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INTERNATIONAL ATOMIC ENERGY AGENCY

IAEA-CPS-93/04
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Original: ENGLISH

COUNTRY PROGRAMME SUMMARY

**THE AGENCY'S TECHNICAL CO-OPERATION
PROGRAMME WITH
AFGHANISTAN
1983 - 1993
COUNTRY PROGRAMME SUMMARIES**

DEPARTMENT OF TECHNICAL CO-OPERATION

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EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

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AFGHANISTAN
1983 - 1993
COUNTRY PROGRAMME SUMMARIES**

This report contains a review of the Agency's technical co-operation activities in Afghanistan carried out during 1983 - 1993. In terms of coverage and analytical depth, country programme summaries stand somewhere midway between in-depth country programme evaluations and individual project evaluations. They attempt to provide a comprehensive, descriptive picture of the Agency's co-operation with a Member State in a manner that will be particularly useful for programming decisions. The attempt is very much to describe -- largely through statistical data -- not to provide independent analysis and evaluation.

AFGHANISTAN

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INTRODUCTION

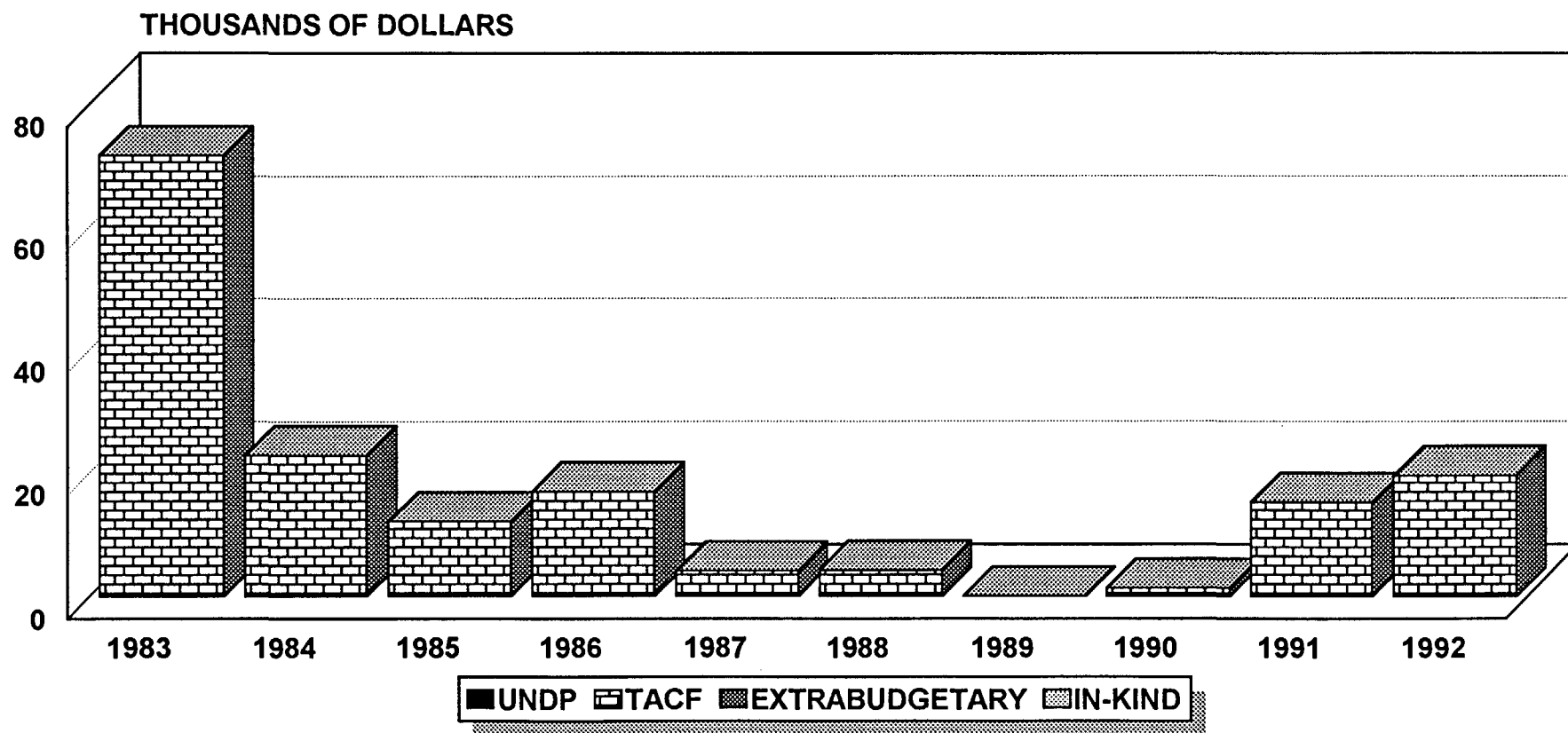
The country programme summary reported on here is one in the series of such studies being undertaken of the Agency's TC programme with Member States. With just over \$1 million of Agency support received, Afghanistan ranks 72nd among all recipients of technical assistance during the period 1958 through 1992.

Almost three quarters of the assistance received during the past ten years has been provided in the form of equipment (73%), complemented by expert services (16%) and training (11%). The entire resources were made available through the TACF, 59% in convertible currency and 41% in NCC.

