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INTERNATIONAL ATOMIC ENERGY AGENCY

IAEA-CPS-92/21
20 November 1992
Original: ENGLISH

COUNTRY PROGRAMME SUMMARY

THE AGENCY'S TECHNICAL CO-OPERATION

PROGRAMME WITH

NIGER

1982 - 1992

COUNTRY PROGRAMME SUMMARIES

DEPARTMENT OF TECHNICAL CO-OPERATION

IAEA-CPS-92/24
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COUNTRY PROGRAMME SUMMARY

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PROGRAMME WITH

NIGER

1982 - 1992

COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

THE AGENCY'S TECHNICAL CO-OPERATION

PROGRAMME WITH

NIGER

1982 - 1992

COUNTRY PROGRAMME SUMMARIES

This report contains a review of the Agency's technical co-operation activities in Niger carried out during 1982 - 1992. 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.

NIGER

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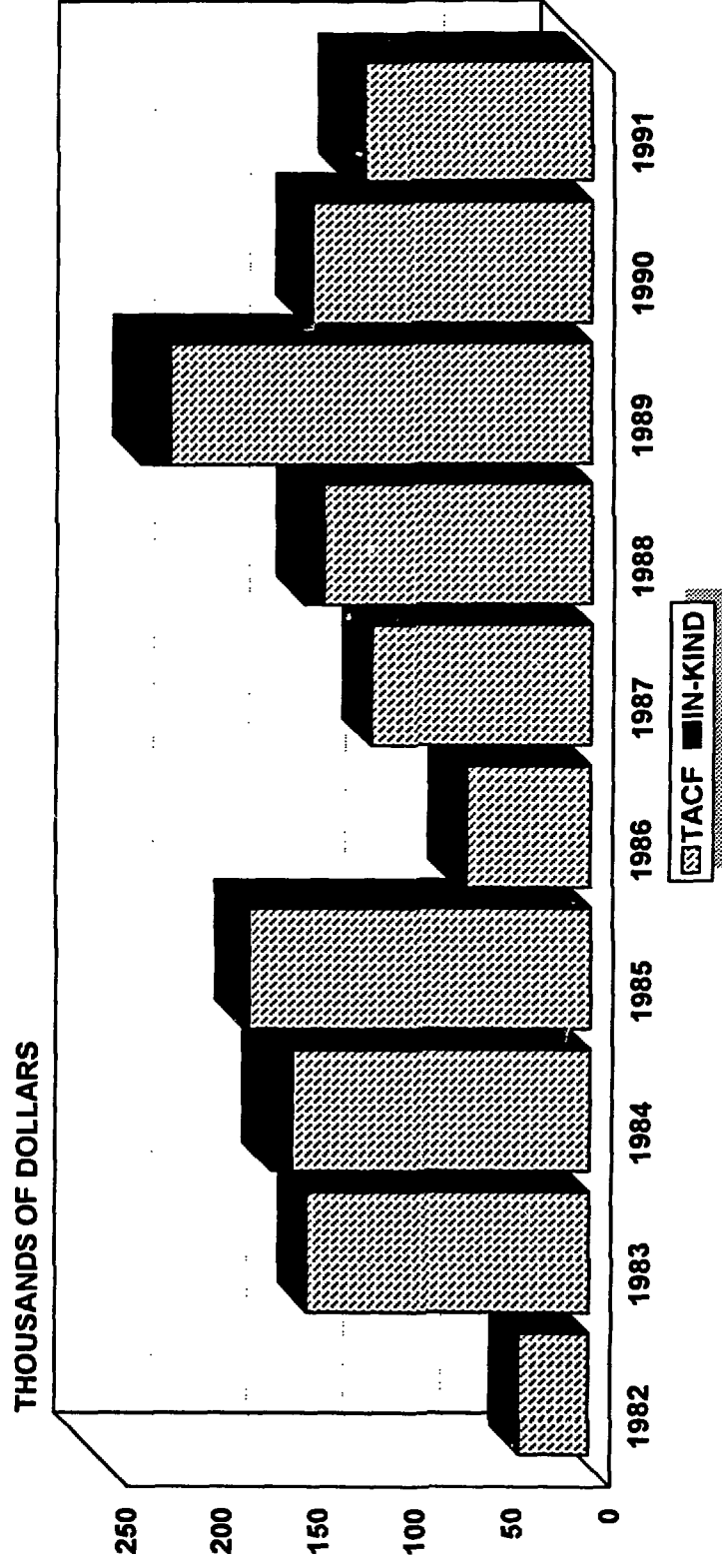
INTRODUCTION

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 some \$1.5 million of Agency support received, Niger ranks 65th among all recipients of technical assistance in the period 1958 through 1991.

