



INTERNATIONAL ATOMIC ENERGY AGENCY



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IAEA-CPS-94/12
12 October 1994
Original: ENGLISH

COUNTRY PROGRAMME SUMMARY

**THE AGENCY'S TECHNICAL CO-OPERATION
PROGRAMME WITH THE
UNITED ARAB EMIRATES

1984 - 1994

COUNTRY PROGRAMME SUMMARIES**

DEPARTMENT OF TECHNICAL CO-OPERATION

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UNITED ARAB EMIRATES

1984 - 1994

COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

**THE AGENCY'S TECHNICAL CO-OPERATION
PROGRAMME WITH THE
UNITED ARAB EMIRATES
1984 - 1994
COUNTRY PROGRAMME SUMMARIES**

This report contains a review of the Agency's technical co-operation activities in the United Arab Emirates carried out during 1984 - 1994. 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.

UNITED ARAB EMIRATES

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INTRODUCTION

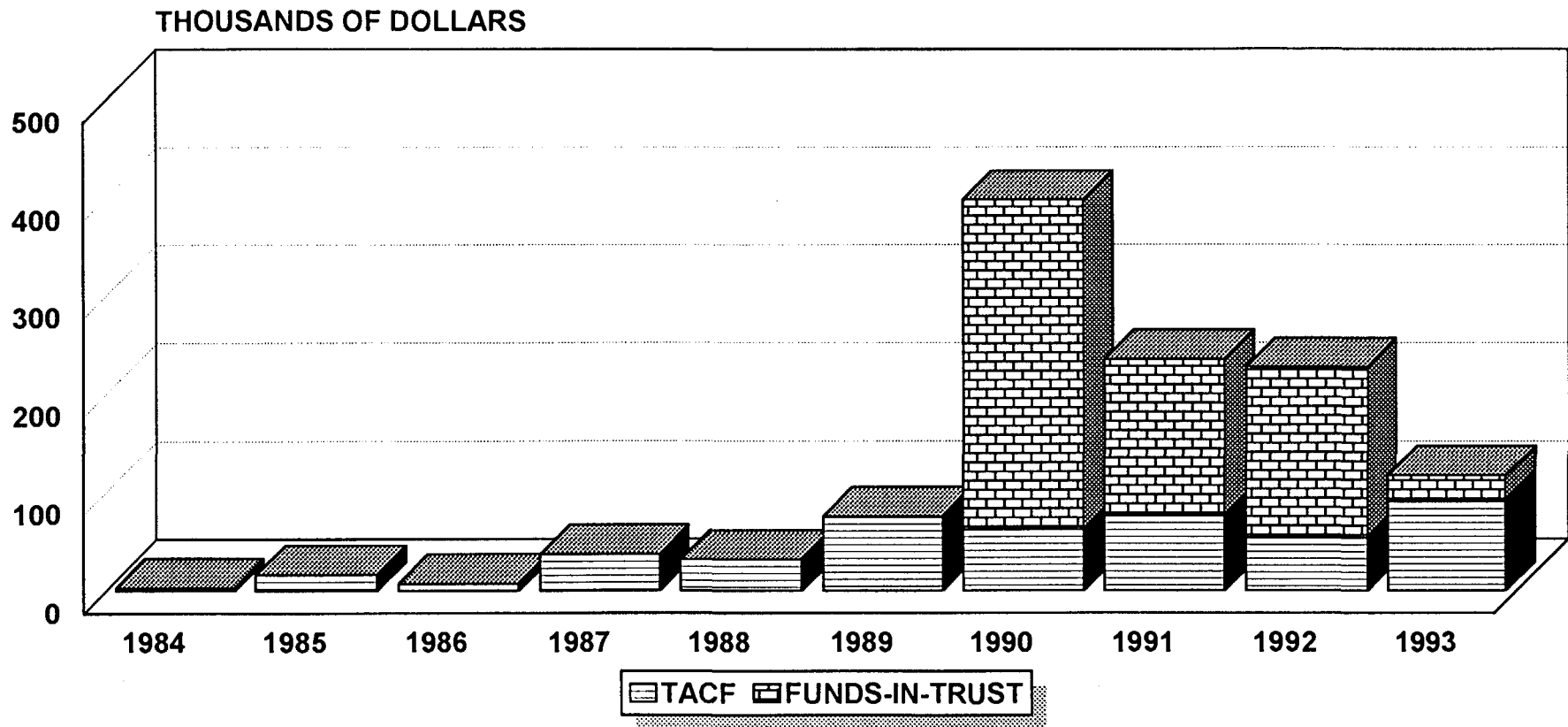
The country programme summary reported on here is one in the series of such studies being undertaken of the Agency's TC programme with Member States. With over \$1.1 million of Agency support received, the United Arab Emirates rank 71st among all recipients of technical assistance during the period 1958 through 1993.

The best part of the assistance received over the past ten years has been provided in the form of equipment (87%), the rest was shared by expert services (11%) and training (2%). More than half of the resources were made available by the United Arab Emirates as Funds-in-Trust (61%), the remainder was provided through the TACF (39%).