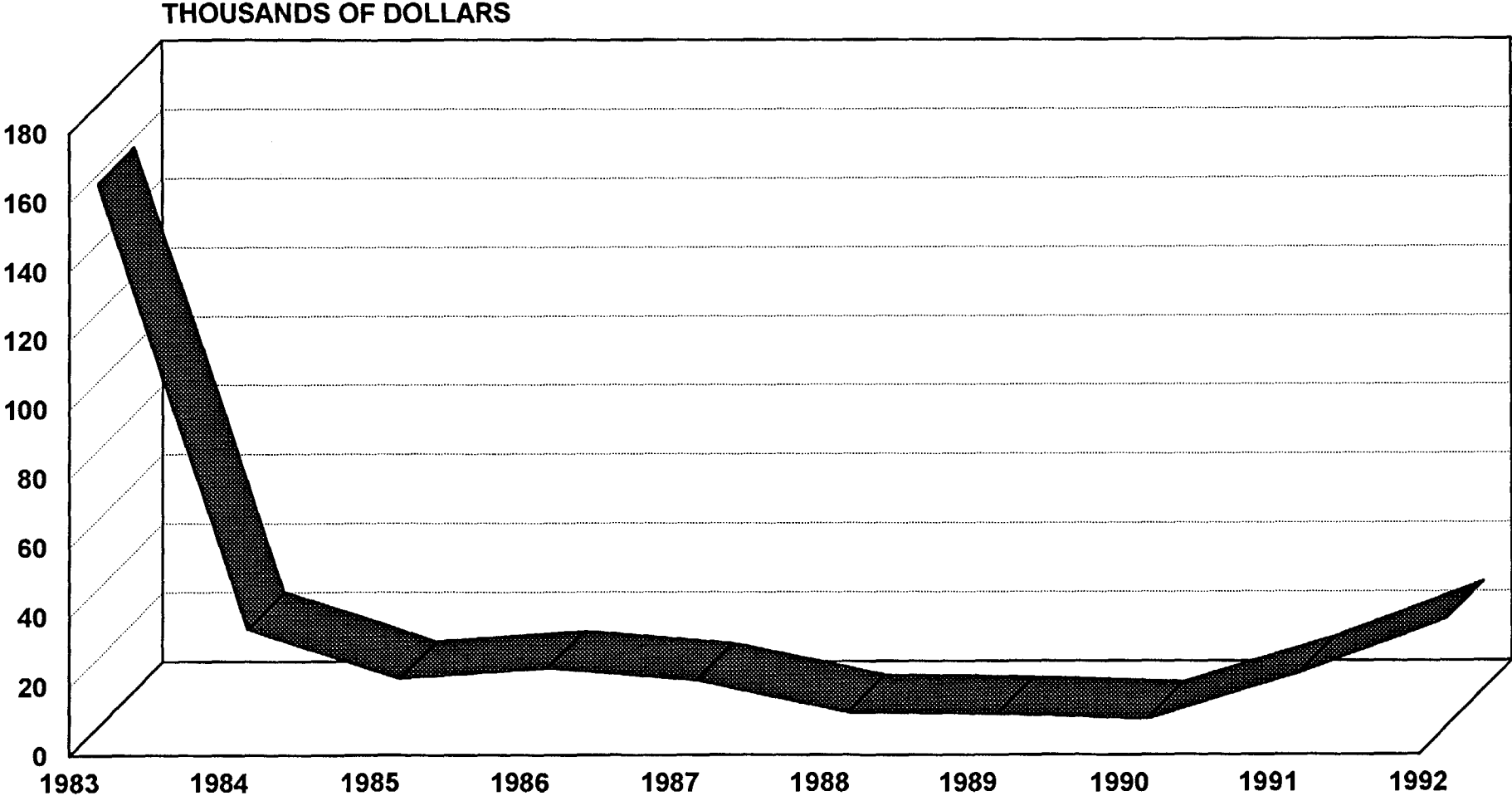
With regard to total disbursements -- by sector -- under those projects that were operational during the period 1983 through 1 April 1993, by far the largest area has been nuclear physics (82%), while only small shares have gone to nuclear engineering and technology (10%) and nuclear medicine (8%).

During the same period, the country has provided experts and training course lecturers for a total of eight assignments.

