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**INTERNATIONAL ATOMIC ENERGY AGENCY**

IAEA-CPS-92/15  
10 November 1992  
Original: ENGLISH

## **COUNTRY PROGRAMME SUMMARY**

**THE AGENCY'S TECHNICAL CO-OPERATION**

**PROGRAMME WITH**

**KENYA**

**1982 - 1992**

**COUNTRY PROGRAMME SUMMARIES**

**DEPARTMENT OF TECHNICAL CO-OPERATION**

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1982 - 1992

COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

**THE AGENCY'S TECHNICAL CO-OPERATION  
PROGRAMME WITH  
KENYA  
1982 - 1992  
COUNTRY PROGRAMME SUMMARIES**

This report contains a review of the Agency's technical co-operation activities in Kenya 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.

**KENYA**

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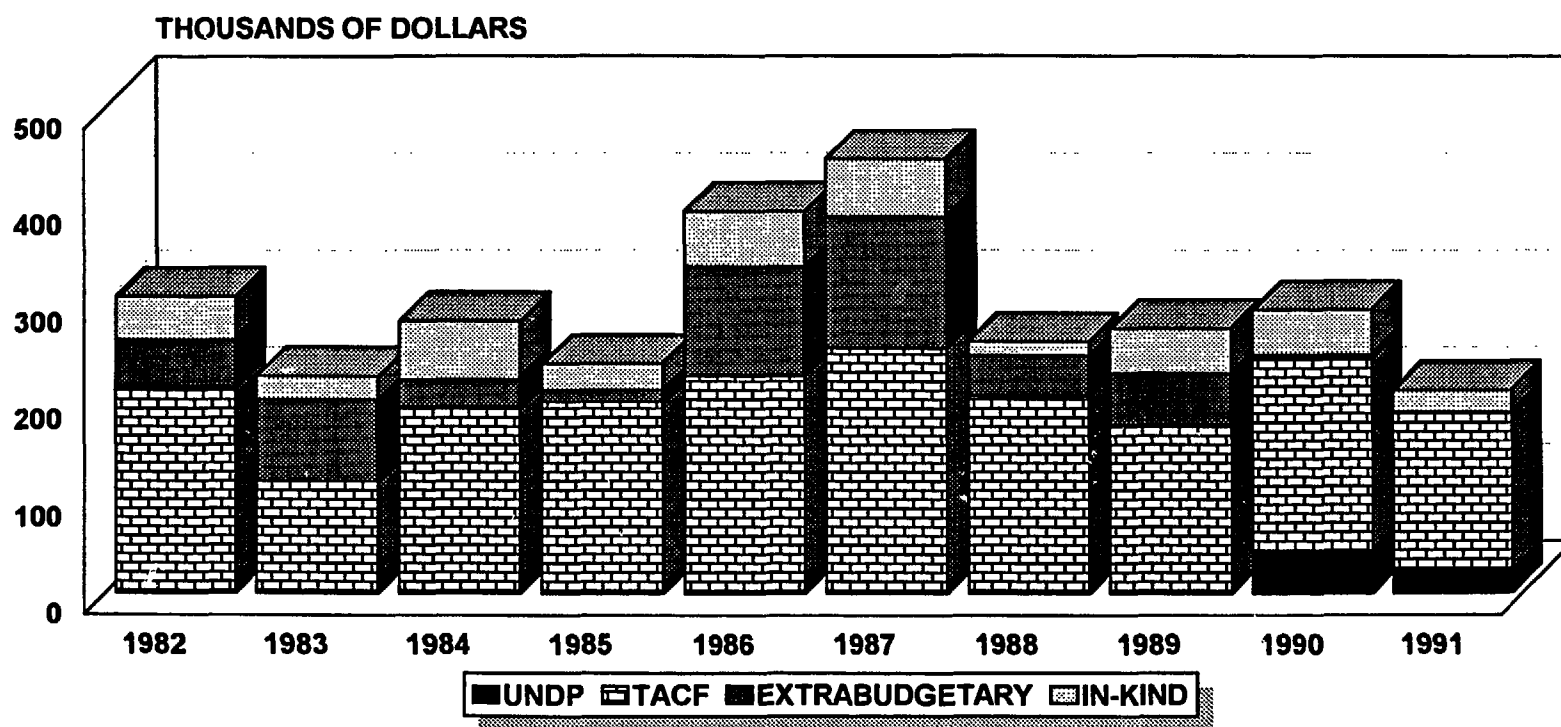
## INTRODUCTION

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 almost \$3.9 million of Agency support received, Kenya ranks 39<sup>th</sup> among all recipients of technical assistance during the period 1958-1991.