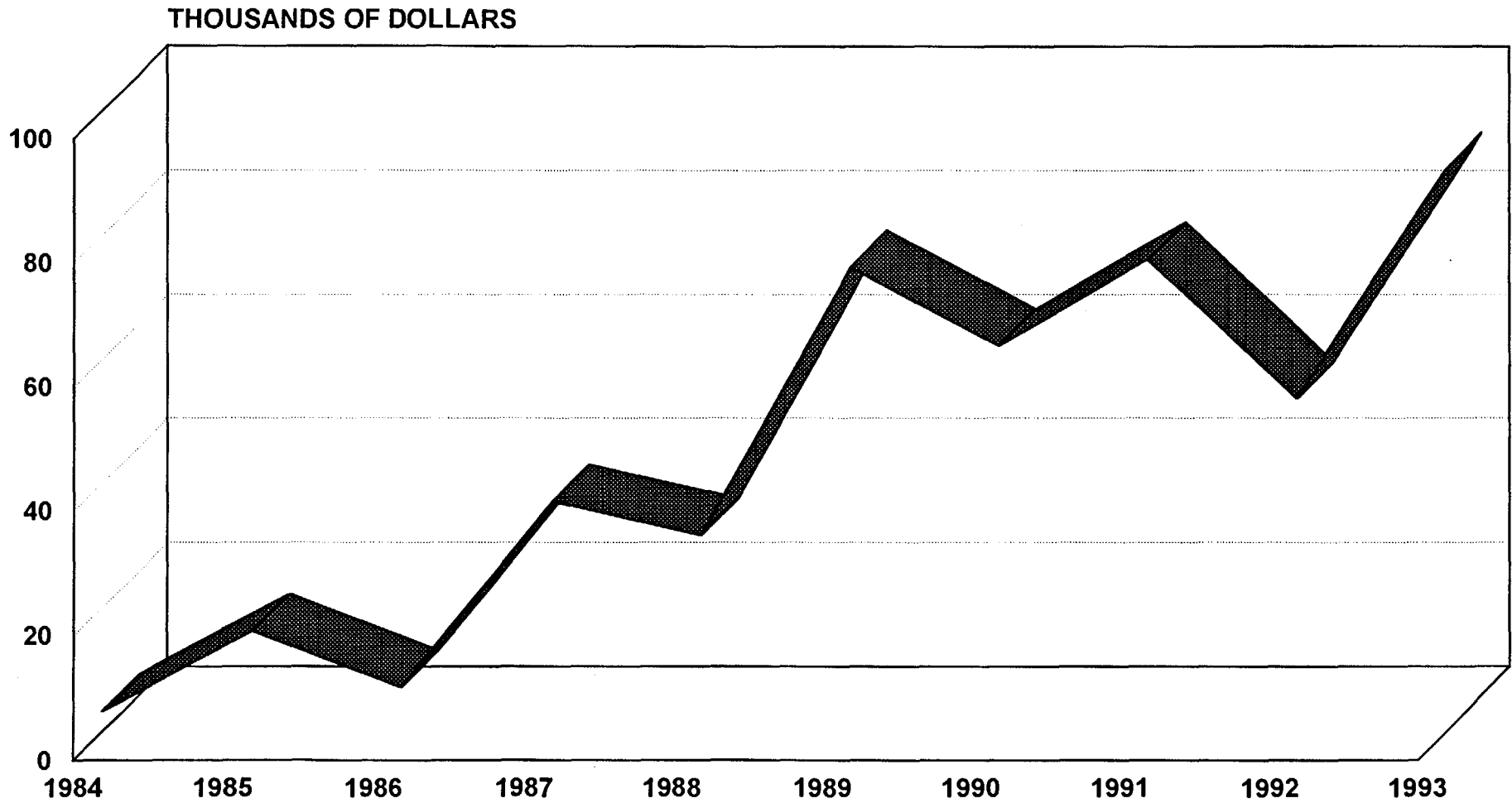
The assistance provided under operational projects and projects completed during the period 1984 through the end of September 1994 is shared by four sectors: By far the largest share is held by nuclear safety (85%), while only small shares went to industry and hydrology (9%), agriculture (5%) and nuclear raw materials (1%).

Since 1984, scientists from the United Arab Emirates have completed ten assignments as Agency experts or as participants in research co-ordination meetings. During the same period, the United Arab Emirates have hosted two regional group training events with a total of 23 participants.