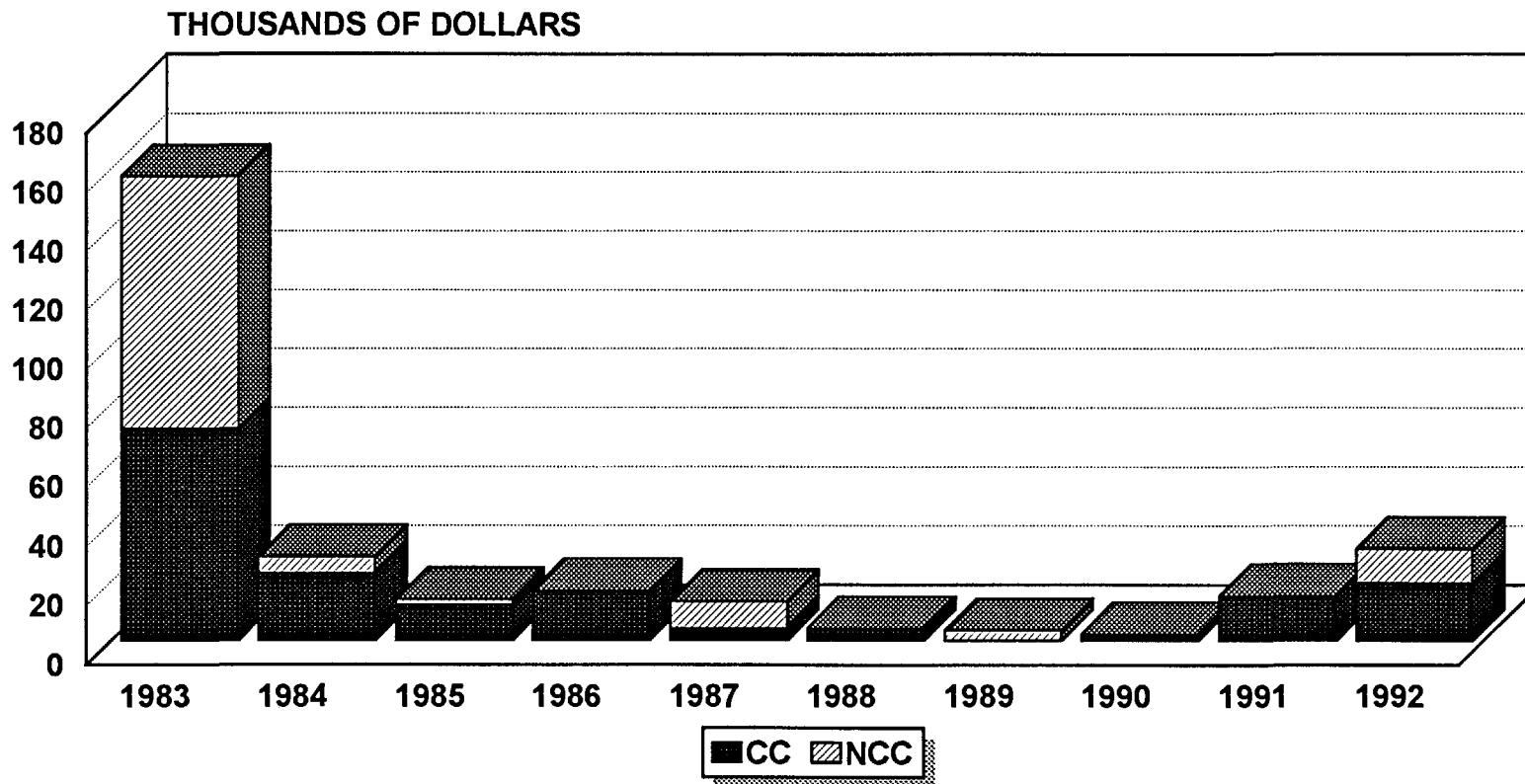
ASSISTANCE PROVIDED BY THE AGENCY TO AFGHANISTAN BY SOURCE (1983- 1992)



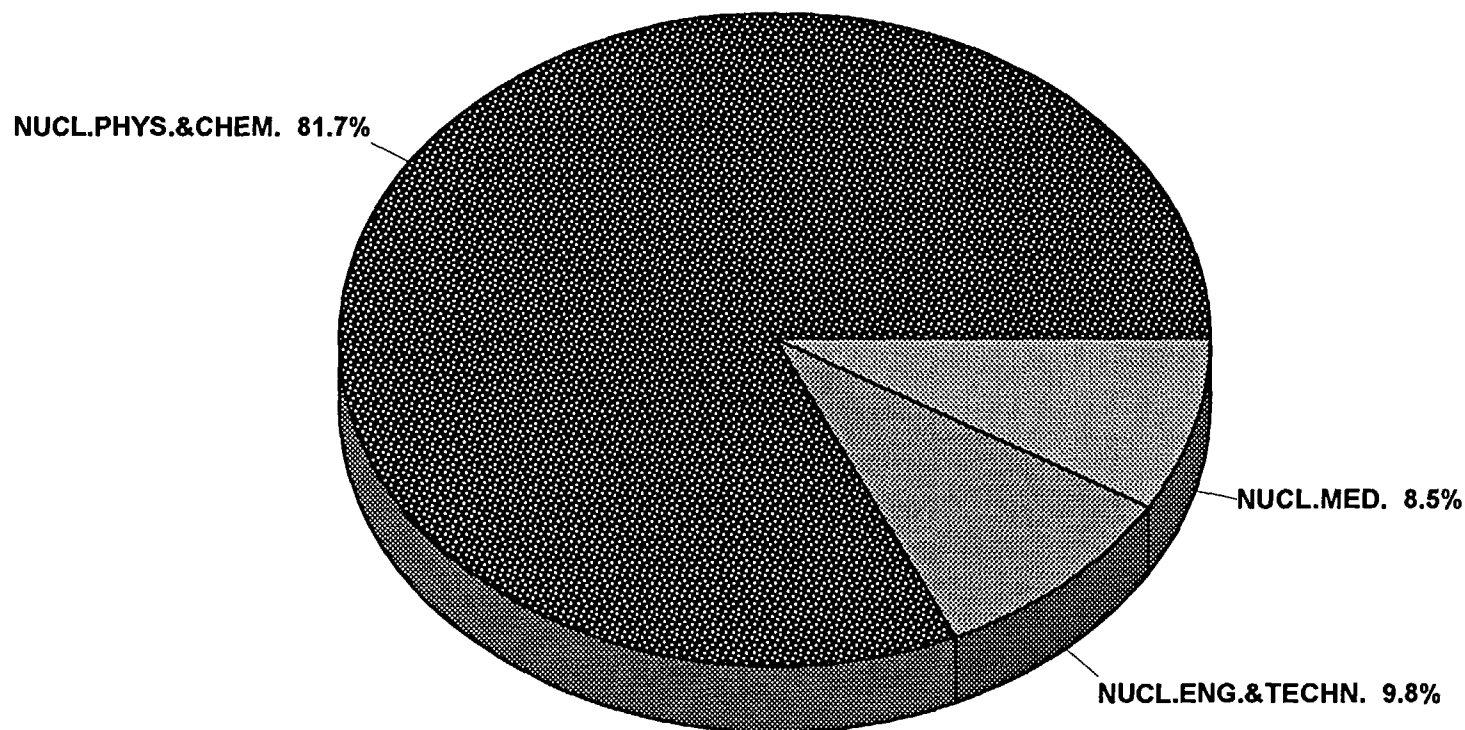
TACF ASSISTANCE PROVIDED TO AFGHANISTAN (1983 - 1992)



