a number of programming missions to developing

countries. A request for \$15 000 was submitted to UNDP in 1982 for this purpose, but formal approval has not yet been given.

47. UNDP reimburses the Agency for administrative overhead costs at a rate of 14% of the cost of the assistance delivered. Overheads received in 1982 amounted to \$609 225. As in previous years, this money was credited to the Agency's Regular Budget as miscellaneous income. Also, the Agency is entitled to submit a request to UNDP for "support cost flexibility"; the flexibility arrangement was established for agencies whose share of UNDP resources is less than \$10 million per year and provides for the reimbursement of additional overhead costs. While payment had been received with regard to 1981, the Agency's request for a 1982 flexibility reimbursement has not yet been approved by UNDP.

C. UTILIZATION OF RESOURCES - ASSISTANCE DELIVERED: \$23 005 700

1. Trends in programme delivery

48. Before the assistance delivered in 1982 under each of the major fund categories is discussed, a few trends that apply generally to all funds should be mentioned.

49. During the period January to September 1982, the rate of implementation was comparable to the record level achieved in 1981. During the fourth quarter of 1982, however, implementation slowed down somewhat, owing largely to circumstances beyond the Secretariat's control. The total volume of technical assistance furnished in the last three years is given in the table below.

Year	Assistance delivered (\$)	Annual increase (%)
1980	18 834 300	17.8
1981	20 960 300	11.3
1982	23 005 700	9.8

At 9.8% over the 1981 level, the increase in programme delivery was less than that in total resources.

50. The distribution of expenditures made in respect of the various funds roughly coincides with the funds' respective shares of the available resources for the 1982 programme year. The funds contributed to total 1982 delivery as follows: Technical Assistance and Co-operation Fund 58.5%, extrabudgetary funds 14.1%, assistance in kind 10.8% and UNDP 16.6%.

51. After a period of decline as regards their share in the total programme, expert services showed an increase in man-month delivery for the second consecutive year.

Year	Man-months delivered	Change from previous year (%)
1980	806.0	-1.0
1981	851.0	5.6
1982	963.0	13.2

During 1982, 642 experts and lecturers undertook 932 assignments. This represents a considerable increase over 1981, for which the corresponding figures were 461 experts and lecturers and 587 assignments. The trend towards shorter expert assignments continued in 1982. The average duration of expert assignments is now about one month. In spite of a significant increase in the delivery of expert services, the number of man-months still to be delivered by year-end was 1197 (1154 man-months at the end of 1981), indicating that further efforts in this area are needed. In this context, it would be advantageous if expert requirements were drawn up more realistically at the project planning stage.

52. Owing in part to the difficulties referred to in paragraph 49, delivery in respect of training fell, for the first time, below its ten-year average level of about one third of the programme. With \$6.9 million expended, fellowships and training courses accounted for slightly less than 30% of the total programme delivered in 1982.

53. The proportion represented by equipment, including items provided for training courses, has grown, reaching 50% of all assistance provided in 1982. The value of the equipment delivered increased from \$9.9 million in 1981 to \$11.5 million in 1982. While agriculture and nuclear engineering are the fields for which most equipment was furnished during the last five years, their relative shares declined in 1982; corresponding increases were registered for nuclear physics and general atomic energy development (particularly assistance to centres and laboratories dedicated to applied nuclear research).

54. While shifts in emphasis between fields of activity occur from time to time, it should be borne in mind that, for most fields, increases or decreases in programme delivery do not necessarily indicate a changing global pattern of assistance priorities. Over the last ten years, however, a few trends have been identified; they are illustrated in the figure on the following page. Statistical data on programme implementation in 1982 confirm some of these long-term trends. For example, the fields of nuclear physics, prospecting, mining and processing of nuclear materials, and general atomic energy development have grown in importance. The combined share of these three fields amounted to nearly 35% of the total programme delivered in 1982 as against 24% in 1981.

2. Technical Assistance and Co-operation Fund: \$13 450 800

55. Although the volume of assistance delivered in 1982 from the Technical Assistance and Co-operation Fund rose by 28.9%, this increase is about 5% below that for 1981. Programme delivery over the last three years is summarized in the table below.

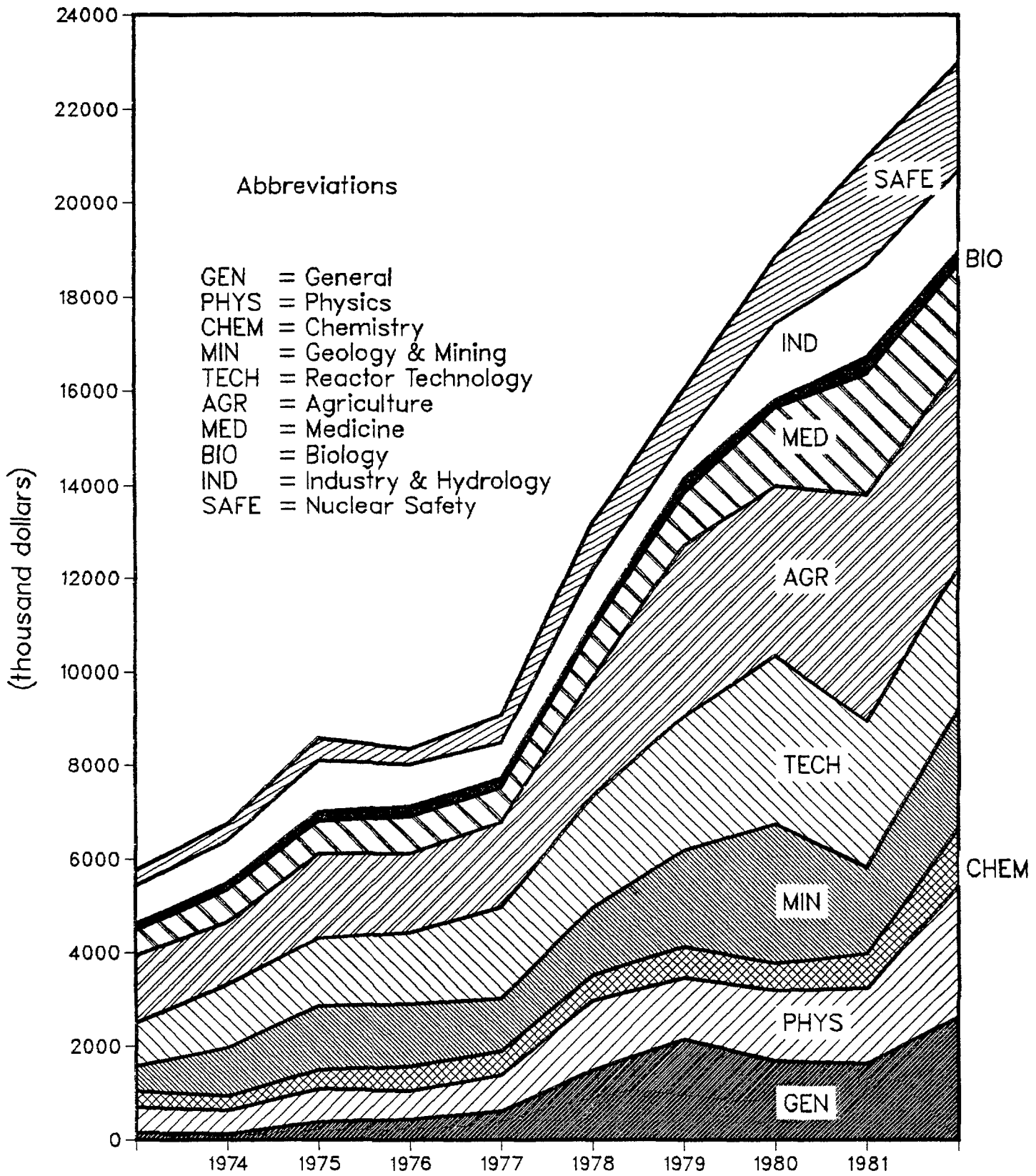
Year	Delivery from TACF (\$)	Annual increase (%)
1980	7 813 700	9.7
1981	10 436 500	33.6
1982	13 450 800	28.9

Besides actual expenditures, the commitments made for assistance still to be delivered (such as equipment on order) rose by 16.2%, from \$9 553 000 to \$11 099 000. New obligations incurred during 1982 against the Technical Assistance and Co-operation Fund totalled \$14 997 000.

56. Although the high levels of 1981 were not reached in 1982, growth in delivery exceeded - for the second consecutive year - growth in resources of the Fund.

57. Delivery during 1982 was insufficient, however, to reduce further the earmarkings against the Technical Assistance and Co-operation Fund. Earmarkings are the amounts set aside for funding assistance approved but still awaiting implementation. By the end of 1982, earmarkings had risen to \$9 046 000, up from \$7 301 000 at the end of 1981.

IAEA TECHNICAL CO-OPERATION PROGRAMME
BY FIELD OF ACTIVITY: 1973-1982



58. Expert services still to be delivered accounted for the largest portion of earmarked funds (60%). Equipment, fellowships and training courses followed, with 27%, 6% and 7% respectively.

59. By 31 December 1982, 67% of the 1982 programme financed from the Technical Assistance and Co-operation Fund had been implemented, as well as 87.3% of the 1981 and 92.5% of the 1980 programmes. A year earlier, on 31 December 1981, 71.4% of the 1981 programme had been implemented, and the figures for the two prior programme years, 1980 and 1979, were 83.1% and 91.4% respectively.

60. Although first-year implementation was therefore lower in 1982, longer-term averages show that implementation rates have remained fairly constant: current (or first-year) implementation was 67.9% in 1977, 67.4% in 1978, 68.3% in 1979, 59.9% in 1980, 71.4% in 1981 and 67% in 1982. In view of the complexity of the programme and the fact that larger amounts are involved each year, it would not be realistic to assume a first-year implementation rate going much beyond 70%.

61. In addition to monitoring implementation by programme year, it has become customary to measure implementation by calendar year, comparing obligations incurred with the total adjusted programme awaiting implementation. Since 1981, financial and programme data as at 30 September have been provided to the Technical Assistance and Co-operation Committee of the Board of Governors in the Director General's report on implementation. Data for the end of September and for year-end are presented in the following table.

Year	Implementation rate as at 30 September (%)	Implementation rate as at 31 December (%)
1981	52.7	61.8
1982	52.3	59.3

Although the rates for 1982 are slightly lower than those for 1981, they are better than the average rates for the period 1978-80, which were around 56%.

62. The following table gives, for the years 1978-82, a comparison of cash resources available with programme commitments incurred.

1978 - 1982
 Comparison of available cash resources and programme commitments
 as at 31 December
 (in thousands of dollars)

Year	Cash resources			Programme commitments			Balance		
	CC	NCC	Total	CC	NCC	Total	CC	NCC	Total
1978	4 896	3 420	8 316	6 978	1 293	8 271	(2 082)	2 127	45
1979	6 418	3 579	9 997	7 672	2 117	9 789	(1 254)	1 462	208
1980	8 267	4 467	12 734	9 470	3 925	13 395	(1 203)	542	(661)
1981	11 336	3 721	15 057	11 277	3 843	15 120	59	(122)	(63)
1982	14 186	3 670	17 856	13 788	4 071	17 859	398	(401)	(3)

These figures illustrate the improvement since 1978, when measures to redress the then existing imbalance between convertible and non-convertible currencies were first introduced. The table also indicates that, if the previous imbalance is not to recur, non-convertible funds have to be committed for future years to a much larger extent than is necessary in the case of convertible funds. The situation in 1982 was undoubtedly healthier, from a financial standpoint, than that in 1978, when programme commitments in convertible currencies exceeded cash resources in those currencies by 42%.

63. Measures aimed at achieving full programming of non-convertible funds have also been successful in another sense. As can be seen in Figure 5B, it has been possible to distribute these funds in a relatively equitable fashion over the various regions and programmes. In 1982, Latin America had the highest share with 27.2%, followed by interregional programmes (19.6%), Africa (18.1%), Europe (17.3%), Asia and the Pacific (17.1%) and the Middle East (0.7%). In view of its large share of the Regular Programme, the region of Asia and the Pacific could utilize a greater share of non-convertible funds.

64. In 1982, the Technical Assistance and Co-operation Fund financed 50% of all training provided as technical assistance by the Agency. The Fund met the costs of 95% of all scientific visits, 66% of all training courses and almost 40% of all fellowships. Since 1980, the Fellowship Programme's share of total programme delivery has been decreasing at a rate of 4% per annum, while the share of the Training Course Programme has been increasing by 1.5% per annum.

65. Technical Assistance and Co-operation Fund resources have also been used since 1980 to finance the Reserve Fund, the level of which was \$250 000 in 1982. The Reserve Fund enables the Agency to respond promptly to meet unforeseen, urgent needs and is seen as providing valuable supplements to the annual programmes of many Member States. The aggregate value of approvals under the Reserve Fund continued to rise in 1982.

Year	Approvals for new projects (\$)	Approvals for additional assistance to existing projects (\$)	Total approvals under the Reserve Fund (\$)
1980	84 500	48 000	132 500
1981	130 000	63 900	193 900
1982	157 100	71 300	228 400

Of the total approvals, two thirds related to urgently required, short-term advisory services. In a number of cases, experts assisted governments in science and technology planning and electrical power planning.

3. Extrabudgetary funds: \$3 235 300

66. Technical assistance provided from these sources continued to grow during 1982, as indicated in the table below.

Year	Expenditures from extrabudgetary funds (\$)	Change from previous year (%)
1980	2 499 500	-10.5
1981	2 742 100	9.7
1982	3 235 300	18.0

In spite of the substantial growth in 1982, the rate of increase in expenditures (18%) is still below the growth rate for resources in this category (23.5% in 1982). As pointed out in last year's report, this is chiefly due to the fact that major extrabudgetary contributions are often made during the second half of the year so that, in many cases, implementation can only take place during the following year. Also, in some cases, the utilization of extrabudgetary funds is subject to specific conditions.

67. Table 5C shows the status of extrabudgetary funds by donor. The unobligated balance increased drastically, from \$3 986 065 in 1981 to \$8 974 674 in 1982; however, the latter amount includes \$4.9 million in contributions received for future years.

68. Of the extrabudgetary funds spent, some 64.6% went for experts and equipment for Regular Programme projects, 21.3% for Special Programme projects and 14.1% for training activities.

69. Under the Special Programme, a project aimed at eradicating the Mediterranean fruit fly in Egypt became operational in 1982. With an estimated budget of some \$25 million, it is the largest single project ever undertaken by the Agency. Implementation was made possible thanks to extrabudgetary contributions by the Governments of Italy and Austria. The sterile-insect technique, which is being applied successfully in Mexico, will play a key role in this project.

70. Within the framework of Technical Co-operation among Developing Countries (TCDC), Chile made, in 1982, a contribution of \$20 000 for training programmes in that country. Part of this contribution was used during the year to provide training to two fellows from Uruguay in gamma camera maintenance.

4. Assistance in kind: \$2 493 000

71. As mentioned previously, the value of in-kind assistance delivered in 1982 decreased by 10.6% as compared with 1981. About 95% of the in-kind assistance provided was in the form of training. Approximately 43% of the fellowships provided by the Agency in 1982 were the result of in-kind contributions.

72. Cost-free (so-called "Type II") fellowships are made available to the Agency either as in-kind offers or as specific amounts contributed for financing individual training. The number of in-kind fellowships offered, which was already low in 1981, declined further in 1982. It is hoped that an increasing number of Member States, including developing countries in which there are centres of excellence, will lend support to the Agency's training activities through the provision of in-kind fellowships.

73. For the Fellowship and Training Course Programmes as a whole, the number of fellows receiving training increased from 1172 to 1295 (+10.5%), whereas the total number of man-months of training provided dropped from 4328 to 3950 (-8.7%). This indicates a reduction in the average duration of individual training. The number of awards rose from 387 in 1981 to 454 in 1982. There was also a slight increase, from 73% to 74%, in the percentage of nominations resulting in awards.

5. UNDP: \$3 826 600

74. After a \$900 000 decrease in delivery in 1981, assistance from UNDP resources declined by a further \$1.2 million in 1982; it now accounts for 16.6% of the total delivered programme. This turn of events was foreseen and, in view of UNDP's resource situation, an improvement is not expected in 1983.

75. During 1982, a total of 30 UNDP-financed projects were being implemented. Thirteen projects were completed during the year and six were approved.

76. Total obligations incurred in respect of UNDP projects during 1982 amounted to \$4.4 million. Measured against the 1982 budgets of all Agency-executed UNDP projects approved at year-end, an implementation rate of 89% was achieved.

77. Implementation of a project funded in part by the United Nations Financing System for Science and Technology for Development (UNFSSTD) started in 1982. This project, which is designed to promote non-destructive testing technologies in Latin America, has evolved into a joint venture in which UNFSSTD, UNIDO and the Agency are participating. Under another on-going UNFSSTD project, a second workshop on monsoon dynamics and forecasting, organized by the International Centre for Theoretical Physics in Trieste, was held in Bangladesh.

D. SPECIAL ISSUES

1. Technical Co-operation Policy Review

78. Following a decision of the Board of Governors, in June 1982, that a review of technical co-operation policies should be conducted by its Technical Assistance and Co-operation Committee, much of the work connected with such a review was done during the latter part of 1982. A technical co-operation seminar, based on a structured list of policy issues prepared by the Secretariat, was held in conjunction with the 1982 session of the General Conference; all Member State delegations were invited to attend, and a large number contributed to the discussions. In November 1982, the Technical Assistance and Co-operation Committee extensively reviewed policy options; this review was completed by the Board at its June 1983 session.

79. Though not completed, the policy review has confirmed the value of multi-year programming for Agency technical co-operation activities. This topic was dealt with in last year's report as a "special issue". The review has also confirmed the value of overprogramming, introduced last year in recognition

of the fact that slippages will always occur between programme planning and implementation. The review touched upon the concept of "dynamic programming", whereby approved but unused funds are reprogrammed for purposes for which immediate funding is required. A combination of these three policy options could lead to a significant reduction in earmarkings (or unobligated funds, as discussed in paragraph 57 above).

80. Another issue examined during the review was the utility of integrating training into individual projects. A decision that training is to be integrated into individual projects whenever possible would affect the structure of the programme, but steps to facilitate the implementation of this decision are being studied.

2. Overprogramming

81. In 1981, when overprogramming was introduced, it was decided to limit it to 10% of the annual target for the Technical Assistance and Co-operation Fund. Since then, the concept has been refined, with the limit now set at 10% of the new programmable resources for a given year. In most instances, these are less than the annual target, and they are constantly being affected by changes in income, exchange gains and losses, and programme savings and deficits; they are therefore constantly monitored. Along with changes in programmable resources, the actual degree of overprogramming varies with time.

82. The present practice is for the Secretariat to provide for overprogramming close to the 10% maximum at the time of programme formulation (in July-August of the year preceding the programme year). By the time the programme year actually starts, the degree of overprogramming has usually dropped, and it continues to decrease during the year. This phenomenon, confirmed in 1982, results from the intricate interplay of various factors that have a bearing on programmable resources. In the case of 1982, the programme was submitted to the Technical Assistance and Co-operation Committee with an overprogramming level of 7.8%. By 31 December 1981, the degree of overprogramming was down to 2.1%; by the end of 1982, it was virtually zero. Similarly, the 1983 programme was submitted with overprogramming set at 9.3%; it had dropped to 5.8% by 31 December 1982. This shows that a judicious degree of overprogramming, needed to ensure timely implementation, does not place an undue strain on the resources available for technical co-operation.

3. Evaluation

83. Evaluation was among the activities identified in the Technical Co-operation Policy Review as warranting further development. During 1982, the tasks

of the new Evaluation Unit were defined and the recruitment of two Professional staff members for the Unit initiated. The Unit started work in May 1983.

84. An evaluation survey of Agency fellows who completed training in the United States of America in the period 1975-79 was started in 1982. The survey is being carried out by the Division of Educational Programmes of Argonne National Laboratory. A progress report shows that more than 45% of the fellows responded to a questionnaire drawn up for the survey within six months of its despatch; it is expected therefore that the 50% "response target" will be exceeded. The questionnaire covers topics such as the trainee's present responsibilities, the degree to which the training objectives were met, the use made of the training in the home country, the relevance of the fellowship to the country's development programme, and how the knowledge gained through the fellowship was shared with others.

85. Arrangements were made to interview Agency fellows in more than ten countries; officials of national atomic energy authorities were also to be interviewed concerning various aspects of the Agency's training programmes. As in all other evaluation activities, it is important that governments participate and co-operate as fully as possible with the Agency in this exercise. The findings of the survey will be included in the evaluation report to be prepared for the meeting of the Technical Assistance and Co-operation Committee at the end of 1983.

4. Technical co-operation computer system

86. As indicated in last year's report, the computerized programme monitoring system is being implemented in a step-by-step fashion, a start having been made in mid-1981 with modules for the Regular Programme and the Special Programme. During 1982, these modules were considerably improved by new software which takes into account data generated in the Division of Budget and Finance. A number of improvements designed to ensure more effective financial control, particularly of extrabudgetary funds, and to facilitate data entry have been introduced. The Agency now handles more than 20 separate funds under its Regular and Special Programmes. It would not be possible to administer all of these funds and the accounts within individual funds efficiently without the new computer system.

87. The year 1982 also saw the completion of the computerization of Fellowship Programme data. This project was led by a systems analyst made available on a cost-free basis by the Government of the United States of America. The establishment of the Fellowship Programme module was a major undertaking, as it was first necessary to recover and unravel extensive data from a previous system that went back to 1958. A substantial amount of excellent data has now become available and will be used for a more complete assessment of individual training provided by the Agency.

88. A spin-off of the system development work carried out in 1982 is a set of computer files listing all individuals and institutions that have participated in the Agency's technical co-operation programmes since 1976. These files are routinely accessed by users outside the Department of Technical Co-operation and are proving extremely useful.

89. Work is to begin in the second half of 1983 on the computerization of UNDP data. This will be followed, in 1984, by the incorporation into the system of training course data.

PART III. EXPLANATORY NOTES TO STATISTICAL
FIGURES, TABLES AND ANNEXES

Figure 1A. Resources available for Agency technical co-operation programmes: 1976-1982

90. This figure shows all resources made available to the Agency for technical co-operation activities from all funds for the programme years 1976-82. The difference between the amount shown for 1981 under the Technical Assistance and Co-operation Fund and the corresponding figure in the report for 1981 is due to the receipt of 1981 contributions in 1982. Modified figures for "Extrabudgetary funds" reflect, amongst other things, exchange rate fluctuations, which are accounted for against the programme year for which the extrabudgetary contribution was made.

91. Amounts given in Figure 1A for UNDP resources correspond to total claims against UNDP resources for projects implemented during each calendar year. These amounts are also used in the Agency's accounts, reflecting UNDP's requirement to report expenditures as the sum of cash disbursements plus unliquidated obligations. The 1981 and 1982 UNDP funds include resources made available by the UNDP-administered United Nations Financing System for Science and Technology for Development.

92. It should be noted that the amounts shown in Figure 1A do not include resources made available for future years.

Figure 1B. Utilization of resources: 1981, 1982 and 1973-1982

93. This figure shows, by component and by major field of activity, the distribution of all assistance provided in 1981 and 1982, irrespective of source of funding.

Figure 1C. Assistance delivered by type of input: 1973-1982

94. The total assistance delivered (that is, expenditures) in the period 1973-1982 is broken down by year and type of input (training, experts and equipment), irrespective of source of funding.

Figure 2A. Distribution of expert services by field of activity:
1981 and 1982

95. This table shows, for training course lecturers and experts separately, the total numbers and the percentages of man-months of expert services provided in each of the Agency's ten major fields of activity.

Figure 2B. Distribution of expert services by region: 1982

96. A graphic presentation is given of (i) the origin of experts (ii) their destination and (iii) the time spent at the destination, grouped by geographic region.

Figure 3A. Distribution of equipment expenditures by field of activity:
1981 and 1982

97. This figure shows the total amount of equipment provided in the ten major fields of activity and the corresponding percentage.

Figure 3B. Distribution of equipment by region: 1982

98. Total equipment purchases, grouped by country of origin and recipient region, are shown in this figure; individual recipient countries are shown in Table 7. "Local payments" refer to customs, storage and internal transport charges in cases where these have been levied by recipient countries on equipment received.

Figure 4A. Distribution of trainees by field of activity: 1981 and 1982

99. Training course participants and fellowship holders are shown separately in this table, along with total number and the percentage of man-months of training provided in the Agency's major fields of activity.

Figure 4B. Summary data on training programmes: 1982

100. This graphic presentation shows where trainees studied, where they came from and how much training was received by their home regions. Individual recipient countries are shown in Tables 6B and 7.

Figure 5A. Distribution of expenditures by type and field of activity

101. In this figure, percentages are shown for equipment, expert services and training distributed over each of the ten major fields of activity and averaged over the past five years.

Figure 5B. Technical Assistance and Co-operation Fund expenditures by type of currency and region: 1982

102. This figure refers only to the Technical Assistance and Co-operation Fund and gives total 1982 expenditures broken down by region and for convertible and non-convertible currencies.

Figure 5C. Distribution of technical co-operation inputs by field and region: 1982

103. The pie charts indicate the relative shares of each field per region, and the table below the figure gives actual amounts.

Figure 5D. Distribution of technical co-operation expenditures by source and region: 1982

104. In this graphic presentation, expenditures from the Technical Assistance and Co-operation Fund, Extrabudgetary funds, Assistance in kind and from UNDP funds are shown for each region, as are total expenditures from all funds by region.

Figure 6. Utilization of the Technical Assistance and Co-operation Fund

105. The bar chart shows, over a ten-year period, the total resources available to the Technical Assistance and Co-operation Fund year by year - each year including the unobligated and unspent funds of prior years - as well as the expenditures and obligations incurred against these resources as at 31 December of each year. Obligations incurred against future years for approved multi-year projects are shown separately.