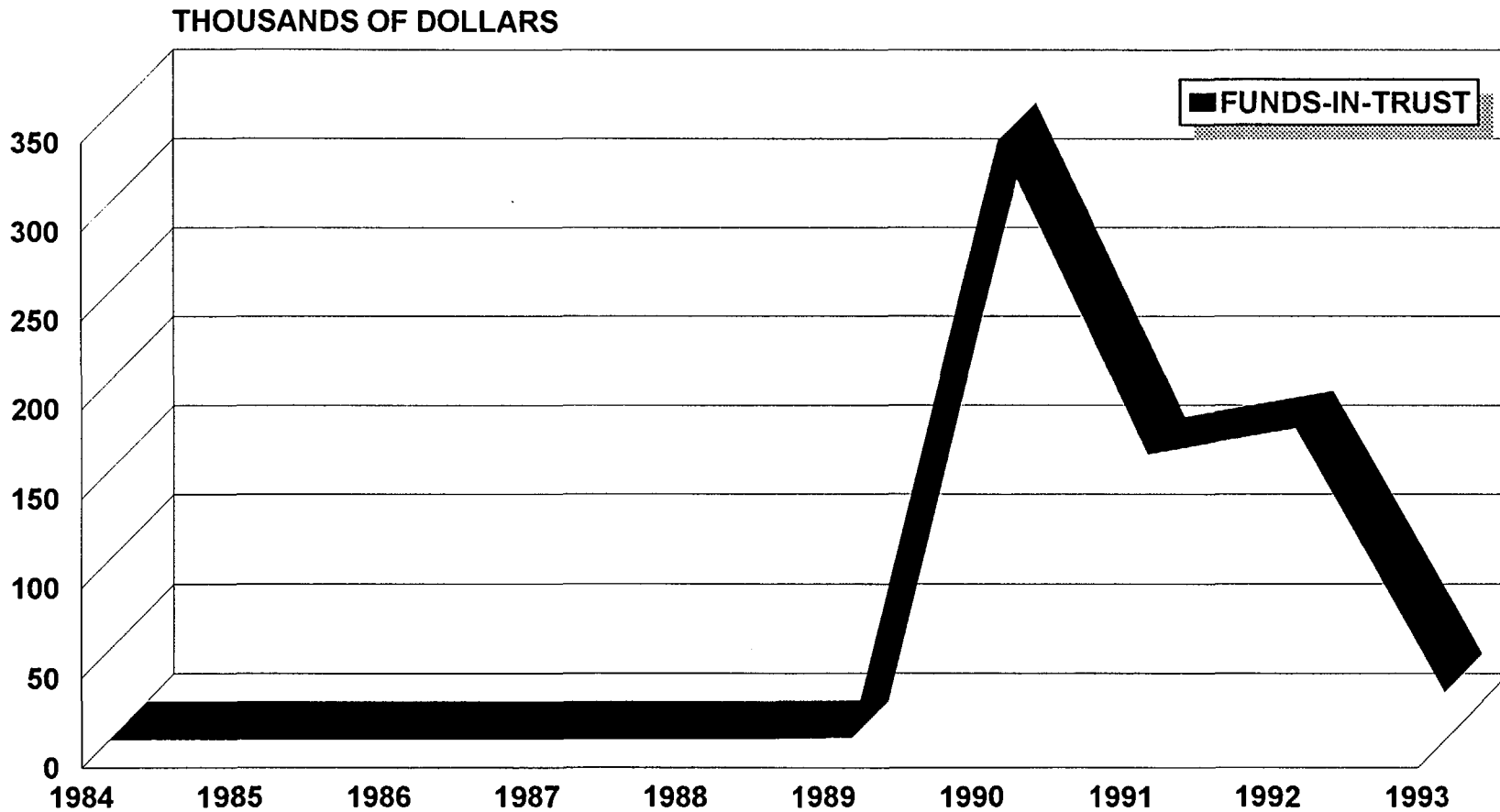
ASSISTANCE PROVIDED BY THE AGENCY TO THE UNITED ARAB EMIRATES BY SOURCE (1984 - 1993)