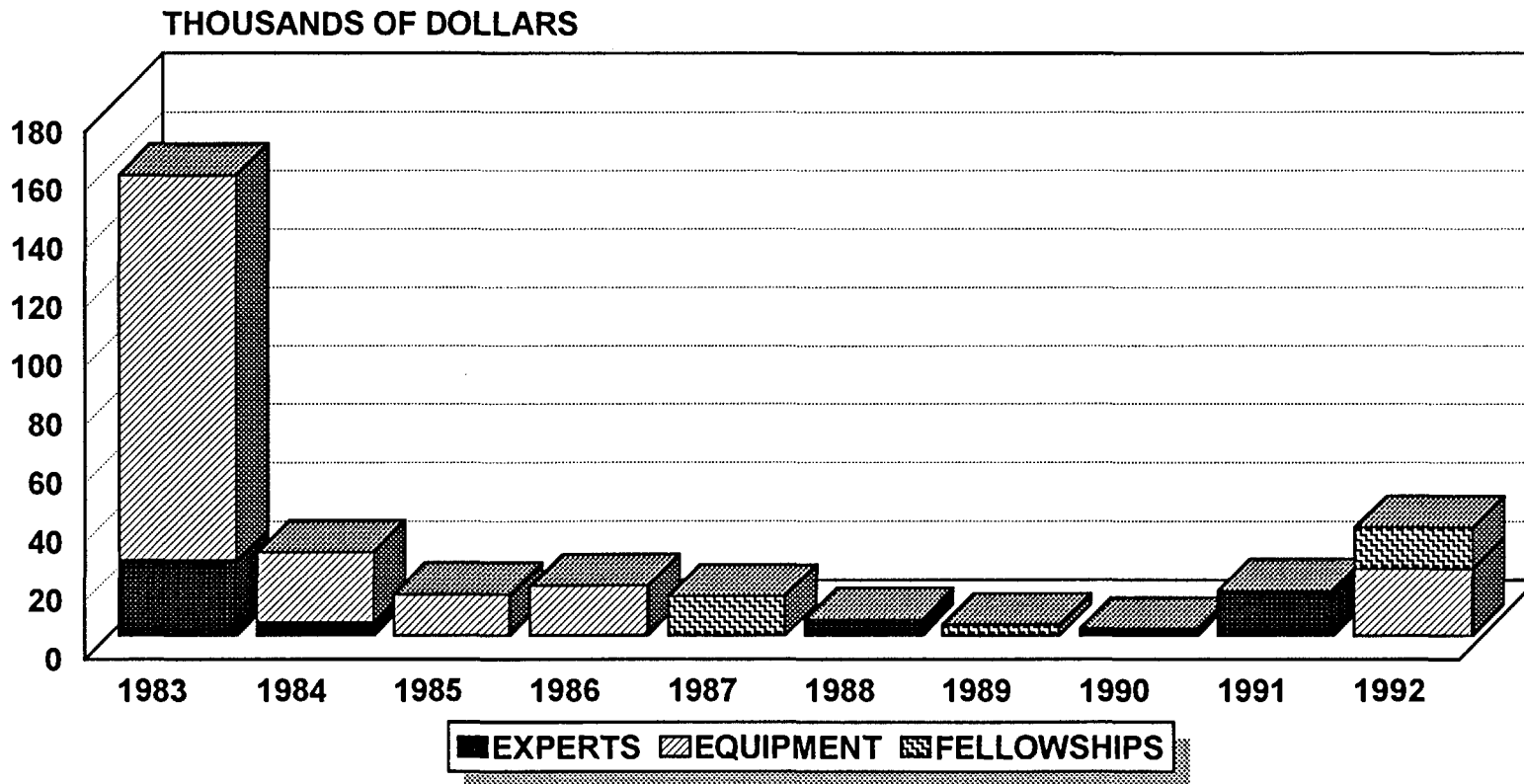
TACF ASSISTANCE PROVIDED TO AFGHANISTAN BY CC AND NCC (1983 - 1992)