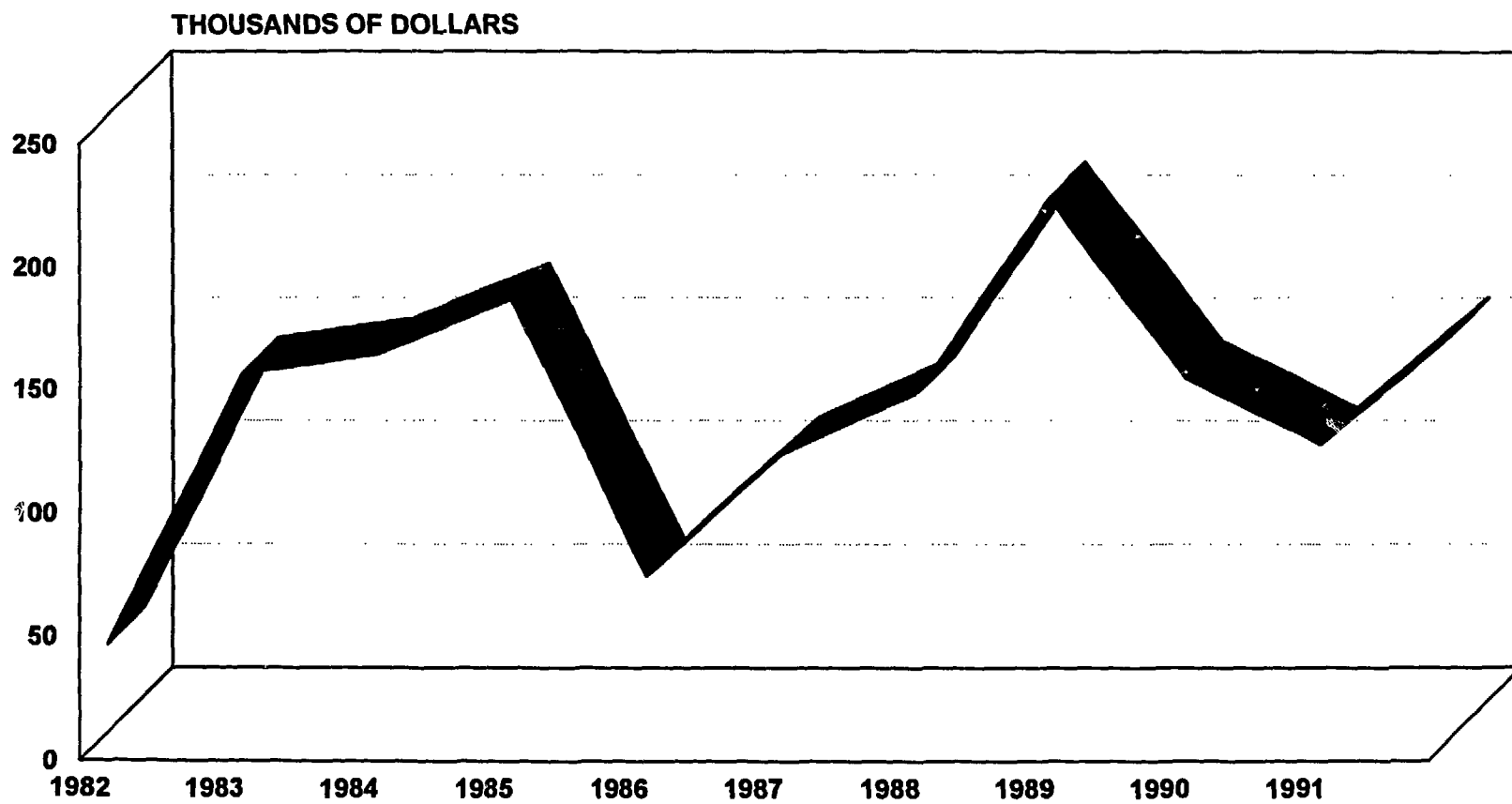
About two-thirds of the assistance received during the past ten years has been provided in the form of equipment (62%), complemented by expert services (26%) and training (12%). Almost the entire resources utilized were provided by the Technical Assistance and Co-operation Fund (96%), with only a small share made available through assistance in kind (4%).

With regard to project disbursements by sector, the four major areas have been agriculture (34%), general atomic energy development (31%), hydrology (18%) and nuclear safety (12%).