106. The graph below it shows the percentage of the available resources spent ("expenditures"), committed ("unliquidated obligations") and still to be implemented ("unobligated balance") each year.

Table 1. Available resources: 1973-1982

107. This table is directly related to Figure 1A, but shows resources over a ten-year period. The Technical Assistance and Co-operation Fund is broken

down by its various components. Total Agency resources (Technical Assistance and Co-operation Fund, Extrabudgetary funds and Assistance in kind) are shown separately from UNDP resources.

Table 2. Technical Assistance and Co-operation Fund: 1973-1982

108. The ten-year development of the target, of the amounts pledged and of the funds actually made available are shown (see Annex IV for 1982 contributions to the Technical Assistance and Co-operation Fund by Member States). The graphic presentation following the table shows, on a logarithmic scale, actual contributions to the Technical Assistance and Co-operation Fund from 1958 to 1982. For 1983, the actual target is shown. Indicative Planning Figures appear for years 1984, 1985 and 1986.

Table 3A. Experts and lecturers by place of origin: 1982

109. This table shows the number of individual experts and lecturers who undertook technical co-operation assignments during 1982. In addition, numbers of assignments are provided. Data are broken down by source of funding, and a distinction is made between assignments as experts or training course lecturers.

Table 3B. Trainees in the field by place of study: 1982

110. A breakdown is given for trainees (fellows, training course participants and scientific visitors) based on place of study and source of funding.

Table 4. Distribution of technical co-operation expenditures by type: 1978-1982

111. This major financial table shows all the technical assistance provided from all sources during the last five years, broken down by programme components. It is the only table that shows (in column 10) the balance for assistance in kind. This balance represents the estimated value of man-months of training beyond the end of 1982 for fellows who had already started their studies in 1982.

Table 5A. Status of the Technical Assistance and Co-operation Fund by programme year and year of expenditure as at 31 December 1982

112. This table shows the status of the programme financed from the Technical Assistance and Co-operation Fund and analyses in detail the time-frame during which full utilization of Technical Assistance and Co-operation Fund resources takes place.

Table 5B. Status of extrabudgetary funds by programme year and year of expenditure as at 31 December 1982

113. This table, which follows the pattern of Table 5A, gives the total of all extrabudgetary funds by programme year, with yearly expenditures against each of these years. Project changes, contributions in later years for prior-year programmes, and exchange rate fluctuations between the year in which contributions were received and years in which the expenditures were made are examples that result in changes in the figures for prior years. Since 17 different funds are involved, this table is one of the most labour-intensive to prepare; its continuation may have to be reviewed.

Table 5C. Extrabudgetary funds for technical co-operation activities by donor as at 31 December 1982

114. This table presents the status of all extrabudgetary funds. The monies received, their utilization and the balance left for further implementation are given for each donor fund.

Table 6A. Recipients of expert services: 1982

115. A list is given of recipient countries showing the number of expert assignments and man-months provided to each country from Agency and UNDP resources. Experts not serving on country projects are shown under intercountry projects and training courses.

Table 6B. Recipients of training abroad: 1982

116. The list shows, by recipient country, the number of trainees and the total duration of their studies.

Table 7. Financial summary: 1982

117. This major table shows, by type of assistance and by fund, the total technical assistance furnished to each recipient country.

Table 8. Financial summary: 1958-1982

118. A summary is given, by country, of all assistance provided since the beginning of the Agency's technical co-operation activities, in 1958.

Annex I. Utilization of extrabudgetary and in-kind contributions

119. Related to Tables 5B and 5C, this Annex shows, by donor and by type, the technical assistance provided during 1982 utilizing extrabudgetary resources and, separately, contributions in kind.

Annex II. Training courses and study tours: 1982

120. All courses organized by the Agency in 1982 are listed along with numbers of participants and amounts obligated. This is the only table in which local participants and participants not financed from Agency or UNDP resources are shown.

Annex III. Formal reports submitted to recipient-country governments

121. The reports produced are grouped by country, with an indication of the distribution status. Of the 164 reports produced in 1982, 120 have already been de-restricted by governments.

Annex IV. Voluntary contributions pledged and paid to the Technical Assistance and Co-operation Fund for 1982

122. Data on voluntary contributions by Member States to the Technical Assistance and Co-operation Fund are given in this table. Figures reflect the status as at 31 December 1982.

Annex V. Cost-free fellowships offered and awarded: 1982

123. Information is made available in this table on the number of cost-free fellowships offered by Member States and the number of awards.

Annex VI. Projects under implementation for UNDP

124. This table includes a project being implemented for the United Nations Financing System for Science and Technology for Development.

Annex VII. Regular and Special Programme projects completed or cancelled during 1982

125. Part A shows projects completed during the year, along with the year of approval and the assistance provided. Part B shows the cancelled projects.

Annex VIII. Footnote-a/ projects made operational or extended during 1982

126. These projects are shown with the source of the funds that made upgrading to operational status possible.

Annex IX. Approvals against the Reserve Fund in 1982

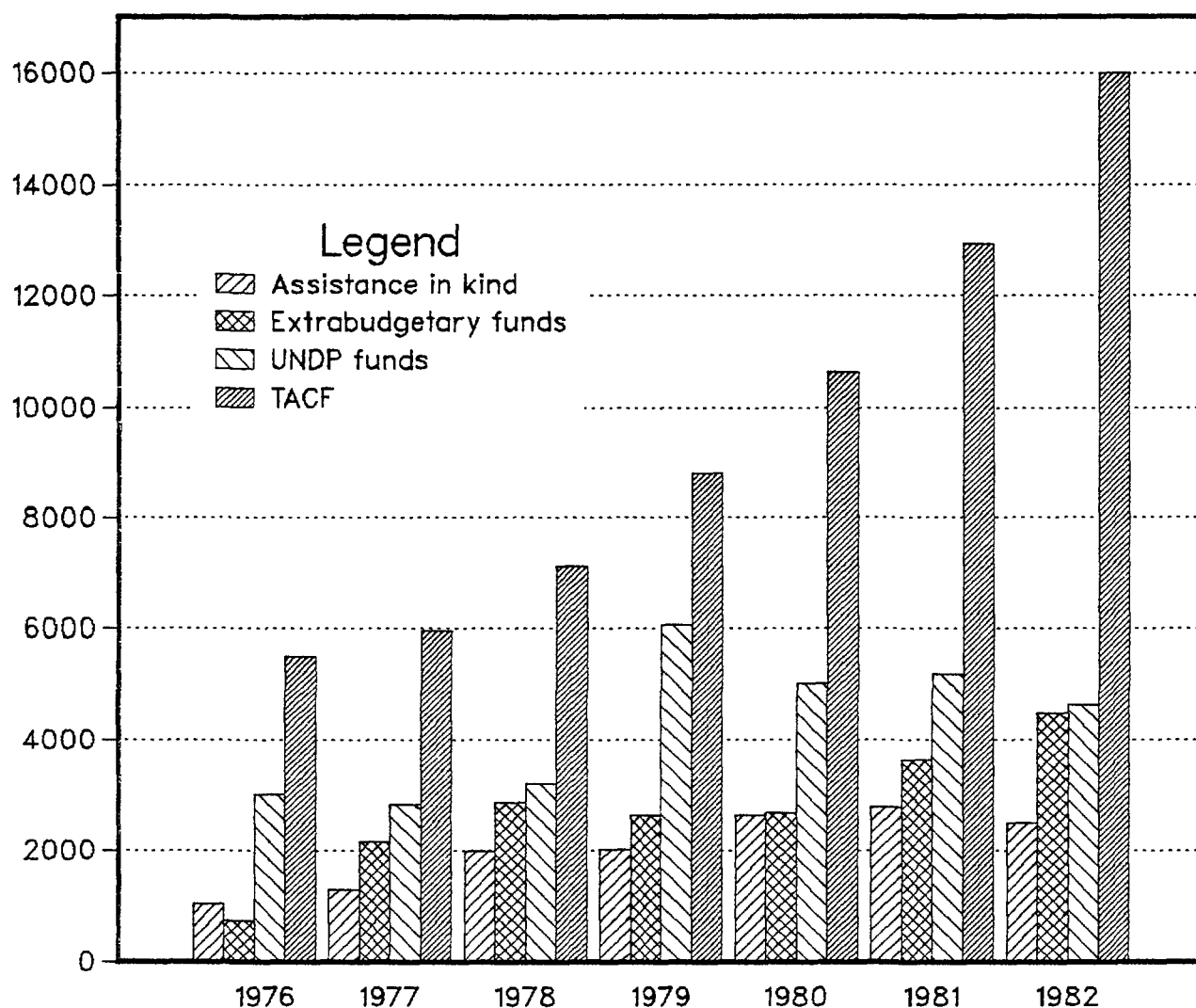
127. Information is provided on Reserve Fund approvals for new and existing projects.

Annex X. Changes to approved projects

128. The Secretariat is obliged to furnish information on changes to approved projects under the provisions of the Revised Guiding Principles. While projects may undergo several changes in the course of a year, the list shows only net changes.

FIGURE 1A

RESOURCES AVAILABLE FOR
AGENCY TECHNICAL CO-OPERATION PROGRAMMES: 1976 - 1982
(in thousands of dollars)



TACF	5 492	5 962	7 122	8 802	10 632	12 926	15 999
Extra- budgetary funds	729	2 147	2 860	2 635	2 673	3 624	4 474
Assistance in kind	1 021	1 284	1 987	2 015	2 628	2 788	2 493
UNDP	3 002	2 836	3 205	6 066	5 018	5 186	4 631
TOTAL	10 244	12 229	15 174	19 518	20 951	24 524	27 597

FIGURE 1B

UTILIZATION OF RESOURCES: 1981, 1982 AND 1973-1982
(in thousands of dollars)

Field of activity	Year	Experts	Equipment	Fellowships	Share of total programme		
		\$	\$	\$	\$	%	
General atomic energy development	1981	508.5	849.0	273.0	1 630.5	7.8	
	1982	746.9	1 610.6	258.2	2 615.7	11.4	
Nuclear physics	1981	304.7	993.4	308.8	1 606.9	7.7	
	1982	444.7	1 831.1	540.3	2 816.1	12.2	
Nuclear chemistry	1981	34.9	365.6	322.7	723.2	3.4	
	1982	83.9	774.3	342.0	1 200.2	5.2	
Prospecting, mining and processing of nuclear materials	1981	1 063.6	568.7	217.1	1 849.4	8.8	
	1982	1 094.8	1 192.0	270.5	2 557.3	11.1	
Nuclear engineering and technology	1981	673.7	1 544.1	893.5	3 111.3	14.8	
	1982	520.1	1 501.2	989.7	3 011.0	13.1	
Application of isotopes and radiation in	Agriculture	1981	1 095.4	2 315.2	1 450.0	4 860.6	23.2
		1982	1 331.3	1 689.2	1 252.1	4 272.6	18.6
	Medicine	1981	309.1	900.3	1 342.3	2 551.7	12.2
		1982	325.7	952.5	928.8	2 207.0	9.6
	Biology	1981	56.5	127.6	177.0	361.1	1.7
		1982	27.2	105.3	153.6	286.1	1.2
	Industry and Hydrology	1981	359.8	1 324.1	285.4	1 969.3	9.4
		1982	457.7	1 003.8	263.2	1 724.7	7.5
Safety in nuclear energy	1981	643.2	877.5	775.6	2 296.3	11.0	
	1982	624.2	850.3	840.5	2 315.0	10.1	
Total assistance	1981	5 049.4	9 865.5	6 045.4	20 960.3	100.0	
	1982	5 656.5	11 510.3	5 838.9	23 005.7	100.0	
Ten-year total	1973-1982	36 350.7	56 415.0	37 662.5	130 428.2	100.0	

FIGURE 1C

ASSISTANCE DELIVERED
BY TYPE OF INPUT: 1973-1982
(in thousands of dollars)

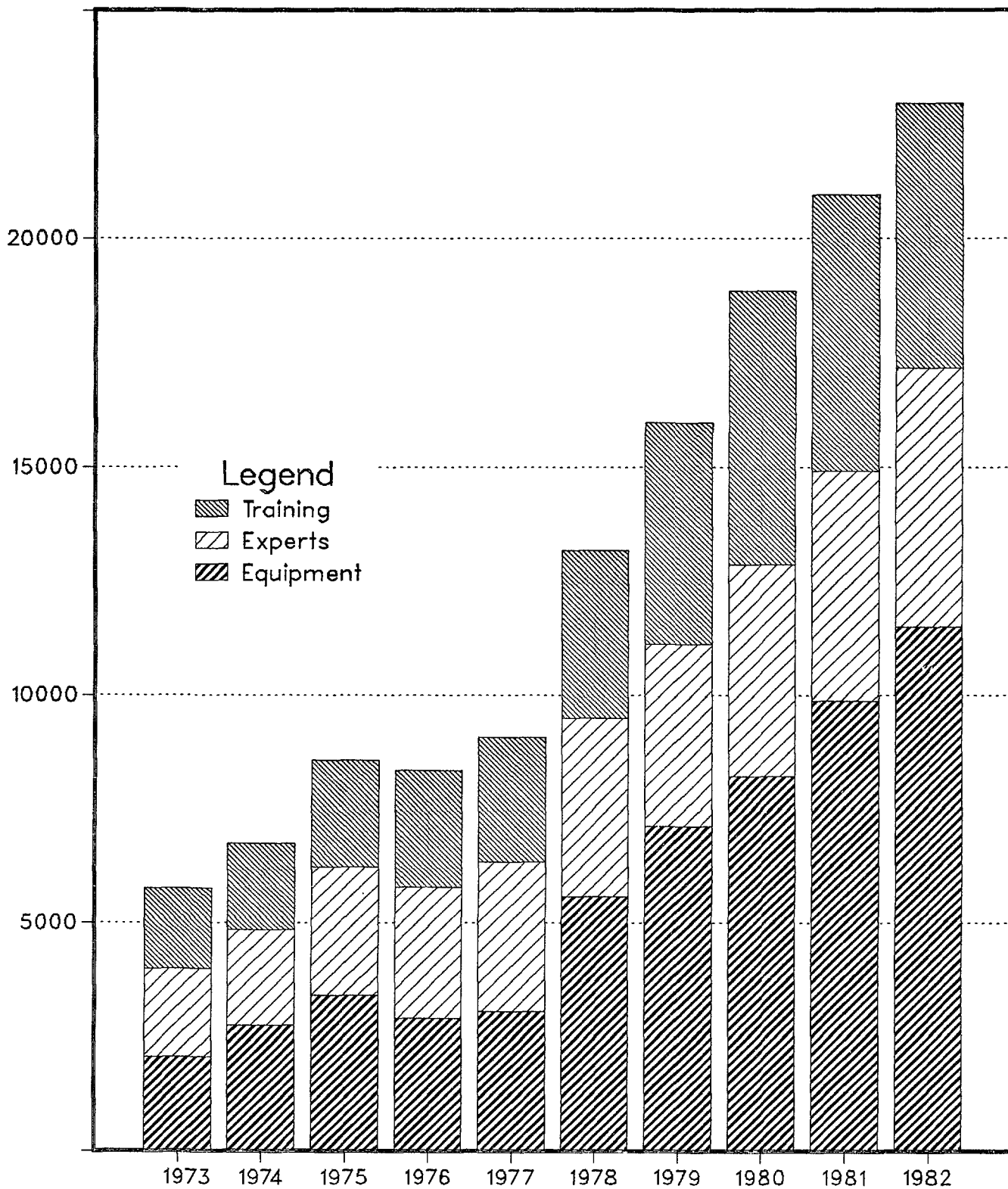


FIGURE 2A

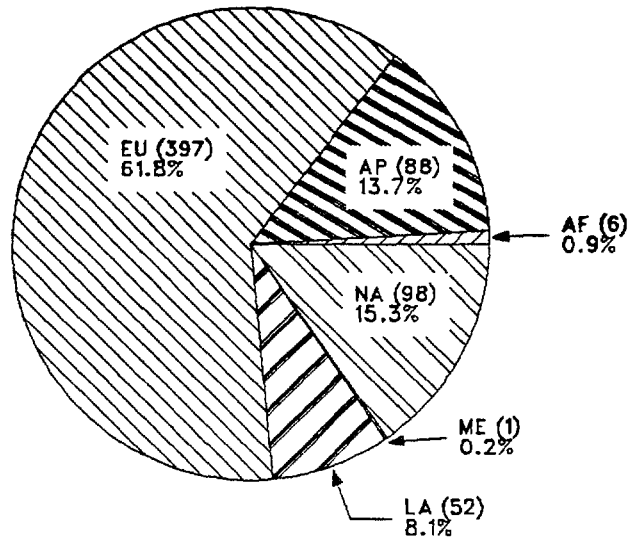
DISTRIBUTION OF EXPERT SERVICES BY FIELD OF ACTIVITY: 1981 AND 1982

Year	Number of assignments			Field of activity	Number of man-months	Share of total (%)
	Training course lecturers	Experts	Total			
1981	22	35	57	General atomic energy development	75	9
1982	71	83	154		101	10
1981	5	25	30	Nuclear physics	57	7
1982	49	55	104		112	12
1981	-	6	6	Nuclear chemistry	7	1
1982	15	8	23		15	2
1981	15	54	69	Prospecting, mining and processing of nuclear materials	180	21
1982	7	52	59		177	18
1981	26	46	72	Nuclear engineering and technology	106	12
1982	51	70	121		93	10
1981	33	106	139	Application of isotopes and radiation in agriculture	214	25
1982	26	175	201		236	24
1981	9	25	34	Application of isotopes and radiation in medicine	60	7
1982	8	39	47		57	6
1981	-	5	5	Application of isotopes and radiation in biology	8	1
1982	-	6	6		5	1
1981	15	29	44	Application of isotopes and radiation in industry and hydrology	55	7
1982	6	93	99		66	7
1981	49	82	131	Safety in nuclear energy	89	10
1982	41	77	118		101	10

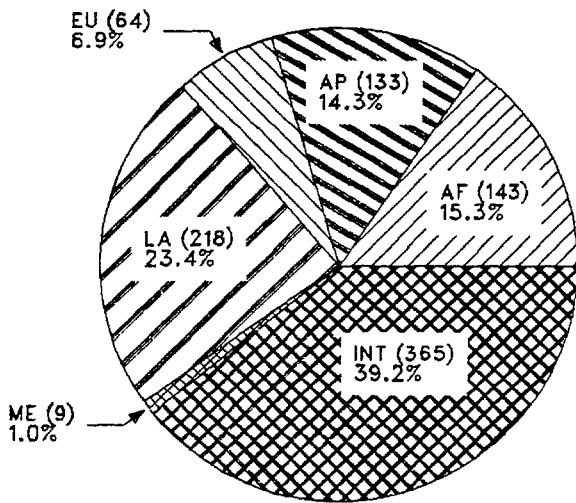
FIGURE 2B

DISTRIBUTION OF EXPERT SERVICES BY REGION: 1982

Where they came from:
(642 experts)



Where they went:
(932 assignments)



Abbreviations	
AF	= Africa
AP	= Asia and the Pacific
EU	= Europe
LA	= Latin America
ME	= Middle East
NA	= North America
INT	= Interregional Projects and Training Courses

For how long:
(963 man-months)

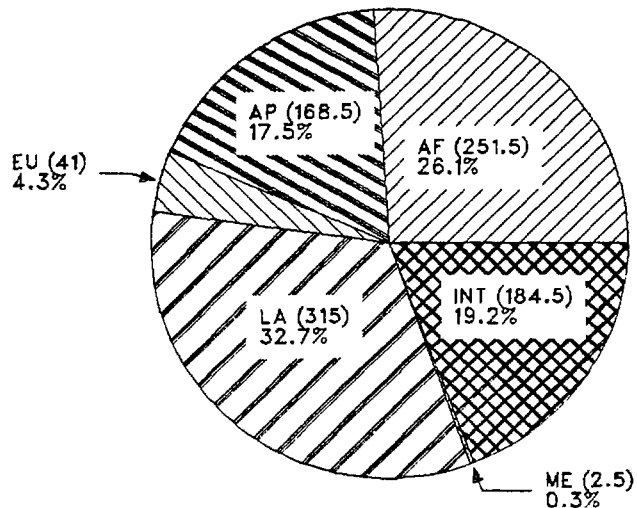


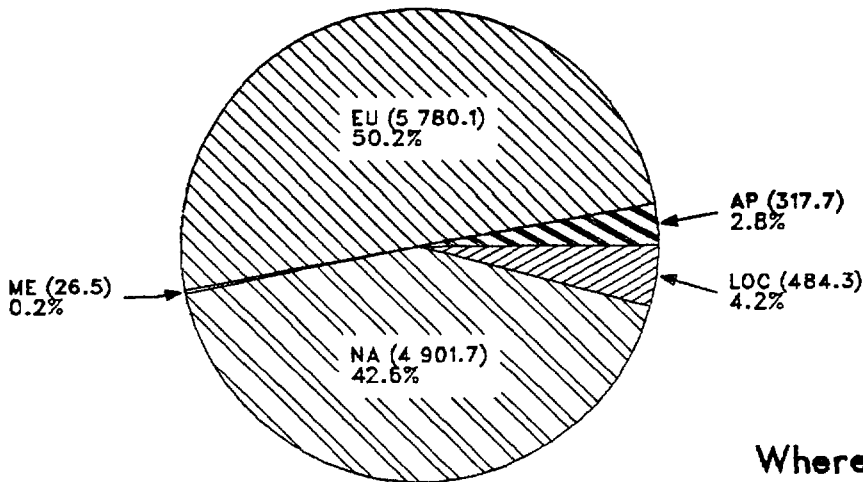
FIGURE 3A

DISTRIBUTION OF EQUIPMENT EXPENDITURES BY FIELD OF ACTIVITY: 1981 AND 1982
(in thousands of dollars)

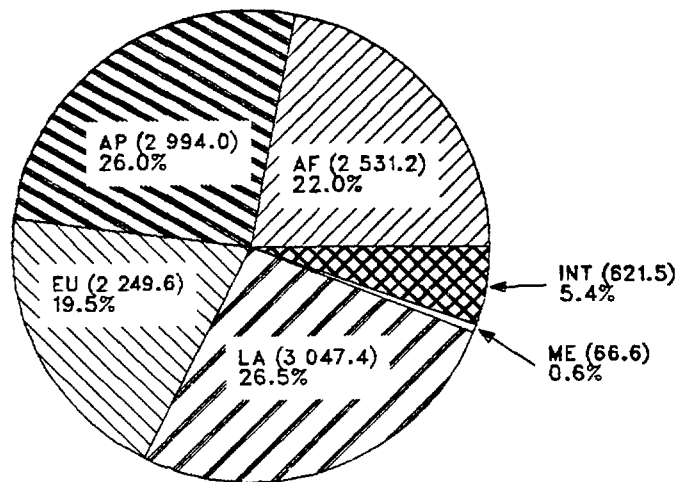
Field of activity	Year	\$	Share of total (%)	
General atomic energy development	1981	849.0	9	
	1982	1 610.6	14	
Nuclear physics	1981	993.4	10	
	1982	1 831.1	16	
Nuclear chemistry	1981	365.6	4	
	1982	774.3	7	
Prospecting, mining and processing of nuclear materials	1981	568.7	6	
	1982	1 192.0	10	
Nuclear engineering and technology	1981	1 544.1	16	
	1982	1 501.2	13	
Application of isotopes and radiation in	Agriculture	1981	2 315.2	23
		1982	1 689.2	15
	Medicine	1981	900.3	9
		1982	952.5	8
	Biology	1981	127.6	1
		1982	105.3	1
	Industry and Hydrology	1981	1 324.1	13
		1982	1 003.8	9
Safety in nuclear energy	1981	877.5	9	
	1982	850.3	7	

FIGURE 3B
DISTRIBUTION OF EQUIPMENT BY REGION: 1982
 (in thousands of dollars)

Where it came from:
 (11 510.3 purchased)



Where it went:
 (11 510.3 delivered)



Abbreviations

- AF = Africa
- AP = Asia and the Pacific
- EU = Europe
- LA = Latin America
- ME = Middle East
- NA = North America
- INT = Interregional Projects and Training Courses
- LOC = Local Payments

Countries from which equipment was purchased

Australia	7.6	German D. R.	234.6	Poland	358.7
Austria	583.2	Germany, F. R.	977.2	Spain	20.3
Belgium	17.7	Hungary	265.5	Sweden	80.5
Brazil	1.3	India	2.1	Switzerland	79.4
Bulgaria	59.9	Ireland	23.5	Thailand	0.7
Canada	176.1	Israel	26.5	USSR	1 416.1
Czechoslovakia	91.7	Italy	83.0	UK	640.3
Denmark	30.5	Japan	307.3	USA	4 725.6
Finland	188.6	Netherlands	145.9	Yugoslavia	5.8
France	477.7	Nigeria	2.8		