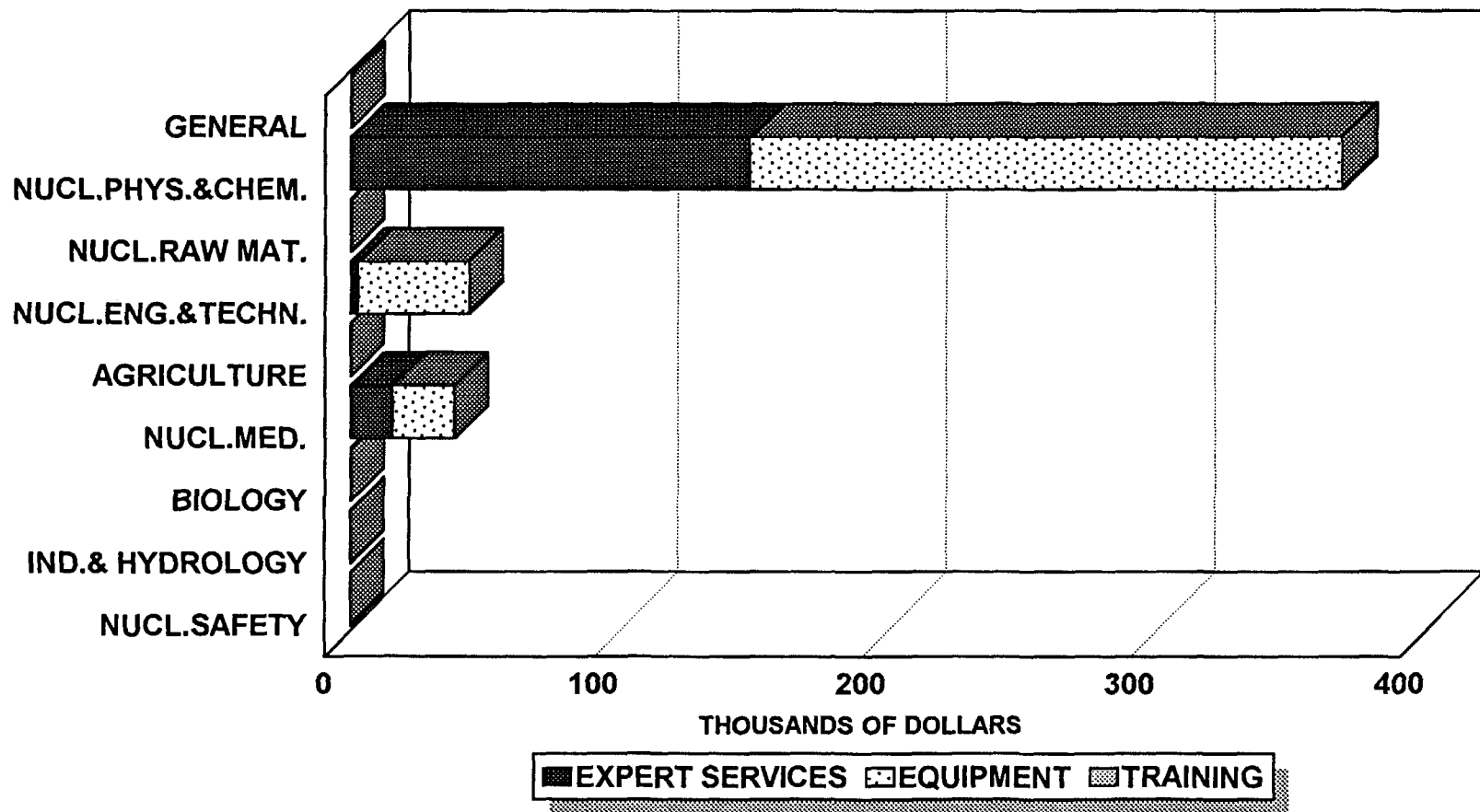
TC PROJECT DISBURSEMENTS IN AFGHANISTAN BY SECTOR (1983 - 1993)



ASSISTANCE PROVIDED BY THE AGENCY TO AFGHANISTAN BY TYPE (1983- 1992)



EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO AFGHANISTAN BY SECTOR (1983- 1993)



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH AFGHANISTAN

ALL SOURCES

AFGHANISTAN'S RANKING AS A TC RECIPIENT
1958 - 1992
(in \$1000)

| YEAR | RANKING | AMOUNT |
|---------|------------------|--------|
| 1958-82 | 52 nd | 724.2 |
| 1983 | 49 th | 157.2 |
| 1984 | 73 rd | 28.3 |
| 1985 | 74 th | 14.0 |
| 1986 | 74 th | 16.9 |
| 1987 | 75 th | 13.3 |
| 1988 | 77 th | 4.2 |
| 1989 | 79 th | 3.6 |
| 1990 | 84 th | 2.3 |
| 1991 | 79 th | 15.2 |
| 1992 | 76 th | 31.0 |
| 1958-92 | 72 nd | 1010.2 |

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1992 (in \$1000)**

ALL SOURCES

| Year | I | II | III | IV | V | AFGHANISTAN |
|---------|-------------|-------------|-------------|-------------|-------------|---------------------------|
| 1958-82 | BRA 8507.3 | IND 6849.4 | ARG 5528.2 | PAK 5492.7 | CHI 5240.1 | 52 nd - 724.2 |
| 1983 | EGY 2077.9 | PER 1116.8 | VIE 948.1 | PHI 778.6 | IRA 722.1 | 49 th - 157.2 |
| 1984 | EGY 3625.9 | PER 1750.4 | THA 1094.6 | CUB 1028.7 | PHI 881.2 | 73 rd - 28.3 |
| 1985 | EGY 2494.8 | PER 1120.7 | THA 1117.4 | BGD 1068.2 | PHI 963.7 | 74 th - 14.0 |
| 1986 | EGY 2317.0 | BRA 1452.9 | THA 1169.4 | POL 1050.3 | BGD 896.4 | 74 th - 16.9 |
| 1987 | HUN 3452.6 | EGY 1775.4 | THA 1742.4 | INS 1312.5 | YUG 1223.2 | 75 th - 13.3 |
| 1988 | EGY 1486.9 | BUL 1361.6 | CPR 1278.5 | THA 1158.7 | BRA 1096.7 | 77 th - 4.2 |
| 1989 | CPR 1542.3 | EGY 1505.1 | THA 1205.3 | BRA 1096.5 | INS 999.1 | 79 th - 3.6 |
| 1990 | POL 2308.1 | CPR 2005.0 | VIE 1589.2 | INS 1412.6 | BRA 1229.1 | 84 th - 2.3 |
| 1991 | INS 1305.2 | CPR 975.0 | EGY 959.8 | BRA 951.2 | BUL 934.7 | 79 th - 15.2 |
| 1992 | EGY 1586.3 | INS 1342.1 | CPR 1328.8 | MEX 1127.8 | POL 1036.4 | 76 th - 31.0 |
| 1958-92 | EGY 23808.6 | BRA 17736.8 | THA 15332.0 | INS 13725.9 | PER 13129.6 | 72 nd - 1010.2 |