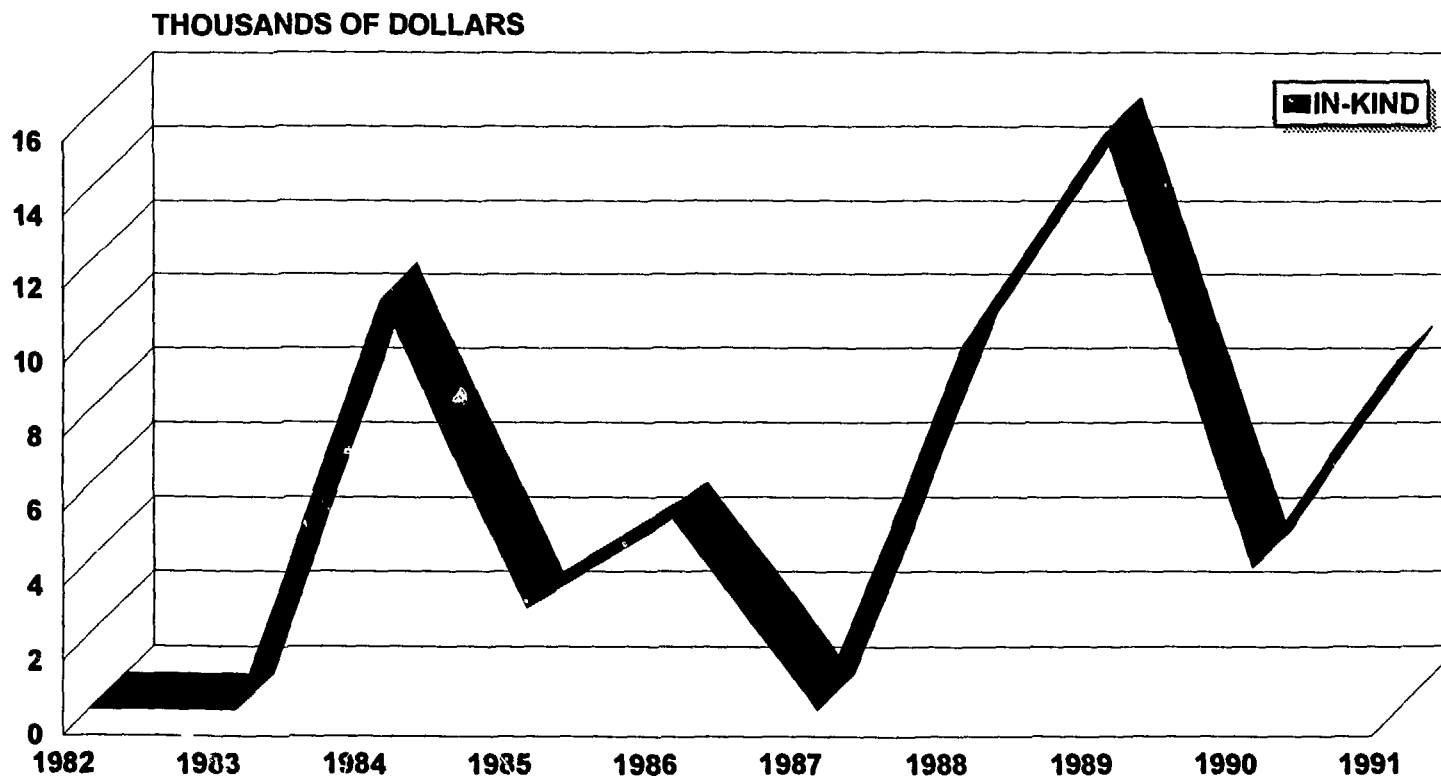
ASSISTANCE PROVIDED BY THE AGENCY TO NIGER BY SOURCE (1982 - 1991)



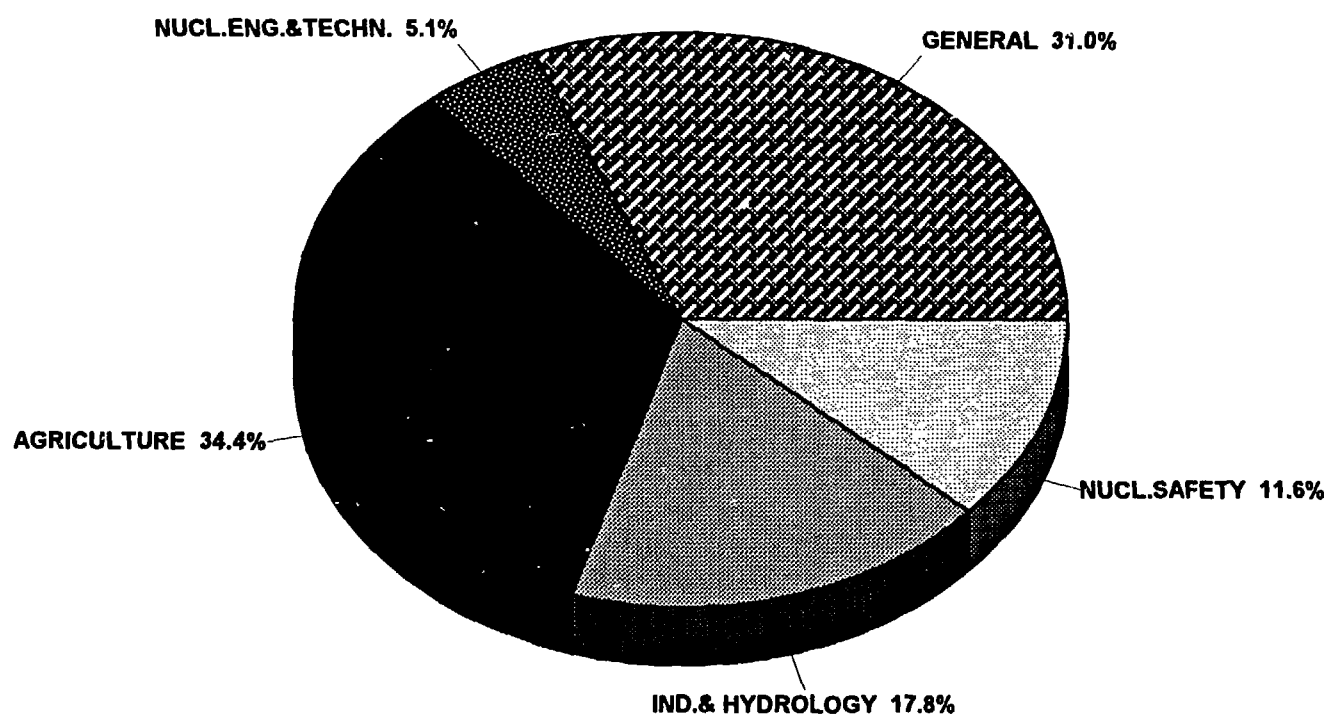
TACF ASSISTANCE PROVIDED TO NIGER (1982 - 1991)