FIGURE 4A

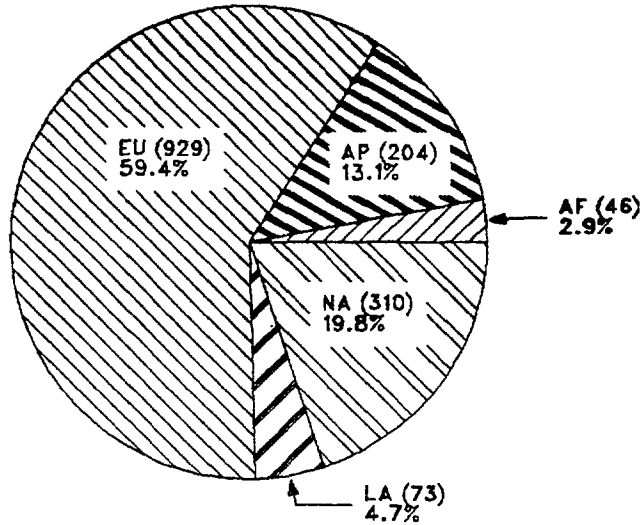
DISTRIBUTION OF TRAINEES BY FIELD OF ACTIVITY: 1981 AND 1982

Year	Number of trainees			Field of activity	Number of man-months	Share of total (%)
	Training courses	Fellowships	Total			
1981	56	25	81	General atomic energy development	199	5
1982	49	25	74		171	4
1981	23	45	68	Nuclear physics	246	6
1982	95	42	137		339	9
1981	-	42	42	Nuclear chemistry	217	6
1982	37	39	76		217	5
1981	29	31	60	Prospecting, mining and processing of nuclear materials	134	3
1982	38	33	71		141	4
1981	49	106	155	Nuclear engineering and technology	691	17
1982	128	110	238		788	20
1981	110	139	249	Application of isotopes and radiation in agriculture	946	24
1982	108	124	232		826	21
1981	37	102	139	Application of isotopes and radiation in medicine	678	17
1982	41	84	125		611	15
1981	-	21	21	Application of isotopes and radiation in biology	77	2
1982	-	21	21		127	3
1981	44	33	77	Application of isotopes and radiation in industry and hydrology	205	5
1982	44	35	79		151	4
1981	150	64	214	Safety in nuclear energy	584	15
1982	163	79	242		579	15

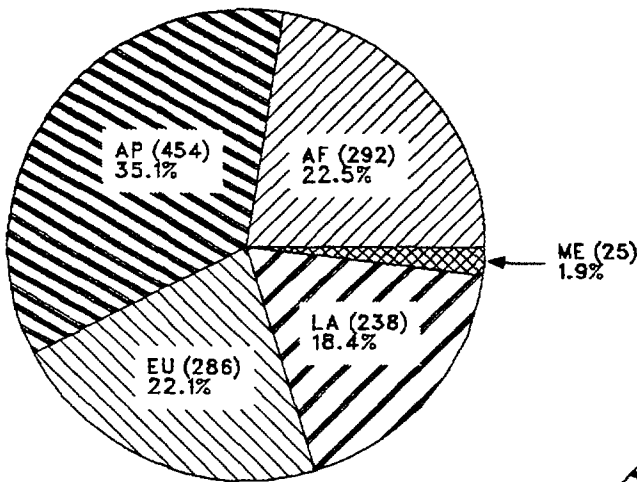
FIGURE 4B

SUMMARY DATA ON TRAINING PROGRAMMES: 1982

Where training was given:
(1563 places of study)



Where trainees came from:
(1295 persons)



Abbreviations	
AF	= Africa
AP	= Asia and the Pacific
EU	= Europe
LA	= Latin America
ME	= Middle East
NA	= North America

Amount of training received:
(3950 man-months)

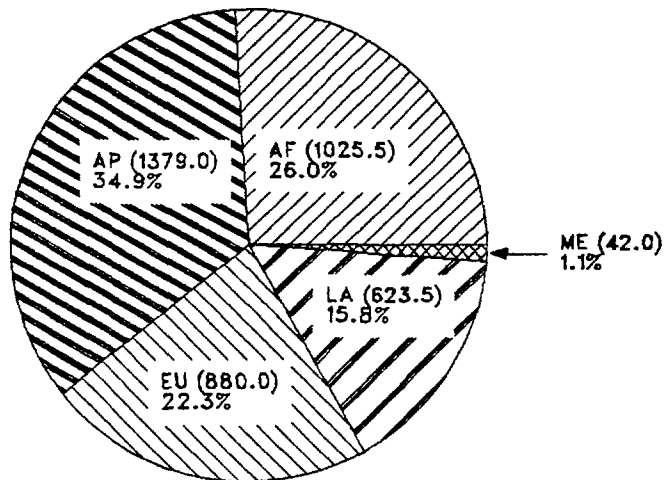


FIGURE 5A

DISTRIBUTION OF EXPENDITURES BY TYPE AND FIELD OF ACTIVITY
(averaged over the past five years)

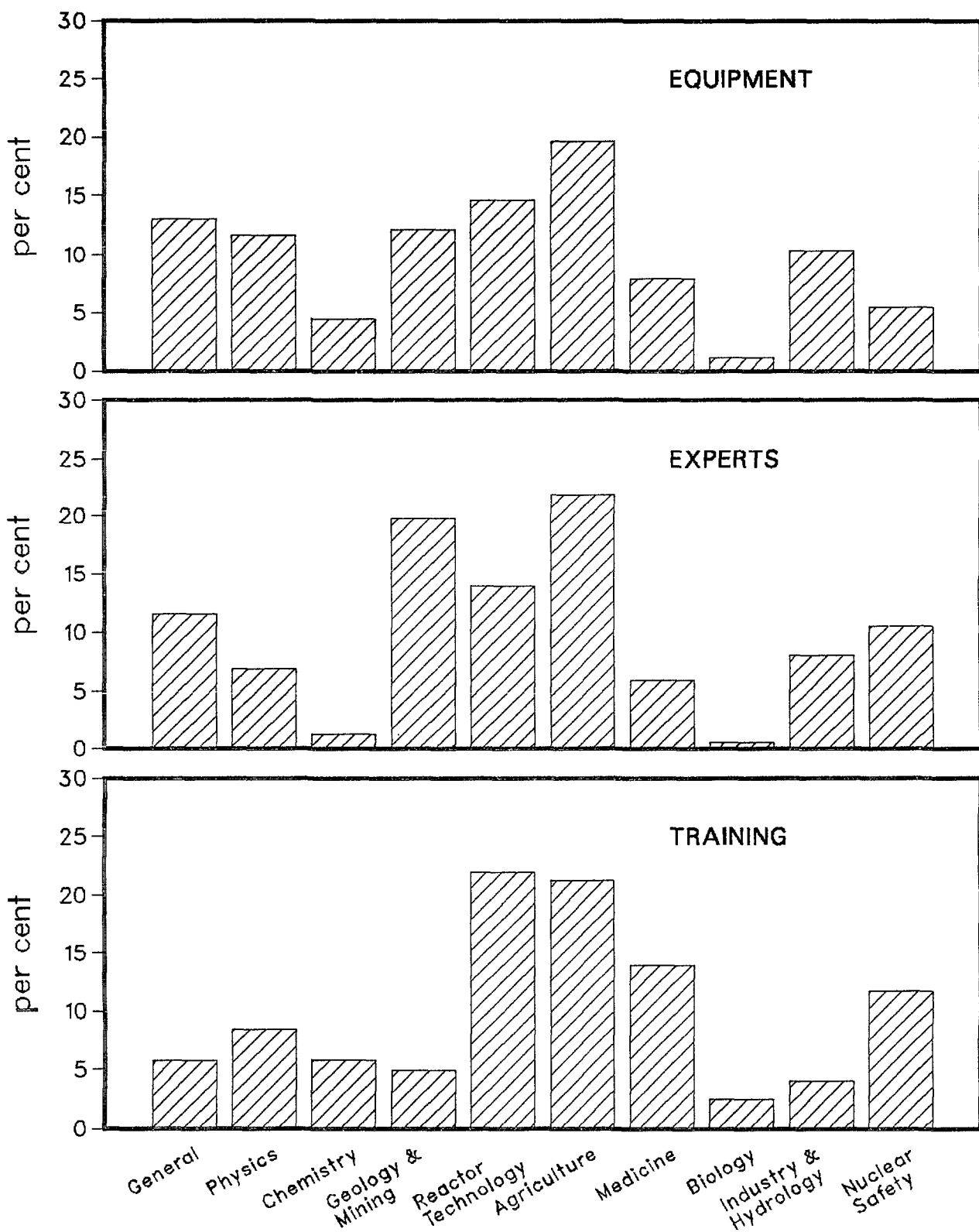
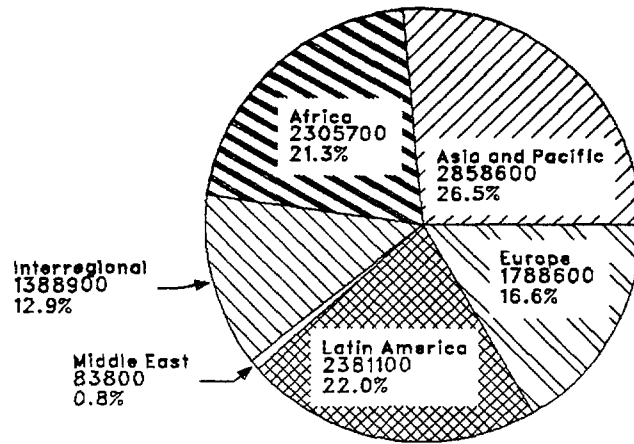


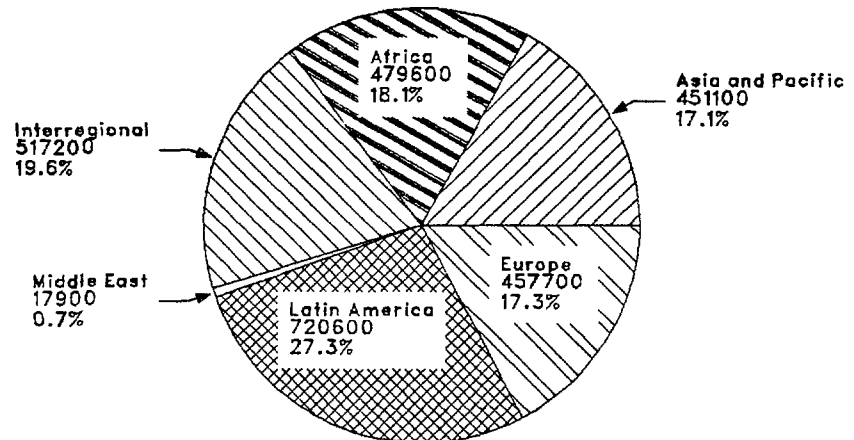
FIGURE 5B

TECHNICAL ASSISTANCE AND CO-OPERATION FUND EXPENDITURES
BY TYPE OF CURRENCY AND REGION, 1982

CONVERTIBLE CURRENCY
10 806 700 DOLLARS



NON-CONVERTIBLE CURRENCY
2 644 100 DOLLARS



TOTAL
13 450 800 DOLLARS

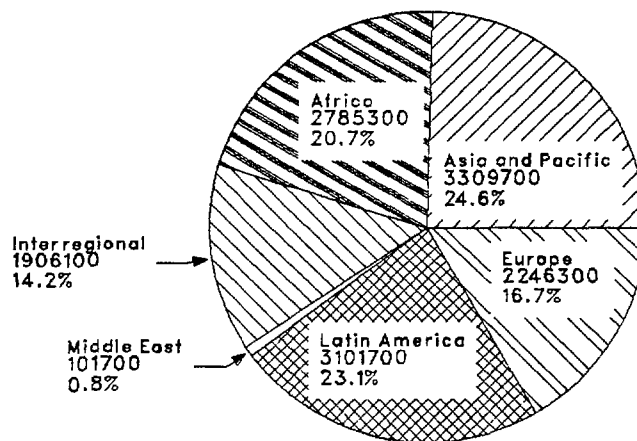
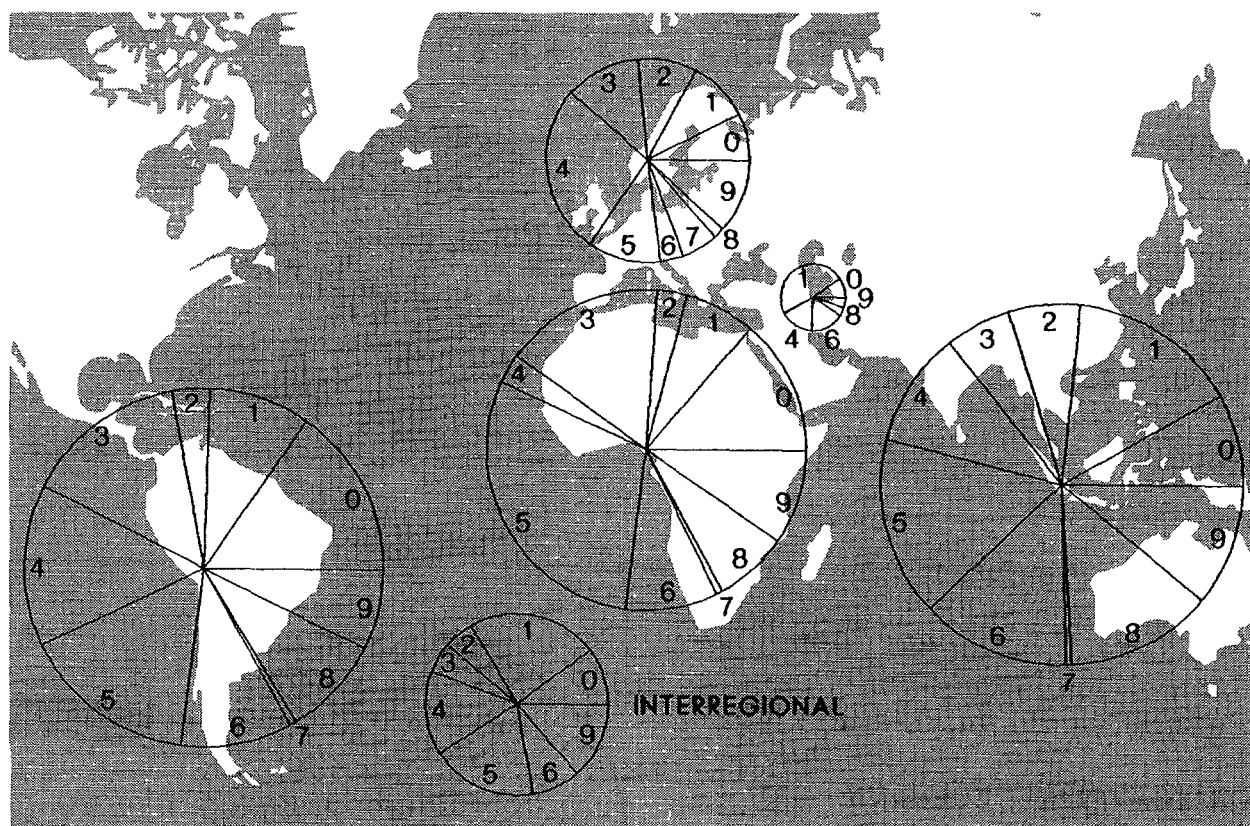


FIGURE 5C

DISTRIBUTION OF TECHNICAL CO-OPERATION INPUTS BY FIELD AND REGION: 1982



SUMMARY
(in thousands of dollars)

Field of activity	Africa \$	Asia and the Pacific \$	Europe \$	Latin America \$	Middle East \$	Inter- regional \$	All regions \$	
0 - General atomic energy development	700.9	473.2	257.1	878.2	10.5	295.8	2 615.7	
1 - Nuclear physics	358.7	872.4	331.6	525.1	50.9	677.4	2 816.1	
2 - Nuclear chemistry	154.7	369.7	322.0	194.2	0.9	158.7	1 200.2	
3 - Prospecting, mining and processing of nuclear materials	815.2	340.0	408.6	835.2	-	158.3	2 557.3	
4 - Nuclear engineering and technology	160.0	657.5	913.7	829.4	17.0	433.4	3 011.0	
Application of isotopes and radiation in	5 - Agriculture	1 506.2	917.0	395.6	907.0	-	546.8	4 272.6
	6 - Medicine	473.5	766.5	124.6	574.2	18.0	250.2	2 207.0
	7 - Biology	29.2	29.3	198.4	29.2	-	-	286.1
	8 - Industry and Hydrology	379.1	757.8	59.0	524.4	4.4	-	1 724.7
9 - Safety in nuclear energy	484.1	621.9	398.8	411.8	5.1	393.3	2 315.0	
Total	5 061.6	5 805.3	3 409.4	5 708.7	106.8	2 913.9	23 005.7	

FIGURE 5D

DISTRIBUTION OF TECHNICAL CO-OPERATION EXPENDITURES
BY SOURCE AND REGION: 1982
(in thousands of dollars)

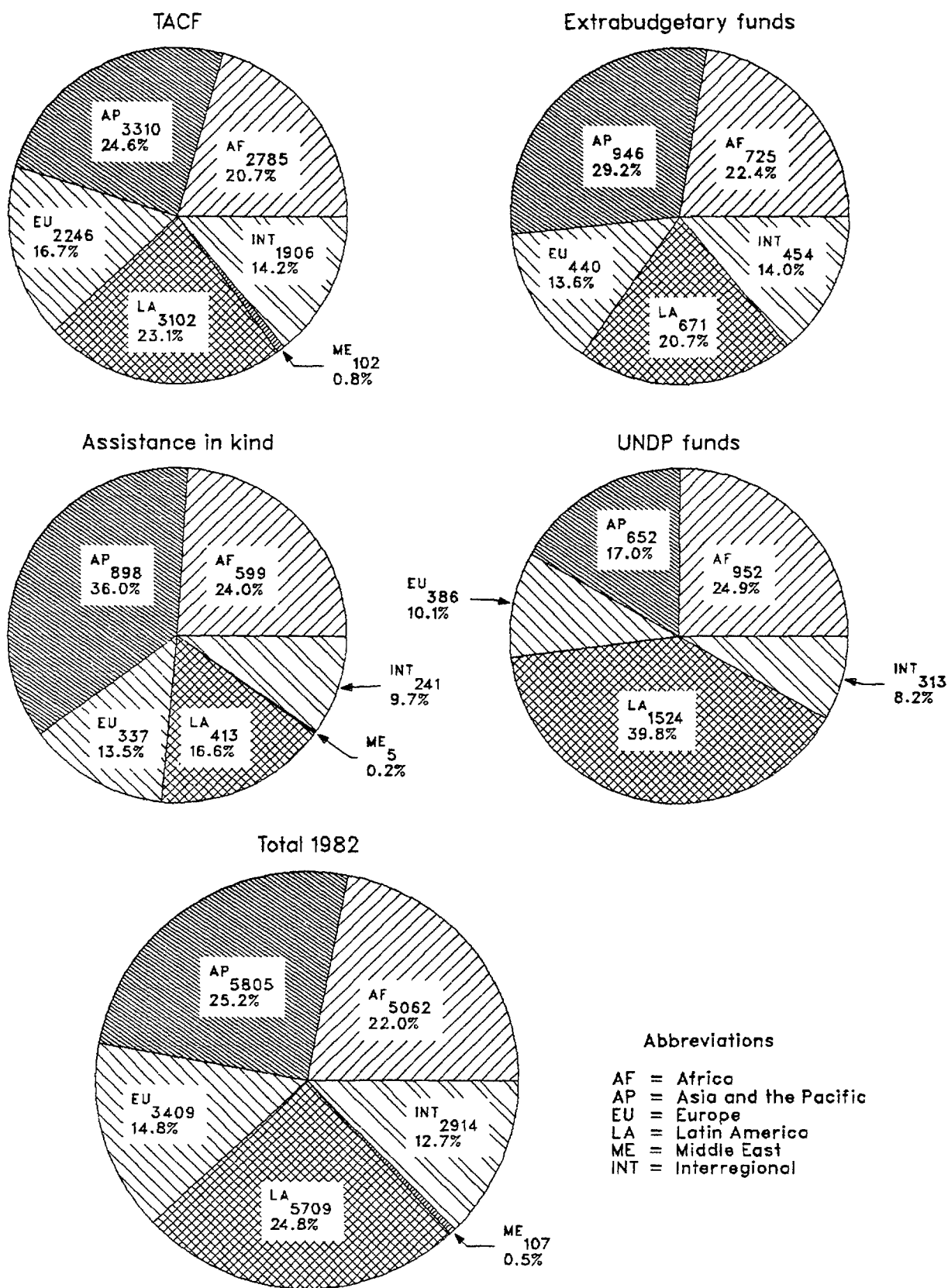


FIGURE 6

UTILIZATION OF THE TECHNICAL ASSISTANCE AND CO-OPERATION FUND
(status at year-end)

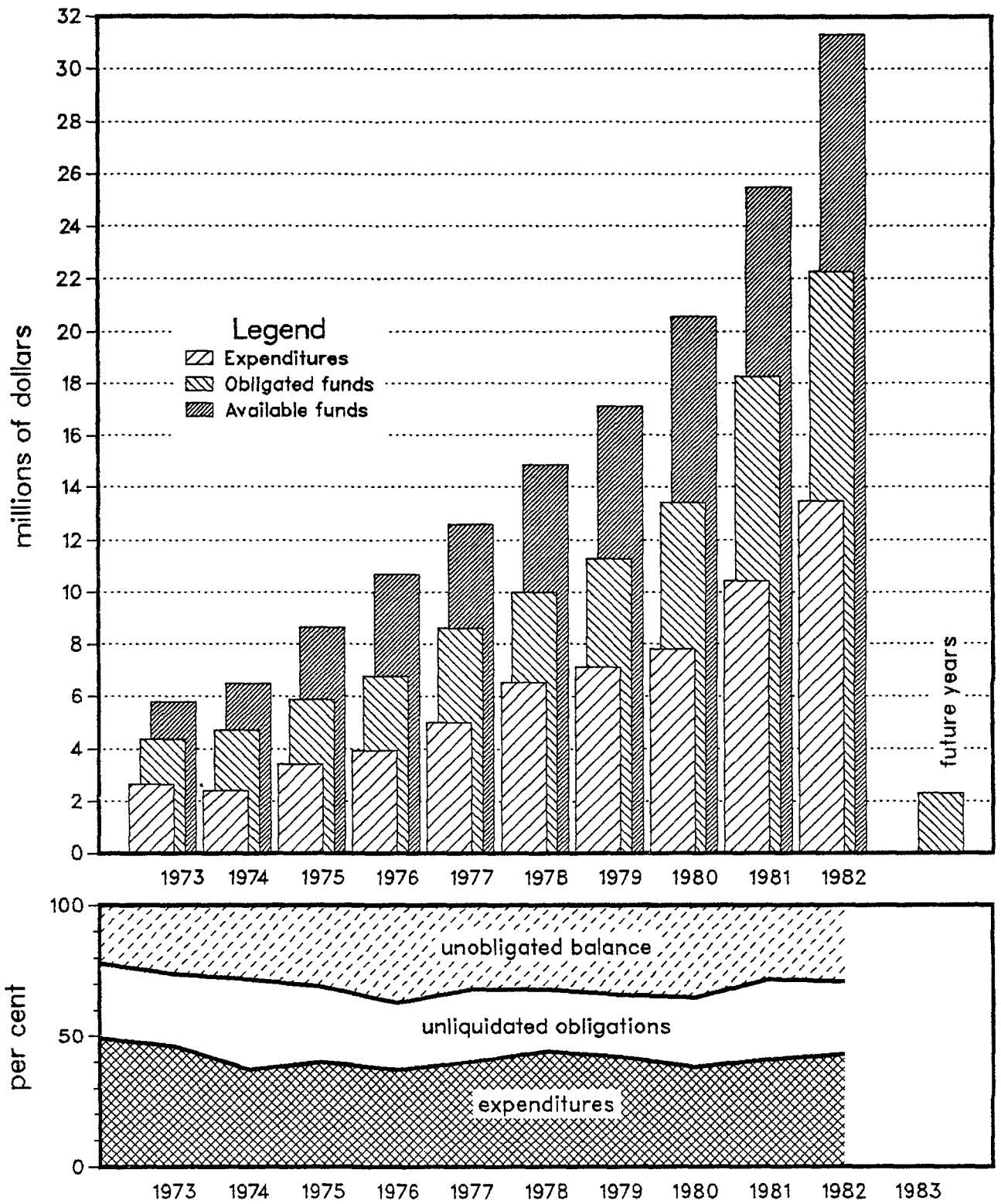


TABLE 1

AVAILABLE RESOURCES: 1973-1982
(in thousands of dollars)

Year	Technical Assistance and Co-operation Fund				Other Agency resources			UNDP	GRAND TOTAL (4+5)
	Voluntary contributions		Miscellaneous income (1c)	Sub-total (1)	Extrabudgetary funds (2)	Assistance in kind (3)	Agency (1+2+3) (4)		
	Convertible currency (1a)	Non-convertible currency (1b)							
1973	2 290	557	278	3 125	251	1 039	4 415	1 964	6 379
1974	2 424	661	263	3 348	369	1 078	4 795	3 082	7 877
1975	3 206	1 013	320	4 539	106	942	5 587	3 942	9 529
1976	3 982	1 080	430	5 492	729	1 021	7 242	3 002	10 244
1977	4 307	1 142	513	5 962	2 147	1 284	9 393	2 836	12 229
1978	5 090	1 362	670	7 122	2 860	1 987	11 969	3 205	15 174
1979	6 448	1 614	740	8 802	2 635	2 015	13 452	6 066	19 518
1980	7 977	2 083	572	10 632	2 673	2 628	15 933	5 018	20 951
1981	9 843	2 181	902	12 926	3 624	2 788	19 338	5 186	24 524
1982	12 108	2 789	1 102	15 999	4 474	2 493	22 966	4 631	27 597
1973- 1982	57 675	14 482	5 790	77 947	19 868	17 275	115 090	38 932	154 022

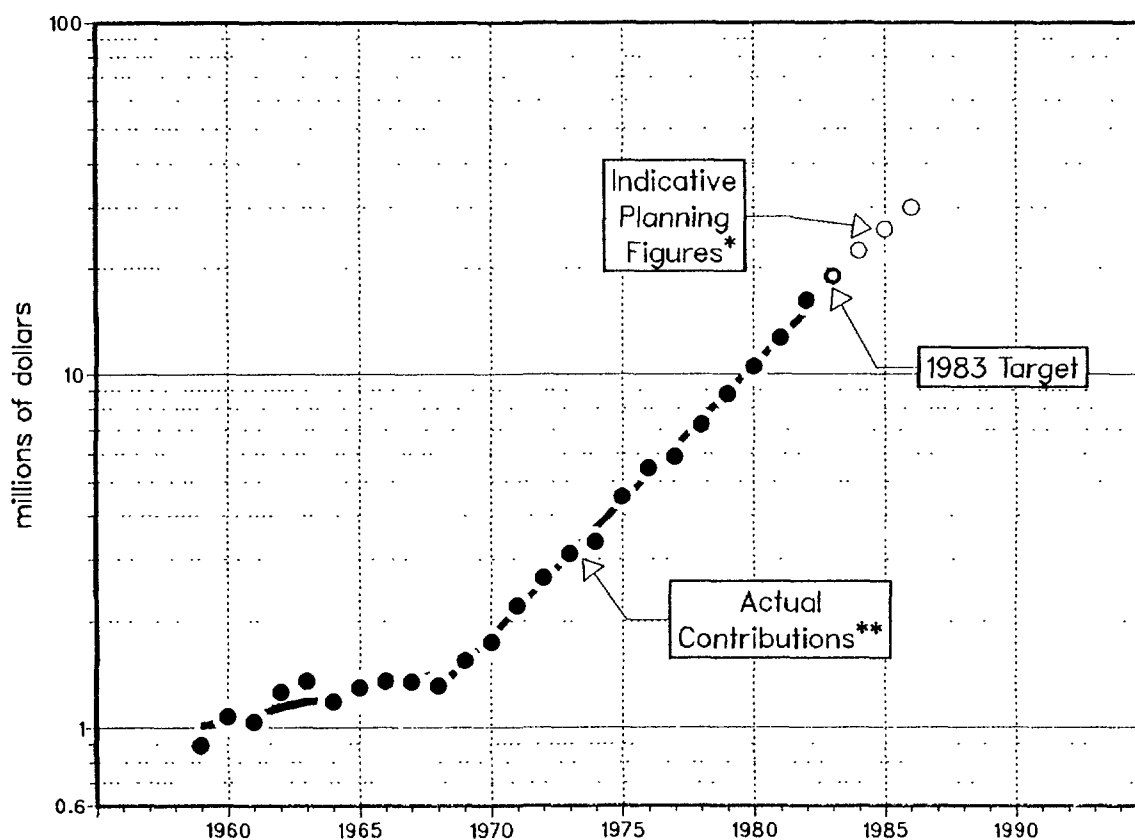
TABLE 2

TECHNICAL ASSISTANCE AND CO-OPERATION FUND: 1973-1982

Year	Target for voluntary contributions to the Technical Assistance and Co-operation Fund	Amount pledged	Amount actually made available for technical co-operation by programme year ^{a/}
1973	3 000 000	2 847 012	3 124 497
1974	3 000 000	3 084 761	3 347 781
1975	4 500 000	4 219 391	4 539 759
1976	5 500 000	5 061 957	5 492 167
1977	6 000 000	5 449 466	5 962 688
1978	7 000 000	6 451 332	7 121 508
1979	8 500 000	8 062 513	8 802 221
1980	10 500 000	10 059 733	10 632 033
1981	13 000 000	12 023 711	12 925 695
1982	16 000 000	14 896 675	15 998 527

^{a/} Funds from voluntary contributions are supplemented by miscellaneous income; this explains why the amounts shown as actually made available exceed the amounts pledged and, in some years (1973-1975 and 1978-1980), the targets themselves.