***TOP FIVE* RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1992 (in \$1000)**

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

| Year | I | II | III | IV | V | AFGHANISTAN |
|---------|-------------|------------|------------|------------|------------|--------------------------|
| 1958-82 | HUN 2971.7 | EGY 2405.8 | PAK 2340.5 | THA 2000.3 | BRA 1983.5 | 48 th - 549.5 |
| 1983 | EGY 1049.4 | VIE 897.4 | POL 667.8 | PAK 498.5 | PHI 430.0 | 38 th - 157.2 |
| 1984 | EGY 1197.2 | CUB 655.6 | ECU 565.6 | BGD 506.3 | BUL 472.4 | 71 st - 28.3 |
| 1985 | BGD 991.8 | VIE 745.0 | THA 708.7 | BRA 571.8 | POR 538.7 | 72 nd - 14.0 |
| 1986 | BRA 1381.8 | THA 871.9 | POL 833.5 | BGD 823.9 | SYR 751.8 | 72 nd - 16.9 |
| 1987 | HUN 3305.2 | DRK 986.8 | BUL 888.5 | INS 885.8 | EGY 878.9 | 74 th - 13.3 |
| 1988 | BUL 1195.6 | PER 856.5 | EGY 768.6 | INS 751.7 | MAL 656.0 | 77 th - 4.2 |
| 1989 | EGY 990.9 | CPR 868.2 | POR 769.6 | CHI 756.9 | MAL 619.4 | 79 th - 3.6 |
| 1990 | POL 1562.3 | VIE 1518.8 | DRK 1156.2 | IRA 958.0 | YUG 933.4 | 83 rd - 2.3 |
| 1991 | BUL 893.1 | PAK 868.8 | INS 855.1 | VIE 817.6 | CPR 814.5 | 78 th - 15.2 |
| 1992 | EGY 1255.7 | CPR 1009.0 | VIE 872.8 | INS 826.6 | IRA 795.5 | 76 th - 31.0 |
| 1958-92 | EGY 10847.0 | HUN 8743.7 | POL 8486.4 | VIE 8199.9 | PAK 8115.6 | 72 nd - 835.5 |

ASSISTANCE PROVIDED BY THE AGENCY TO AFGHANISTAN

Financial Summary 1983 - 1992
(In thousands of dollars)

| Year | ASSISTANCE PROVIDED, BY TYPE | | | | | | ASSISTANCE PROVIDED, BY SOURCE | | | | | |
|---------|------------------------------|-----------|-------------|----------------|---------------|-------|--------------------------------|---------|----------|-----------------|---------|-------|
| | Experts | Equipment | Fellowships | Group training | Sub-contracts | Total | UNDP | TACF CC | TACF NCC | Extra-budgetary | In-kind | Total |
| 1983 | 25.6 | 131.6 | - | - | - | 157.2 | - | 71.7 | 85.5 | - | - | 157.2 |
| 1984 | 4.5 | 23.8 | - | - | - | 28.3 | - | 22.8 | 5.5 | - | - | 28.3 |
| 1985 | - | 14.0 | - | - | - | 14.0 | - | 12.1 | 1.9 | - | - | 14.0 |
| 1986 | - | 16.9 | - | - | - | 16.9 | - | 16.9 | - | - | - | 16.9 |
| 1987 | - | - | 13.3 | - | - | 13.3 | - | 4.1 | 9.2 | - | - | 13.3 |
| 1988 | 5.4 | - | (1.2) | - | - | 4.2 | - | 4.2 | - | - | - | 4.2 |
| 1989 | - | - | 3.6 | - | - | 3.6 | - | - | 3.6 | - | - | 3.6 |
| 1990 | 1.3 | - | 1.0 | - | - | 2.3 | - | 1.3 | 1.0 | - | - | 2.3 |
| 1991 | 15.0 | 0.2 | - | - | - | 15.2 | - | 15.2 | - | - | - | 15.2 |
| 1992 | (5.7) | 22.6 | 14.1 | - | - | 31.0 | - | 19.5 | 11.5 | - | - | 31.0 |
| 1983-92 | 46.1 | 209.1 | 30.8 | - | - | 286.0 | - | 167.8 | 118.2 | - | - | 286.0 |

TECHNICAL CO-OPERATION PROJECTS IN AFGHANISTAN
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1983 - 1993

TOTAL PROJECT ALLOTMENTS AND DISBURSEMENTS
(as of 1 April 1993)

| SECTOR | NO. OF PROJECTS | ALLOTMENTS \$ | % OF TOTAL | DISBURSEMENTS \$ | % OF TOTAL |
|--|-----------------|---------------|------------|------------------|------------|
| General atomic energy development | - | - | - | - | - |
| Nuclear physics and chemistry | 1 | 377 401 | 44.6 | 369 688 | 81.7 |
| Nuclear raw materials | - | - | - | - | - |
| Nuclear engineering and technology | 1 | 46 600 | 5.5 | 44 187 | 9.8 |
| Nuclear techniques in agriculture | 1 | 167 450 | 19.8 | - | - |
| Nuclear medicine | 2 | 254 200 | 30.1 | 38 674 | 8.5 |
| Nuclear techniques in biology | - | - | - | - | - |
| Nuclear techniques in industry and hydrology | - | - | - | - | - |
| Nuclear safety | - | - | - | - | - |
| TOTAL | 5 | 845 651 | 100.0 | 452 549 | 100.0 |