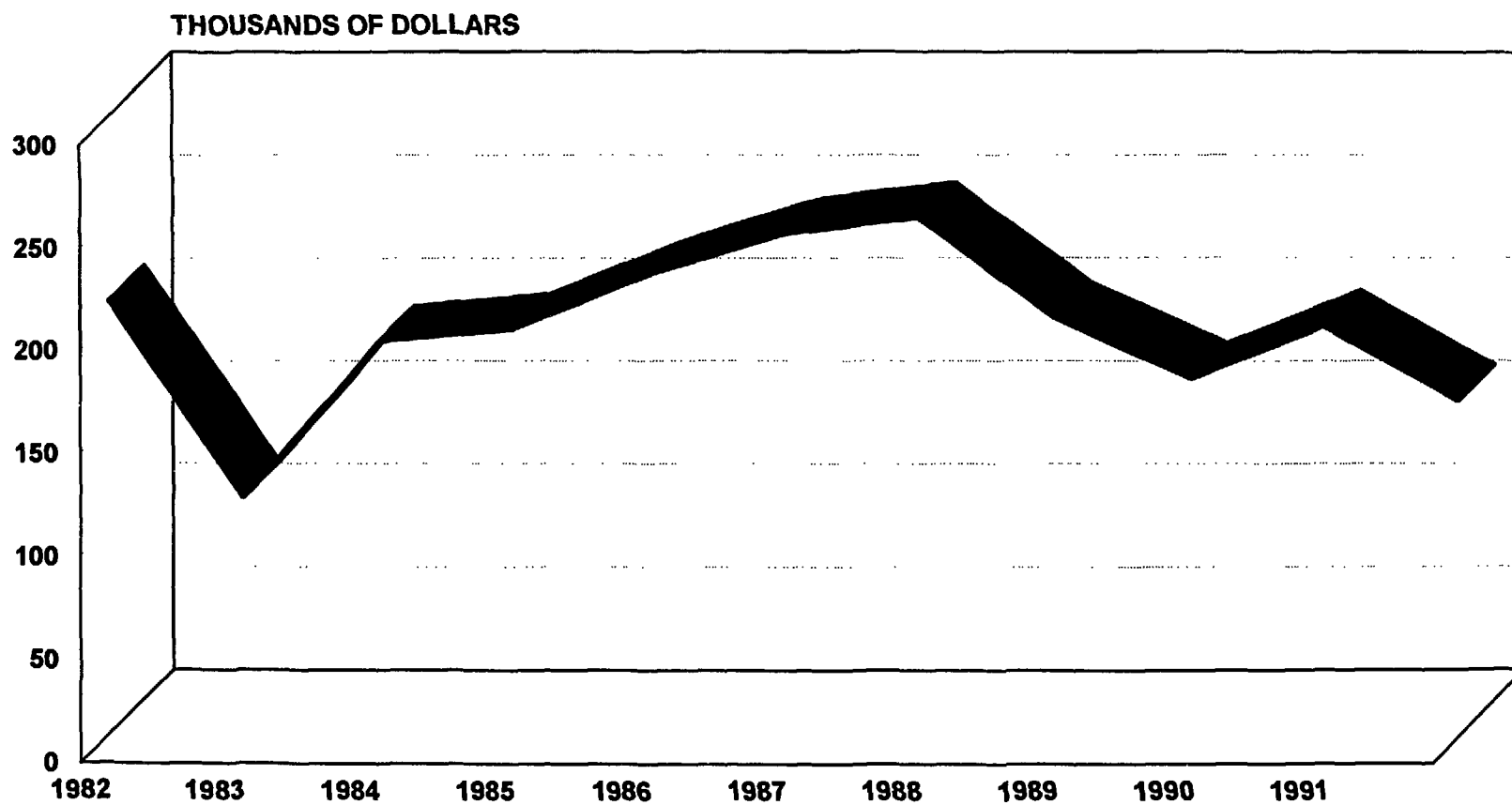
Almost half of the assistance during the past ten years has been provided in the form of equipment (44%), followed by training (33%) and expert services (23%). Two-thirds of the funds available were provided by the Technical Assistance and Co-operation Fund (66%), while extra-budgetary contributions accounted for 18%, in-kind contributions for 14%, and UNDP for 2% of the resources.

With regard to project disbursements during the past ten years, by sector, the four major areas have been general atomic energy development (30%), agriculture (22%), nuclear medicine and nuclear safety (13% each).

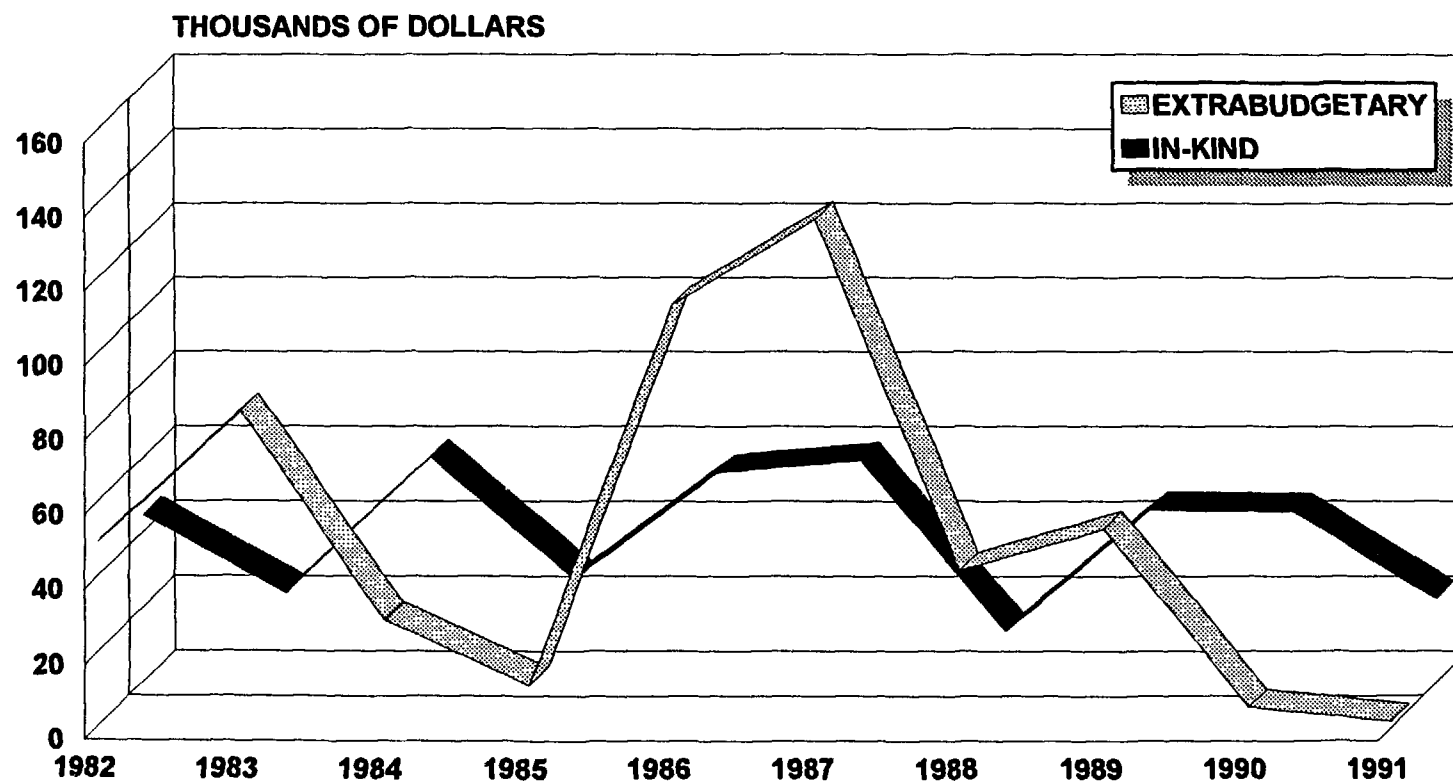
## ASSISTANCE PROVIDED BY THE AGENCY TO KENYA BY SOURCE (1982 - 1991)