Technical Assistance and Co-operation Fund Voluntary Contributions



* as approved by the Board of Governors

** including Miscellaneous Receipts

TABLE 3A

EXPERTS AND LECTURERS BY PLACE OF ORIGIN: 1982

Place of origin	Total individuals	Assignments				TOTAL
		UNDP		Agency		
		Experts	Lecturers	Experts	Lecturers	
Argentina	13	10	-	8	6	24
Australia	15	6	2	9	2	19
Austria	10	1	-	2	7	10
Bangladesh	3	-	-	3	-	3
Belgium	6	2	-	2	3	7
Bolivia	1	-	-	1	-	1
Brazil	12	2	-	12	1	15
Canada	12	3	1	9	-	13
Colombia	4	1	-	3	-	4
Costa Rica	2	-	-	-	2	2
Czechoslovakia	9	1	-	6	3	10
Denmark	6	-	-	6	-	6
Dominican Republic	1	-	-	-	1	1
Ecuador	3	-	-	3	-	3
Egypt	6	-	-	8	-	8
Finland	4	-	-	4	-	4
France	56	1	1	21	37	60
German D.R.	5	-	-	1	4	5
Germany, F.R.	56	9	-	37	17	63
Greece	2	-	-	2	-	2
Hungary	11	-	-	16	2	18
India	31	3	10	19	2	34
Indonesia	4	3	-	5	-	8
Israel	1	-	-	1	-	1
Italy	17	2	6	10	4	22
Japan	16	2	3	9	4	18
Korea, R.	3	-	-	3	-	3
Malaysia	6	2	-	6	1	9
Mexico	7	-	-	4	3	7
Netherlands	3	-	-	2	1	3
Norway	2	3	-	1	-	4
Pakistan	3	-	-	3	-	3
Peru	6	-	-	7	-	7
Philippines	3	1	-	3	-	4
Poland	12	-	-	11	2	13
Spain	17	2	2	9	8	21
Sri Lanka	2	-	-	4	-	4
Sweden	12	-	-	10	5	15
Switzerland	5	-	-	4	2	6
Thailand	2	1	-	2	-	3
Turkey	5	-	-	6	1	7
USSR	1	-	-	1	-	1
UK	32	9	4	24	9	46
USA	86	7	4	72	15	98
Uruguay	3	-	-	3	-	3
Yugoslavia	10	1	-	10	3	14
IAEA	109	14	1	190	88	293
Other international organizations	7	-	-	-	7	7
TOTAL	642	86	34	572	240	932

TABLE 3B

TRAINEES IN THE FIELD BY PLACE OF STUDY: 1982

Place of study	UNDP		Agency			TOTAL
	Fellows	Training course participants	Fellows	Training course participants	Scientific visitors	
Argentina	4	-	4	8	1	17
Australia	1	-	9	15	1	26
Austria	4	-	14	56	-	74
Bangladesh	-	36	-	-	-	36
Belgium	1	-	6	37	-	44
Brazil	4	-	5	-	1	10
Bulgaria	-	-	1	13	-	14
Canada	2	-	13	-	1	16
Chile	-	-	1	-	-	1
Colombia	-	-	2	-	-	2
Costa Rica	-	-	1	-	-	1
Czechoslovakia	-	-	7	44	-	51
Denmark	-	-	5	-	3	8
Egypt	-	-	1	-	-	1
Finland	-	-	1	-	1	2
France	5	-	30	65	7	107
German D.R.	-	-	4	40	3	47
Germany, F.R.	5	-	48	93	13	159
Ghana	-	24	-	-	-	24
Greece	-	-	-	20	-	20
Hungary	-	-	11	65	3	79
India	-	-	3	-	3	6
Indonesia	-	8	-	29	-	37
Israel	-	-	1	-	-	1
Italy	2	-	13	-	1	16
Japan	-	22	6	-	-	28
Kenya	-	-	1	-	1	2
Madagascar	-	-	-	19	-	19
Malaysia	-	-	1	-	-	1
Mexico	-	-	1	21	4	26
Netherlands	-	-	17	-	2	19
Peru	-	-	-	13	-	13
Philippines	-	-	-	29	1	30
Poland	-	-	6	-	-	6
Romania	-	-	4	-	-	4
Singapore	-	15	-	-	-	15
Spain	5	-	15	19	3	42
Sweden	-	-	9	-	2	11
Switzerland	-	-	-	-	1	1
Thailand	-	11	-	14	-	25
Turkey	-	-	1	-	-	1
USSR	-	-	5	51	-	56
UK	3	-	64	20	7	94
USA	7	-	169	112	6	294
Uruguay	1	-	1	-	1	3
Yugoslavia	1	-	-	-	2	3
IAEA	1	-	29	21	13	64
Other international organizations	-	-	4	-	3	7
TOTAL	46	116	513	804	84	1563 ^{a/}

^{a/} The difference between the number of trainees (1295) and the number of places of study (1563) is due to the fact that a number of fellows, training course participants and scientific visitors went to more than one country/place.

TABLE 4

DISTRIBUTION OF TECHNICAL CO-OPERATION EXPENDITURES BY TYPE: 1978-1982
(in thousands of dollars)

Year and source	Experts		Equipment		Fellowships		Scientific visits		Training courses		Intercountry projects		Sub-contracts		TOTAL		Assistance outstanding as at 31 December 1982		TOTAL (8+9+10)
	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	(10)	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	\$	
1978																			
UNDP funds	1 182.5	40.0	1 268.6	43.0	341.7	11.6	-	-	36.5	1.2	-	-	124.7	4.2	2 954.0	100.0	-	-	2 954.0
Agency funds	1 862.9	28.5	2 978.5	45.6	704.8	10.8	101.9	1.6	787.3	12.1	92.1	1.4	-	-	6 527.5	100.0	-	-	6 527.5
Extrabudgetary funds	275.4	16.2	1 115.1	65.7	137.1	8.1	4.6	0.3	164.7	9.7	-	-	-	-	1 696.9	100.0	-	-	1 696.9
Assistance in kind	22.0	1.1	51.4	2.6	1 685.4	84.8	7.3	0.4	220.7	11.1	-	-	-	-	1 986.8	100.0	-	-	1 986.8
TOTAL	3 342.8	25.4	5 413.6	41.1	2 869.0	21.8	113.8	0.9	1 209.2	9.2	92.1	0.7	124.7	0.9	13 165.2	100.0	-	-	13 165.2
1979																			
UNDP funds	1 286.0	31.7	1 808.9	44.6	306.8	7.5	-	-	47.4	1.2	4.9	0.1	605.6	14.9	4 059.6	100.0	-	-	4 059.6
Agency funds	1 782.8	25.0	2 726.5	38.3	823.3	11.5	125.0	1.8	1 618.8	22.7	47.5	0.7	-	-	7 123.9	100.0	-	-	7 123.9
Extrabudgetary funds	378.9	13.5	1 784.3	63.9	339.9	12.2	3.1	0.1	259.0	9.3	-	-	28.6	1.0	2 793.8	100.0	-	-	2 793.8
Assistance in kind	67.7	3.4	24.8	1.2	1 687.5	83.7	5.5	0.3	229.3	11.4	-	-	-	-	2 014.8	100.0	-	-	2 014.8
TOTAL	3 515.4	22.0	6 344.5	39.7	3 157.5	19.7	133.6	0.8	2 154.5	13.5	52.4	0.3	634.2	4.0	15 992.1	100.0	-	-	15 992.1
1980																			
UNDP funds	1 574.4	26.7	3 089.8	52.4	608.2	10.3	-	-	104.8	1.8	102.3	1.8	413.9	7.0	5 893.4	100.0	-	-	5 893.4
Agency funds	1 999.1	25.6	3 070.1	39.3	1 295.8	16.6	103.1	1.3	1 327.9	17.0	17.7	0.2	-	-	7 813.7	100.0	-	-	7 813.7
Extrabudgetary funds	479.0	19.2	1 412.3	56.5	416.3	16.6	14.3	0.6	170.2	6.8	7.4	0.3	-	-	2 499.5	100.0	-	-	2 499.5
Assistance in kind	88.0	3.3	59.6	2.3	2 358.6	89.8	2.3	0.1	119.2	4.5	-	-	-	-	2 627.7	100.0	-	-	2 627.7
TOTAL	4 140.5	22.0	7 631.8	40.5	4 678.9	24.8	119.7	0.6	1 722.1	9.2	127.4	0.7	413.9	2.2	18 834.3	100.0	-	-	18 834.3
1981																			
UNDP funds	1 555.8	31.1	1 940.7	38.9	340.8	6.8	-	-	23.7	0.5	1 043.9	20.9	88.8	1.8	4 993.7	100.0	-	-	4 993.7
Agency funds	2 205.1	21.1	4 964.3	47.6	1 216.9	11.6	154.0	1.5	1 813.9	17.4	82.3	0.8	-	-	10 436.5	100.0	-	-	10 436.5
Extrabudgetary funds	517.5	18.9	1 636.5	59.7	236.9	8.6	4.0	0.2	326.9	11.9	1.1	0.0	19.2	0.7	2 742.1	100.0	-	-	2 742.1
Assistance in kind	121.5	4.4	-	-	2 551.5	91.5	-	-	104.1	3.7	10.9	0.4	-	-	2 788.0	100.0	-	-	2 788.0
TOTAL	4 399.9	21.0	8 541.5	40.8	4 346.1	20.7	158.0	0.8	2 268.6	10.8	1 138.2	5.4	108.0	0.5	20 960.3	100.0	-	-	20 960.3
1982																			
UNDP funds	1 105.0	28.9	1 686.0	44.1	196.8	5.1	-	-	313.0	8.2	362.8	9.5	163.0	4.2	3 826.6	100.0	3 119.1	-	6 945.7
Agency funds	2 681.5	19.9	6 886.6	51.2	1 539.4	11.5	112.4	0.8	1 810.9	13.5	403.7	3.0	16.3	0.1	13 450.8	100.0	11 098.8	-	24 549.6
Extrabudgetary funds	523.2	16.2	1 936.0	59.8	177.6	5.5	6.4	0.2	335.1	10.4	241.7	7.4	15.3	0.5	3 235.3	100.0	1 504.9	-	4 740.2
Assistance in kind	93.8	3.8	20.0	0.8	2 110.8	84.7	-	-	267.1	10.7	1.3	0.0	-	-	2 493.0	100.0	-	918.9	3 411.9
TOTAL	4 403.5	19.1	10 528.6	45.8	4 024.6	17.5	118.8	0.5	2 726.1	11.9	1 009.5	4.4	194.6	0.8	23 005.7	100.0	15 722.8	918.9	39 647.4
1978-1982																			
UNDP funds	6 703.7	30.8	9 794.0	45.1	1 794.3	8.3	-	-	525.4	2.4	1 513.9	7.0	1 396.0	6.4	21 727.3	100.0	3 119.1	-	24 846.4
Agency funds	10 531.4	23.2	20 626.0	45.5	5 580.2	12.3	596.4	1.3	7 358.8	16.2	643.3	1.4	16.3	0.1	45 352.4	100.0	11 098.8	-	56 451.2
Extrabudgetary funds	2 174.0	16.8	7 884.2	60.8	1 307.8	10.1	32.4	0.2	1 255.9	9.7	250.2	1.9	63.1	0.5	12 967.6	100.0	1 504.9	-	14 472.5
Assistance in kind	393.0	3.3	155.8	1.3	10 393.8	87.3	15.1	0.1	940.4	7.9	12.2	0.1	-	-	11 910.3	100.0	-	918.9	12 829.2
GRAND TOTAL	19 802.1	21.5	38 460.0	41.8	19 076.1	20.8	643.9	0.7	10 080.5	11.0	2 419.6	2.6	1 475.4	1.6	91 957.6	100.0	15 722.8	918.9	108 599.3

TABLE 5A

STATUS OF THE TECHNICAL ASSISTANCE AND CO-OPERATION FUND BY
PROGRAMME YEAR AND YEAR OF EXPENDITURE
AS AT 31 DECEMBER 1982
(in thousands of dollars)

Programme year	Funds made available	Year of expenditure											Total expenditures 1958-1982	Unliquidated obligations	Earmarkings	Balance
		1958-1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982				
1958-1972	19 866	17 140	1 718	564	224	95	70	2	-	1	-	-	19 814	-	-	52
1973	3 125	-	958	1 114	616	229	102	45	11	4	-	-	3 079	-	-	46
1974	3 348	-	-	735	1 373	657	287	93	47	24	52	69	3 337	4	94	(87)
1975	4 539	-	-	-	1 211	1 474	850	359	100	66	102	4	4 166	-	57	316
1976	5 492	-	-	-	-	1 500	1 917	1 141	356	111	410	16	5 451	20	52	(31)
1977	5 962	-	-	-	-	-	1 771	2 292	1 237	315	108	53	5 776	25	64	97
1978	7 122	-	-	-	-	-	-	2 595	2 655	775	377	170	6 572	32	344	174
1979	8 802	-	-	-	-	-	-	-	2 718	3 135	1 495	632	7 980	131	323	368
1980	10 632	-	-	-	-	-	-	-	-	3 383	3 929	1 798	9 110	887	815	(180)
1981	12 926	-	-	-	-	-	-	-	-	-	3 963	4 503	8 466	2 285	1 569	606
1982	15 999	-	-	-	-	-	-	-	-	-	-	6 206	6 206	5 429	5 728	(1 364)
TOTAL	97 813	17 140	2 676	2 413	3 424	3 955	4 997	6 527	7 124	7 814	10 436	13 451	79 957	8 813 ^{a/}	9 046 ^{b/}	(3)

^{a/} Does not include unliquidated obligations totalling \$2 286 000 for future-year components of multi-year projects.
^{b/} The difference between the total earmarkings of \$9 046 000 and the unobligated balance of \$6 757 000 in respect of the Technical Assistance and Co-operation Fund (see Statement V.A of the Agency's Accounts for 1982), namely \$2 289 000, is the sum of \$2 286 000 (mentioned in the above footnote) plus \$3 000, which is the cumulative programme deficit as at 31 December 1982.

TABLE 5B

STATUS OF EXTRABUDGETARY FUNDS BY
PROGRAMME YEAR AND YEAR OF EXPENDITURE
AS AT 31 DECEMBER 1982
(in thousands of dollars)

Programme year	Funds made available	Year of expenditure											Total expenditures 1958-1982	Unliquidated obligations	Unobligated balance
		1958-1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982			
1958-1972	498	285	34	28	18	9	22	5	5	2	33	33	474	20	4
1973	251	-	53	79	96	4	19	-	-	-	-	-	251	-	-
1974	369	-	-	63	102	173	12	19	-	-	-	-	369	-	-
1975	106	-	-	-	37	10	59	-	-	-	-	-	106	-	-
1976	729	-	-	-	-	162	197	262	88	1	-	19	729	-	-
1977	2 147	-	-	-	-	-	329	998	568	98	38	33	2 064	14	69
1978	2 860	-	-	-	-	-	-	413	1 325	1 041	53	12	2 844	15	1
1979	2 635	-	-	-	-	-	-	-	808	1 006	465	149	2 428	93	114
1980	2 673	-	-	-	-	-	-	-	-	351	1 203	638	2 192	202	279
1981	3 624	-	-	-	-	-	-	-	-	-	950	1 265	2 215	367	1 042
1982	4 474 ^{a/}	-	-	-	-	-	-	-	-	-	-	1 086	1 086	794	2 594
TOTAL	20 366	285	87	170	253	358	638	1 697	2 794	2 499	2 742	3 235	14 758	1 505	4 103

^{a/} Does not include funds totalling \$4 871 341 in respect of technical assistance activities programmed for 1983, namely \$4 200 000 from Italy, \$493 976 from Austria and \$177 365 from Sweden.

TABLE 5C

EXTRABUDGETARY FUNDS FOR TECHNICAL CO-OPERATION ACTIVITIES BY DONOR
AS AT 31 DECEMBER 1982

Country	Funds available 1 January 1982	New funds in 1982	Total funds available	Expenditures in 1982	Unliquidated obligations at year-end	Unobligated balance
A. Funds for activities in countries other than donor						
Australia	-	7 571	7 571	2 085	915	4 571
Austria	-	493 976	493 976	-	-	493 976
Belgium	73 952 ^{a/}	40 816	114 768	69 886	-	44 882
Canada	59 087	-	59 087	16 818	-	42 269
Denmark	12 958	-	12 958	778	-	12 180
Finland	26 275	117 778	144 053	76 792	31 290	35 971
France	-	20 000	20 000	-	-	20 000
Germany, F.R.	708 064	679 945	1 388 009	508 625	177 200	702 184
Italy	551 000	4 551 000	5 102 000	320 768	285 499	4 495 733
Japan	69 318	103 641	172 959	80 936	30 803	61 220
Saudi Arabia	-	50 000	50 000	24 226	-	25 774
Sweden	1 427 638 ^{a/}	566 083	1 993 721	488 060	393 687	1 111 974
USSR	56 990 ^{a/}	-	56 990	33 327	19 340	4 323
UK	182 301	300 000	482 301	136 398	119 772	226 131
USA	1 722 274	1 370 000	3 092 274	1 424 816	432 657	1 234 801
Sub-total	4 889 857	8 300 810	13 190 667	3 183 515	1 491 163	8 515 989
B. Funds for activities in donor country						
Brazil	(7 319)	20 000	12 681	7 079	13 741	(8 139)
Ecuador	132	-	132	-	-	132
Iran I.R.	-	5 085	5 085	-	-	5 085
Libyan A.J.	947	-	947	879	-	68
Madagascar	771	-	771	771	-	-
Nigeria	27 739	-	27 739	-	-	27 739
Portugal	40 000	-	40 000	40 000	-	-
Spain	102	2 999	3 101	3 101	-	-
Thailand	-	433 800	433 800	-	-	433 800
Sub-total	62 372	461 884	524 256	51 830	13 741	458 685
TOTAL	4 952 229	8 762 694	13 714 923	3 235 345	1 504 904	8 974 674^{b/}

^{a/} Includes exchange loss during 1982.

^{b/} Includes funds totalling \$4 871 341 in respect of technical assistance activities programmed for 1983, namely \$493 976 from Austria, \$4 200 000 from Italy and \$177 365 from Sweden.

TABLE 6A

RECIPIENTS OF EXPERT SERVICES: 1982

Recipient	Source of funds					
	UNDP		Agency		TOTAL	
	(1)	(2)	(1)	(2)	(1)	(2)
Afghanistan	-	-	1	1.0	1	1.0
Algeria	-	-	6	4.0	6	4.0
Argentina	12	14.5	2	6.0	14	20.5
Bangladesh	-	-	16	17.5	16	17.5
Bolivia	-	-	13	8.5	13	8.5
Brazil	6	12.0	33	43.0	39	55.0
Bulgaria	-	-	1	0.5	1	0.5
Burma	-	-	2	9.0	2	9.0
Chile	-	-	11	23.0	11	23.0
Colombia	4	26.5	11	6.5	15	33.0
Costa Rica	-	-	4	2.0	4	2.0
Cuba	-	-	8	3.5	8	3.5
Cyprus	-	-	1	1.0	1	1.0
Dem. P.R. Korea	-	-	3	0.5	3	0.5
Dominican Republic	-	-	4	1.5	4	1.5
Ecuador	3	15.0	10	17.0	13	32.0
Egypt	-	-	36	20.0	36	20.0
El Salvador	-	-	1	1.0	1	1.0
Ethiopia	2	3.0	-	-	2	3.0
Ghana	-	-	5	6.0	5	6.0
Greece	-	-	4	9.5	4	9.5
Guatemala	-	-	1	4.0	1	4.0
Iceland	-	-	4	3.0	4	3.0
India	-	-	5	7.0	5	7.0
Indonesia	3	4.0	12	19.0	15	23.0
Iran I.R.	-	-	1	1.0	1	1.0
Ivory Coast	-	-	2	0.5	2	0.5
Jamaica	-	-	6	3.0	6	3.0
Jordan	-	-	1	0.5	1	0.5
Kenya	-	-	6	21.0	6	21.0
Korea, R.	-	-	21	28.5	21	28.5
Lebanon	-	-	1	0.5	1	0.5
Libyan A.J.	-	-	6	7.0	6	7.0
Madagascar	4	48.0	3	10.5	7	58.5
Malaysia	-	-	15	17.0	15	17.0
Mali	-	-	9	10.0	9	10.0
Mexico	-	-	22	43.5	22	43.5
Mongolia	-	-	4	6.0	4	6.0
Morocco	-	-	8	16.0	8	16.0
Niger	-	-	4	2.5	4	2.5

Recipient	Source of funds					
	UNDP		Agency		TOTAL	
	(1)	(2)	(1)	(2)	(1)	(2)
Nigeria	3	11.0	15	36.0	18	47.0
Pakistan	-	-	3	3.0	3	3.0
Panama	-	-	3	7.5	3	7.5
Paraguay	-	-	3	4.0	3	4.0
Peru	23	22.0	19	23.0	42	45.0
Philippines	-	-	11	13.0	11	13.0
Poland	-	-	4	2.0	4	2.0
Portugal	-	-	9	4.5	9	4.5
Romania	2	0.5	4	1.5	6	2.0
Saudi Arabia	-	-	2	0.5	2	0.5
Senegal	5	5.5	3	4.0	8	9.5
Sierra Leone	-	-	4	7.0	4	7.0
Singapore	-	-	3	3.0	3	3.0
Sri Lanka	-	-	10	19.0	10	19.0
Sudan	-	-	3	2.0	3	2.0
Syrian A.R.	-	-	5	1.0	5	1.0
Thailand	-	-	15	10.5	15	10.5
Tunisia	-	-	4	7.0	4	7.0
Turkey	-	-	15	9.5	15	9.5
U.R. Cameroon	-	-	1	0.5	1	0.5
U.R. Tanzania	-	-	3	8.0	3	8.0
Uruguay	-	-	10	9.0	10	9.0
Venezuela	-	-	9	19.0	9	19.0
Viet Nam	-	-	8	9.5	8	9.5
Yugoslavia	3	1.5	17	7.5	20	9.0
Zaire	1	0.5	5	7.5	6	8.0
Zambia	-	-	5	14.0	5	14.0
Sub-total	71	164.0	496	614.5	567	778.5
Intercountry projects	15	6.5	76	57.5	91	64.0
Training courses	34	44.0	240	76.5	274	120.5
Sub-total	49	50.5	316	134.0	365	184.5
GRAND TOTAL	120	214.5	812	748.5	932	963.0

(1) Number of expert assignments. (2) Number of man-months served.