TECHNICAL CO-OPERATION PROJECTS IN AFGHANISTAN
 COMPLETED AND OPERATIONAL, BY SECTOR, 1983 - 1993
 (As of 1 April 1993)

| Sector | No. of projects | Total project allotments \$ | Total project disbursements \$ |
|--|-----------------|-----------------------------|--------------------------------|
| <u>Completed projects</u> | | | |
| General atomic energy development | - | - | - |
| Nuclear physics and chemistry | 1 | 377 401 | 369 688 |
| Nuclear raw materials | - | - | - |
| Nuclear engineering and technology | 1 | 46 600 | 44 187 |
| Nuclear techniques in agriculture | - | - | - |
| Nuclear medicine | - | - | - |
| Nuclear techniques in biology | - | - | - |
| Nuclear techniques in industry & hydrology | - | - | - |
| Nuclear safety | - | - | - |
| TOTAL | 2 | 424 001 | 413 875 |
| <u>Operational projects</u> | | | |
| General atomic energy development | - | - | - |
| Nuclear physics and chemistry | - | - | - |
| Nuclear raw materials | - | - | - |
| Nuclear engineering and technology | - | - | - |
| Nuclear techniques in agriculture | 1 | 167 450 | - |
| Nuclear medicine | 2 | 254 200 | 38 674 |
| Nuclear techniques in biology | - | - | - |
| Nuclear techniques in industry & hydrology | - | - | - |
| Nuclear safety | - | - | - |
| TOTAL | 3 | 421 650 | 38 674 |

**EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO AFGHANISTAN, BY SECTOR
PROJECTS COMPLETED AND OPERATIONAL 1983 - 1993
(As of 1 April 1993)**

| FIELD | TOTAL PROJECT ALLOTMENTS | | | | TOTAL PROJECT DISBURSEMENTS | | | |
|--|--------------------------|----------------|----------------|---------------|-----------------------------|----------------|----------------|----------|
| | EXPERT SERVICES | | EQUIPMENT | TRAINING | EXPERT SERVICES | | EQUIPMENT | TRAINING |
| | M/M | \$ | \$ | \$ | M/M | \$ | \$ | \$ |
| General atomic energy development | - | - | - | - | - | - | - | - |
| Nuclear physics and chemistry | 35/00 | 159 600 | 217 801 | - | 34/09 | 149 099 | 220 589 | - |
| Nuclear raw materials | - | - | - | - | - | - | - | - |
| Nuclear engineering and technology | 1/00 | 6 600 | 40 000 | - | 0/20 | 2 621 | 41 566 | - |
| Nuclear techniques in agriculture | 4/00 | 42 300 | 50 000 | 75 150 | - | - | - | - |
| Nuclear medicine | 4/12 | 38 200 | 207 000 | 9 000 | 2/16 | 15 935 | 22 739 | - |
| Nuclear techniques in biology | - | - | - | - | - | - | - | - |
| Nuclear techniques in industry & hydrology | - | - | - | - | - | - | - | - |
| Nuclear safety | - | - | - | - | - | - | - | - |
| TOTAL | 44/12 | 246 700 | 514 801 | 84 150 | 37/15 | 167 655 | 284 894 | - |

AGENCY FELLOWS FROM AFGHANISTAN

1983 - 1993¹
(As of 1 April 1993)

| Sector | No. of fellowships | No. of months/days | Host countries |
|--|--------------------|--------------------|----------------|
| General atomic energy development | - | - | - |
| Nuclear physics | - | - | - |
| Nuclear chemistry | - | - | - |
| Nuclear raw materials | - | - | - |
| Nuclear engineering and technology | - | - | - |
| Nuclear techniques in agriculture | 1 | 11/29 | POL |
| Nuclear medicine | 1 | 0/26 | USSR, IAEA |
| Nuclear techniques in biology | - | - | - |
| Nuclear techniques in industry and hydrology | - | - | - |
| Nuclear safety | 1 | 6/01 | GDR |
| TOTAL | 3 | 18/26 | |

^{1/} Only includes fellows who have completed or at least started training.
Eight additional fellows awarded in 1992 are under placement.

AFGHANISTAN
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 April 1992)

| Name | Field of study | Host country | Date | Duration | Project |
|--------|-----------------------------|--------------|-----------------|----------|-----------|
| HABIBI | Plant breeding and genetics | POL | Started: Feb.92 | 18/00 | RER/0/005 |

AFGHAN NATIONALS WHO WERE AWARDED MORE THAN ONE
FELLOWSHIP OR SCIENTIFIC VISIT
1983 - 1993
(As of 1 April 1993)

NONE

AGENCY TRAINING COURSES WITH AFGHAN PARTICIPATION

1983 - 1993
(As of 1 April 1993)

| Field | Number of participants | Number of courses |
|--|------------------------|-------------------|
| General atomic energy development | - | - |
| Nuclear physics | - | - |
| Nuclear chemistry | 2 | 1 |
| Nuclear raw materials | - | - |
| Nuclear engineering and technology | - | - |
| Nuclear techniques in agriculture | 8 | 8 |
| Nuclear medicine | 4 | 3 |
| Nuclear techniques in biology | - | - |
| Nuclear techniques in industry & hydrology | - | - |
| Nuclear safety | 3 | 3 |
| TOTAL | 17 | 15 |

**MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY AFGHAN NATIONALS
1983 - 1993
(As of 1 April 1993)**

NONE

**PROJECTS COMPLETED IN AFGHANISTAN SINCE 1983
(As of 1 April 1993)**

| STARTED | PROJECT NO. | TITLE | ALLOTMENTS | | | | DISBURSEMENTS | | | | COMPLETED |
|---------|-------------|-------------------------|------------|---------|-----------|----------|---------------|---------|-----------|----------|-----------|
| | | | EXPERTS | | EQUIPMENT | TRAINING | EXPERTS | | EQUIPMENT | TRAINING | |
| | | | M/M | \$ | \$ | \$ | M/M | \$ | \$ | \$ | |
| 1979 | AFG/1/004 | Nuclear science | 35/00 | 159 600 | 217 801 | - | 34/09 | 149 099 | 220 589 | - | 1986 |
| 1984 | AFG/4/002 | Nuclear instrumentation | 1/00 | 6 600 | 40 000 | - | 0/20 | 2 621 | 41 566 | - | 1988 |
| | TOTAL | 2 projects | 36/00 | 166 200 | 257 801 | - | 34/29 | 151 720 | 262 155 | - | |

**OPERATIONAL PROJECTS IN AFGHANISTAN
(As of 1 April 1993)**

| STARTED | PROJECT NO. | TITLE | ALLOTMENTS | | | | DISBURSEMENTS | | | |
|---------|-------------|--|------------|--------|-----------|----------|---------------|--------|-----------|----------|
| | | | EXPERTS | | EQUIPMENT | TRAINING | EXPERTS | | EQUIPMENT | TRAINING |
| | | | M/M | \$ | \$ | \$ | M/M | \$ | \$ | \$ |
| 1993 | AFG/5/002 | Use of N-15 technique in improving crop production | 4/00 | 42 300 | 50 000 | 75 150 | - | - | - | - |
| 1987 | AFG/6/009 | Radiotherapy physics | 1/20 | 15 220 | 195 000 | - | 0/19 | 5 356 | 15 250 | - |
| 1988 | AFG/6/010 | Dosimetry in radiotherapy | 2/22 | 22 980 | 12 000 | 9 000 | 1/27 | 10 579 | 7 489 | - |
| | TOTAL | 3 projects | 8/12 | 80 500 | 257 000 | 84 150 | 2/16 | 15 935 | 22 739 | - |

COUNTERPART INSTITUTIONS IN AFGHANISTAN (I)

(By Project)

| <u>Project No.</u> | <u>Institute</u> | <u>Counterpart(s)</u> |
|---|--|-----------------------|
| <u>NUCLEAR PHYSICS AND CHEMISTRY</u> | | |
| AFG/1/004 | Kabul University, Faculty of Science, Kabul | - |
| <u>NUCLEAR ENGINEERING AND TECHNOLOGY</u> | | |
| AFG/4/002 | Kabul University, Faculty of Science, Kabul | ZADRAN |
| <u>AGRICULTURE</u> | | |
| AFG/5/002 | Kabul University, Faculty of Agriculture, Department of Soils and Irrigation, Kabul | AYUBI |
| <u>NUCLEAR MEDICINE</u> | | |
| AFG/6/009 | Ali Abad Hospital, Faculty of Medicine, Department of Radiology, Kabul | SALIM |
| AFG/6/010 | Ali Abad Hospital, Faculty of Medicine, Department of Radiology, Kabul | SALIM |

COUNTERPART INSTITUTIONS IN AFGHANISTAN (II)
(By Institute)

KABUL

Kabul University
Faculty of Science
Kabul

AFG/1/004 Nuclear Science
AFG/4/002 Nuclear Instrumentation

Kabul University
Faculty of Agriculture
Department of Soils and Irrigation
Kabul

AFG/5/002 Use of N-15 Technique in Improving Crop Production

Alli Abad Hospital
Faculty of Medicine
Department of Radiology
Kabul

AFG/6/009 Radiotherapy Physics
AFG/6/010 Dosimetry in Radiotherapy

**THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH
AFGHANISTAN
SINCE 1983**

LONG-TERM EXPERT ASSIGNMENTS

NONE

**RESEARCH CONTRACTS/AGREEMENTS IN AFGHANISTAN SINCE 1983
(As of 1 April 1993)**

NONE

**SCIENTISTS FROM AFGHANISTAN SERVING AS AGENCY
TECHNICAL CO-OPERATION EXPERTS OR
TRAINING COURSE LECTURERS
1983 - 1993
(As of 1 April 1993)**

| Name | No. of assignments | Project(s) |
|-------------|--------------------|------------|
| ARGHANDEWAL | 1 | RER/8/002 |
| NAZAR | 1 | RER/9/007 |
| NAZIFI | 3 | AFG/1/004 |
| NOOR AHMAD | 1 | RER/9/007 |
| SALIM | 1 | AFG/6/010 |
| SHIRZAD | 1 | AFG/6/010 |
| TOTAL | 8 | |

**AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS
HOSTED BY AFGHANISTAN
1983 - 1993
(As of 1 April 1993)**

NONE

**REGIONAL AND INTERREGIONAL TRAINING COURSES
HOSTED BY AFGHANISTAN
1983 - 1993
(As of 1 April 1993)**

NONE