## TACF ASSISTANCE PROVIDED TO KENYA (1982 - 1991)

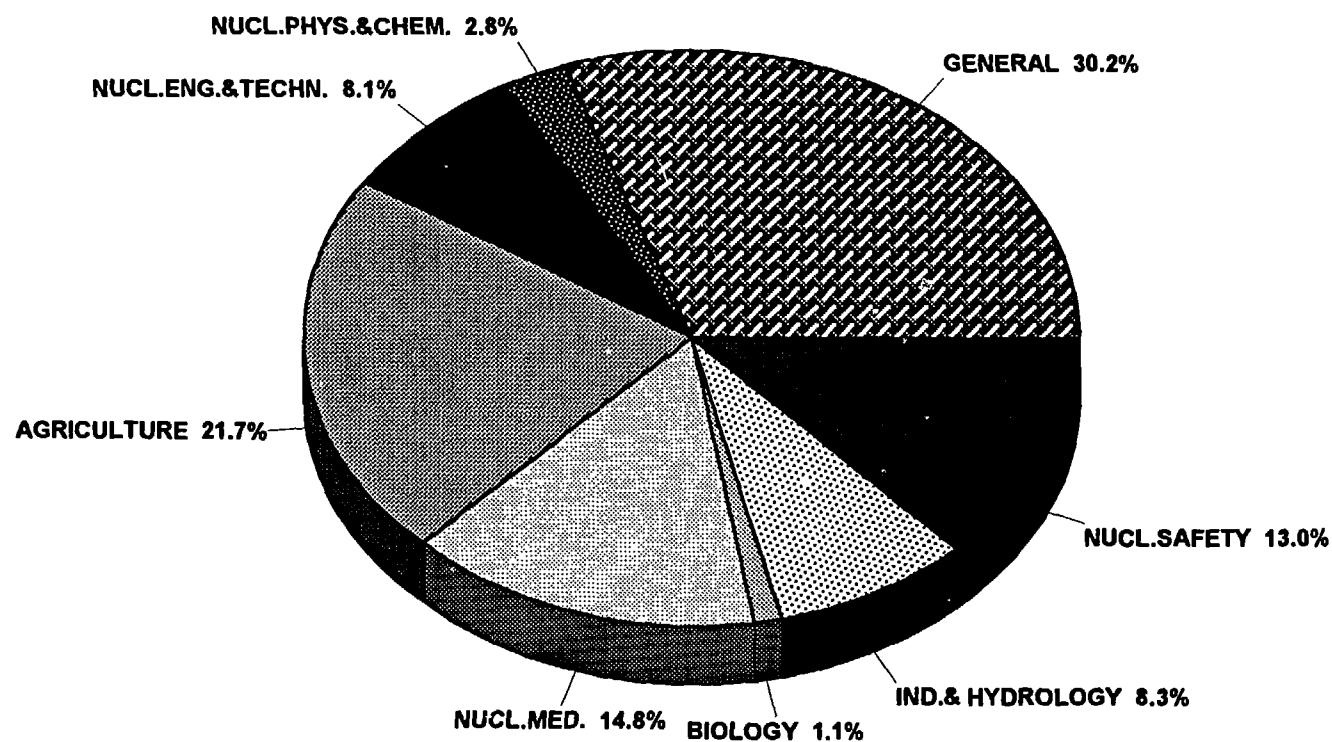


## EXTRABUDGETARY AND IN-KIND ASSISTANCE PROVIDED TO KENYA (1982 - 1991)

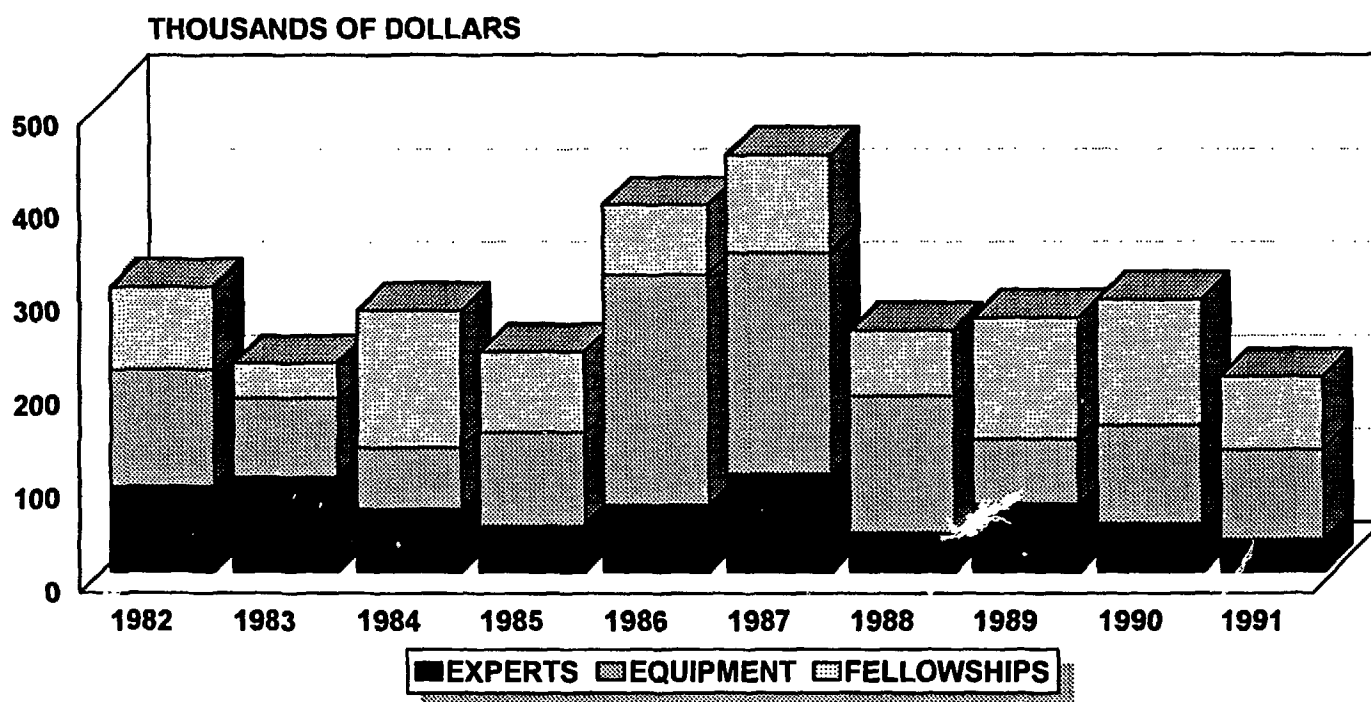




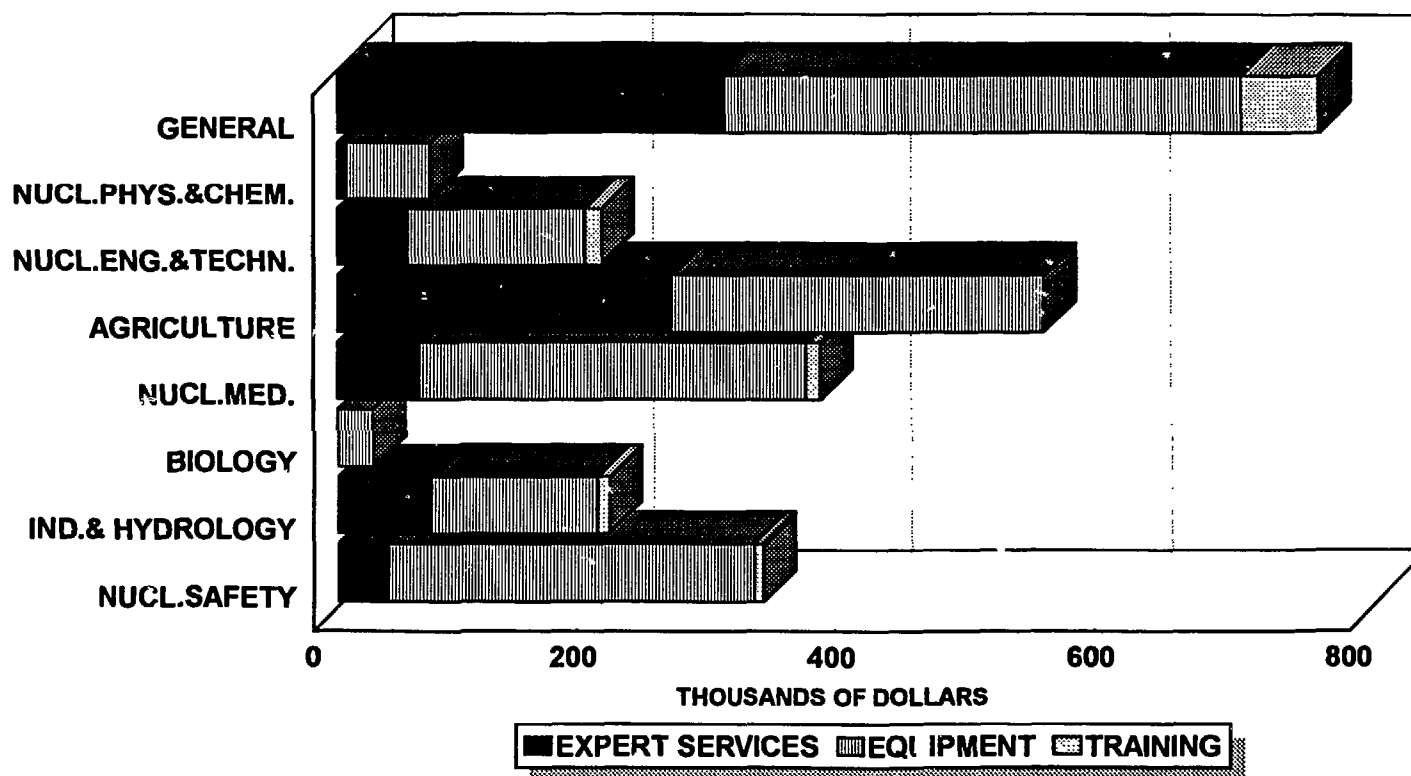
## TC PROJECT DISBURSEMENTS IN KENYA BY SECTOR (1982 - 1991)



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



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



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH KENYA

ALL SOURCES

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

YEAR	RANKING	AMOUNT
1958-81	40 <sup>th</sup>	962.2
1982	28 <sup>th</sup>	304.2
1983	35 <sup>th</sup>	222.5
1984	26 <sup>th</sup>	279.0
1985	37 <sup>th</sup>	235.0
1986	33 <sup>rd</sup>	391.6
1987	31 <sup>st</sup>	445.9
1988	36 <sup>th</sup>	257.7
1989	41 <sup>st</sup>	271.1
1990	43 <sup>rd</sup>	290.3
1991	53 <sup>rd</sup>	207.9
1958-91	39 <sup>th</sup>	3867.4

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

**ALL SOURCES**

Year	I	II	III	IV	V	KENYA
1958-81	BRA 7907.9	IND 6670.7	ARG 5200.4	PAK 5091.2	CHI 5005.7	40 <sup>th</sup> - 962.2
1982	EGY 807.5	PER 746.4	CUB 715.7	COL 667.7	THA 654.3	28 <sup>th</sup> - 304.2
1983	EGY 2077.9	PER 1116.8	VIE 948.1	PHI 778.6	IRA 722.1	35 <sup>th</sup> - 222.5
1984	EGY 3625.9	PER 1750.4	THA 1094.6	CUB 1028.7	PHI 881.2	26 <sup>th</sup> - 279.0
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	37 <sup>th</sup> - 235.0
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	33 <sup>rd</sup> - 391.6