TABLE 6B

RECIPIENTS OF TRAINING ABROAD: 1982

Recipient	UNDP				Agency							
	Fellows		Training course participants		Fellows		Scientific visitors		Training course participants		TOTAL	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Afghanistan	-	-	1	1.0	-	-	-	-	1	1.5	2	2.5
Albania	-	-	-	-	4	20.5	-	-	-	-	4	20.5
Algeria	-	-	-	-	3	11.5	-	-	4	3.5	7	15.0
Argentina	1	1.0	-	-	-	-	-	-	-	-	1	1.0
Bangladesh	-	-	3	2.0	19	128.5	5	3.0	2	2.0	29	135.5
Benin	-	-	1	2.0	-	-	-	-	1	2.0	2	4.0
Bolivia	-	-	-	-	2	5.0	-	-	8	9.0	10	14.0
Brazil	4	15.0	-	-	21	93.5	-	-	18	20.5	43	129.0
Bulgaria	4	12.0	-	-	18	88.0	-	-	18	19.0	40	119.0
Burma	-	-	-	-	1	1.0	-	-	1	1.0	2	2.0
Chile	4	4.0	-	-	4	15.0	1	0.5	6	6.5	15	26.0
China	-	-	6	8.0	-	-	-	-	1	1.0	7	9.0
Colombia	1	1.0	-	-	9	62.5	1	0.5	7	14.5	18	78.5
Costa Rica	-	-	1	1.0	4	11.0	-	-	6	13.0	11	25.0
Cuba	-	-	-	-	5	7.5	-	-	5	6.0	10	13.5
Cyprus	-	-	-	-	2	15.5	-	-	-	-	2	15.5
Czechoslovakia	-	-	-	-	9	50.0	2	1.5	20	22.5	31	74.0
Dem. P.R. Korea	-	-	-	-	11	78.0	-	-	6	5.0	17	83.0
Dominican Republic	-	-	-	-	-	-	-	-	2	1.0	2	1.0
Ecuador	-	-	-	-	6	11.5	-	-	11	19.0	17	30.5
Egypt	4	11.0	1	2.0	20	96.0	5	1.5	30	32.0	60	142.5
El Salvador	-	-	-	-	4	37.0	-	-	3	10.0	7	47.0
Ethiopia	2	7.0	2	3.0	5	32.5	-	-	-	-	9	42.5
Gabon	-	-	-	-	-	-	-	-	3	3.5	3	3.5
Ghana	-	-	1	1.5	19	176.0	1	0.5	5	5.5	26	183.5
Greece	-	-	-	-	7	31.0	2	1.0	2	2.0	11	34.0
Guatemala	-	-	-	-	-	-	-	-	4	4.5	4	4.5
Honduras	-	-	-	-	-	-	-	-	3	3.0	3	3.0
Hungary	-	-	-	-	14	84.0	2	2.0	9	9.0	25	95.0
Iceland	-	-	-	-	3	32.0	-	-	1	1.0	4	33.0
India	-	-	18	19.5	8	43.5	2	1.0	20	25.0	48	89.0
Indonesia	-	-	7	6.0	14	67.0	-	-	16	15.5	37	88.5
Iran I.R.	-	-	-	-	1	0.5	-	-	2	1.5	3	2.0
Iraq	-	-	-	-	1	4.5	1	1.0	7	8.0	9	13.5
Ivory Coast	-	-	-	-	-	-	-	-	2	2.5	2	2.5
Jamaica	-	-	-	-	-	-	-	-	2	5.0	2	5.0
Jordan	-	-	-	-	-	-	-	-	6	6.0	6	6.0
Kenya	-	-	1	1.5	9	67.5	-	-	4	2.5	14	71.5
Korea, R.	-	-	4	1.5	13	76.0	2	0.5	18	16.0	37	94.0
Lebanon	-	-	-	-	-	-	-	-	2	2.5	2	2.5
Libyan A.J.	-	-	-	-	1	8.5	-	-	11	13.5	12	22.0
Madagascar	2	4.0	4	7.0	2	9.5	-	-	5	5.5	13	26.0
Malaysia	-	-	8	5.0	9	61.5	-	-	16	18.0	33	84.5
Mali	-	-	1	2.0	7	25.5	-	-	4	4.5	12	32.0
Mauritius	-	-	1	2.0	1	5.0	-	-	1	0.5	3	7.5
Mexico	-	-	2	2.5	6	23.5	1	1.0	16	18.0	25	45.0
Mongolia	-	-	-	-	-	-	-	-	1	2.0	1	2.0
Morocco	-	-	-	-	4	15.5	-	-	11	14.0	15	29.5
Nepal	-	-	2	2.5	-	-	-	-	1	1.0	3	3.5
Nicaragua	-	-	-	-	-	-	-	-	1	1.0	1	1.0
Niger	-	-	1	1.5	1	5.0	-	-	4	5.0	6	11.5
Nigeria	-	-	1	2.0	12	68.0	-	-	6	6.0	19	76.0
Pakistan	-	-	2	2.0	21	132.5	4	3.0	23	24.5	50	162.0
Panama	-	-	-	-	2	9.0	-	-	3	3.0	5	12.0
Paraguay	-	-	-	-	2	18.5	1	1.0	2	5.0	5	24.5
Peru	5	23.0	-	-	8	42.0	-	-	14	21.0	27	86.0
Philippines	6	18.5	4	3.5	13	82.5	1	0.5	27	24.5	51	129.5
Poland	-	-	-	-	15	94.0	2	1.0	12	13.0	29	108.0
Portugal	-	-	-	-	9	26.0	-	-	12	12.0	21	38.0
Romania	4	5.0	-	-	2	7.0	-	-	7	7.5	13	19.5

Recipient	UNDP				Agency						TOTAL	
	Fellows		Training course participants		Fellows		Scientific visitors		Training course participants		(1)	(2)
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)		
Saudi Arabia	-	-	-	-	-	-	-	-	1	2.0	1	2.0
Senegal	-	-	1	1.0	1	2.0	-	-	1	1.0	3	4.0
Sierra Leone	-	-	3	5.5	1	11.5	-	-	1	0.5	5	17.5
Singapore	-	-	2	1.0	-	-	-	-	2	1.0	4	2.0
Somalia	-	-	-	-	-	-	-	-	1	2.0	1	2.0
Spain	-	-	-	-	1	12.0	-	-	12	14.0	13	26.0
Sri Lanka	-	-	8	5.0	17	89.0	1	1.0	10	13.0	36	108.0
Sudan	-	-	-	-	14	78.0	-	-	7	8.5	21	86.5
Syrian A.R.	-	-	-	-	1	12.0	-	-	6	6.0	7	18.0
Thailand	-	-	9	4.5	38	250.0	-	-	21	26.0	68	280.5
Togo	-	-	1	2.0	-	-	-	-	-	-	1	2.0
Trinidad and Tobago	-	-	-	-	-	-	-	-	1	1.0	1	1.0
Tunisia	-	-	-	-	1	1.5	1	0.5	2	2.0	4	4.0
Turkey	-	-	-	-	23	161.0	3	1.0	16	17.0	42	179.0
Uganda	-	-	4	7.0	5	33.5	-	-	7	10.5	16	51.0
U.R. Cameroon	-	-	1	2.0	-	-	-	-	4	5.0	5	7.0
U.R. Tanzania	-	-	-	-	6	46.0	-	-	1	0.5	7	46.5
Uruguay	-	-	-	-	3	24.5	-	-	7	23.5	10	48.0
Venezuela	-	-	-	-	-	-	2	1.0	19	27.0	21	28.0
Viet Nam	-	-	-	-	11	81.0	-	-	15	20.5	26	101.5
Yugoslavia	3	1.0	-	-	20	87.0	-	-	28	30.5	51	118.5
Zaire	2	12.0	2	3.5	7	47.0	-	-	2	2.0	13	64.5
Zambia	-	-	-	-	9	66.0	1	1.0	2	2.0	12	69.0
Zimbabwe	-	-	1	2.0	-	-	-	-	-	-	1	2.0
TOTAL	42	114.5	104	112.5	509	2982.0	41	24.0	599	717.0	1295	3950.0

(1) Number of trainees. (2) Number of man-months of training received.

TABLE 7

FINANCIAL SUMMARY: 1982
(in thousands of dollars)

Recipient	Assistance provided, by type				Assistance provided, by source						Unliquidated obligations as at 31 December 1982	TOTAL (10)+(11)
	Experts	Equip-ment	Fellow-ships	TOTAL	UNDP	Convertible currency	Non-convertible currency	Extra-budgetary funds	In kind	TOTAL		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
Afghanistan	4.6	29.0	-	33.6	-	25.9	7.7	-	-	33.6	123.5	157.1
Albania	-	150.4	17.6	168.0	-	138.4	29.6	-	-	168.0	79.6	247.6
Algeria	31.3	93.6	8.5	133.4	-	123.0	3.1	-	7.3	133.4	105.4	238.8
Argentina	151.8	155.8	20.2	327.8	278.1	49.7	-	-	-	327.8	204.2	532.0
Bangladesh	75.7	266.5	191.5	533.7	7.0	257.1	22.6	134.9	112.1	533.7	279.3	813.0
Bolivia	54.1	227.8	9.1	291.0	-	150.3	114.4	24.1	2.2	291.0	55.0	346.0
Brazil	378.6	69.3	151.5	599.4	190.6	278.7	-	14.2	115.9	599.4	151.6	751.0
Bulgaria	9.9	217.8	131.2	358.9	130.8	138.7	3.6	-	85.8	358.9	96.4	455.3
Burma	31.7	128.4	1.1	161.2	-	108.7	51.4	-	1.1	161.2	181.4	342.6
Chile	130.2	70.9	33.3	234.4	25.0	198.9	-	-	10.5	234.4	87.2	321.6
Colombia	209.8	356.3	101.6	667.7	350.2	99.7	-	157.9	59.9	667.7	139.2	806.9
Costa Rica	10.6	103.7	19.4	133.7	-	59.3	55.9	6.7	11.8	133.7	23.8	157.5
Cuba	18.7	683.2	13.8	715.7	274.0	232.1	198.6	11.0	-	715.7	1 082.9	1 798.6
Cyprus	6.6	67.8	24.2	98.6	-	74.6	0.8	-	23.2	98.6	1.6	100.2
Czechoslovakia	-	103.5	62.6	166.1	-	53.5	103.4	-	9.2	166.1	606.3	772.4
Dem. P.R. Korea	6.4	301.6	92.5	400.5	-	198.4	122.5	8.0	71.6	400.5	19.9	420.4
Dominican Republic	9.4	17.7	-	27.1	-	16.3	10.8	-	-	27.1	64.6	91.7
Ecuador	162.7	364.1	17.9	544.7	95.0	166.6	231.8	21.1	30.2	544.7	721.2	1 265.9
Egypt	74.4	581.6	151.5	807.5	85.5	183.0	324.1	131.3	83.6	807.5	2 220.4	3 027.9
El Salvador	6.9	1.1	47.7	55.7	-	17.7	-	-	38.0	55.7	19.7	75.4
Ethiopia	16.0	20.2	42.6	78.8	42.8	23.8	-	-	12.2	78.8	102.9	181.7
Ghana	47.7	63.2	249.7	360.6	-	118.5	-	55.6	186.5	360.6	127.2	487.8
Greece	60.6	94.8	45.7	201.1	12.8	166.1	-	9.2	13.0	201.1	199.7	400.8
Guatemala	21.0	25.3	-	46.3	-	40.0	0.1	6.2	-	46.3	19.0	65.3
Hong Kong	-	2.0	-	2.0	-	2.0	-	-	-	2.0	-	2.0
Hungary	-	355.2	92.9	448.1	-	123.1	315.6	-	9.4	448.1	113.1	561.2
Iceland	14.2	8.1	40.6	62.9	-	38.1	-	-	24.8	62.9	12.1	75.0
India	32.9	83.5	62.3	178.7	-	30.5	-	136.7	11.5	178.7	153.3	332.0
Indonesia	119.9	136.0	86.6	342.5	30.0	153.0	10.1	92.4	57.0	342.5	296.9	639.4
Iran I.R.	8.2	7.0	2.8	18.0	3.4	14.6	-	-	-	18.0	35.6	53.6
Iraq	-	17.0	7.2	24.2	-	2.1	17.0	-	5.1	24.2	73.6	97.8
Israel	-	15.0	-	15.0	-	15.0	-	-	-	15.0	-	15.0
Ivory Coast	6.1	109.7	-	115.8	-	66.1	49.7	-	-	115.8	24.9	140.7
Jamaica	12.2	77.4	-	89.6	-	89.6	-	-	-	89.6	15.6	105.2
Jordan	13.3	25.8	-	39.1	-	39.1	-	-	-	39.1	9.9	49.0
Kenya	91.5	124.5	88.2	304.2	-	210.5	-	49.1	44.6	304.2	98.7	402.9
Korea, R.	163.3	148.4	103.2	414.9	-	263.3	-	72.6	79.0	414.9	188.6	603.5
Lebanon	0.7	-	-	0.7	-	0.7	-	-	-	0.7	29.8	30.5
Libyan A.J.	27.4	4.5	9.2	41.1	-	31.0	-	0.9	9.2	41.1	44.3	85.4
Madagascar	354.4	246.9	14.2	615.5	524.6	90.1	-	0.8	-	615.5	44.4	659.9
Malaysia	105.0	258.1	85.1	448.2	-	252.5	11.1	142.0	42.6	448.2	113.4	561.6
Mali	50.6	89.0	34.6	174.2	-	152.8	21.4	-	-	174.2	57.0	231.2
Mauritius	-	-	8.2	8.2	-	8.2	-	-	-	8.2	1.3	9.5
Mexico	205.0	57.1	27.8	289.9	-	203.4	-	71.8	14.7	289.9	146.6	436.5
Mongolia	29.4	150.5	-	179.9	-	146.1	33.8	-	-	179.9	139.8	319.7
Morocco	95.2	60.9	17.6	173.7	-	147.2	6.9	13.8	5.8	173.7	103.0	276.7
Niger	13.3	15.6	6.6	35.5	-	35.5	-	-	-	35.5	9.2	44.7
Nigeria	255.5	172.4	93.1	521.0	105.7	68.2	-	254.4	92.7	521.0	252.8	773.8
Pakistan	13.9	232.6	155.0	401.5	-	305.2	24.4	7.3	64.6	401.5	422.5	824.0
Panama	41.8	36.1	12.6	90.5	-	83.0	-	-	7.5	90.5	39.4	129.9
Paraguay	20.2	41.3	28.3	89.8	-	61.9	-	-	27.9	89.8	153.5	243.3
Peru	273.8	376.5	96.1	746.4	310.9	191.1	49.3	138.5	56.6	746.4	631.8	1 378.2
Philippines	88.9	283.6	173.2	545.7	241.8	128.9	17.8	39.9	117.3	545.7	581.3	1 127.0
Poland	7.0	149.9	98.7	255.6	-	245.5	4.2	-	5.9	255.6	1 080.6	1 336.2
Portugal	22.3	226.1	20.2	268.6	-	105.8	-	162.8	-	268.6	78.1	346.7
Romania	21.9	205.4	14.6	241.9	62.1	173.0	-	-	6.8	241.9	574.2	816.1
Saudi Arabia	3.7	-	-	3.7	-	3.7	-	-	-	3.7	10.2	13.9
Senegal	38.2	117.9	1.9	158.0	63.7	77.0	3.2	14.1	-	158.0	134.8	292.8
Sierra Leone	47.4	35.4	13.0	95.8	-	94.0	1.8	-	-	95.8	24.4	120.2
Singapore	4.5	114.5	0.3	119.3	-	99.3	-	20.0	-	119.3	133.3	252.6
Spain	22.8	-	10.8	33.6	-	30.5	-	3.1	-	33.6	3.4	37.0
Sri Lanka	79.3	156.2	126.8	362.3	7.2	227.6	27.4	48.6	51.5	362.3	116.7	479.0
Sudan	14.0	136.7	112.8	263.5	-	115.7	2.2	88.3	57.3	263.5	168.6	432.1
Syrian A.R.	6.7	8.5	8.4	23.6	-	22.7	0.9	-	-	23.6	42.1	65.7
Thailand	64.5	266.7	323.1	654.3	-	287.5	-	147.5	219.3	654.3	189.1	843.4

Recipient	Assistance provided, by type				Assistance provided, by source						Unliquidated obligations as at 31 December 1982	TOTAL (10)+(11)	
	Experts	Equip-ment	Fellow-ships	TOTAL	UNDP	Convertible currency	Non-convertible currency	Extra-budgetary funds	In kind	TOTAL			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)			(11)
Tunisia	53.3	149.4	3.2	205.9	-	74.8	19.8	111.3	-	205.9	26.7	232.6	
Turkey	46.7	268.4	209.0	524.1	-	312.5	0.5	80.9	130.2	524.1	102.4	626.5	
Uganda	-	-	44.9	44.9	-	36.0	-	-	8.9	44.9	25.4	70.3	
U.R. Cameroon	2.5	9.7	-	12.2	-	12.2	-	-	-	12.2	8.3	20.5	
U.R. Tanzania	57.4	79.2	53.4	190.0	-	148.6	16.2	-	25.2	190.0	27.6	217.6	
Uruguay	46.8	304.6	29.5	380.9	-	126.1	59.2	177.5	18.1	380.9	123.7	504.6	
Venezuela	137.3	12.9	5.5	155.7	-	155.2	0.5	-	-	155.7	127.4	283.1	
Viet Nam	45.2	221.8	113.9	380.9	-	182.2	122.3	14.3	62.1	380.9	82.9	463.8	
Yugoslavia	67.8	396.2	108.7	572.7	179.8	179.6	-	184.3	29.0	572.7	282.6	855.3	
Zaire	57.8	186.5	71.1	315.4	129.8	152.1	0.6	0.1	32.8	315.4	203.0	518.4	
Zambia	76.8	227.4	89.1	393.3	-	324.3	30.6	5.3	33.1	393.3	177.4	570.7	
Sub-total	4 479.3	10 601.7	4 137.5	19 218.5	3 150.8	9 057.7	2 126.9	2 658.5	2 224.6	19 218.5	14 247.3	33 465.8	
						<u>Intercountry projects</u>							
Asia and the Pacific	189.8	168.0	80.7	438.5	362.8	75.7	-	-	-	438.5	609.7	1 048.2	
Latin America	25.6	2.8	-	28.4	-	28.4	-	-	-	28.4	18.4	46.8	
Interregional	215.5	327.1	-	542.6	-	218.2	81.4	241.7	1.3	542.6	196.8	739.4	
						<u>Training courses</u>							
Africa	-	0.2	-	0.2	-	0.2	-	-	-	0.2	10.8	11.0	
Asia and the Pacific	106.8	30.9	36.9	174.6	-	85.1	-	81.5	8.0	174.6	94.5	269.1	
Latin America	53.1	57.6	70.7	181.4	-	120.5	-	41.6	19.3	181.4	100.3	281.7	
Interregional	569.0	293.8	1 507.1	2 369.9	313.0	1 169.3	435.8	212.0	239.8	2 369.9	430.1	2 800.0	
Sub-total	1 159.8	880.4	1 695.4	3 735.6	675.8	1 697.4	517.2	576.8	268.4	3 735.6	1 460.6	5 196.2	
Miscellaneous	17.4	28.2	6.0	51.6	-	51.6	-	-	-	51.6	14.9	66.5	
GRAND TOTAL	5 656.5	11 510.3	5 838.9	23 005.7	3 826.6	10 806.7	2 644.1	3 235.3	2 493.0	23 005.7	15 722.8	38 728.5	

TABLE 8

FINANCIAL SUMMARY: 1958-1982
(in thousands of dollars)

Recipient	Assistance provided, by type				Assistance provided, by source				
	Experts	Equip- ment	Fellow- ships	TOTAL	UNDP	Agency funds	Extra- budgetary funds ^{a/7}	In kind	TOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Afghanistan	348.5	255.2	120.5	724.2	92.9	549.5	-	81.8	724.2
Albania	52.4	559.5	63.3	675.2	118.4	536.3	-	20.5	675.2
Algeria	91.3	135.1	119.9	346.3	21.7	278.4	-	46.2	346.3
Argentina	2 722.8	1 698.6	1 106.8	5 528.2	3 327.6	1 647.7	17.5	535.4	5 528.2
Austria	62.0	13.8	120.7	196.5	-	132.6	-	63.9	196.5
Bangladesh	598.8	1 204.4	1 256.4	3 059.6	62.7	1 057.2	914.7	1 025.0	3 059.6
Bolivia	319.4	800.7	213.1	1 333.2	153.4	838.4	198.7	142.7	1 333.2
Brazil	3 903.2	2 993.0	1 611.1	8 507.3	5 608.9	1 983.5	290.7	624.2	8 507.3
Bulgaria	82.8	1 026.3	1 081.8	2 190.9	543.3	1 191.6	-	456.0	2 190.9
Burma	735.0	768.8	200.6	1 704.4	537.0	1 063.8	-	103.6	1 704.4
Ghad	116.3	30.6	-	146.9	146.9	-	-	-	146.9
Chile	2 272.9	1 880.5	1 086.7	5 240.1	3 597.7	1 279.7	-	362.7	5 240.1
Colombia	902.1	1 683.6	573.7	3 159.4	1 615.8	825.5	157.9	560.2	3 159.4
Costa Rica	310.4	558.9	157.3	1 026.6	-	630.2	220.3	176.1	1 026.6
Cuba	255.1	2 419.1	171.0	2 845.2	850.4	1 851.6	32.3	110.9	2 845.2
Cyprus	94.7	267.0	75.7	437.4	24.1	336.6	-	76.7	437.4
Czechoslovakia	-	104.8	844.9	949.7	6.2	563.3	12.9	367.3	949.7
Dem. P.R. Korea	10.7	619.1	201.9	831.7	-	639.7	23.9	168.1	831.7
Dominican Republic	22.4	26.0	6.7	55.1	-	48.4	3.9	2.8	55.1
Ecuador	595.7	768.8	190.4	1 554.9	130.5	1 006.0	191.4	227.0	1 554.9
Egypt	637.4	2 547.8	1 761.4	4 946.6	1 108.9	2 405.8	254.7	1 177.2	4 946.6
El Salvador	81.4	110.6	122.6	314.6	14.1	119.8	20.4	160.3	314.6
Ethiopia	356.4	220.7	164.7	741.8	417.6	273.4	-	50.8	741.8
Gabon	3.7	-	-	3.7	-	3.7	-	-	3.7
Ghana	450.1	768.3	1 592.1	2 810.5	269.0	1 152.8	261.0	1 127.7	2 810.5
Greece	1 839.5	764.2	982.4	3 586.1	1 557.7	1 290.8	161.7	575.9	3 586.1
Guatemala	121.5	235.1	48.0	404.6	56.2	206.2	51.2	91.0	404.6
Hong Kong	59.9	104.5	26.1	190.5	-	181.5	-	9.0	190.5
Hungary	87.2	2 705.5	1 097.7	3 890.4	622.7	2 971.7	8.0	288.0	3 890.4
Iceland	64.5	267.0	139.5	471.0	-	345.7	-	125.3	471.0
India	950.9	3 452.2	2 446.3	6 849.4	2 920.3	1 280.7	1 490.7	1 157.7	6 849.4
Indonesia	1 184.8	1 015.5	932.6	3 132.9	519.6	1 691.9	294.7	626.7	3 132.9
Iran I.R.	658.3	80.1	449.4	1 187.8	458.8	462.6	2.4	264.0	1 187.8
Iraq	380.3	836.0	736.7	1 953.0	242.5	1 288.8	25.0	396.7	1 953.0
Israel	257.8	819.8	438.7	1 516.3	170.9	900.6	18.0	426.8	1 516.3
Ivory Coast	178.3	264.1	11.0	453.4	73.4	356.1	23.9	-	453.4
Jamaica	130.2	194.2	24.0	348.4	10.4	267.2	-	70.8	348.4
Jordan	275.1	375.7	185.5	836.3	89.3	547.2	100.6	99.2	836.3
Kenya	402.2	498.0	366.2	1 266.4	33.2	800.4	259.9	172.9	1 266.4
Korea, R.	1 217.6	1 086.9	1 694.8	3 999.3	566.8	1 692.1	486.1	1 254.3	3 999.3
Kuwait	12.0	-	3.9	15.9	-	15.9	-	-	15.9
Lebanon	248.5	140.7	96.7	485.9	139.3	292.0	31.4	23.2	485.9
Liberia	115.2	29.0	-	144.2	60.2	27.7	-	56.3	144.2
Libyan A.J.	119.5	167.5	91.2	378.2	7.3	314.6	2.5	53.8	378.2
Madagascar	1 116.3	996.8	92.4	2 205.5	1 384.6	543.0	244.2	33.7	2 205.5
Malaysia	582.4	839.8	562.7	1 984.9	1.6	1 108.1	445.0	430.2	1 984.9
Mali	367.0	338.4	155.9	861.3	13.4	741.1	40.2	66.6	861.3
Mauritius	17.5	41.3	12.0	70.8	-	67.0	3.8	-	70.8
Mexico	1 546.2	528.3	355.2	2 429.7	419.3	1 472.2	319.5	218.7	2 429.7
Mongolia	91.5	534.7	17.2	643.4	-	626.2	10.6	6.6	643.4
Morocco	1 298.3	803.3	240.8	2 342.4	900.1	1 139.4	107.3	195.6	2 342.4
Nicaragua	26.5	7.6	20.1	54.2	-	54.2	-	-	54.2
Niger	65.4	80.1	23.9	169.4	-	154.9	-	14.5	169.4
Nigeria	1 772.3	978.4	503.1	3 253.8	959.3	627.1	1 107.0	560.4	3 253.8
Niue	7.8	6.9	-	14.7	14.7	-	-	-	14.7