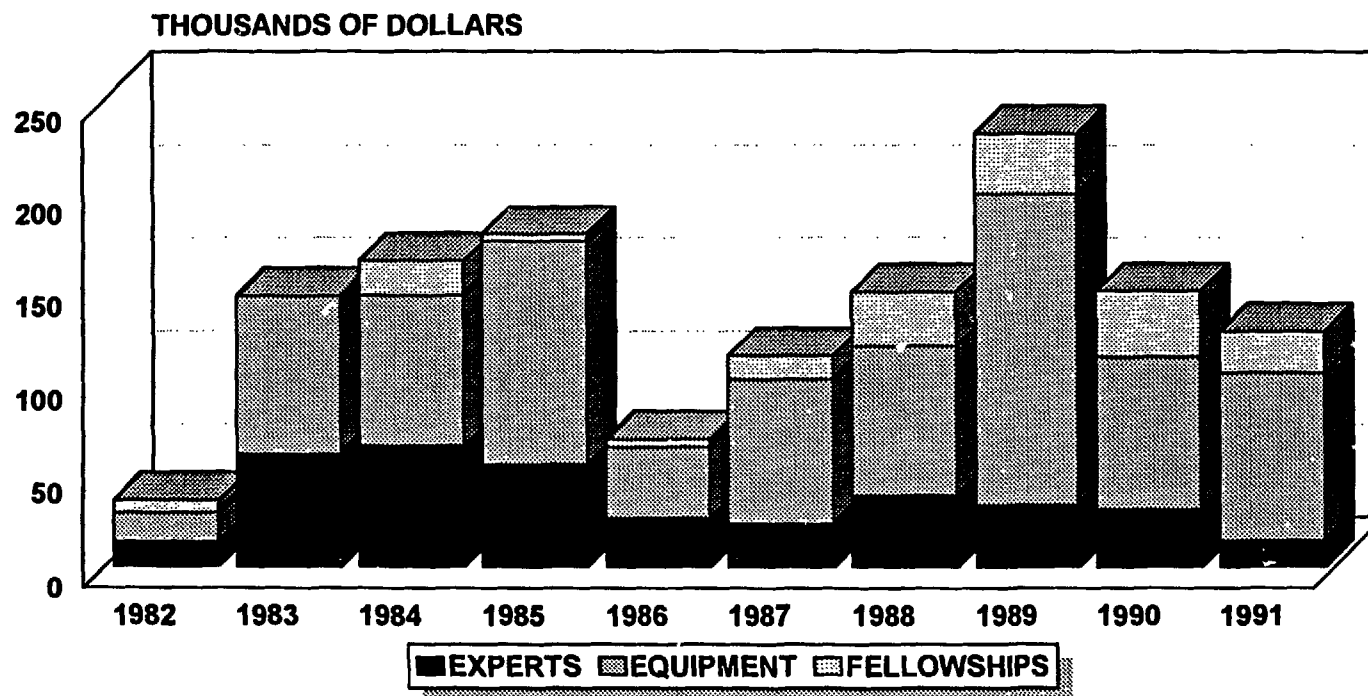
IN-KIND ASSISTANCE PROVIDED TO NIGER (1982 - 1991)