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	31 <sup>st</sup> - 445.9
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	36 <sup>th</sup> - 257.7
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	41 <sup>st</sup> - 271.1
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	43 <sup>rd</sup> - 290.3
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	53 <sup>rd</sup> - 207.9
1958-91	EGY 22222.3	BRA 17021.1	THA 14596.1	PER 12631.1	INS 12383.8	39 <sup>th</sup> - 3867.4

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

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	KENYA
1958-81	HUN 2533.0	PAK 2010.9	EGY 1898.7	THA 1712.8	BRA 1704.8	37 <sup>th</sup> - 589.9
1982	EGY 507.1	HUN 438.2	CUB 430.7	ECU 398.4	ZAM 354.9	19 <sup>th</sup> - 210.5
1983	EGY 1049.4	VIE 897.4	POL 667.8	PAK 498.5	PHI 430.0	49 <sup>th</sup> - 114.4
1984	EGY 1197.2	CUB 655.6	ECU 565.6	BGD 506.3	BUL 472.4	34 <sup>th</sup> - 190.1
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	32 <sup>nd</sup> - 196.1
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	37 <sup>th</sup> - 222.5
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	40 <sup>th</sup> - 250.6
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	36 <sup>th</sup> - 202.0
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	52 <sup>nd</sup> - 172.1
1990	POL 1562.3	VIE 1318.8	DRK 1156.2	IRA 958.0	YUG 933.4	47 <sup>th</sup> - 197.7
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	54 <sup>th</sup> - 161.4
1958-91	EGY 9591.3	HUN 8256.5	POL 7793.5	BRA 7433.5	PAK 7346.0	43 <sup>rd</sup> - 2507.3