Recipient	Assistance provided, by type				Assistance provided, by source				
	Experts	Equip- ment	Fellow- ships	TOTAL	UNDP	Agency funds	Extra- budgetary funds ^{a/}	In kind	TOTAL
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pakistan	1 406.8	1 923.0	2 162.9	5 492.7	1 842.0	2 340.5	88.0	1 222.2	5 492.7
Panama	125.5	77.4	126.9	329.8	4.1	201.9	11.0	112.8	329.8
Paraguay	79.0	160.3	105.1	344.4	-	181.0	94.1	69.3	344.4
Peru	1 613.9	2 398.2	694.9	4 707.0	2 388.2	1 326.8	487.2	504.8	4 707.0
Philippines	1 149.5	1 702.1	2 167.6	5 019.2	1 275.9	1 702.8	464.1	1 576.4	5 019.2
Poland	54.2	606.4	1 506.3	2 166.9	199.7	1 465.1	1.4	500.7	2 166.9
Portugal	135.5	459.5	139.1	734.1	-	429.3	224.0	80.8	734.1
Romania	635.4	2 462.2	730.3	3 827.9	1 967.6	1 593.8	39.3	227.2	3 827.9
St. Kitts	-	-	8.5	8.5	-	-	8.5	-	8.5
Saudi Arabia	31.8	8.6	12.8	53.2	-	46.2	-	7.0	53.2
Senegal	247.5	500.0	117.6	865.1	168.1	521.8	128.8	46.4	865.1
Sierra Leone	259.7	137.0	99.3	496.0	174.5	219.5	12.4	89.6	496.0
Singapore	151.4	518.5	63.2	733.1	-	655.5	24.8	52.8	733.1
Somalia	6.3	-	-	6.3	6.3	-	-	-	6.3
Spain	325.3	-	76.5	401.8	-	322.7	56.0	23.1	401.8
Sri Lanka	576.9	1 060.3	844.0	2 481.2	304.4	1 520.8	270.7	385.3	2 481.2
Sudan	459.1	856.6	758.6	2 074.3	296.7	1 240.3	273.9	263.4	2 074.3
Syrian A.R.	153.4	244.3	247.3	645.0	229.6	341.1	4.5	69.8	645.0
Thailand	1 152.2	1 334.8	2 130.6	4 617.6	545.5	2 000.3	615.5	1 456.3	4 617.6
Tunisia	588.2	473.5	170.5	1 232.2	141.2	843.8	166.2	81.0	1 232.2
Turkey	1 354.6	1 468.1	1 922.6	4 745.3	1 628.7	1 731.8	122.5	1 262.3	4 745.3
Uganda	260.8	198.8	111.0	570.6	131.0	397.1	-	42.5	570.6
U.A. Emirates	16.8	-	-	16.8	-	16.8	-	-	16.8
U.R. Cameroon	327.4	149.0	44.2	520.6	297.3	194.1	22.4	6.8	520.6
U.R. Tanzania	187.6	297.0	190.6	675.2	9.6	587.6	2.4	75.6	675.2
Uruguay	408.1	1 112.4	215.0	1 735.5	173.6	914.8	390.5	256.6	1 735.5
Venezuela	547.4	252.4	243.9	1 043.7	130.7	664.7	65.9	182.4	1 043.7
Viet Nam	135.1	757.2	296.1	1 188.4	31.4	898.4	14.3	244.3	1 188.4
Yugoslavia	705.5	2 742.2	1 398.2	4 845.9	2 696.6	1 430.7	339.6	379.0	4 845.9
Zaire	465.9	744.6	418.4	1 628.9	432.7	856.4	89.7	250.1	1 628.9
Zambia	591.3	515.1	325.3	1 431.7	152.5	1 079.5	20.8	178.9	1 431.7
Other countries ^{b/}	390.3	214.9	1 335.2	1 940.4	397.6	754.8	-	788.0	1 940.4
Sub-total	44 762.4	63 027.2	43 259.8	151 049.4	45 494.2	68 362.3	11 872.5	25 320.4	151 049.4
Interregional projects and training courses									
Africa	148.5	96.7	132.0	377.2	328.9	43.4	-	4.9	377.2
Asia and the Pacific	1 215.3	1 216.2	674.1	3 105.6	2 270.7	527.1	169.6	138.2	3 105.6
Europe	21.0	18.6	17.3	56.9	56.9	-	-	-	56.9
Latin America	959.7	950.2	391.5	2 301.4	1 458.2	466.2	261.2	115.8	2 301.4
Middle East	5.8	1.2	5.3	12.3	12.3	-	-	-	12.3
Interregional	3 347.2	1 789.7	9 655.8	14 792.7	1 775.3	10 238.7	1 302.4	1 476.3	14 792.7
Sub-total	5 697.5	4 072.6	10 876.0	20 646.1	5 902.3	11 275.4	1 733.2	1 735.2	20 646.1
Miscellaneous	180.6	147.6	14.3	342.5	23.2	319.3	-	-	342.5
GRAND TOTAL	50 640.5	67 247.4	54 150.1	172 038.0	51 419.7	79 957.0	13 605.7	27 055.6	172 038.0

^{a/} The assistance provided from extrabudgetary funds prior to 1977 is included under assistance "in kind."
^{b/} Includes the following countries which have not received technical assistance during the last ten or more years: China, Democratic Kampuchea, Denmark, Finland, France, the Federal Republic of Germany, Haiti, Italy, Japan, Monaco, the Netherlands, New Zealand, Norway, South Africa, Sweden, Switzerland, the United States of America and Zimbabwe.

A N N E X I

UTILIZATION OF EXTRABUDGETARY AND IN-KIND CONTRIBUTIONS

A. Assistance for activities in countries other than donor
(in thousands of dollars)

Donor	Extrabudgetary					In kind					TOTAL
	Experts	Equipment	Fellowships	Other training	Sub-total	Experts	Equipment	Fellowships	Other training	Sub-total	
<u>Countries</u>											
Argentina	-	-	-	-	-	2.1	-	15.3	2.1	19.5	19.5
Australia	-	-	-	2.1	2.1	-	-	-	3.7	3.7	5.8
Austria	-	-	-	-	-	-	-	30.2	4.5	34.7	34.7
Belgium	32.8	37.1	-	-	69.9	-	-	58.4	30.5	88.9	158.8
Brazil	-	-	-	-	-	-	-	21.7	-	21.7	21.7
Canada	16.1	0.7	-	-	16.8	-	-	-	-	-	16.8
Colombia	-	-	-	-	-	2.9	-	-	-	2.9	2.9
Costa Rica	-	-	-	-	-	-	-	-	3.3	3.3	3.3
Czechoslovakia	-	-	-	-	-	-	-	71.6	4.4	76.0	76.0
Denmark	-	-	-	0.8	0.8	-	-	45.8	-	45.8	46.6
Dominican Republic	-	-	-	-	-	-	-	-	3.3	3.3	3.3
Finland	8.8	68.0	-	-	76.8	-	-	-	-	-	76.8
France	-	-	-	-	-	6.1	-	17.7	67.6	91.4	91.4
German D.R.	-	-	-	-	-	-	-	-	1.8	1.8	1.8
Germany, F.R.	93.1	386.2	-	29.3	508.6	6.1	-	193.5	35.4	235.4	743.6
Hungary	-	-	-	-	-	-	-	66.7	-	66.7	66.7
India	-	-	-	-	-	1.6	-	6.2	2.4	10.2	10.2
Israel	-	-	-	-	-	-	-	11.7	-	11.7	11.7
Italy	59.1	261.7	-	-	320.8	1.3	-	93.8	2.1	97.2	418.0
Japan	-	-	2.1	78.8	80.9	1.7	-	33.6	7.4	42.7	123.6
Malaysia	-	-	-	-	-	-	-	-	1.1	1.1	1.1
Mexico	-	-	-	-	-	2.5	-	11.0	0.5	14.0	14.0
Netherlands	-	-	-	-	-	3.0	-	44.1	0.9	48.0	48.0
Peru	-	-	-	-	-	2.6	-	-	-	2.6	2.6
Poland	-	-	-	-	-	-	-	24.3	5.7	30.0	30.0
Romania	-	-	-	-	-	-	-	11.0	-	11.0	11.0
Saudi Arabia	-	24.2	-	-	24.2	-	-	-	-	-	24.2
Spain	-	-	-	-	-	1.0	20.0	63.2	8.3	92.5	92.5
Sweden	80.3	95.0	148.6	164.2	488.1	3.7	-	-	4.1	7.8	495.9
Switzerland	-	-	-	-	-	-	-	-	3.2	3.2	3.2
USSR	-	-	33.3	-	33.3	-	-	-	-	-	33.3
UK	-	136.4	-	-	136.4	23.7	-	78.7	4.0	106.4	242.8
USA	246.1	1 118.8	-	59.9	1 424.8	36.8	-	1 212.3	47.4	1 296.5	2 721.3
Yugoslavia	-	-	-	-	-	-	-	-	1.1	1.1	1.1
Sub-total	536.3	2 128.1	184.0	335.1	3 183.5	95.1	20.0	2 110.8	244.8	2 470.7	5 654.2
<u>Organizations</u>											
CEC	-	-	-	-	-	-	-	-	1.4	1.4	1.4
IBRD	-	-	-	-	-	-	-	-	4.7	4.7	4.7
UN-DNRE	-	-	-	-	-	-	-	-	4.4	4.4	4.4
UNESCO	-	-	-	-	-	-	-	-	6.3	6.3	6.3
WHO	-	-	-	-	-	-	-	-	5.5	5.5	5.5
Sub-total	-	-	-	-	-	-	-	-	22.3	22.3	22.3
GRAND TOTAL	536.3	2 128.1	184.0	335.1	3 183.5	95.1	20.0	2 110.8	267.1	2 493.0	5 676.5

B. Assistance for activities in donor country
(in thousands of dollars)

Donor	Project title and code	Assistance provided		
		Experts	Equipment	TOTAL
Brazil	Raw materials prospection, BRA/3/005	0.8	-	0.8
	Agricultural research and development, BRA/5/009	6.2	-	6.2
Libyan A.J.	Nuclear research centre, LIB/0/004	0.9	-	0.9
Madagascar	Nuclear raw materials prospection, MAG/3/003	-	0.8	0.8
Portugal	Activation analysis, POR/2/006	-	40.0	40.0
Spain	Nuclear power safety, SPA/9/004	3.1	-	3.1
TOTAL		11.0	40.8	51.8

A N N E X I I

TRAINING COURSES AND STUDY TOURS: 1982

Project title and code	Place(s) and dates	Source of funds	Participation ^{a/}			Amount(s) ^{b/} obligated ^{b/} (\$)
			(1)	(2)	(3)	
Interregional training course on solid state physics, INT/1/021	Accra, Ghana 1 December 1981 - 22 January 1982	UNFSSTD	24	1	18	211 100 (CC)
Interregional workshop on monsoon dynamics, INT/1/022	Dhaka, Bangladesh 11 January - 19 February	UNFSSTD	36	3	23	106 149 (CC)
Interregional training course on planning preparedness and response to radiological emergencies, INT/9/034	Argonne, Illinois, USA 1 - 19 February	Agency	25	3	-	45 675 (CC)
Regional training-demonstration workshop on the use of nucleonic control systems in the paper industry, RAS/8/013	Tokyo, Japan, and Ban Pong, Thailand 8 - 26 February	UNDP and Japan	11	-	-	35 015 (CC)
Interregional training course on seismic considerations in nuclear power plant siting, INT/9/035	Argonne, Illinois, USA 22 February - 26 March	Agency	26	-	-	47 680 (CC)
Interregional training course on the use of isotope and radiation techniques in studies on soil/plant relationships, INT/5/080	Seibersdorf, Austria 29 March - 21 May	SIDA	20	-	-	83 642 (CC)
Regional training course on radiological protection and nuclear safety, RLA/9/007	Buenos Aires, Argentina 12 April - 30 November	Agency	8	5	19	16 118 (CC)
Interregional training course on uranium exploration, INT/3/008	Antananarivo, Madagascar 19 April - 28 May	Agency	19	-	6	112 785 (CC)
Interregional training course on physical protection of nuclear facilities and materials, INT/9/039	Albuquerque, New Mexico, USA 4 - 26 May	USA	15	9	-	58 391 (CC)
Study tour on the utilization of research reactors, INT/4/060	Austria, Hungary, Czechoslovakia, German Democratic Republic and USSR 4 May - 4 June	Agency	23	-	-	17 655 (CC) 84 104 (NCC)
Regional study tour on nuclear techniques in animal production, RAS/5/013	Rockhampton, Australia 10 May - 4 June	Agency	15	-	-	70 489 (CC)
Interregional training course on uranium ore analysis, INT/3/010	Madrid, Spain 10 May - 18 June	Agency	19	-	-	44 644 (CC)
Interregional training course on the safe transport of radioactive materials, INT/9/038	Harwell, UK 17 - 28 May	Agency	20	1	-	32 971 (CC)
Interregional training course on radiochemistry, INT/2/003	Leipzig, German Democratic Republic 17 May - 25 June	Agency	17	-	-	37 386 (CC) 44 548 (NCC)
Interregional training course on energy planning in developing countries with special attention to nuclear energy, INT/0/027	Jakarta, Indonesia, and Manila, Philippines 24 May - 20 June	Agency	29	-	7	123 603 (CC)
Interregional training course on risk prevention in the use of radiation and nuclear installations, INT/4/057	Saclay, France 24 May - 25 June	Agency	23	-	-	54 456 (CC)
Study tour on low/intermediate-level waste management, INT/9/036	France, Belgium, Federal Republic of Germany, Hungary and Czechoslovakia 25 May - 19 June	Agency	21	-	-	51 779 (CC) 14 284 (NCC)
Interregional training course on the induction and use of mutations in plant breeding, INT/5/083	Seibersdorf, Austria 25 May - 1 July	SIDA	14	2	-	53 696 (CC)

Project title and code	Place(s) and dates	Source of funds	Participation ^{a/}			Amount(s) _{b/} obligated _{b/} (\$)
			(1)	(2)	(3)	
Interregional training course on the utilization of neutron generators, INT/1/020	Debrecen, Hungary 7 June - 9 July	Agency	21	-	-	50 271 (CC) 21 669 (NCC)
Interregional training course on radioimmunoassay and its application in research on animal reproduction, INT/5/081	Ithaca, New York, USA 7 June - 16 July	Agency	22	-	-	62 963 (CC)
Advanced interregional training course on nuclear electronics, INT/4/061	Berlin (West) 19 July - 15 October	Agency and Federal Republic of Germany	16	1	-	126 643 (CC) 19 031 (CC)
Interregional training course and study tour on nuclear medicine, INT/6/025	Moscow, USSR 1 September - 31 October	Agency	28	-	-	24 916 (CC) 178 252 (NCC)
Interregional training course on the use of isotope and radiation techniques in soil physics studies, INT/5/082	Ghent, Belgium 6 - 24 September	Agency	16	-	-	4 134 (CC)
Interregional training course on waste management in nuclear facilities, INT/4/059	Karlsruhe, Federal Republic of Germany 6 September - 1 October	Agency	29	3	-	49 827 (CC)
Regional training course on the use of the sterile insect technique for the control of fruit flies, RLA/5/014	Metapa, Chiapas, Mexico 6 September - 1 October	Agency and Federal Republic of Germany	21	-	-	63 731 (CC) 30 567 (CC)
Interregional training course on assuring pressure boundary integrity, INT/4/058	Argonne, Illinois, USA 7 September - 8 October	Agency	24	-	-	57 067 (CC)
Interregional training course on radioimmunoassay and related procedures, INT/6/026	Sofia, Bulgaria 27 September - 15 October	Agency	13	-	-	29 766 (CC) 20 082 (NCC)
Regional training course on advanced non-destructive testing, RAS/8/014	Singapore 11 - 29 October	UNDP	15	-	14	34 336 (CC)
Interregional training course on nuclear power plant siting, INT/9/040	Saclay, France 11 October - 12 November	Agency	21	-	1	43 698 (CC)
Interregional training course on control and instrumentation of nuclear power plants, INT/9/037	Karlsruhe, Federal Republic of Germany 11 October - 17 November	Agency	28	-	-	46 833 (CC) 124 (NCC)
Regional training course on nuclear instrumentation for laboratory technicians, RLA/4/004	Lima, Peru 18 October - 10 December	Agency	13	-	5	100 233 (CC)
Regional industrial technology transfer workshop, RAS/8/015	Jakarta, Indonesia 1 - 3 November	UNDP	8	9	4	14 544 (CC)
Interregional training course on the preparation and control of radiopharmaceuticals, INT/2/004	Athens, Greece 1 - 26 November	Agency	20	-	-	68 221 (CC)
Regional workshop II on industrial system applications, economics and maintenance, RAS/8/016	Tokyo, Japan 15 - 26 November	UNDP	12	-	-	26 183 (CC)
Regional advanced training course on nuclear analytical techniques and their application, RAS/1/004	Bangkok and Chiang Mai, Thailand 15 November - 9 December	Agency	14	-	24	80 019 (CC)
Interregional training course on starting a nuclear power project, INT/0/028	Vienna, Austria 15 November - 17 December	Agency	21	-	-	61 174 (CC)

^{a/} The figures under (1) denote the number of award holders whose cost of participation was met out of project funds; those under (2) denote the number of participants who attended at the expense of their Government, or of another organization or programme; and those under (3) denote the number of local participants. No stipends or international travel costs were paid out of project funds in respect of participants shown under (2) and (3).

^{b/} The amounts obligated (i.e. expenditures plus unliquidated obligations) do not include expenditures by host governments in respect of local lecturers, or expenditures for laboratory, lecture room and other facilities.

A N N E X I I I

FORMAL REPORTS SUBMITTED TO RECIPIENT-COUNTRY GOVERNMENTS

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. status ^{b/}	
Afghanistan	Nuclear science, AFG/1/004	Bakos, L.	TA-1749	D	
Algeria	Installation and use of a neutron generator, ALG/0/004	Paic, M.	TA-1742 (French)	D	
	Radiation protection at the Nuclear Research Centre, Ain Oussera, ALG/9/003	Pfeiffer, K.	TA-1989 (French)	S	
Argentina	Reactor design	Stegemann, D.	UNDP-ARG/78/020-08	D	
	Thermal aspects of reactors	Raichura, R.C.	UNDP-ARG/78/020-09	D	
	Thermohydraulics laboratory (Centro Atómico Bariloche)	Berger, F.P.	UNDP-ARG/78/020-10	D	
Bangladesh	Plant breeding, BGD/5/003	Kumar, P.	SIDA-BGD/5/003-15	D	
	Plant physiology, BGD/5/003	Sengupta, U.	SIDA-BGD/5/003-16	D	
	Use of radioisotopes in animal science, BGD/5/005	Barnett, B.	TA-1974	S	
	Nuclear medicine, BGD/6/004	Nauman, J.	TA-1846	D	
	Radiation protection, BGD/9/004	Ahmed, J.	TA-1939	D	
Bolivia	Reactor physics: neutron generator technology, BOL/1/006	Sztaricskai, T.	TA-1981	D	
	Uranium prospection, BOL/3/008	Gamba, M.	TA-1893 (Spanish)	D	
Brazil	Environmental studies: water pollution, BRA/5/009	Reddy, R.	TA-1896	D	
	Development of agricultural production through the application of nuclear technology, BRA/5/009	Warembourg, F.	TA-1876	D	
	Development of agricultural production through the application of nuclear technology, BRA/5/009	Smith, R.	TA-1867	D	
	Radiopharmaceuticals, BRA/6/006	Weinreich, R.	TA-1913	D	
	Radiation protection and radioactive waste management, BRA/9/015	Troup, G.	TA-1894	R	
	Nuclear power plant safety analysis, BRA/9/015	Kellogg, P.	TA-1909	D	
	Low-power physics test programme for nuclear power plant, BRA/9/015	Raymond, W.	TA-1966	D	
	Mutation breeding	Blixt, S.	UNDP-BRA/78/006-04	R	
	Isotopic studies of rain and moisture in the Amazon Basin	Gat, J.R.	UNDP-BRA/78/006-05	R	
	Isotopic methods in hydrological studies of the Amazon forest	Clarke, R.T.	UNDP-BRA/78/006-06	R	
Bulgaria	Hospital physics, BUL/6/005	Lerch, I.	TA-1855	D	
	Burma	Radiation sterilization, BUR/7/003	Phillips, G.	TA-1853	D
		Analytical chemistry	Joergensen, S.S.	UNDP-BRA/78/006-07	R
	Project findings and recommendations	Vose, P.	UNDP-BRA/78/006-TR	R	

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. ^{b/} status
Chile	Nuclear safety, CHI/0/006	McCullen, J. Palabrica, R.	TA-1857	D
	Calibration and metrology, CHI/1/009	Gupta, U.	TA-1864	D
	Neutron diffraction, CHI/1/010	Butt, N.	TA-1898	D
	Neutron activation analysis, CHI/1/011	Krishnan, S.	TA-1878	D
	Food irradiation, CHI/5/009	Loaharanu, P.	TA-1953	D
	Tracer techniques in industry, CHI/8/012	Niemi, A.	TA-1863	D
	Remote-sensing data in uranium exploration	Bartolucci, L.A. Levandowski, D.W.	UNDP-CHI/79/001-04	D
Colombia	Project findings and recommendations	Carrie, R.R.	UNDP-CHI/79/001-TR (Spanish)	D
	Uranium ore processing	Soler, C.	UNDP-COL/76/031-05 (Spanish)	R
Costa Rica	Radiation protection in the mining and milling of radioactive ores	Ahmed, J.	UNDP-COL/76/031-06	R
	Initiation of training courses on radiation protection, COS/9/002	Loester, W.	TA-1899	D
Cuba	Design and construction of a neutron generator laboratory, CUB/1/002	Csikai, G.	TA-1916	D
	Radioisotopes in biology, CUB/7/002	Belcher, E.	TA-1888	D
	Infrastructure for post-graduate instruction	Dolnicar, J.	UNDP-CUB/77/001-01	
Cyprus	Nuclear techniques in agriculture, CYP/5/011	Brindley, W.	TA-1991	S
Egypt	Eradication of the Mediterranean fruit fly by means of the sterile insect technique, EGY/5/012	LaBrecque, G.	TA-1905	D
El Salvador	Radiation protection, ELS/9/003	Watson, P.	TA-1983	D
Ethiopia	Project findings and recommendations	Corba, J. Lalic, R.	UNDP-ETH/78/005-TR	D
Ghana	Mutation breeding, GHA/5/008	Donini, B.	TA-1961	D
	Radioisotopes in medicine, GHA/6/004	Dandanudi, V.	TA-1886	D
	Use of nuclear techniques in medicine, GHA/6/007	Vavrejn, B.	TA-1979	R
Greece	Borehole logging	Hallenburg, J.R.	UNDP-GRE/79/004-02	D
	Mineralogy	Stettner, G.	UNDP-GRE/79/004-03	D
Guatemala	Applied nuclear science, GUA/0/003	Gancedo, J.	TA-1982 (Spanish)	S
Iceland	Radioisotopes in agriculture, ICE/5/004	Duffus, W.	TA-1990	S
India	Animal parasitology, IND/5/010	Ristic, M.	SIDA-IND/5/010-07	D
Indonesia	Labelled compounds, INS/2/008	Abdel-Wahab, M.	TA-1908	D
	Nuclear electronics and nuclear instrument maintenance, INS/4/012	Ambro, P.	TA-1954	D
	Nuclear fuel fabrication, INS/4/015	Rojas de Diego, J.	TA-1901	R
	Food preservation through irradiation, INS/5/015	Dollar, A.	TA-1928	D
	Radioisotopes in animal science, INS/5/016	Seamark, R.	TA-1891	D
	Radiation processing, INS/8/010	Makuuchi, K.	TA-1862	R

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. status ^{b/}
Ivory Coast	Water-soil-plant relationships, IVC/5/007	Haverkamp, R.	TA-1947 (French)	R
	Radioisotopes in agriculture, IVC/5/009	Moutonnet, P.	TA-1938 (French)	D
	Physiology of hevea production, IVC/5/010	Tupy, J.	TA-1924	D
Jordan	Isotopes in hydrology, JOR/8/002	Zuppi, G.	TA-1869	D
Kenya	Advisory mission on radiation protection, KEN/9/003	Bernardo, B.	TA-1915	D
Korea, R.	Radioisotopes in animal science, ROK/5/017	Radford, H.	TA-1852	D
	Radioisotopes in agriculture, ROK/5/018	Glubrecht, H. Niemann, E.	TA-1890	D
	Nuclear power plant safety, ROK/9/013	Csik, B.	TA-1936	D
Lesotho	Establishment of a uranium analysis facility	Monsecour, M.	UNDP-LES/80/007-01	S
Libyan A.J.	Legal aspects of nuclear regulation and establishment of a nuclear regulatory body, LIB/0/005	Herron, L. Vuorinen, A.	TA-1946	D
	Nuclear power manpower planning, LIB/0/005	Schmidt, R.	TA-1997	R
Madagascar	X-ray fluorescence analysis (University of Madagascar), MAG/1/004	Tys, J.	TA-1883 (French)	D
	Uranium exploration in Karroo sediments of the Folakara region	Morante, V.	UNDP-MAG/77/012-03	D
Malaysia	Neutron physics, MAL/1/002	Sterlinski, S.	TA-1866	D
	Uranium exploration, MAL/3/003	Frey, D.L.	TA-1870	D
	Reactor research centre, MAL/4/003	Buchtela, K.	TA-1902	D
	Radioisotopes in agriculture, MAL/5/006	Hassan, A.	TA-1922	D
	Food preservation, MAL/5/007	Kawashima, K.	TA-1910	D
	Soil moisture studies, MAL/5/012	Green, R.	TA-1941	D
	Environmental monitoring, MAL/9/003	Ahmed, J.	TA-1940	D
Mali	Research programme on water use efficiency, MLI/5/004	Couchat, P.	TA-1962 (French)	D
	Mutations breeding, MLI/5/005	Gaul, H.	TA-1964 (French)	R
	Interpretation of isotope and chemical hydrological data, MLI/8/002	Tazioli, G.	TA-1934 (French)	D
	Hydrology laboratory of the Direction Nationale de l'Hydraulique et de l'Energie in Bamako, MLI/8/002	Chassaing, B.	TA-1935 (French)	D
	Use of nuclear techniques in hydrology, MLI/8/002	Zuppi, G.	TA-1914 (French)	D
Mexico	Nuclear techniques in agriculture, MEX/5/010	Dargie, J. Fredriksson, L. Fried, M. Lamm, C.	TA-1980	D
	Radiosterilization of medical products, MEX/7/004	Lapidot, M.	TA-1875	D
Morocco	Nuclear physics laboratory (Science Faculty, Rabat), MOR/1/005	Paic, G.	TA-1992 (French)	S
	Radiation protection in uranium prospecting, extraction and treatment, MOR/3/005	Ahmed, J.	TA-1951 (French)	D