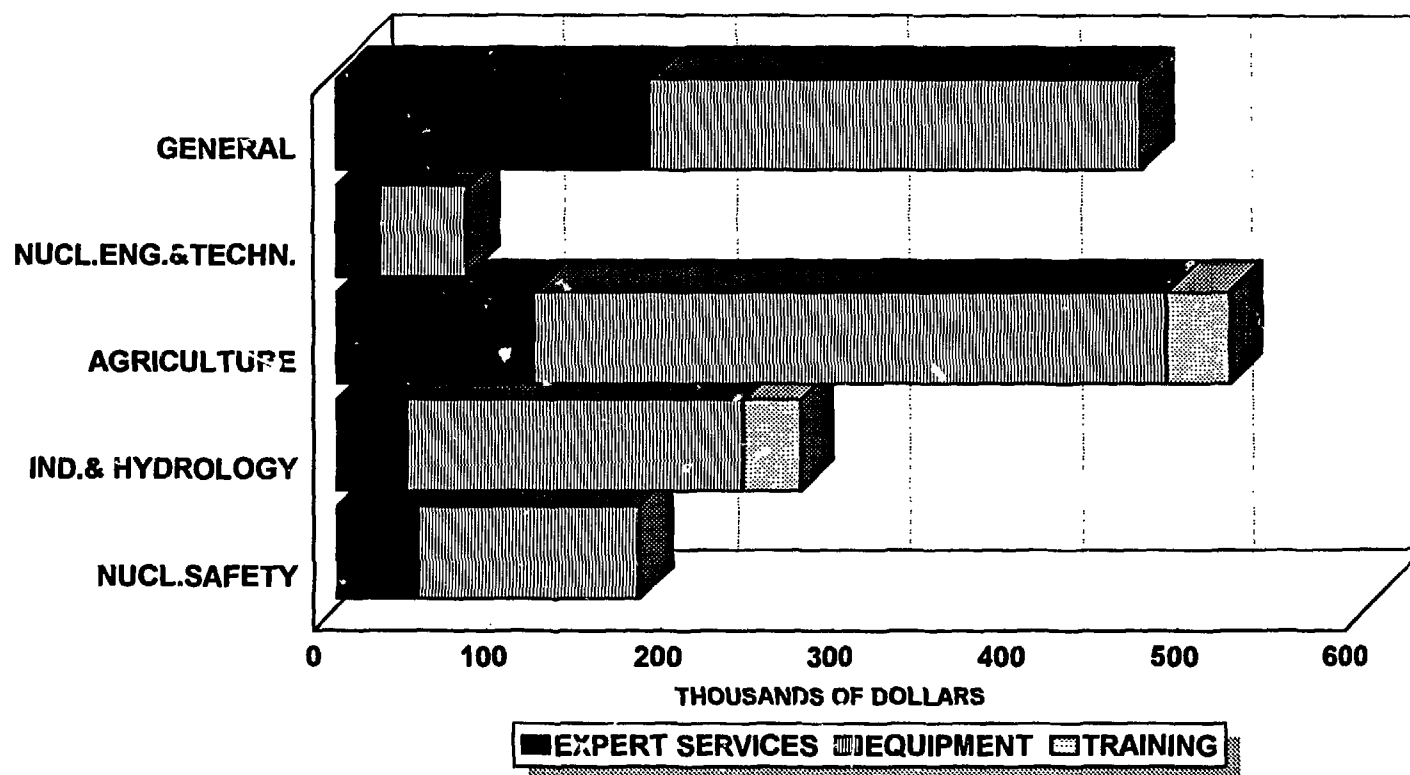
TC PROJECT DISBURSEMENTS IN NIGER BY SECTOR (1982 - 1992)



ASSISTANCE PROVIDED BY THE AGENCY TO NIGER BY TYPE (1982 -1991)



EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO NIGER BY SECTOR (1982 - 1992)



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH NIGER

ALL SOURCES

NIGER'S RANKING AS A TC RECIPIENT
1958 - 1991
(in \$1000)

YEAR	RANKING	AMOUNT
1958-81	77 th	133.9
1982	64 th	35.5
1983	51 st	145.0
1984	50 th	163.8
1985	46 th	178.0
1986	63 rd	68.2
1987	61 st	112.7
1988	52 nd	147.1
1989	48 th	232.2
1990	60 th	147.5
1991	65 th	125.8
1958-91	65 th	1489.7

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1991 (in \$1000)**

ALL SOURCES

Year	I	II	III	IV	V	NIGER
1958-81	BRA 7907.9	IND 6670.7	ARG 5200.4	PAK 5091.2	CHI 5005.7	77 th - 133.9
1982	EGY 807.5	PER 746.4	CUB 715.7	COL 667.7	THA 654.3	64 th - 35.5
1983	EGY 2077.9	PER 1116.8	VIE 948.1	PHI 778.6	IRA 722.1	51 st - 145.0
1984	EGY 3625.9	PER 1750.4	THA 1094.6	CUB 1028.7	PHI 881.2	50 th - 163.8
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	46 th - 178.0
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	63 rd - 68.2
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	61 st - 112.7
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	52 nd - 147.1
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	48 th - 232.2
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	60 th - 147.5
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	65 th - 125.8
1958-91	EGY 22222.3	BRA 17021.1	THA 14596.1	PER 12631.1	INS 12383.8	65 th - 1489.7

TOP FIVE RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1991 (in \$1000)

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	NIGER
1958-81	HUN 2533.0	PAK 2010.9	EGY 1898.7	THA 1712.8	BRA 1704.8	72 nd - 119.4
1982	EGY 507.1	HUN 438.2	CUB 430.7	ECU 398.4	ZAM 354.9	60 th - 35.5
1983	EGY 1049.4	VIE 897.4	POL 667.8	PAK 498.5	PHI 430.0	41 st - 145.0
1984	EGY 1197.2	CUB 655.6	ECU 565.6	BGD 506.3	BUL 472.4	45 th - 152.8
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	39 th - 175.3
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	64 th - 63.1
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	59 th - 112.7
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	49 th - 137.4
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	42 nd - 216.7
1990	POL 1562.3	VIE 1518.8	DRK 1156.2	IRA 958.0	YUG 933.4	58 th - 143.7
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	63 rd - 116.5
1958-91	EGY 9591.3	HUN 8256.5	POL 7793.5	BRA 7433.5	PAK 7346.0	60 th - 1418.1