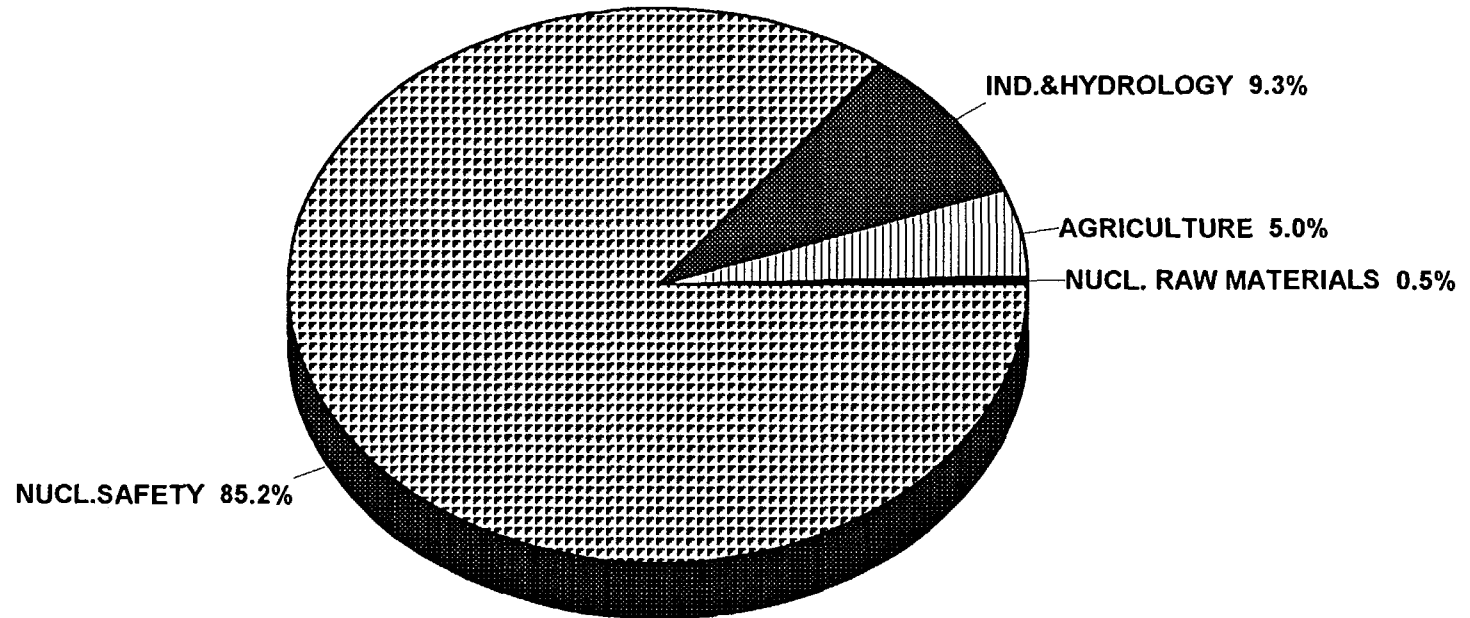
TACF ASSISTANCE PROVIDED TO THE UNITED ARAB EMIRATES (1984 - 1993)



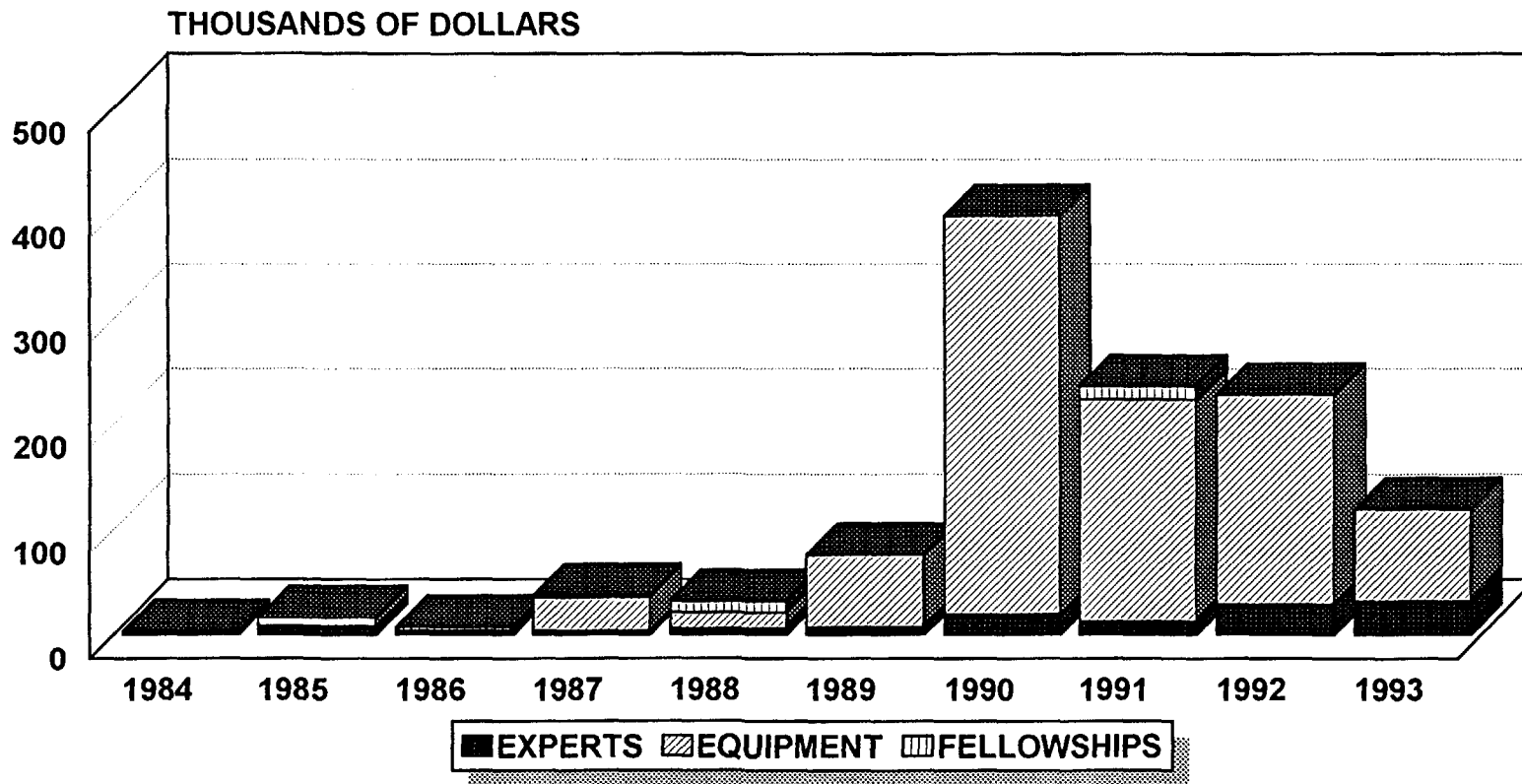
ASSISTANCE WITH FUNDS-IN-TRUST PROVIDED BY THE UNITED ARAB EMIRATES (1984 - 1993)