ASSISTANCE PROVIDED BY THE AGENCY TO KENYA

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	91.5	124.5	88.2	-	-	304.2	-	210.5	-	49.1	44.6	304.2
1983	100.9	84.1	37.5	-	-	222.5	-	114.4	-	84.3	23.8	222.5
1984	67.3	65.1	146.6	-	-	279.0	-	190.1	-	28.7	60.2	279.0
1985	49.3	99.6	86.1	-	-	235.0	-	196.1	-	11.4	27.5	235.0
1986	71.6	245.1	74.9	-	-	391.6	-	222.5	-	113.0	56.1	391.6
1987	104.7	235.5	105.7	-	-	445.9	-	242.6	8.0	136.0	59.3	445.9
1988	41.7	145.9	70.1	-	-	257.7	-	202.0	-	41.9	13.8	257.7
1989	72.9	68.7	129.5	-	-	271.1	-	172.1	-	53.0	46.0	271.1
1990	51.5	104.5	134.3	-	-	290.3	41.4	197.7	-	5.5	45.7	290.3
1991	34.8	95.1	78.0	-	-	207.9	22.6	161.4	-	1.6	22.3	207.9
1982-91	686.2	1 268.1	950.9	-	-	2 905.2	64.0	1 909.4	8.0	524.5	399.3	2 905.2

TECHNICAL CO-OPERATION PROJECTS IN KENYA  
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1982 - 1992

TOTAL PROJECT ALLOTMENTS AND DISBURSEMENTS  
(as of 31 October 1992)

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	1	812 964	27.7	759 784	30.2
Nuclear physics and chemistry	2	73 330	2.5	70 812	2.8
Nuclear raw materials	-	-	-	-	-
Nuclear engineering and technology	2	312 960	10.7	203 948	8.1
Nuclear techniques in agriculture	6	663 870	22.6	545 469	21.7
Nuclear medicine	6	474 819	16.2	373 222	14.8
Nuclear techniques in biology	1	33 631	1.2	27 527	1.1
Nuclear techniques in industry and hydrology	2	208 245	7.1	209 448	8.3
Nuclear safety	2	352 511	12.0	328 644	13.0
TOTAL	22	2 932 330	100.0	2 518 854	100.0



TECHNICAL CO-OPERATION PROJECTS IN KENYA  
 COMPLETED AND OPERATIONAL, BY SECTOR, 1982 - 1992  
 (As of 31 October 1992)

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	2	73 330	70 812
Nuclear raw materials	-	-	-
Nuclear engineering and technology	1	82 800	56 312
Nuclear techniques in agriculture	4	475 280	482 408
Nuclear medicine	4	224 169	194 539
Nuclear techniques in biology	1	33 631	27 527
Nuclear techniques in industry & hydrology	2	208 245	209 448
Nuclear safety	1	115 400	116 167
TOTAL	15	1 212 855	1 157 213
<u>Operational projects</u>			
General atomic energy development	1	812 964	759 784
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	-	-	-
Nuclear engineering and technology	1	230 160	147 636
Nuclear techniques in agriculture	2	188 590	63 061
Nuclear medicine	2	250 650	178 683
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	-	-	-
Nuclear safety	1	237 111	212 477
TOTAL	7	1 719 475	1 361 641

EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO KENYA, BY SECTOR  
 PROJECTS COMPLETED AND OPERATIONAL 1982 - 1992  
 (As of 31 October 1992)

FIELD	TOTAL PROJECT ALLOTMENTS				TOTAL PROJECT DISBURSEMENTS			
	EXPERT SERVICES		EQUIPMENT	TRAINING	EXPERT SERVICES		EQUIPMENT	TRAINING
	M/M	\$	\$	\$	M/M	\$	\$	\$
General atomic energy development	62/18	348 670	403 105	61 189	62/22	299 797	398 798	61 189
Nuclear physics and chemistry	1/26	9 945	63 385	-	1/15	7 427	63 385	-
Nuclear raw materials	-	-	-	-	-	-	-	-
Nuclear engineering and technology	14/11	105 960	135 600	71 400	9/28	54 849	5 935	13 164
Nuclear techniques in agriculture	69/22	295 758	366 861	1 251	71/22	258 248	287 221	-
Nuclear medicine	13/27	99 998	345 661	29 160	9/10	63 579	299 058	10 585
Nuclear techniques in biology	1/00	4 200	29 431	-	-	-	27 527	-
Nuclear techniques in industry & hydrology	11/12	70 656	127 989	9 600	10/22	71 626	128 626	9 196
Nuclear safety	6/16	36 280	309 366	6 865	6/19	39 392	282 387	6 865
TOTAL	181/12	971 467	1 781 398	179 465	172/18	794 918	1 622 937	100 999

AGENCY FELLOWS FROM KENYA

1982 - 1992<sup>1</sup>  
(As of 31 October 1992)

Sector	No. of fellowships	No. of months/days	Host countries
General atomic energy development	-	-	-
Nuclear physics	5	58/02	USA, UK
Nuclear chemistry	5	31/02	AUL, BEL, YUG, SWE, USA
Nuclear raw materials	-	-	-
Nuclear engineering and technology	4	28/29	USA, AUS, IAEA
Nuclear techniques in agriculture	21	154/11	CAN, USA, ITA, GER, ISR, UK, IAEA
Nuclear medicine	17	124/16	USA, ITA, ISR, BEL, EGY, UK
Nuclear techniques in biology	2	7/09	ITA, UK, IAEA
Nuclear techniques in industry and hydrology	6	32/04	IND, MAL, THA, INS, UK, IAEA
Nuclear safety	5	33/12	USA, UK, IAEA
TOTAL	65	469/25	

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

KENYA  
FELLOWSHIPS LONGER THAN 12 M/M  
1982 - 1992  
(As of 32 October 1992)