ASSISTANCE PROVIDED BY THE AGENCY TO NIGER

Financial Summary 1982 - 1991
(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
1982	13.3	15.6	6.6	-	-	35.5	-	35.5	-	-	-	35.5
1983	60.2	84.7	0.1	-	-	145.0	-	145.0	-	-	-	145.0
1984	64.7	80.4	18.7	-	-	163.8	-	152.8	-	-	11.0	163.8
1985	54.8	119.3	3.9	-	-	178.0	-	175.3	-	-	2.7	178.0
1986	26.2	37.8	4.2	-	-	68.2	-	63.1	-	-	5.1	68.2
1987	23.1	76.9	12.7	-	-	112.7	-	112.7	-	-	-	112.7
1988	38.3	79.7	29.1	-	-	147.1	-	136.9	0.5	-	9.7	147.1
1989	33.0	166.8	32.4	-	-	232.2	-	189.6	27.1	-	15.5	232.2
1990	30.5	81.6	35.4	-	-	147.5	-	143.7	-	-	3.8	147.5
1991	13.9	90.0	21.9	-	-	125.8	-	103.1	13.4	-	9.3	125.8
1982-91	358.0	832.8	165.0	-	-	1 355.8	-	1 257.7	41.0	-	57.1	1 355.8

TECHNICAL CO-OPERATION PROJECTS IN NIGER
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1982 - 1992

TOTAL PROJECT ALLOTMENTS AND DISBURSEMENTS
(as of mid-November 1992)

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	1	452 944	26.6	467 951	31.0
Nuclear physics and chemistry	-	-	-	-	-
Nuclear raw materials	-	-	-	-	-
Nuclear engineering and technology	1	110 436	6.5	76 592	5.1
Nuclear techniques in agriculture	6	522 541	30.6	519 667	34.5
Nuclear medicine	-	-	-	-	-
Nuclear techniques in biology	-	-	-	-	-
Nuclear techniques in industry and hydrology	3	385 187	22.6	269 079	17.8
Nuclear safety	2	233 390	13.7	175 300	11.6
TOTAL	13	1 704 498	100.0	1 508 589	100.0

TECHNICAL CO-OPERATION PROJECTS IN NIGER
 COMPLETED AND OPERATIONAL, BY SECTOR, 1982 - 1992
 (As of mid-November 1992)

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	1	452 944	467 951
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	5	396 056	413 554
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	1	197 982	195 310
Nuclear safety	1	119 340	118 474
TOTAL	8	1 166 322	1 195 289
<u>Operational projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	-	-	-
Nuclear engineering and technology	1	110 436	76 592
Nuclear techniques in agriculture	1	126 485	106 113
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	2	187 205	73 769
Nuclear safety	1	114 050	56 826
TOTAL	5	538 176	313 300

EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO NIGER, BY SECTOR
 PROJECTS COMPLETED AND OPERATIONAL 1982 - 1992
 (As of mid-November 1992)

FIELD	TOTAL PROJECT ALLOTMENTS				TOTAL PROJECT DISBURSEMENTS			
	EXPERT SERVICES		EQUIPMENT	TRAINING	EXPERT SERVICES		EQUIPMENT	TRAINING
	M/M	\$	\$	\$	M/M	\$	\$	\$
General atomic energy development	30/14	165 905	287 039	-	30/18	182 522	285 429	-
Nuclear physics and chemistry	-	-	-	-	-	-	-	-
Nuclear raw materials	-	-	-	-	-	-	-	-
Nuclear engineering and technology	6/05	49 925	60 511	-	5/05	25 574	51 018	-
Nuclear techniques in agriculture	15/11	96 675	373 966	51 900	12/12	115 291	367 030	37 346
Nuclear medicine	-	-	-	-	-	-	-	-
Nuclear techniques in biology	-	-	-	-	-	-	-	-
Nuclear techniques in industry & hydrology	10/07	71 935	258 608	54 644	7/00	41 117	195 317	32 645
Nuclear safety	7/13	56 890	176 500	-	5/29	47 303	127 997	-
TOTAL	69/20	441 330	1 156 624	106 544	61/04	411 807	1 026 791	69 991

AGENCY FELLOWS FROM NIGER

1982 - 1992¹
(As of mid-November 1992)

Sector	No. of fellowships	No. of months/days	Host countries
General atomic energy development	-	-	-
Nuclear physics	-	-	-
Nuclear chemistry	3	13/02	FRA, HUN
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	8	29/29	BEL, FRA, UK, IAEA
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry and hydrology	9	45/10	FRA, HLI, SWI
Nuclear safety	2	10/18	FRA
TOTAL	22	98/29	