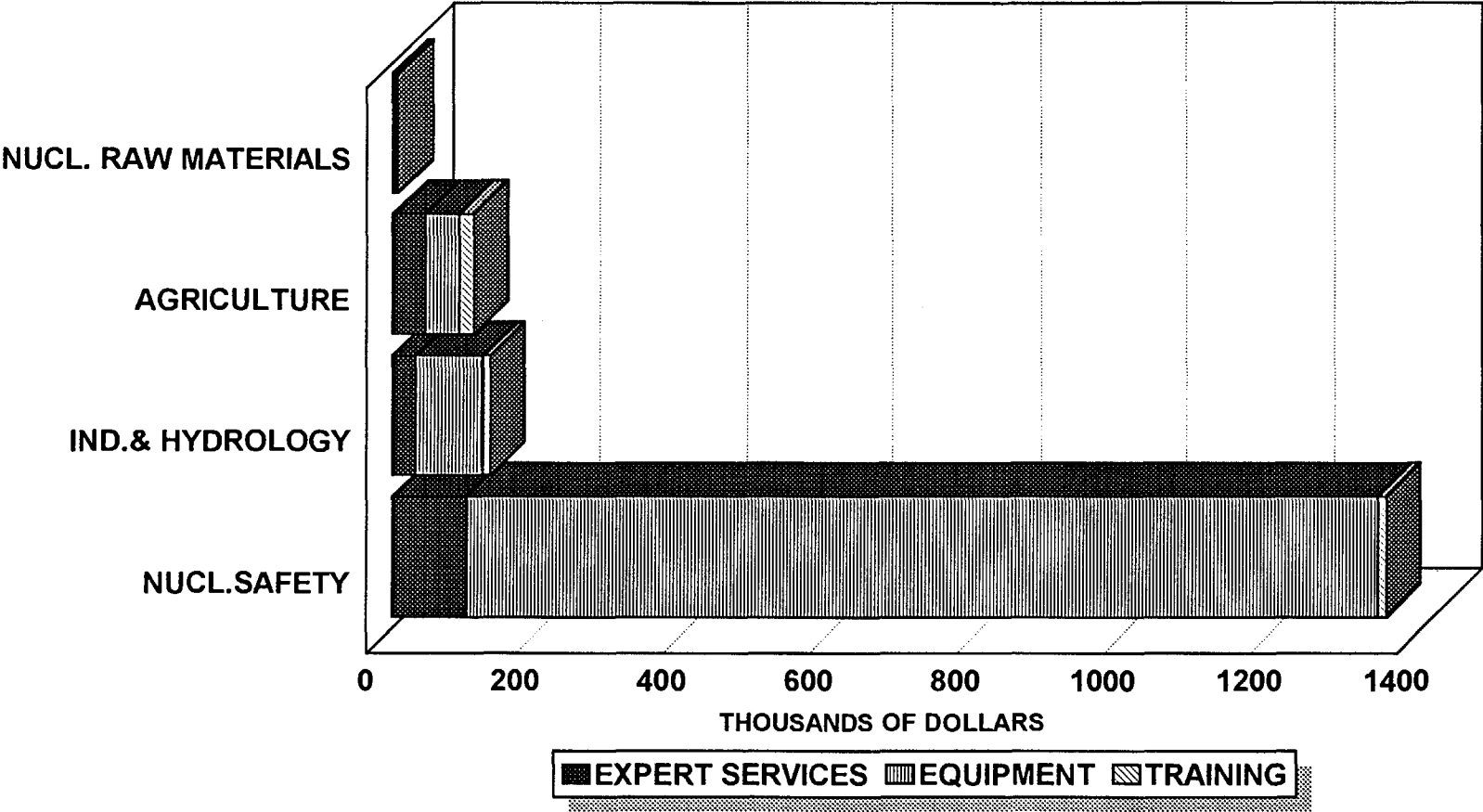
TC PROJECT DISBURSEMENTS TO THE UNITED ARAB EMIRATES BY SECTOR (1984 - 1994)