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. ^{b/} status-
Morocco	Aerial gamma-ray spectrometry in exploration for radioactive minerals, MOR/3/006	Matolin, M.	TA-1931 (French)	D
	Application of radioisotopes in agriculture, MOR/5/013	Hamissa, M.	TA-1874 (French)	D
	Use of radioisotopes in medicine: gamma camera investigations, MOR/6/007	Gheorghescu, B.	TA-1920 (French)	D
Niger	Use of isotopic techniques in the evaluation of water resources of discontinuous aquifers in southern Niger (Maradi-Zinder Regions), NER/8/003	Fontes, J.C.	TA-1944 (French)	D
Panama	Radioisotopes in agriculture, PAN/5/003	Mansell, R.	TA-1972	D
	Nuclear medicine, PAN/6/004	Kosowicz, J.	TA-1887	D
Paraguay	Nuclear sciences, PAR/1/002	Dolnicar, J.	TA-1892 (Spanish)	D
Peru	Computer installations, PER/0/009	Dolnicar, J. Winiecki, A.	TA-1912 (Spanish)	D
	Information services, PER/0/009	Lasbo, P.	TA-1854	D
	Nuclear science, PER/0/010	Rosenberg, R.	TA-1865 (Spanish)	D
	Nuclear medicine, PER/6/004	Erickson, J.	TA-1884	D
	Aerial prospection	Suarez Mahou, E.	UNDP-PER/76/002-06 (Spanish)	R
	Aerial prospection	Suarez Mahou, E.	UNDP-PER/76/002-07 (Spanish)	R
	Animal nutrition and production	Leng, R.A.	UNDP-PER/76/002-08	R
	Research reactor licensing	Burkart, A.K.	UNDP-PER/76/002-09 (Spanish)	R
	Project findings and recommendations	Alegria, J.L.	UNDP-PER/76/002-TR (Spanish)	R
	Philippines	Nuclear electronics, PHI/4/013	Ambro, P.	TA-1957
Use of radioisotopes in animal science, PHI/5/012		Post, T.	TA-1861	D
Pesticide residues, PHI/5/017		Hassan, A.	TA-1921	D
Medical physics training, PHI/6/010		Schlesinger, T.	TA-1877	D
Nuclear power plant safety, PHI/9/006		Albert, W.	TA-1871	D
Environmental radioactivity, PHI/9/007		Ahmed, J.	TA-1971	D
Portugal	Secondary standards dosimetry laboratory POR/1/002	Brosed Serreta, A.	TA-1959	R
	Secondary standards dosimetry laboratory POR/1/002	Eisenlohr, H.	TA-1879	R
	Uranium prospection, POR/3/002	Matolin, M.	TA-1956	R
	Nuclear power safety, POR/9/002	Stepp, J.	TA-1881	R
	Nuclear energy safety, POR/9/002	Descamps, B.	TA-1906 (French)	D
Senegal	Investigations on soil water in arid regions, SEN/5/011	Elrick, D.	TA-1963 (French)	D
	Nuclear electronics laboratory	Ciancaglioni, H.R.	UNDP-SEN/77/005-01 (French)	D

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. status ^{b/}
Sri Lanka	Radioisotopes in animal science, SRL/5/013	Johnson, J.	TA-1960	D
	Fertilizer use efficiency, SRL/5/015	Reinhardt, R.	TA-1968	D
	Crop water and soil management, SRL/5/016	Kutilek, M.	TA-1975	D
	Radiation entomology, SRL/5/017	Cromroy, H.	TA-1925	D
	Nuclear medicine, SRL/6/009	Tothill, P.	TA-1918	D
Sudan	Use of nuclear techniques in the study of reproductive problems in dairy cattle, SUD/5/013	Carr, W.	TA-1904	D
Syrian A.R.	Nuclear energy planning: uranium exploration, SYR/0/003	Seidel, D. Stipanovic, P.	TA-1880	R
	Nuclear energy planning, SYR/0/003	Bianco, A.	TA-1932	D
Thailand	Radioisotope production facility, THA/4/008	Uhlenius, K.	TA-1929	D
	Pesticide residues, THA/5/021	Das, H.	TA-1970	D
	Environmental radioactivity, THA/9/005	Ahmed, J.	TA-1969	D
	Nuclear power plant siting, THA/9/006	Van der Hoven, I.	TA-1986	S
Tunisia	Nuclear energy planning, TUN/0/003	Marques de Souza, J.	TA-1948 (French)	R
Turkey	Nuclear techniques in animal science, TUR/5/010	Smith, W.	TA-1976	R
	Nuclear power safety, TUR/9/004	Odar, F.	TA-1860	D
	Nuclear power programme, TUR/9/004	Thomson, D.	TA-1917	D
	Nuclear power programme: pre-operational environmental radioactivity monitoring, TUR/9/005	Atakan, Y.	TA-1895	D
	Nuclear power safety, TUR/9/005	Celebi, M.	TA-1950	D
U.R. Cameroon	Uranium prospection, QMR/3/004	Hussein, H.	TA-1851 (French)	R
U.R. Tanzania	Quantitative X-ray fluorescence analysis methods and applications, URT/1/003	Kump, P.	TA-1903	D
	Establishment of a radioisotope facility for teaching and research (Faculty of Agriculture, Forestry and Veterinary Science, Morogoro), URT/5/002	Kannan, S.	TA-1859	D
	Establishment of a radioisotope laboratory (Agricultural Research Institute, Mlingano), URT/5/004	Dombovari, J.	TA-1923	D
	Tritium discharge measurements of the Rufiji River at Stiegler Gorge and follow-up isotope studies in the Dodoma Region, URT/8/004	Dincer, T.	TA-1978	S
Venezuela	INIS implementation, VEN/0/002	Christov, N.	TA-1850	D
	Siting of nuclear power plants, VEN/4/006	Cluff, L. Iansiti, E.	TA-1973	D
	Radiation protection, VEN/4/006	Vana, N.	TA-1977	D
Viet Nam	Nuclear science technology	Dolnicar, J. Lamm, C. Nethsinghe, D.	TA-1889	R
	Nuclear physics, VIE/1/003	Katsanos, A.	TA-1858	R
	Nuclear physics teaching, VIE/1/004	Csikai, G.	TA-1897B	D

Recipient	Subject and project code	Author(s)	Reference no. ^{a/} (IAEA/)	Distr. ^{b/} status
Viet Nam	Nuclear electronics laboratory, VIE/4/002	Kaufmann, H. Kessel, W. Manfredi, P. Pahor, J.	TA-1919	R
	Isotope hydrology, VIE/8/003	Aranyossy, J.	TA-1930 (French)	R
Yugoslavia	Uranium exploration, YUG/3/005	Kertes, A.	TA-1856	D
	Reactor training centre, YUG/4/017	Gnospelius, C.	TA-1882	D
	Radiation polymerization, YUG/8/008	Hedvig, P.	TA-1885	D
	Nuclear power safety, YUG/9/010	Nyfors, V.	TA-1927	D
	Nuclear power safety, YUG/9/010	Izquierdo Rocha, J. Jung, I. Larsson, L. Tedesco, R. Tiren, L.	TA-1937	D
	Nuclear power safety, YUG/9/010	Giuliani, P.	TA-1945	D
Zaire	Laboratory for the production of radioimmunoassay materials, ZAI/2/009	Stupnicki, R.	TA-1952 (French)	D
	Application of nuclear techniques in dynamic sedimentology, ZAI/8/005	Caillot, A.	TA-1933 (French)	D
	Establishment of a laboratory for the application of nuclear techniques	Leenders, L.	UNDP-ZAI/76/004-02 (French)	S
	Neutron detection and measurement	Tourwé, H.	UNDP-ZAI/76/004-03 (French)	S
Zambia	Nuclear physics, ZAM/0/004	Maripuu, S.	TA-1984	S
	Design and construction of the neutron generator laboratory, ZAM/0/005	Csikai, G.	TA-1872	D
	Isotope and radiation techniques in water and fertilizer use efficiency studies, ZAM/5/005	Barrada, Y.	TA-1985	S
	Reproductive physiology: establishment of a hormone laboratory, ZAM/5/008	Carr, W.	TA-1873	D
Interregional	Nuclear instrument maintenance, INT/4/054	Vuister, P.	TA-1926	D
	Nuclear instrument maintenance, INT/4/054	Ambro, P.	TA-1955	D
	Nuclear instrument maintenance, INT/4/054	Ambro, P.	TA-1958	D

^{a/} Report issued in English except where otherwise indicated.

^{b/} D = De-restricted distribution; R = Restricted distribution; S = Restricted pending notification from Government.

A N N E X I V

VOLUNTARY CONTRIBUTIONS PLEDGED AND PAID
TO THE TECHNICAL ASSISTANCE AND CO-OPERATION FUND FOR 1982
as at 31 December 1982

Member State	1982 Base rate ^{a/} (%)	Share of \$16 million target for voluntary contributions for 1982 using the base rate ^{a/} (\$)	Pledged (\$)	Paid (\$)
(1)	(2)	(3)	(4)	(5)
Afghanistan	0.01	1 600	-	-
Albania	0.01	1 600	1 600	1 600
Algeria	0.12	19 200	-	-
Argentina	0.79	126 400	126 400	-
Australia	1.85	296 000	296 000	296 000
Austria	0.72	115 200	115 200	115 200
Bangladesh	0.04	6 400	-	-
Belgium	1.23	196 800	10 204	10 204
Bolivia	0.01	1 600	-	-
Brazil	1.28	204 800	204 800	204 800
Bulgaria	0.16	25 600	25 600	25 600
Burma	0.01	1 600	-	-
Byelorussian SSR	0.40	64 000	70 126	70 126
Canada	3.32	531 200	531 200	531 200
Chile	0.07	11 200	31 500	31 500
Colombia	0.11	17 600	17 600	17 600
Costa Rica	0.02	3 200	-	-
Cuba	0.11	17 600	17 600	17 048
Cyprus	0.01	1 600	1 600	1 600
Czechoslovakia	0.84	134 400	112 850	112 850
Dem. Kampuchea	0.01	1 600	-	-
Dem. P.R. Korea	0.05	8 000	8 000	-
Denmark	0.75	120 000	120 000	120 000
Dominican Republic	0.03	4 800	-	-
Ecuador	0.02	3 200	3 200	3 200
Egypt	0.07	11 200	11 200	-
El Salvador	0.01	1 600	-	-
Ethiopia	0.01	1 600	-	-
Finland	0.49	78 400	78 400	78 400
France	6.33	1 012 800	1 012 800	1 012 800
Gabon	0.02	3 200	-	-
German D.R.	1.41	225 600	210 881	210 881
Germany, F.R.	8.40	1 344 000	1 344 000	1 344 000
Ghana	0.03	4 800	2 100	2 100
Greece	0.35	56 000	56 000	56 000

Member State	1982 Base rate ^{a/} (%)	Share of \$16 million target for voluntary contributions for 1982 using the base rate ^{a/} (\$)	Pledged (\$)	Paid (\$)
(1)	(2)	(3)	(4)	(5)
Guatemala	0.02	3 200	3 200	3 200
Haiti	0.01	1 600	-	-
Holy See	0.01	1 600	-	-
Hungary	0.33	52 800	57 143	57 143
Iceland	0.03	4 800	4 800	4 800
India	0.61	97 600	97 600	97 600
Indonesia	0.16	25 600	25 600	25 600
Iran I.R.	0.66	105 600	-	-
Iraq	0.12	19 200	19 200	19 200
Ireland	0.16	25 600	25 600	25 600
Israel	0.25	40 000	-	-
Italy	3.49	558 400	311 419	311 419
Ivory Coast	0.03	4 800	-	-
Jamaica	0.02	3 200	-	-
Japan	9.69	1 550 400	1 550 400	1 050 400
Jordan	0.01	1 600	1 600	1 600
Kenya	0.01	1 600	-	-
Korea, R.	0.15	24 000	24 000	24 000
Kuwait	0.20	32 000	32 000	32 000
Lebanon	0.03	4 800	-	-
Liberia	0.01	1 600	-	-
Libyan A.J.	0.23	36 800	-	-
Liechtenstein	0.01	1 600	1 600	1 600
Luxembourg	0.05	8 000	-	-
Madagascar	0.01	1 600	1 600	-
Malaysia	0.09	14 400	14 400	14 400
Mali	0.01	1 600	-	-
Mauritius	0.01	1 600	-	-
Mexico	0.77	123 200	120 342	120 342
Monaco	0.01	1 600	-	-
Mongolia	0.01	1 600	1 578	1 578
Morocco	0.05	8 000	-	-
Netherlands	1.65	264 000	264 000	264 000
New Zealand	0.27	43 200	-	-
Nicaragua	0.01	1 600	-	-
Niger	0.01	1 600	1 600	-
Nigeria	0.16	25 600	25 600	-
Norway	0.51	81 600	81 600	81 600
Pakistan	0.07	11 200	11 200	11 200
Panama	0.02	3 200	3 200	3 200

Member State	1982 Base rate ^{a/} (%)	Share of \$16 million target for voluntary contributions for 1982 using the base rate ^{a/} ($\$$)	Pledged ($\$$)	Paid ($\$$)
(1)	(2)	(3)	(4)	(5)
Paraguay	0.01	1 600	-	-
Peru	0.06	9 600	9 600	-
Philippines	0.10	16 000	15 000	-
Poland	1.25	200 000	62 500	62 500
Portugal	0.19	30 400	30 400	30 400
Qatar	0.03	4 800	4 800	-
Romania	0.21	33 600	33 600	15 120
Saudi Arabia	0.59	94 400	94 400	94 400
Senegal	0.01	1 600	-	-
Sierra Leone	0.01	1 600	-	-
Singapore	0.08	12 800	-	-
South Africa	0.43	68 800	-	-
Spain	1.72	275 200	30 000	27 037
Sri Lanka	0.02	3 200	3 200	3 200
Sudan	0.01	1 600	-	-
Sweden	1.33	212 800	212 800	212 800
Switzerland	1.06	169 600	169 600	169 600
Syrian A.R.	0.03	4 800	-	-
Thailand	0.10	16 000	16 000	16 000
Tunisia	0.03	4 800	944	944
Turkey	0.30	48 000	48 000	48 000
Uganda	0.01	1 600	-	-
Ukrainian SSR	1.48	236 800	252 454	252 454
USSR	11.22	1 795 200	1 963 534	1 963 534
U.A. Emirates	0.10	16 000	16 000	16 000
UK	4.51	721 600	721 600	721 600
U.R. Cameroon	0.01	1 600	-	-
U.R. Tanzania	0.01	1 600	1 600	1 600
USA	25.00	4 000 000	4 000 000	3 700 000
Uruguay	0.04	6 400	6 400	-
Venezuela	0.51	81 600	44 100	44 100
Viet Nam	0.03	4 800	-	-
Yugoslavia	0.43	68 800	68 800	68 800
Zaire	0.02	3 200	-	-
Zambia	0.02	3 200	3 200	-
TOTAL	100.00	16 000 000	14 896 675	13 861 280

^{a/} As recommended in General Conference resolutions GC(V)/RES/100 and GC(XV)/RES/286.

A N N E X V

COST-FREE FELLOWSHIPS OFFERED AND AWARDED: 1982

Donor	Offered		Awarded ^{a/}	
	Number	Man-months	Number	Man-months
Argentina	6	72	6	29
Austria	- ^{b/}	-	1	12
Belgium	10	60	4	28
Brazil	10	120	3	15
Bulgaria	2	12	-	-
Czechoslovakia	9 ^{c/}	-	2 ^{d/}	21
Denmark	5	60	3	30
France	-	50	5	36
Germany, F.R.	-	105	12	133
Hungary	4	48	6	46
India	10	-	9	48
Israel	-	45	1	12
Italy	25	200	10	93
Japan	5	45	3	33
Mexico	2	24	-	-
Netherlands	8	-	4	56
Pakistan	6	-	1	12
Philippines	3	-	-	-
Poland	10	-	3	30
Spain	5	60	4	31
Thailand	2	-	-	-
United Kingdom	- ^{b/}	-	6	67
United States of America	- ^{b/}	-	88	787
Yugoslavia	-	22	-	-

^{a/} Awards less rejections and withdrawals as at 31 December 1982.

^{b/} A specific amount of money was made available rather than a given number of fellowships.

^{c/} Includes five long-term fellowships for up to 60 man-months each.

^{d/} Includes one long-term award, initially for 12 man-months.

A N N E X V I

PROJECTS UNDER IMPLEMENTATION FOR UNDP
(in thousands of dollars)

Recipient	Project title and code	Total amount approved	Approved budgets						
			Prior to 1982	1982	1983	1984	1985	1986	1987
Argentina	Nuclear engineering, ARG/78/020	2316	1545	301	288	182	-	-	-
Bangladesh	Exploration for uranium and thorium, BGD/77/008	66	56	10	-	-	-	-	-
Brazil	Nuclear manpower qualification and training, BRA/76/003	2671	2549	122	-	-	-	-	-
	Development of agriculture through the application of nuclear technology - Phase II, BRA/78/006	697	684	13	-	-	-	-	-
Bulgaria	Development of a centre for the application of isotopes, BUL/77/013	468	449	19	-	-	-	-	-
Chile	Uranium prospection - Phase II, CHI/79/001	453	428	25	-	-	-	-	-
Colombia	Prospection for radioactive minerals, COL/76/031	1561	1200	361	-	-	-	-	-
Cuba	Introduction of nuclear techniques into the national economy, CUB/77/001	1799	1079	100	150	200	174	96	-
Ecuador	Uranium prospection in Ecuador, ECU/80/002	657	-	163	302	192	-	-	-
Egypt	National Centre for Radiation Technology - Phase II, EGY/78/011	694	145	306	243	-	-	-	-
Ethiopia	Application of nuclear techniques, ETH/78/005	372	321	51	-	-	-	-	-
Hungary	Establishment of an automated radiation laboratory, HUN/82/002	63	-	5	41	8	9	-	-
Indonesia	Application of isotopes and radiation to increasing agricultural production, INS/78/074	1560	-	207	450	393	255	198	57
Iran I.R.	Pilot demonstration plant for radio-sterilization and other applications of radiation technology, IRA/82/003	1604	-	264	674	470	196	-	-
Madagascar	Uranium prospection and evaluation, MAG/77/012	1459	1053	371	35	-	-	-	-

Recipient	Project title and code	Total amount approved	Approved budgets						
			Prior to 1982	1982	1983	1984	1985	1986	1987
Malawi	Negotiations on uranium exploration, MLW/81/037	8	-	8	-	-	-	-	-
Nigeria	Use of nuclear techniques in animal production, NIR/72/005	591	476	115	-	-	-	-	-
Peru	Nuclear energy, PER/76/002	2349	2131	218	-	-	-	-	-
	Nuclear energy, PER/81/004	1262	-	265	472	435	90	-	-
Philippines	Philippine nuclear power manpower development programme, PHI/80/007	1114	194	106	235	311	268	-	-
Romania	Development of nuclear technology - Phase II, ROM/76/023	653	587	66	-	-	-	-	-
	Assistance for nuclear power stations, ROM/82/001	700	-	290	367	43	-	-	-
Senegal	Assistance to the Institute for the Application of Nuclear Techniques, SEN/77/005	275	40	135	100	-	-	-	-
Sri Lanka	Radioactive tracer techniques for the study of coastal sedimentology, SRL/77/014	197	176	21	-	-	-	-	-
Yugoslavia	Industrial application of high-energy ionizing radiation, YUG/78/007	169	138	27	4	-	-	-	-
	Establishment of a uranium analysis laboratory at Zirovski Vrh Mine, Slovenia, YUG/78/008	80	24	41	15	-	-	-	-
	Ecological laboratory with a mobile unit, YUG/79/006	53	47	6	-	-	-	-	-
Zaire	Strengthening of infrastructure - Centre régional d'études nucléaires - Regional Centre for Nuclear Studies (CREN), Kinshasa, ZAI/76/004	618	311	267	40	-	-	-	-
Asia and the Pacific	Support for regional co-operation in the industrial application of isotopes and radiation technology, RAS/79/061	4372	1181	910	842	630	514	295	-
Interregional	Applications of modern techniques in physics to development, INT/81/TO4 (UNFSSD)	367	118	249	-	-	-	-	-

A N N E X VII

REGULAR AND SPECIAL PROGRAMME PROJECTS COMPLETED OR
CANCELLED DURING 1982

A. Completed projects

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Albania	Nuclear electronics, ALB/4/002	1980	1	69 600
Algeria	Nuclear energy centre planning, ALG/0/004	1978	4.5	24 500
	Nuclear power studies, ALG/0/008	1982	0.5	-
	Radioisotopes in hydrology, ALG/8/002	1981	0.5	-
Argentina	Non-destructive testing, ARG/8/008	1979	11	-
Bangladesh	Symposium on the role of physics in development, BGD/1/006	1981	0.5	-
	Radioisotopes in animal science, BGD/5/005	1977	2.5	-
	Nuclear medicine, BGD/6/005	1981	-	72 400
Bolivia	Nuclear planning and programming, BOL/0/003	1981	1	-
	Science and technology planning, BOL/0/004	1982	1.5	-
Brazil	Ecological investigations in the Amazon basin, BRA/0/008	1981	4	-
	Equilibrium of uranium ores and geological materials, BRA/3/007	1980	1.5	-
	Quality assurance, BRA/4/026	1977	3.5	-

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Brazil	Radioisotope production, BRA/4/027	1977	6.5	4 900
	Radiopharmaceuticals, BRA/6/006	1980	6	52 200
	Isotopes in hydrology, BRA/8/019	1981	1.5	-
	Nuclear power plant safety, BRA/9/010	1977	4.5	-
Burma	Radioisotopes in haematology, BUR/6/007	1976	13	27 400
	Nuclear medicine laboratory, BUR/6/009	1978 1979	-	96 300
Chile	Nuclear regulatory services, CHI/0/006	1980	1.5	-
	Calibration and metrology, CHI/1/009	1975 1978	2	68 100
	Neutron diffraction, CHI/1/010	1976	12	18 000
	Radioisotope Division development, CHI/4/007	1980	-	30 000
	Nuclear techniques in metallurgy, CHI/8/011	1980	1	-
	Tracer techniques in industry, CHI/8/012	1981	1	-
Colombia	Nuclear science training, COL/0/003	1980	2	-
	Science and technology planning, COL/0/005	1982	0.5	-
	Gamma spectrometry, COL/2/008	1976	2	14 200
	Radioisotopes in industry/hydrology, COL/8/009	1979	0.5	-
Costa Rica	Nuclear medicine, COS/6/007	1977 1978	1.5	132 300

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Costa Rica	Radiation protection, COS/9/002	1981	2	-
Cuba	Radioimmunoassay, CUB/6/006	1979	1	9 400
	Industrial applications, CUB/8/006	1979	-	100 100
Dominican Republic	Nuclear instrumentation and nuclear analytical techniques, DOM/1/002	1981	1.5	-
Dem. P.R. Korea	Environmental protection, DRK/7/002	1978	0.5	63 100
Ecuador	Science and technology planning, ECU/0/003	1982	1.5	-
	Nuclear techniques in animal science, ECU/5/005	1980	-	23 900
	Radioimmunoassay, ECU/6/004	1977	3	34 800
	Industrial radiography, ECU/8/006	1981	3	-
Egypt	Stable isotope enrichment/analysis, EGY/4/013	1975	2.5	40 200
	Reactor engineering, EGY/4/014	1977	-	33 700
Ghana	Applications of nuclear techniques, GHA/4/007	1981	-	37 300
	Radioisotopes in medicine, GHA/6/006	1978	3.5	49 200
Hungary	Waste management, HUN/9/006	1977	0.5	10 800
Iceland	Radioisotopes in agriculture, ICE/5/003	1980	3	46 200
India	X-ray fluorescence, IND/2/005	1979	-	12 500