Name	Field of study	Host country	Date	Duration	Project
KINYUA	Analytical nuclear physics	USA	Mar.84 - Mar.86	24/02	KEN/0/003
MAINA	Analytical nuclear physics	UK	Sep.88 - Sep.90	24/00	KEN/0/003
MUTA-NGANGA	X-ray fluorescence analysis	BEL	Jan.87 - Jan.88	12/01	KEN/0/003
ANYANGO	Soil science	UK	Jan.88 - Jan.89	12/01	-
IRERI	Animal parasitology	CAN	Aug.82 - Aug.83	12/01	-
KONGORO	Entomology	UK	Jun.85 - Jul.86	13/00	RAF/5/004
ONCHERE	Soil fertility	UK	Sep.81 - Jan.83	15/20	-
OTIENO-AYAYO	Molecular biology	ISR	Jul.89 - Jul.90	12/01	RAF/0/003
VUNDLA	Nuclear entomology	USA	Dec.88 - Mar.90	16/00	RAF/5/004
AGGARWAL	Nuclear medicine	UK	Oct.83 - Dec.84	14/01	-
AGURE	Medical application	USA	Jun.90 - Sep.91	14/02	RAF/0/007
NGAIRA	Nuclear medicine	BEL	Started: Nov.91	12/00	RAF/0/007
ODERA	Immunoparasitology	USA	Jan.86 - Sep.87	20/27	-

KENYA  
 FELLOWSHIPS LONGER THAN 12 M/M  
 1982 - 1992  
 (As of 32 October 1992)

Name	Field of study	Host country	Date	Duration	Project
OTHIENO	Medical physics	USA	Sep.82 - Sep.84	23/12	-
KILONZO	General industrial applications	UK	Oct.88 - Dec.89	15/00	KEN/8/004
DIANG'A	Radiation protection	USA	Jan.84 - Dec.84	12/00	KEN/9/003
NDONYE	Radiation protection	UK	Oct.89 - Jan.91	15/02	RAF/0/003
OYOO	Radiation protection	USA	Sep.81 - Sep.82	12/00	-

**KENYAN NATIONALS WHO WERE AWARDED MORE THAN ONE  
FELLOWSHIP OR SCIENTIFIC VISIT  
1982 - 1992  
(As of 31 October 1992)**

Name	Field of study	Host country	Date	Duration	Project
KARANJA	1. Soil fertility 2. Soil fertility	UK	Oct.85 - Oct.86	11/18	-
		UK	May 88 - Oct.88	5/24	-
KILONZO	1. Analytical chemistry 2. General industrial applications	AUL	Sep.84 - Feb.85	5/00	KEN/8/004
		UK	Oct.89 - Dec.89	15/00	KEN/8/004
KINYUA	1. Analytical nuclear physics 2. Analytical nuclear physics 3. X-ray fluorescence analysis	USA	Mar.84 - Mar.86	24/02	KEN/0/003
		USA	Jul.86 - Apr.87	10/00	KEN/0/003
		SWE	Apr.91 - Aug.91	4/00	RAF/0/007
Mwai	1. Nuclear medicine 2. Nuclear medicine	UK	Sep.85 - Mar.86	6/00	-
		UK	Started: May 92	6/00	KEN/6/009
NDONYE	1. Nuclear medicine 2. Radiation protection	UK	Oct.83 - Oct.84	11/29	-
		UK	Oct.90 - Jan.91	3/01	RAF/0/003
NGAIRA	1. Radiation laboratory technology 2. Nuclear medicine	GER	Nov.81 - Jan.82	11/26	-
		BEL	Started: Nov.91	12/00	RAF/0/007
OYOO	1. Radiation protection 2. Radiation protection	USA	Sep.81 - Sep.82	12/01	-
		IAEA	Sep.86 - Nov.86	2/09	KEN/9/004

AGENCY TRAINING COURSES WITH KENYAN PARTICIPATION

1982 - 1992  
(As of 31 October 1992)

Field	Number of participants	Number of courses
General atomic energy development	5	4
Nuclear physics	5	5
Nuclear chemistry	2	2
Nuclear raw materials	-	-
Nuclear engineering and technology	5	5
Nuclear techniques in agriculture	21	20
Nuclear medicine	8	7
Nuclear techniques in biology	-	-
Nuclear techniques in industry & hydrology	4	4
Nuclear safety	16	13
TOTAL	66	60

MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES  
BY KENYAN NATIONALS  
1982 - 1992  
(As of 31 October 1992)

Name	Course No.	Course title	Year	Location
KAMANDE	INT/9/114 (001) RAF/9/005 (004)	ITC on planning, preparedness and response to radiological emergencies RWS on basic radiation and development of national infrastructure for radiation safety	1991 1990	USA NIR
KIARIE	RAF/9/005 (007) RAF/9/010 (001)	RWS on emergency planning, preparedness and international co-operation RTC on radioactive waste management: a systems approach	1991 1992	AUS EGY
KIRAGU	RLA/8/013 (009) RLA/8/013 (010)	International 12 <sup>th</sup> World Conference on Non-destructive Testing International workshop on project achievements	1989 1989	NET GER
MAINA	INT/1/030 (001) INT/1/041 (001)	ITC on energy dispersive X-ray analysis ITC on advanced nuclear analytical techniques	1984 1986	YUG AUS
OMBALLAH	INT/9/090 (001) RAF/5/021 (001)	ITC on the determination of radionuclides in food and environmental samples RTC on food irradiation technology	1988 1991	GER EGY
ONYANGO	INT/9/038 (001) RAF/0/006 (001)	ITC on the transport of radioactive materials RTC on design, management and evaluation techniques of IAEA technical co-operation projects	1982 1991	UK GHA
OTWOMA	INT/9/098 (001) RAF/9/010 (001)	ITC on safety and regulation of unsealed sources of radioactive material RTC on radioactive waste management: a systems approach	1989 1992	IRE EGY
WANGURU	RAF/0/005 (001) RAF/9/005 (002) RAF/9/005 (008)	Regional seminar on nuclear science for peace and development Meeting on regional co-operation in radiation protection in Africa Regional meeting on co-operation in radiation protection in Africa	1990 1989 1992	UGA URT URT