ASSISTANCE PROVIDED BY THE AGENCY TO THE UNITED ARAB EMIRATES BY TYPE (1984 - 1993)



EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO THE UNITED ARAB EMIRATES BY SECTOR (1984 - 1994)



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH THE UNITED ARAB EMIRATES

ALL SOURCES

THE UAE'S RANKING AS A TC RECIPIENT
1958 - 1993
(in \$1000)

YEAR	RANKING	AMOUNT
1958-83	81 st	19.7
1984	77 th	3.3
1985	73 rd	16.2
1986	78 th	7.2
1987	73 rd	37.0
1988	74 th	31.6
1989	67 th	75.6
1990	34 th	398.0
1991	47 th	235.2
1992	56 th	227.3
1993	70 th	118.6
1958-93	71 st	1169.7

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1993 (in \$1000)**

ALL SOURCES

Year	I	II	III	IV	V	UNITED ARAB EMIRATES
1958-83	BRA 8887.6	IND 7197.4	EGY 7024.5	PAK 6008.9	ARG 5912.2	81 st - 19.7
1984	EGY 3625.9	PER 1750.4	THA 1094.6	CUB 1028.7	PHI 881.2	77 th - 3.3
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	73 rd - 16.2
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	78 th - 7.2
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	73 rd - 37.0
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	74 th - 31.6
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	67 th - 75.6
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	34 th - 398.0
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	47 th - 235.2
1992	EGY 1586.3	INS 1342.1	CPR 1328.8	MEX 1127.8	POL 1036.4	56 th - 227.3
1993	INS 1285.9	CPR 1091.7	PAK 1012.2	EGY 905.3	IRA 810.1	70 th - 118.6
1958-93	EGY 24713.9	BRA 18541.4	THA 16125.1	INS 15011.8	PER 13772.0	71 st - 1169.7

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1993 (in \$1000)**

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	UNITED ARAB EMIRATES
1958-83	EGY 3455.2	HUN 3221.6	PAK 2839.0	THA 2354.1	BRA 2158.9	80 th - 19.7
1984	EGY 1197.2	CUB 655.6	ECU 565.6	BGD 506.3	BUL 472.4	75 th - 3.3
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	71 st - 16.2
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	76 th - 7.2
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	71 st - 37.0
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	73 rd - 31.6
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	67 th - 74.8
1990	POL 1562.3	VIE 1518.8	DRK 1156.2	IRA 958.0	YUG 933.4	68 th - 62.1
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	72 nd - 76.1
1992	EGY 1255.7	CPR 1009.0	VIE 872.8	INS 826.6	IRA 795.5	72 nd - 53.6
1993	INS 1040.5	CPR 896.5	PAK 847.6	IRA 807.4	THA 721.5	71 st - 90.6
1958-93	EGY 11549.2	PAK 8963.2	VIE 8908.2	POL 8820.1	INS 8814.1	77 th - 472.2

ASSISTANCE PROVIDED BY THE AGENCY TO THE UNITED ARAB EMIRATES

Financial Summary 1984 - 1993
(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
1984	3.3	-	-	-	-	3.3	-	3.3	-	-	-	3.3
1985	8.1	8.1	-	-	-	16.2	-	16.2	-	-	-	16.2
1986	1.5	2.4	3.3	-	-	7.2	-	7.2	-	-	-	7.2
1987	3.6	31.4	2.0	-	-	37.0	-	37.0	-	-	-	37.0
1988	6.2	14.8	10.6	-	-	31.6	-	31.6	-	-	-	31.6
1989	7.1	68.5	-	-	-	75.6	-	74.8	-	0.8	-	75.6
1990	19.1	378.9	-	-	-	398.0	-	62.1	-	335.9	-	398.0
1991	12.6	210.4	12.2	-	-	235.2	-	76.1	-	159.1	-	235.2
1992	28.7	198.6	-	-	-	227.3	-	53.6	-	173.7	-	227.3
1993	32.0	86.6	-	-	-	118.6	-	90.6	-	26.6	1.4	118.6
1984-93	122.2	999.7	28.1	-	-	1 150.0	-	452.5	-	696.1	1.4	1 150.0

TECHNICAL CO-OPERATION PROJECTS IN THE UNITED ARAB EMIRATES
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1984 - 1994

TOTAL PROJECT ALLOTMENTS AND DISBURSEMENTS
(As of 30 September 1994)

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	-	-	-	-	-
Nuclear physics and chemistry	-	-	-	-	-
Nuclear raw materials	1	6 600	0.4	6 305	0.5
Nuclear engineering and technology	-	-	-	-	-
Nuclear techniques in agriculture	1	108 700	6.8	68 621	5.0
Nuclear medicine	-	-	-	-	-
Nuclear techniques in biology	-	-	-	-	-
Nuclear techniques in industry and hydrology	1	131 470	8.2	128 121	9.3
Nuclear safety	3	1 351 922	84.6	1 171 225	85.2
TOTAL	6	1 598 692	100.0	1 374 272	100.0