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Indonesia	Ion implantation technique, INS/1/011	1980	2	-
	Uranium exploration, INS/3/006	1979	2	25 600
	Nuclear electronics, INS/4/012	1977	2	16 600
Iran I.R.	Quality control of radioisotopes, IRA/2/002	1975	3.5	8 000
Ivory Coast	Plant breeding, IVC/5/010	1981	4	35 000
Korea, R.	Pellet cladding, ROK/4/009	1979	3	-
	Sintered UO ₂ pellet study, ROK/4/010	1981	1	-
	Radioisotopes in animal nutrition, ROK/5/017	1979	2.5	72 900
	Nuclear power plant safety, ROK/9/009	1977	2.5	25 100
	Nuclear power plant safety, ROK/9/011	1978	1	36 600
Libyan A.J.	Nuclear power plant, LIB/0/005	1982	1	-
Malaysia	Neutron physics (Kuala Lumpur), MAL/1/002	1979	3	62 400
	Nuclear physics, MAL/1/004	1980	-	22 000
	Uranium exploration, MAL/3/003	1980	7.5	40 100
	Non-destructive testing, MAL/4/004	1981	3	9 400
	Soil moisture studies, MAL/5/012	1981	2	4 600
	Radioisotopes in animal science, MAL/5/013	1982	-	14 900
	Nuclear medicine services, MAL/6/007	1978	6	13 000

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Morocco	Aerial spectrometry, MOR/3/006	1981	4	12 800
Niger	Radioisotopes in animal science, NER/5/004	1982	0.5	-
Nigeria	Hospital physics, NIR/6/002	1973 1976	24	24 200
Pakistan	Uranium exploration, PAK/3/007	1980	-	19 700
	Food preservation, PAK/5/015	1980	2	-
Panama	Nuclear medicine, PAN/6/004	1978	4.5	17 800
Paraguay	Atomic energy planning, PAR/0/002	1980	0.5	-
Peru	Science and technology planning, PER/0/014	1982	1.5	-
	Medfly control, PER/5/011	1981	1	-
Philippines	Nuclear electronics, PHI/4/013	1980	6	20 800
	Nuclear medicine, PHI/6/011	1981	-	48 300
Poland	Materials research, POL/1/002	1982	0.5	29 100
	Radiopharmaceuticals, POL/2/007	1981	-	47 000
Portugal	Radiochemistry, POR/2/006	1980	-	138 500
	Radioisotope production, POR/2/007	1982	-	11 300
	Uranium prospection, POR/3/002	1977, 1978 1979	6	29 500
	Uranium prospection, POR/3/003	1980, 1981 1982	-	46 300

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Portugal	Borehole logging, POR/3/004	1981	-	27 800
Romania	Nucleonic instruments for monitoring industrial processes, ROM/8/007	1981	0.5	39 100
Sri Lanka	Fertilizer use efficiency, SRL/5/015	1980	2	41 600
Thailand	Plant mutation breeding, THA/5/024	1980	-	43 800
	Nuclear medicine, THA/6/012	1978	4	14 600
	Environmental radioactivity, THA/9/005	1978	3	50 300
Tunisia	Nuclear raw materials, TUN/3/009	1979, 1980 1981, 1982	21.5	32 800
	Nuclear raw materials, TUN/3/010	1980	-	25 000
Turkey	Fusion energy research, TUR/1/013	1982	-	6 700
	Production of technetium-99m generators, TUR/2/006	1981	-	28 000
	Conservation of archaeological works, TUR/2/007	1982	-	21 400
	Nuclear science centre, TUR/4/017	1981	-	23 000
	Film badge laboratory, TUR/9/006	1979	0.5	41 600
U.R. Tanzania	Isotopes in agriculture, URT/5/002	1977	8.5	51 000
	Isotopes in hydrology, URT/8/004	1982	2.5	14 200

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Uruguay	Nuclear research centre, URU/0/004	1979	12	76 900
	Isotopes in food quality control, URU/5/012	1979	1	-
	Scintigraphy, URU/6/008	1978	1.5	38 900
Venezuela	Science and technology planning, VEN/0/003	1982	0.5	-
	Radioisotopes in agriculture, VEN/5/006	1980	7.5	-
Viet Nam	Radioisotopes in medicine, VIE/6/006	1975	-	36 200
Yugoslavia	Reactor training centre, YUG/4/017	1981	2.5	-
	Nuclear materials studies, YUG/4/019	1982	-	144 000
	Radioecological modelling, YUG/9/012	1980 1981	1	31 900
Zaire	Radioimmunoassay, ZAI/2/009	1981	3.5	18 000
	Radioisotopes in industry/food preservation, ZAI/8/002	1975	2	-
	Nuclear methods in mineralogy, ZAI/8/004	1980	0.5	28 500
Zambia	Tsetse fly control, ZAM/5/007	1980 1981	0.5	15 100
Latin America Region	Animal science, RLA/5/015	1982	1	-

B. Cancelled projects

Recipient	Project title and code	Year of approval	Assistance provided	
			Experts (man-months)	Equipment (\$)
Brazil	Site evaluation, BRA/9/013	1978	3	-
El Salvador	Nuclear science, ELS/0/002	1980, 1981 1982	10	25 000 (CC) 30 000 (NCC)
	Nuclear medicine, ELS/6/007	1980 1982	3	-
Malaysia	Nuclear power planning, MAL/0/006	1980	5	-
Philippines	Mutation breeding (wheat), PHI/5/015	1980	4	-
Thailand	Quality assurance, THA/9/007	1979	3	-

A N N E X V I I I

FOOTNOTE a/ PROJECTS MADE OPERATIONAL OR EXTENDED DURING 1982

Recipient	Project title and code	Experts		Equipment	
		Man-months	Source ^a /	\$	Source ^a /
Bangladesh	Repair and maintenance of nuclear instruments, BGD/4/007	6	USA	30 000	USA
	Isotopes in agriculture, BGD/5/009	6	USA	10 000	USA
Brazil	Development of in-pile irradiation loops, BRA/4/032	3	GFR	-	-
	Determination of reactor operational parameters, BRA/4/033	4	GFR	2 000	GFR
	Radioisotopes in agriculture, BRA/5/012	6	GFR	15 000	GFR
	Radioisotopes in clinical medicine ^b /, BRA/6/008	6	GFR	70 000	GFR
	Radioisotopes in medicine, BRA/6/009	6	GFR	90 000	GFR
Ecuador	Nuclear techniques in animal health and production, ECU/5/006	12	TACFC ^c /	20 000	TACFC ^c /
Egypt	Physico-chemical studies of actinides, EGY/2/003	1	USA	50 000	USA
	Medfly control, EGY/5/012	12	USA	70 000	USA
Ghana	Riverine tsetse fly study, GHA/5/010	3	UK	50 000	UK
Greece	Nuclear medicine, GRE/6/006	-	-	50 000	GFR
	Environmental radioactivity, GRE/9/011	-	-	100 000	GFR

Recipient	Project title and code	Experts		Equipment	
		Man-months	Source ^{a/}	\$	Source ^{a/}
Indonesia	Nuclear electronics, INS/4/019	2	USA	42 000	USA
Kenya	Non-destructive testing, KEN/8/004	6	USA	44 000	USA
Korea, R.	Industrial applications, ROK/8/005	6	GFR	-	-
	Nuclear waste management (NRB), ROK/9/022	6	USA	-	-
Malaysia	Radioactive minerals survey, MAL/3/004	2	USA	37 000	USA
	Radioisotopes in animal science, MAL/5/013	-	-	15 000	USA
Mexico	Electron accelerator development, MEX/4/032	6	USA	-	-
Peru	Nuclear sciences, PER/0/010	5	FIN	87 778	FIN
	Medfly control, PER/5/012	14	ITA	216 000	ITA
Philippines	Quality assurance/quality control training centre, PHI/4/016	30	USA	50 000	USA
	Nuclear engineering education, PHI/4/017	8	USA	20 000	USA
Portugal	Actinide chemistry, POR/2/008	-	-	60 000	GFR
Senegal	Radiocarbon laboratory, SEN/0/004	-	-	40 000	USA
Singapore	Personnel dosimetry, SIN/9/012	-	-	115 000	UK
Sri Lanka	Radioisotopes in animal science, SRL/5/018	-	-	45 000	UK

Recipient	Project title and code	Experts		Equipment	
		Man-months	Source ^{a/}	\$	Source ^{a/}
Sudan	Liquid nitrogen plant, SUD/1/003	-	-	45 000	USA
	Electronics workshop, SUD/4/002	-	-	45 000	UK
Thailand	Radioisotopes in agriculture, THA/5/026	3	SAU	25 000	SAU
	Radiation sterilization of medical supplies, THA/8/009	4	TACF	20 000	FRA
	Environmental radioactivity monitoring, THA/9/008	-	-	40 000	UK
Tunisia	Radioisotopes in industry, TUN/8/008	-	-	40 000	UK
Uruguay	Nuclear medicine, URU/6/014	-	-	120 000	USA
Yugoslavia	Nuclear materials studies, YUG/4/019	-	-	150 000	USA
Zambia	Tsetse fly control, ZAM/5/009	8	SWE	120 000	SWE
	Radiation protection, ZAM/9/004	6 <u>d/</u>	IND	53 000 <u>d/</u>	IND

a/ Explanation of abbreviations: FIN = Finland, FRA = France, GFR = Federal Republic of Germany, IND = India, ITA = Italy, SAU = Saudi Arabia, SWE = Sweden (SIDA), TACF = Technical Assistance and Co-operation Fund, UK = United Kingdom, USA = United States of America.

b/ Project approved prior to 1982 and not included in 1982 programme.

c/ A contribution by Spain for an operational project released funds from the TACF to permit this upgrading

d/ In-kind contribution.

A N N E X I X

APPROVALS AGAINST THE RESERVE FUND IN 1982

A. New projects

Recipient	Project title and number	Experts m/m	Equipment \$	Total \$
Algeria	Nuclear power studies, ALG/0/008	1	-	5 400
Bolivia	Science and technology planning, BOL/0/004	2	-	10 800
Colombia	Science and technology planning, COL/0/005	2	-	10 800
	Nuclear power planning, COL/0/006	2	-	10 800
Ecuador	Science and technology planning, ECU/0/003	2	-	10 800
	Nuclear safety mission, ECU/9/006	2	-	10 800
Iran I.R.	Maintenance of radioisotope production capability, IRA/2/004	-	5 000	5 000
Iraq	Establishment of an entomology laboratory, IRQ/5/006	1	-	5 400
Jordan	Nuclear energy planning, JOR/0/002	1	-	5 400
Libyan A.J.	Nuclear power plant, LIB/0/005	1	-	5 400
Mexico	Exploratory mission in the field of agriculture, MEX/5/010	3	-	16 200
Peru	Science and technology planning, PER/0/014	2	-	10 800
Turkey	Liquid nitrogen facility, TUR/1/014	-	7 500	7 500
	Food irradiation, VIE/5/009	1	-	5 400
	Isotope hydrology, VIE/8/003	1	-	5 400
Venezuela	Science and technology planning, VEN/0/003	2	-	10 800
Latin America Region	Chemical science, RLA/5/015	1	-	5 400
	Non-destructive testing in Latin America, RLA/8/005	5	-	15 000
	Sub-total	29	12 500	157 100

Recipient	Project title and number	Experts m/m	Equipment \$	Total \$
<u>B. Supplementary assistance to existing projects</u>				
Brazil	Ecological investigations in the Amazon Basin, BRA/0/008	1/05	-	6 300
Malaysia	Radioisotope production, MAL/2/002	-	25 000	25 000
Sierra Leone	Radioisotopes in medicine, SIL/6/003	-	20 000	20 000
Zambia	Nuclear analytical laboratory, ZAM/0/005	-	14 000 6 000 NCC	20 000
	Sub-total	1/05	65 000	71 300
	TOTAL	30/05	77 500	228 400

A N N E X X

CHANGES TO APPROVED PROJECTS

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
Afghanistan	Nuclear science, AFG/1/004	34/00	67 000 138 000 NCC ^{b/}	(5/00)	4 800 -
Albania	Applied nuclear techniques and documentation, ALB/0/002	3/00	160 000 40 000 NCC	(1/00)	- -
Argentina	Non-destructive testing, ARG/8/008	11/00	-	0/24	-
Bangladesh	Neutron physics, BGD/1/005	3/00	100 000	-	(19 000)
	X-ray fluorescence, BGD/2/006	2/00	37 000	-	5 500
	Nuclear raw materials prospection, BGD/3/004	15/00	78 000	-	19 000
	Sterilization of pharmaceuticals, BGD/7/003	5/00	24 000	(3/00)	-
Bolivia	Quality control of radiopharmaceuticals, BOL/2/009	4/00	12 000	(1/00)	9 400
	Radioisotopes in agriculture, BOL/5/004	12/00	30 000 40 000 NCC	(2/00)	10 800 -
	Radiopharmaceuticals, BOL/6/010	-	28 100 60 500 NCC	0/05	- -
	Radiation protection, BOL/9/004	6/00	27 000	(3/00)	14 400
Brazil	Ecological investigations in the Amazon Basin, BRA/0/008	3/00	-	2/05	-
	Equilibrium of uranium ores and geological materials, BRA/3/007	3/00	-	(1/18)	-
	Equilibrium of uranium ores and geological materials, BRA/3/008	-	16 000	-	8 000
	Quality assurance, BRA/4/026	6/00	-	(1/16)	-
	Agricultural research and development, BRA/5/009	36/00	78 000	6/00 12/00 FITC ^{c/}	-
	Radiopharmaceuticals, BRA/6/006	6/00	51 000	-	4 124
	Isotopes in hydrology, BRA/8/019	1/00	-	0/15	-
	Nuclear power plant safety, BRA/9/010	4/00	-	0/15	-
Nuclear power programme, BRA/9/016	18/00	-	(6/00)	-	
Burma	Medical application of radioisotopes, BUR/6/012	-	10 000	-	2 500
	Radiobiochemistry, BUR/7/002	6/00	12 500	3/00	-

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
Chile	Radioisotope Division development, CHI/4/007	3/00	30 000	(3/00)	-
	Irradiation and testing of reactor materials, CHI/4/010	18/00	-	(6/00)	-
	Isotopes in hydrology, CHI/8/013	4/00	-	(2/00)	-
Colombia	Isotopes in hydrology, COL/8/010	3/00	170 000	-	6 000
Cuba	Production of labelled compounds, CUB/2/004	-	60 000	-	3 300
Dem. P.R. Korea	Radiopharmaceuticals, DRK/2/002	1/00	143 500 147 500 NCC	(0/15)	6 400 (4 000) NCC
	Uranium ore and concentrate analysis, DRK/3/002	2/00	55 000 30 000 NCC	-	10 000 (10 000) NCC
Dominican Republic	Nuclear instrumentation and nuclear analytical techniques, DOM/1/002	1/00	-	0/16	-
Ecuador	Secondary standards dosimetry laboratory, ECU/1/003	13/00	145 000	3/00	-
	Uranium prospecting, ECU/3/005	26/00	20 000	1/00	-
	Nuclear medicine, ECU/6/007	4/00	18 000 25 000 NCC	-	- 2 700 NCC
	Radiation technology, ECU/8/005	7/00	25 000 980 000 NCC	(0/24)	- -
Egypt	Accelerator modernization and use, EGY/0/005	3/00	45 000	(2/14)	-
	Zircaloy cladding materials, EGY/4/015	3/00	3 600 1 200 NCC	- -	- 3 000 NCC
	Medfly control, EGY/5/012	12/00	70 000	1/00	-
	Waste management, EGY/9/007	12/00	195 000 2 665 000 NCC	(3/00)	- -
El Salvador	Radiation protection, ELS/9/003	6/00	18 000	-	5 000
Ethiopia	Radioisotopes in medicine, ETH/6/003	6/00	21 000 30 000 NCC	- -	5 000 5 000 NCC
Ghana	Radioisotopes in medicine, GHA/6/006	3/00	32 200 18 000 NCC	- -	2 000 -
	Gamma irradiation facility, GHA/8/004	2/18	304 000	-	(71 752)
Greece	Radiopharmaceuticals, GRE/2/015	2/00	81 000 90 000 NCC	(1/20) -	22 000 ^{d/} -
	Nuclear raw materials, GRE/3/006	28/00	80 000	(10/00)	20 000

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
Guatemala	Applied nuclear science, GUA/0/003	10/00	74 400 10 000 NCC	(1/00)	5 400 -
Hungary	Cyclotron laboratory, HUN/4/004	-	1 000 1 384 600 NCC	-	- (47 346) NCC
	Agricultural residue studies, HUN/5/011	-	40 000	0/15	(2 700)
Indonesia	Nuclear power programme, INS/0/003	14/00	-	(2/00)	-
	Secondary standards dosimetry laboratory, INS/1/010	12/00	81 000	(1/19)	9 000
	Uranium ore processing, INS/3/007	6/00	67 000	-	3 500
	Fuel element technology, INS/4/017	1/00	15 000	-	2 500
	Radioisotopes in poultry nutrition, INS/5/017	7/00	19 000	(1/22)	-
Iran I.R.	Quality control of radioisotopes, IRA/2/002	4/00	5 000	(0/21)	2 500
Iraq	Reactor safety studies, IRQ/4/006	12/00	23 000 19 000 NCC	(11/14)	(23 000) -
	Research reactor utilization, IRQ/4/008	-	30 000 NCC	-	42 000 NCC
Ivory Coast	Radioisotopes in agriculture, IVC/5/009	4/00	12 000	(2/00)	13 600
Jamaica	Applied radiochemistry, JAM/2/003	12/00	90 000	(1/00)	5 400
Jordan	Nuclear science, JOR/1/002	15/00	148 000 50 279 NCC	(6/15)	24 500 -
	Radioisotopes in hydrology, JOR/8/002	1/00	103 300	(0/04)	700
Kenya	Nuclear science laboratory, KEN/0/003	36/00	163 000 15 000 NCC	6/00 -	- -
	Radioisotopes in agriculture, KEN/5/008	12/00	29 000	(3/00)	12 000
	Non-destructive testing, KEN/8/004	6/00	44 000	-	7 000
Korea, R.	Nuclear power plant safety, ROK/9/011	3/00	37 500	(1/29)	-
Lebanon	Nuclear analytical techniques, LEB/0/002	3/00	30 000	(2/00)	-
Libyan A.J.	Nuclear raw materials, LIB/3/003	12/00	24 000	(3/00)	-

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^a / (man-months/days)	Equipment (\$)
Malaysia	Non-destructive testing, MAL/4/004	3/00	15 000	-	(5 600)
	Radioisotopes in animal science, MAL/5/009	2/00	33 000 7 000 NCC	(0/29)	-
	Nuclear applications in industry, MAL/8/003	18/00	80 000	-	5 600
Mali	Nuclear medicine, MLI/6/002	7/00	55 000 25 000 NCC	2/20	-
Mexico	Medfly control, MEX/5/009	31/00	119 000	(4/00)	21 600
Mongolia	Application of nuclear technology, MON/0/002	5/00	193 000 42 000 NCC	1/00	-
Morocco	Nuclear physics, MOR/1/005	16/00	35 000	1/00	-
	Nuclear electronics, MOR/4/005	9/00	-	(4/11)	20 960
Niger	Radioisotopes in hydrology, NER/8/003	12/00	48 000	(4/29)	26 820
Nigeria	Nuclear physics, NIR/1/003	24/00	111 000 37 767 $\frac{c}{d}$	(12/00)	-
Pakistan	Uranium prospection, PAK/3/005	16/00	-	(3/00)	-
	Radioisotopes dispensing, PAK/4/022	-	- 60 000 NCC	-	20 000 (20 000) NCC
Paraguay	Nuclear science, PAR/1/002	14/00	190 000	-	9 000
	Nuclear medicine, PAR/6/006	-	45 000 60 000 NCC	-	7 500 (2 500) NCC
Peru	Nuclear sciences, PER/0/010	12/15	189 257	(3/00)	(5 422)
	Uranium processing techniques, PER/3/010	4/00	6 000	1/00	-
	Radioisotopes in agriculture, PER/5/008	13/00	25 000	-	1 937
Philippines	Establishment of an electron linear accelerator facility, PHI/4/014	1/00	-	(0/20)	-
	Sterilization of medical products, PHI/8/009	1/00	137 000	-	75 000
Poland	Materials research, POL/1/002	1/00	27 000	(0/15)	2 700
Portugal	Nuclear power programme, POR/0/003	4/00	-	(1/15)	-
	Uranium prospection, POR/3/003	6/00	55 500	(6/00)	-

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
Romania	Nuclear materials research, ROM/4/009	2/00	132 000	(1/00)	4 800
Senegal	Radioisotopes in agriculture, SEN/5/011	8/00	110 900	1/00	-
Sierra Leone	Radioisotopes in medicine, SIL/6/003	12/00	30 000 35 000 NCC	-	1 000 4 500 NCC
Sri Lanka	Non-destructive testing, SRL/4/007	6/00	37 000 10 000 NCC	-	5 000 (5 000) NCC
	Nuclear technology, SRL/4/008	6/00	5 000 40 000 NCC	-	3 000 (3 000) NCC
	Radioisotopes in animal science, SRL/5/013	7/00	82 000	(1/00)	-
Sudan	Nuclear science laboratory, SUD/0/006	10/00	219 900 52 100 NCC	-	13 000 -
	Isotopes in animal science, SUD/5/013	5/00	14 800	(1/00)	5 400
Syrian A.R.	Nuclear energy planning, SYR/0/003	11/00	-	(4/00)	-
	Nuclear analytical laboratory, SYR/1/002	2/00	40 000	(1/00)	-
Thailand	Nuclear raw materials prospection, THA/3/003	-	64 300 ^{e/}	-	(3 000)
	Radioisotopes in animal science, THA/5/020	6/00	107 940	(2/29)	-
	Pesticide residues, THA/5/021	6/00	113 000	1/00	5 000
	Plant mutation breeding, THA/5/023	3/00	-	1/00	-
	Plant mutation breeding, THA/5/024	-	45 000	-	(1 000)
	Radioimmunoassay, THA/6/013	3/00	39 000	-	8 000
Tunisia	Radioisotopes in industry, TUN/8/007	19/00	242 500 65 000 NCC	-	(50 000) -
Turkey	Secondary standards dosimetry laboratory, TUR/1/011	3/00	150 000	-	10 000
	Conservation of archaeological works, TUR/2/007	-	15 000	-	8 500
	Nuclear techniques in animal science, TUR/5/008	7/00	76 600	(4/10)	-
	Nuclear techniques in animal science, TUR/5/010	12/00	22 000	1/10	13 600
	Nuclear power programme, TUR/9/005	18/00	-	(4/00)	26 000
	Film badge laboratory, TUR/9/006	0/15	37 600	-	5 000

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
U.R. Tanzania	Nuclear physics, URT/1/003	10/00	100 600 37 000 NCC	(1/19)	-
	Radioisotopes in agriculture, URT/5/004	6/00	21 000 48 000 NCC	1/00	2 000 -
	Isotopes in hydrology, URT/8/004	3/00	10 000	-	2 200
Uruguay	Isotopes in agriculture, URU/5/012	5/00	8 800 30 000 NCC	(2/00)	9 600 -
	Nuclear medicine, URU/6/012	4/00	20 000	-	4 000
Venezuela	Research reactor operation, VEN/4/006	4/00	30 400	1/00	-
Viet Nam	Nuclear physics teaching, VIE/1/004	2/00	37 200 60 000 NCC	-	1 800 -
	Nuclear electronics laboratory, VIE/4/002	6/00	46 500	-	8 000
	Nuclear medicine, VIE/6/010	-	16 500 37 500 NCC	-	5 700 -
	Radiation monitoring, VIE/9/003	4/00	60 250 29 750 NCC	(1/15)	16 100 (8 000) NCC
Yugoslavia	Research reactor modernization, YUG/4/014	2/00	-	(0/23)	6 000 <u>f/</u>
	Nuclear materials studies, YUG/4/019	-	150 000	-	(6 000)
	Nuclear power safety, YUG/9/010	24/00	28 800 <u>f/</u>	(6/00)	-
Zaire	Radioisotopes in agriculture, ZAI/5/006	-	34 000 5 000 NCC	-	3 200 -
	Food preservation, ZAI/5/007	-	10 000	1/25	-
	Radioisotopes in industry/food preservation, ZAI/8/002	4/00	-	(1/25)	-
	Radioisotopes in hydrology, ZAI/8/005	3/00	20 000	(1/00)	4 800
Zambia	Nuclear physics, ZAM/0/004	13/00	40 000	-	3 000
	Nuclear analytical laboratory, ZAM/0/005	8/00	114 200 85 000 NCC	-	9 300 -
	Nuclear raw materials, ZAM/3/003	28/00	40 500	(1/25)	-
	Isotopes in agriculture, ZAM/5/005	6/00	20 000 5 000 NCC	-	5 000 (5 000) NCC
	Tsetse fly control, ZAM/5/009	8/00	120 000	-	13 514
	Radiation protection services, ZAM/9/004	6/00	53 000	2/00	-

Recipient	Project title and code	Existing approval 1 January 1982		Project changes in 1982	
		Experts (man-months/days)	Equipment (\$)	Experts ^{a/} (man-months/days)	Equipment (\$)
Regional Asia and Pacific	Quality control of nuclear medicine procedures in vivo, RAS/6/004	12/00	85 000	(4/00)	(30 000)
Interregional	Nuclear data techniques and instrumentation, INT/1/018	12/00	109 600 120 000 NCC	(2/00)	45 800 -
Sub-totals		1 023/03	7 295 747	(136/15)	497 781
		-	6 627 429 NCC	-	(32 646)
		-	111 000 FIT	12/00 FIT	-
TOTAL		1 023/03	14 034 176	(124/15)	465 135

- ^{a/} Numbers in parentheses denote reductions - for example: (0/15) = minus 15 man-days and (4/00) = minus four man-months
- ^{b/} NCC denotes selected non-convertible currencies.
- ^{c/} FIT denotes funds in trust - that is, assistance provided from funds made available by Member States to finance assistance for themselves.
- ^{d/} Includes increase in future year.
- ^{e/} Includes sub-contract component.
- ^{f/} Sub-contract.