PROJECTS COMPLETED IN KENYA SINCE 1982  
(As of 31 October 1992)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1983	KEN/1/002	Accelerator study	0/15	3 100	-	-	0/04	582	-	-	1983
1984	KEN/1/003	Radiochemistry	1/11	6 845	63 385	-	1/11	6 845	63 385	-	1991
1984	KEN/4/003	Nuclear instrumentation	8/00	52 800	30 000	-	5/27	27 611	28 701	-	1985
1977	KEN/5/008	Radioisotopes in agriculture	9/00	62 073	50 351	-	9/01	62 073	50 549	-	1984
1984	KEN/5/009	Tsetse fly control	41/10	81 122	29 340	-	48/20	81 122	29 340	-	1992
1985	KEN/5/011	Animal reproductive behaviour studies	7/02	50 835	136 300	1 251	7/00	58 182	137 134	-	1990
1990	KEN/5/012	Fate of trypanocidal drugs in cattle	6/00	43 428	20 580	-	6/00	43 428	20 580	-	1992
1983	KEN/6/004	Nuclear medicine	6/00	37 200	-	-	2/00	12 868	-	-	1984
1985	KEN/6/005	Nuclear medicine	1/00	6 900	-	-	0/11	3 646	-	-	1985
1986	KEN/6/006	Intracavitary radiation therapy for cervical cancer	-	-	72 109	-	-	-	70 065	-	1987

PROJECTS COMPLETED IN KENYA SINCE 1982  
(As of 31 October 1992)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1986	KEN/6/007	Radioisotopes in parasitology	2/27	19 598	88 362	-	2/27	19 598	88 362	-	1988
1980	KEN/7/002	Development of vaccine for bilharzia	1/00	4 200	29 431	-	-	-	27 527	-	1983
1982	KEN/8/004	Non-destructive testing	10/02	60 806	84 189	-	9/12	60 806	84 189	-	1988
1987	KEN/8/005	Assessment of water resources	1/10	9 850	43 800	9 600	1/10	10 820	44 437	9 196	1991
1982	KEN/9/003	Radiation protection	6/00	32 400	83 000	-	6/03	31 668	84 499	-	1984
	TOTAL	15 projects	101/17	471 157	730 847	10 851	100/06	419 249	728 768	9 196	

**OPERATIONAL PROJECTS IN KENYA**  
(As of 31 October 1992)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1979	KEN/0/003	Nuclear science laboratory	62/18	348 670	403 105	61 189	62/22	299 797	398 798	61 189
1986	KEN/4/004	Nuclear instrument maintenance and quality control	6/11	53 160	105 600	71 400	4/01	27 238	107 234	13 164
1991	KEN/5/013	Fate of trypanocidal drugs in cattle	3/10	29 500	38 290	-	0/03	388	22 195	-
1991	KEN/5/016	Pesticide research	3/00	28 800	92 000	-	0/28	13 055	27 423	-
1991	KEN/6/008	Treatment of cervical and oesophageal cancer	-	-	128 550	-	-	-	108 636	-
1991	KEN/6/009	Radioimmunoassay laboratory	4/00	36 300	56 640	29 160	4/02	27 467	31 995	10 585
1986	KEN/9/004	Radiation protection	0/16	3 880	226 366	6 865	0/16	7 724	197 888	6 865
	<b>TOTAL</b>	<b>7 projects</b>	<b>79/25</b>	<b>500 310</b>	<b>1 050 551</b>	<b>168 614</b>	<b>72/12</b>	<b>375 669</b>	<b>894 169</b>	<b>91 803</b>

Footnote-a/ projects not yet upgraded:

KEN/5/014      Tsetse fly eradication in Lambwe Valley  
 KEN/6/010      Gamma camera

**COUNTERPART INSTITUTIONS IN KENYA (I)**  
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>GENERAL ATOMIC ENERGY DEVELOPMENT</u>		
KEN/0/003	University of Nairobi, Faculty of Engineering, Nairobi	KINYUA
<u>NUCLEAR PHYSICS AND CHEMISTRY</u>		
KEN/1/002	University of Nairobi, Faculty of Engineering, Nairobi	KINYUA
KEN/1/003	University of Nairobi, Faculty of Sciences, Department of Chemistry, Nairobi	EL-BUSAIDY
<u>NUCLEAR ENGINEERING AND TECHNOLOGY</u>		
KEN/4/003	University of Nairobi, Faculty of Engineering, Nairobi	DE SOUZA
KEN/4/004	University of Nairobi, Faculty of Engineering, Nairobi	GATARI
<u>AGRICULTURE</u>		
KEN/5/008	Coffee Research Foundation, Radioisotope Laboratory, Ruiru	OPILE
KEN/5/009	Ministry of Agriculture, Nairobi	ODUPOY
KEN/5/011	Kenya Agricultural Research Institute, Veterinary Research Department, Muguga	MATUGI
KEN/5/012	Kenya Trypanosomiasis Research Institute, Kikuyu	NJOGU

**COUNTERPART INSTITUTIONS IN KENYA (I)**  
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>AGRICULTURE (cont'd)</u>		
KEN/5/013	Kenya Trypanosomiasis Research Institute, Kikuyu	NJOGU
KEN/5/016	University of Nairobi, Faculty of Sciences, Department of Chemistry, Nairobi	WANDIGA
<u>NUCLEAR MEDICINE</u>		
KEN/6/004	Ministry of Health, Kenyatta National Hospital, Nairobi	-
KEN/6/005	Kenya Medical Research Institute, Nairobi	KOECH
KEN/6/006	Ministry of Health, Kenyatta National Hospital, Nairobi	ONYANGO
KEN/6/007	Kenya Medical Research Institute, Nairobi	KOECH
KEN/6/008	1. Ministry of Health, Nairobi 2. New Nyanza General Hospital, Kisumu	ONYANGO -
KEN/6/009	Ministry of Health, Kenyatta National Hospital, Nairobi	OMONDI
<u>NUCLEAR TECHNIQUES IN BIOLOGY</u>		
KEN/7/002	University of Nairobi, Department of Zoology, Nairobi	KINOTI

**COUNTERPART INSTITUTIONS IN KENYA (I)**  
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR TECHNIQUES IN INDUSTRY AND HYDROLOGY</u>		
KEN/8/004	Ministry of Transport and Communications, Materials Branch, Nairobi	ODHIAMBO
KEN/8/005	Ministry of Water Development, Nairobi	OSWANA
<u>NUCLEAR SAFETY</u>		
KEN/9/003	1. Ministry of Health, Radiation Protection Board, Nairobi	WANGURU
	2. Ministry of Health, Kenya National Hospital, Nairobi	TOLE
KEN/9/004	1. Ministry of Health, Radiation Protection Board, Nairobi	WANGURU
	2. Ministry of Health, Kenya National Hospital, Nairobi	TOLE