TECHNICAL CO-OPERATION PROJECTS IN THE UNITED ARAB EMIRATES
 COMPLETED AND OPERATIONAL, BY SECTOR, 1984 - 1994
 (As of 30 September 1994)

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	1	6 600	6 305
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	-	-	-
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	-	-	-
Nuclear safety	1	162 511	166 264
TOTAL	2	169 111	172 569
<u>Operational projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	1	108 700	68 621
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	1	131 470	128 121
Nuclear safety	2	1 189 411	1 004 961
TOTAL	4	1 429 581	1 201 703

**EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO THE UNITED ARAB EMIRATES, BY SECTOR
PROJECTS COMPLETED AND OPERATIONAL 1984 - 1994
(As of 30 September 1994)**

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	-	-	-	-	-	-	-	-
Nuclear raw materials	1/00	6 600	-	-	0/29	6 305	-	-
Nuclear engineering and technology	-	-	-	-	-	-	-	-
Nuclear techniques in agriculture	4/00	43 350	45 550	19 800	2/08	34 274	34 347	-
Nuclear medicine	-	-	-	-	-	-	-	-
Nuclear techniques in biology	-	-	-	-	-	-	-	-
Nuclear techniques in industry & hydrology	3/27	30 555	90 450	10 465	3/21	29 594	86 284	12 243
Nuclear safety	10/15	99 060	1 240 262	12 600	7/17	95 471	1 075 754	-
TOTAL	19/12	179 565	1 376 262	42 865	14/15	165 644	1 196 385	12 243

AGENCY FELLOWS FROM THE UNITED ARAB EMIRATES

1984 - 1994¹
 (As of 30 September 1994)

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	2	0/10	YUG
Nuclear techniques in agriculture	-	-	-
Nuclear medicine	1	5/25	UK
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry and hydrology	2	5/04	IAEA
Nuclear safety	-	-	-
TOTAL	5	11/09	

^{1/} Only includes fellows who have completed or at least started training.

UNITED ARAB EMIRATES
LONG-TERM FELLOWSHIPS
1984 - 1994
(As of 30 September 1994)

NONE

**UAE NATIONALS WHO WERE AWARDED MORE THAN ONE
FELLOWSHIP OR SCIENTIFIC VISIT**

**1984 - 1994
(As of 30 September 1994)**

NONE

AGENCY TRAINING COURSES WITH UAE PARTICIPATION

1984 - 1994
(As of 30 September 1994)

Field	Number of participants	Number of courses
General atomic energy development	-	-
Nuclear physics	-	-
Nuclear chemistry	-	-
Nuclear raw materials	-	-
Nuclear engineering and technology	1	1
Nuclear techniques in agriculture	4	4
Nuclear medicine	5	4
Nuclear techniques in biology	-	-
Nuclear techniques in industry & hydrology	7	4
Nuclear safety	14	10
TOTAL	31	23

**MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY UAE PARTICIPANTS
1984 - 1994
(As of 30 September 1994)**

Name	Course No.	Course title	Year	Location
AHMED	RER/9/003 (007) RER/9/003 (008)	RWS on radiochemical measurements in food and environmental samples RWS on advanced radiochemical techniques for the monitoring of food and environmental samples	1990 1991	YUG SYR
AL-MUTAWA	RER/8/002 (001) RER/8/002 (003)	RCM on isotope hydrology Second RCM on isotope hydrology and workshop	1989 1989	JOR SYR
AL-SHEBANY	RER/8/002 (003) RER/9/003 (003) RER/9/007 (001)	Second RCM on isotope hydrology and workshop RWS on derived intervention levels for Arab Middle East RWS on radiation protection regulations and their implementation	1989 1988 1989	SYR JOR QAT
HADIAN	RER/9/003 (003) RER/9/007 (002)	RWS on derived intervention levels for Arab Middle East RWS on radiation protection in industrial application of ionizing radiation	1988 1989	JOR IRQ
KULAIB	RER/8/002 (001) RER/8/002 (002) RER/8/002 (005)	RCM on isotope hydrology RWS on isotope hydrology RWS on isotope hydrology in the Middle East	1989 1989 1993	JOR JOR SYR
NASRULLAH	RER/9/007 (001) RER/9/007 (003)	RWS on radiation protection regulations and their implementation RWS on radiation protection in medical applications of ionizing radiation	1989 1990	QAT KUW
YOUSIF	INT/9/090 (001) RER/9/003 (007)	ITC on the determination of radionuclides in food and environmental samples RWS on radiochemical measurements in food and environmental samples	1988 1990	GFR YUG
ZAKKOO	INT/6/041 (001) RER/6/002 (001)	ITC on advanced single photon emission computerized tomography with emphasis in brain and heart studies Practical RWS on the introduction to the optimum use of radiopharmaceuticals in nuclear medicine	1992 1988	ITA KUW