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

NIGER
FELLOWSHIPS LONGER THAN 12 M/M
1982 - 1992
(As of mid-November 1992)

NONE

NIGERIAN NATIONALS WHO WERE AWARDED MORE THAN ONE
FELLOWSHIP OR SCIENTIFIC VISIT
1982 - 1992
(As of mid-November 1992)

Name	Field of study	Host country	Date	Duration	Project
SAMI	1. Analytical chemistry 2. Isotope hydrology	FRA MLI	Dec.85 - Mar.86 May 88 - Sep.88	3/01 4/01	NER/8/003 NER/8/003

AGENCY TRAINING COURSES WITH NIGERAN PARTICIPATION

1982 - 1992
(As of mid-November 1992)

Field	Number of participants	Number of courses
General atomic energy development	2	2
Nuclear physics	2	2
Nuclear chemistry	-	-
Nuclear raw materials	3	2
Nuclear engineering and technology	6	3
Nuclear techniques in agriculture	10	10
Nuclear medicine	-	-
Nuclear techniques in biology	-	-
Nuclear techniques in industry & hydrology	8	5
Nuclear safety	7	6
TOTAL	38	30

**MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY NIGERIAN NATIONALS
1982 - 1992
(As of mid-November 1992)**

Name	Course No.	Course title	Year	Location
BAKO	INT/3/008 (001)	ITC on uranium exploration	1982	MAG
	INT/3/013 (001)	ITC on uranium prospection and processing	1984	FRA
GOUBE	INT/5/103 (001)	ITC on the use of isotope and radiation techniques in studies on biological nitrogen fixation	1986	AUS
	RAF/5/010 (001)	RWS biological nitrogen fixation	1987	GHA
	RAF/5/010 (002)	First Research Co-ordination Meeting of the regional project RAF/5/010	1989	TUN
GREMA	RAF/0/006 (001)	RTC on design, management and evaluation techniques of IAEA technical co-operation projects	1991	GHA
	RAF/9/005 (003)	RTC for radiation protection officers	1990	TUN
MAHOUDOU	INT/4/057 (001)	ITC on quality assurance for nuclear power plants	1982	FRA
	INT/9/074 (001)	ITC on radiation protection	1987	FRA
OUSMANE	RAF/0/005 (001)	Regional seminar on nuclear science for peace and development	1990	UGA
	RAF/8/012 (002)	First Research Co-ordination Meeting of the regional project RAF/8/012	1989	MLI
YACOUBA	RAF/8/012 (003)	RWS on hydrosedimentology	1990	MLI
	RAF/8/012 (005)	RWS on the study of non-saturated zones	1991	SEN

PROJECTS COMPLETED IN NIGER SINCE 1982
(As of mid-November 1992)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1978	NER/0/003	Radioisotope laboratory	30/14	165 905	287 039	-	30/18	182 522	285 429	-	1992
1979	NER/5/003	Radioisotopes in agriculture	6/00	22 800	25 000	-	5/20	28 272	22 442	-	1984
1982	NER/5/004	Radioisotopes in animal science	1/00	5 400	-	-	0/09	1 952	-	-	1982
1983	NER/5/005	Nuclear techniques in animal production	2/28	21 130	137 610	-	2/28	31 794	137 385	-	1992
1986	NER/5/006	Radioisotopes in agriculture	0/15	3 475	71 756	-	0/15	4 290	71 530	-	1989
1989	NER/5/007	Laboratory for sero-epidemiology	1/28	15 985	74 600	18 300	1/28	23 927	73 693	18 269	1992
1981	NER/8/003	Radioisotopes in hydrology	6/07	34 630	137 608	25 744	6/07	30 231	137 854	27 225	1990
1983	NER/9/005	Radiation protection in uranium mining and milling	5/18	37 840	81 500	-	5/00	36 765	81 709	-	1990
	TOTAL	8 projects	54/20	307 165	815 113	44 044	53/05	339 753	810 042	45 494	

OPERATIONAL PROJECTS IN NIGER
(As of mid-November 1992)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1987	NER/4/002	Maintenance and repair of equipment	6/05	49 925	60 511	-	5/05	25 574	51 018	-
1991	NER/5/008	Biological nitrogen fixation studies	3/00	27 885	65 000	33 600	1/02	25 056	61 980	19 077
1991	NER/8/004	Isotope techniques in hydrology	2/00	18 255	60 000	8 200	0/23	10 886	32 187	5 420
1991	NER/8/005	Upgrading the radiocarbon laboratory	2/00	19 050	61 000	20 700	-	-	25 276	-
1991	NER/9/006	Upgrading the radiation protection inspectorate	1/25	19 050	95 000	-	0/29	10 538	46 288	-
	TOTAL	5 projects	15/00	134 165	341 511	62 500	7/29	72 054	216 749	24 497