**COUNTERPART INSTITUTIONS IN KENYA (II)**  
(By Institute)

**NAIROBI**

**University of Nairobi  
Faculty of Engineering  
Nairobi**

KEN/0/003	Nuclear Science Laboratory
KEN/1/002	Accelerator Study
KEN/4/003	Nuclear Instrumentation
KEN/4/004	Nuclear Instrument Maintenance and Quality Control

**University of Nairobi  
Faculty of Sciences  
Department of Chemistry  
Nairobi**

KEN/1/003	Radiochemistry
KEN/5/016	Pesticide Research

**University of Nairobi  
Department of Zoology  
Nairobi**

KEN/7/002	Development of Vaccine for Bilharzia
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**Ministry of Agriculture  
Nairobi**

KEN/5/009	Tsetse Fly Control
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**Ministry of Health  
Nairobi**

KEN/6/008	Treatment of Cervical and Oesophageal Cancer
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**Ministry of Health  
Radiation Protection Board  
Nairobi**

KEN/9/003	Radiation Protection
KEN/9/004	Radiation Protection

**COUNTERPART INSTITUTIONS IN KENYA (II)**  
(By Institute)

**NAIROBI (cont'd)**

**Ministry of Health**  
**Kenyatta National Hospital**  
**Nairobi**

KEN/6/004	Nuclear Medicine
KEN/6/006	Intracavitary Radiation Therapy for Cervical Cancer
KEN/6/009	Radioimmunoassay Laboratory
KEN/9/003	Radiation Protection
KEN/9/004	Radiation Protection

**Ministry of Transport and Communications**  
**Materials Branch**  
**Nairobi**

KEN/8/004	Non-destructive Testing
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**Ministry of Water Development**  
**Nairobi**

KEN/8/005	Assessment of Water Resources
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**Kenya Medical Research Institute**  
**Nairobi**

KEN/6/005	Nuclear Medicine
KEN/6/007	Radioisotopes in Parasitology

**RUIRU**

**Coffee Research Foundation**  
**Radioisotope Laboratory**  
**Ruiru**

KEN/5/008	Radioisotopes in Agriculture
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**COUNTERPART INSTITUTIONS IN KENYA (II)**  
(By Institute)

**MUGAGA**

**Kenya Agricultural Research Institute  
Veterinary Research Department  
Mugaga**

KEN/5/011     Animal Reproductive Behaviour Studies

**KIKUYU**

**Kenya Trypanosomiasis Research Institute  
Kikuyu**

KEN/5/012     Fate of Trypanocidal Drugs in Cattle  
KEN/5/013     Fate of Trypanocidal Drugs in Cattle

**KISUMU**

**New Nyanza General Hospital  
Kisumu**

KEN/6/008     Treatment of Cervical and Oesophageal Cancer

**THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH KENYA**

**LONG-TERM ASSIGNMENTS  
(1982-1992)**

**Project KEN/0/003, Nuclear Science Laboratory**

- Task 01 - Establishment of Nuclear Science Laboratory
  - P. KUMP (YUG) Jan 82 - Aug 83 19.8 months
    - To assist in setting up a laboratory with equipment provided by the Agency for this purpose;
    - To provide in-service training to scientists and technicians in the use of the equipment provided;
    - To advise on future programmes to be carried out utilizing the laboratory.

**Project KEN/5/009, Tsetse Fly Control**

- Task 03 - Laboratory Technician
  - M. AUGUSTIN (IAEA) Feb 87 - Mar 88 14 months
  - Jan 89 - Dec 89 12 months
  - G. GERMERSHAUSEN (IAEA) Jan 89 - Dec 89 12 months
  - To assist in the in vitro work on *G. pallidipes*, including blood meal preparation, membrane processing and special treatment of materials used.

**RESEARCH CONTRACTS/AGREEMENTS IN KENYA SINCE 1982 <sup>1</sup>**  
**(As of 31 October 1992)**

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear techniques in agriculture	20	191 800
Nuclear medicine	4	54 500
Nuclear techniques in biology	1	10 000
TOTAL	25	256 300

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<sup>1</sup>/ New awards since 1982

**SCIENTISTS FROM KENYA SERVING AS AGENCY  
TECHNICAL CO-OPERATION EXPERTS OR  
TRAINING COURSE LECTURERS  
1982 - 1992  
(As of 31 October 1992)**

Name	No. of assignments	Project(s)
AWINO	2	RAF/5/021
GATARI	1	IVC/0/003
KAMANDE	1	RAF/9/007
MANDO	1	KEN/4/004
NGAUIYA	1	EGY/6/004
NJOGU	3	INT/5/094
OMANY	1	EGY/6/004
OSORE	2	INT/5/084
ROGO	1	EGY/6/004
SCHILLINGER	1	INT/5/094
WACHIRA	1	RAF/8/016
WALONG OLOO	1	UGA/5/012
TOTAL	16	

**AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS  
HOSTED BY KENYA  
1982 - 1992  
(As of 31 October 1992)**

Recipient country	No. of fellowships	No. of scientific visits	TOTAL <sup>1</sup>
COTE D'IVOIRE	1	-	1
GHANA	2	-	2
MADAGASCAR	2	-	2
NIGERIA	1	-	1
SRI LANKA	1	-	1
SUDAN	2	-	2
TANZANIA	4	-	4
ZAMBIA	4	1	5
ZIMBABWE	-	1	1
TOTAL	17	2	19

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

**REGIONAL AND INTERREGIONAL TRAINING EVENTS  
HOSTED BY KENYA  
1982 - 1992  
(As of 31 October 1992)**

Course No.	Course Title	Participants	Year
INT/5/088 (001)	ITC on the use of nuclear techniques in the study and control of parasitic infections of farm animals	19	1983
INT/8/025 (001)	ITC on non-destructive testing, radiography and ultrasonics techniques	16	1987
RAF/0/004 (001)	RTC on nuclear law and safety regulations	18	1991
RAF/2/002 (001)	RTC on radiochemistry and nuclear analytical techniques	16	1985
RAF/5/008 (001)	RTC on the use of radio- and enzyme-immunoassay techniques for studies on animal reproduction and disease diagnosis	24	1986
RAF/6/007 (001)	RWS on co-operation in radioimmunoassay	6	1991
RAF/8/015 (001)	RWS on X-ray fluorescence laboratory network in Africa	14	1992
RAF/9/005 (001)	RTC for radiation protection officers	8	1988
RAF/9/006 (001)	RTC on management of spent sealed radiation sources	17	1991
RAF/9/009 (001)	RTC on control and safe use of radiation sources	8	1992
	TOTAL	146	