PROJECTS COMPLETED IN THE UNITED ARAB EMIRATES SINCE 1984
(As of 30 September 1994)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1984	UAE/3/002	Atomic energy planning	1/00	6 600	-	-	0/29	6 305	-	-	1985
1988	UAE/9/002	Radiation protection	1/26	14 690	147 821	-	1/26	18 443	147 821	-	1993
	TOTAL	2 Projects	2/26	21 290	147 821	-	2/25	24 748	147 821	-	

OPERATIONAL PROJECTS IN THE UNITED ARAB EMIRATES
(As of 30 September 1994)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	UAE/5/002	Introduction of ELISA technique for animal disease diagnosis	4/00	43 350	45 550	19 800	2/08	34 274	34 347	-
1985	UAE/8/002	Isotopes in hydrology	3/27	30 555	90 450	10 465	3/21	29 594	86 284	12 243
1988	UAE/9/003	Radioactive environmental and food contamination ^{1/}	4/19	41 620	972 333	-	4/21	53 874	875 776	-
1993	UAE/9/004	Radiation protection (phase II)	4/00	42 750	120 108	12 600	1/00	23 154	52 157	-
	TOTAL	4 Projects	16/16	158 275	1 228 441	42 865	11/20	140 896	1 048 564	12 243

^{1/} Funds-in-Trust included in the project:

Experts:	Allotments -	\$ 11 400	Disbursements -	\$ 4 972
Equipment:	Allotments -	<u>\$931 488</u>	Disbursements -	<u>\$832 702</u>
Total:	Allotments -	<u>\$942 888</u>	Disbursements -	<u>\$837 674</u>

COUNTERPART INSTITUTIONS IN THE UNITED ARAB EMIRATES (I)
(By Project)

Project No. Institute Counterpart(s)

NUCLEAR RAW MATERIALS

UAE/3/002 Ministry of Electricity and Water,
Dubai JAFFAR

AGRICULTURE

UAE/5/002 Ministry of Electricity and Water,
Department of Agriculture and Animal Production,
Al Ain TARIQ

NUCLEAR TECHNIQUES IN INDUSTRY AND HYDROLOGY

UAE/8/002 Ministry of Electricity and Water,
Dubai AL-HUMAIDAN

NUCLEAR SAFETY

UAE/9/002 Ministry of Electricity and Water,
Dubai BIN DARWISH

UAE/9/003 Food and Environment Control Centre,
Abu Dhabi YOUSIF

UAE/9/004 Ministry of Health,
Central Laboratory for Radiological Protection,
Dubai AL-ASSALY

COUNTERPART INSTITUTIONS IN THE UNITED ARAB EMIRATES (II)
(By Institute)

ABU DHABI

**Food and Environment Control Centre
Abu Dhabi**

UAE/9/003 Radioactive Environmental and Food Contamination

AL AIN

**Ministry of Electricity and Water
Department of Agriculture and Animal Production
Al Ain**

UAE/5/002 Introduction of ELISA Technique for Animal Disease Diagnosis

DUBAI

**Ministry of Electricity and Water
Dubai**

UAE/3/002 Atomic Energy Planning
UAE/8/002 Isotopes in Hydrology
UAE/9/002 Radiation Protection

**Ministry of Health
Central Laboratory for Radiological Protection
Dubai**

UAE/9/004 Radiation Protection (Phase II)

**THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH
THE UNITED ARAB EMIRATES**

(1984 - 1994)

LONG-TERM EXPERT ASSIGNMENTS

NONE

RESEARCH CONTRACTS/AGREEMENTS IN THE UNITED ARAB EMIRATES SINCE 1984 ¹
(As of 30 September 1994)

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear techniques in agriculture	1	11 000
Nuclear medicine	1	5 000
TOTAL	2	16 000

¹/ New awards since 1984

**SCIENTISTS FROM THE UNITED ARAB EMIRATES SERVING AS AGENCY
TECHNICAL CO-OPERATION EXPERTS AND
TRAINING COURSE LECTURERS
OR
PARTICIPATING IN CO-ORDINATION MEETINGS
1984 - 1994
(As of 30 September 1994)**

Name	No. of assignments	Project(s)
ABDELGADIR	3	RER/9/003, RER/9/007
BEAL	1	RER/4/008
HADIAN	1	RER/9/003
MOHAMMED	2	RER/9/003
NOOR	1	RER/9/007
SINGH	1	RER/9/007
YOUSIF	1	RER/8/003
TOTAL	10	

AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS

HOSTED BY THE UNITED ARAB EMIRATES

1984 - 1994

{As of 30 September 1994}

NONE

**REGIONAL AND INTERREGIONAL GROUP TRAINING EVENTS
HOSTED BY THE UNITED ARAB EMIREATES
1984 - 1994
(As of 30 September 1994)**

Course No.	Course Title	Partici- pants	Year
RER/6/002 (008)	RWS on Quality Control in Hospital Radiopharmacy	14	1992
RER/9/007 (004)	RTC on Regulatory Practices for Radiation Safety	9	1992
	TOTAL	23	