COUNTERPART INSTITUTIONS IN NIGER (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>GENERAL ATOMIC ENERGY DEVELOPMENT</u>		
NER/0/003	University of Niamey, Radioisotope Institute, Niamey	BEN MOHAMED
<u>NUCLEAR ENGINEERING AND TECHNOLOGY</u>		
NER/4/002	Ministry of Mines and Energy, National Office for Mining Resources, Niamey	KANFENI
<u>AGRICULTURE</u>		
NER/5/003	National Institute of Agronomic Research, Niamey	GANDAH
NER/5/004	University of Niamey, Department of Biology, Niamey	YENIKOYE
NER/5/005	University of Niamey, Higher School of Agriculture, Niamey	YENIKOYE
NER/5/006	University of Niamey, Faculty of Agronomy, Department of Plant Production, Niamey	SOUMANA
NER/5/007	Laboratoire Central de l'Élevage Niamey	DIALLO
NER/5/008	1. National Institute of Agronomic Research, Niamey 2. University of Niamey, Radioisotope Institute, Niamey	BEIDARI MARINI

COUNTERPART INSTITUTIONS IN NIGER (I)
(By Project)

Project No. Institute Counterpart(s)

NUCLEAR TECHNIQUES IN HYDROLOGY

NER/8/003	Ministry of Hydrology and Environment, Directorate of Water Resources, Niamey	... OUSMANE
NER/8/004	Ministry of Hydrology and Environment, Directorate of Water Resources, Niamey	JACKOU
NER/8/005	University of Niamey, Radiotope Institute, Niamey	MARINI

NUCLEAR SAFETY

NER/9/005	Ministry of Mines and Energy, Directorate of Mines, Niamey	ABARCHI
NER/9/006	District Mining and Energy Service, Arlit	ABARCHI

COUNTERPART INSTITUTIONS IN NIGER (II)
(By Institute)

NIAMEY

**University of Niamey
Radioisotope Institute
Niamey**

NER/0/003 Radioisotope Laboratory
NER/5/008 Biological Nitrogen Fixation Studies
NER/8/005 Upgrading the Radiocarbon Laboratory

**University of Niamey
Department of Biology
Niamey**

NER/5/004 Radioisotopes in Animal Science

**University of Niamey
Higher School of Agriculture
Niamey**

NER/5/005 Nuclear Techniques in Animal Production

**University of Niamey
Faculty of Agronomy
Department of Plant Production
Niamey**

NER/5/006 Radioisotopes in Agriculture

**Ministry of Mines and Energy
National Office for Mining Resources
Niamey**

NER/4/002 Maintenance and Repair of Equipment

**Ministry of Mines and Energy
Directorate of Mines
Niamey**

NER/9/005 Radiation Protection in Uranium Mining and Milling

COUNTERPART INSTITUTIONS IN NIGER (II)
(By Institute)

NIAMEY (cont'd)

Ministry of Hydrology and Environment
Directorate of Water Resources
Niamey

NER/8/003 Radioisotopes in Hydrology
NER/8/004 Isotope Techniques in Hydrology

National Institute of Agronomic Research
Niamey

NER/5/003 Radioisotopes in Agriculture
NER/5/008 Biological Nitrogen Fixation Studies

Laboratoire Central de l'Élevage
Niamey

NER/5/007 Laboratory for Sero-Epidemiology

ARLIT

District Mining and Energy Service
Arlit

NER/9/006 Upgrading the Radiation Protection Inspectorate

THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH NIGER
LONG-TERM EXPERT ASSIGNMENTS
(1982 - 1992)

Project NER/0/003 Radioisotope Laboratory

● Task 01 - Radioisotopes Application

F.S. TOMEK (TUR)

Mar 83 - Mar 85

24 months

- To assist in establishing a radioisotopes laboratory.
- To give introductory courses in the use of radioisotopes and on radiation protection.
- To advise the authorities on embarking gradually upon a programme for the utilization of nuclear techniques in the economic, scientific and social development of the country.

RESEARCH CONTRACTS/AGREEMENTS IN NIGER SINCE 1982 ¹
(As of mid-November 1992)

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear techniques in agriculture	4	31 500
Nuclear techniques in hydrology	1	4 000
TOTAL	5	35 500

¹/ New awards since 1982

**SCIENTISTS FROM NIGER SERVING AS AGENCY
TECHNICAL CO-OPERATION EXPERTS OR
TRAINING COURSE LECTURERS
1982 - 1992
(As of mid-November 1992)**

Name	No. of assignments	Project(s)
AFAGNIBO	1	NER/4/002
BEIDARI	1	RAF/5/010
GOUBE	1	RAF/5/010
KARBO	2	RAF/8/012
YACOUBA	1	RAF/8/012
TOTAL	6	

**AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS
HOSTED BY NIGER
1982 - 1992
(As of mid-November 1992)**

Recipient country	No. of fellowships	No. of scientific visits	TOTAL ¹
PAKISTAN	-	2	2
TOTAL	-	2	2

¹/ Includes trainees who have completed or at least started their studies.

**REGIONAL AND INTERREGIONAL TRAINING EVENTS
HOSTED BY NIGER
1982 - 1992
(As of mid-November 1992)**

Course No.	Course Title	Participants	Year
RAF/8/012 (001)	RWS on the development of isotope techniques in hydrology and hydrogeology	8	1988
	TOTAL	8	