



INTERNATIONAL ATOMIC ENERGY AGENCY



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IAEA-CPS-95/24
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Original: ENGLISH

COUNTRY PROGRAMME SUMMARY

THE AGENCY'S TECHNICAL CO-OPERATION

PROGRAMME WITH

PANAMA

1985 - 1995

COUNTRY PROGRAMME SUMMARIES

DEPARTMENT OF TECHNICAL CO-OPERATION

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PANAMA
1985 - 1995
COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

**THE AGENCY'S TECHNICAL CO-OPERATION
PROGRAMME WITH
PANAMA
1985 - 1995
COUNTRY PROGRAMME SUMMARIES**

This report contains a review of the Agency's technical co-operation activities in Panama carried out during 1985 - 1995. 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.

PANAMA

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INTRODUCTION

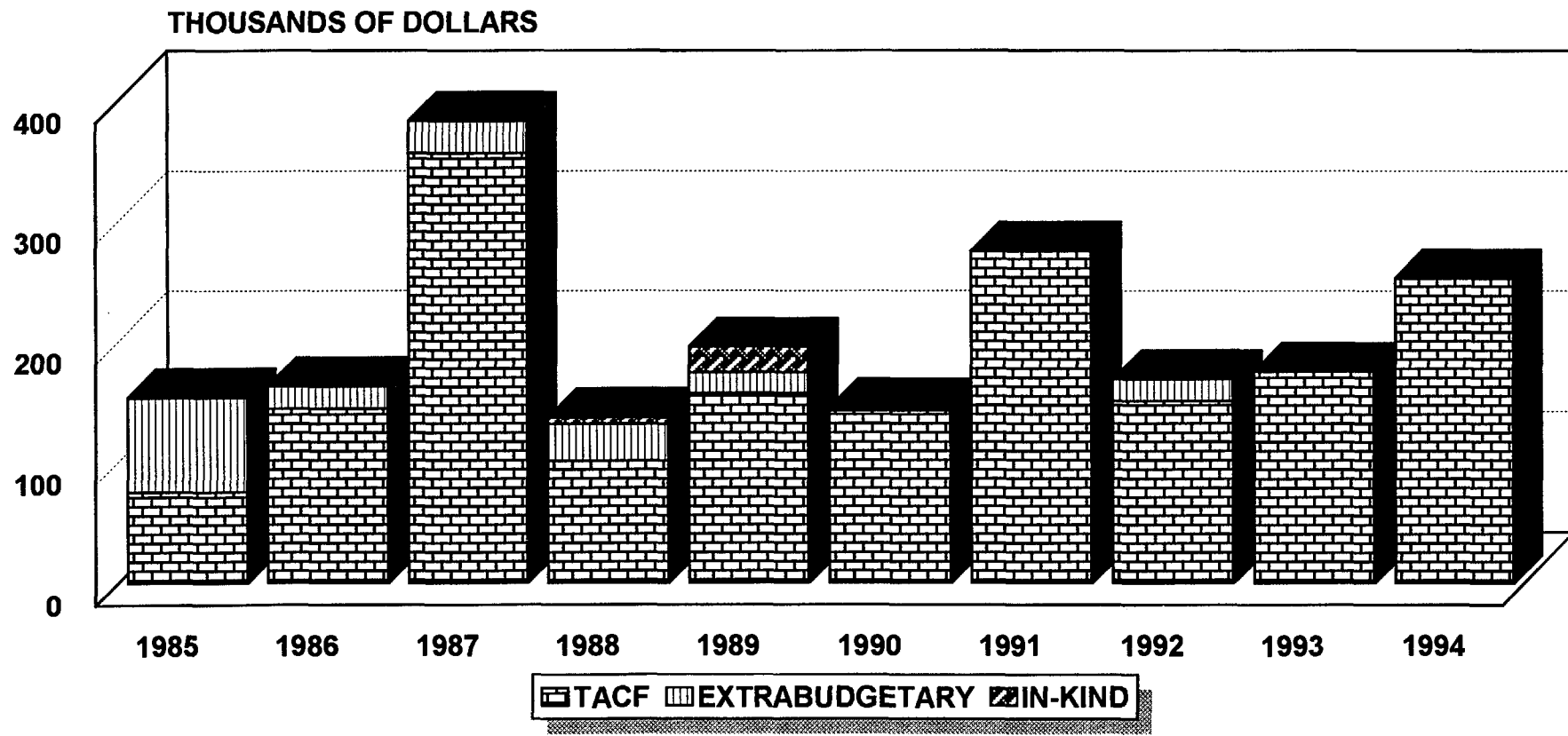
The country programme summary reported on here is one in the series of such studies being undertaken of the Agency's TC programme with Member States. With \$2.8 million of Agency support received, Panama ranks 56th among all recipients of technical assistance during the period 1958 through 1994.

Over two-thirds of the project assistance received during the past ten years has been provided in the form of equipment (73%), complemented by expert services (17%) and training (10%). The bulk of the resources was made available through the Technical Co-operation Fund (90%), the rest was provided through extrabudgetary contributions (9%) and assistance in kind (1%).

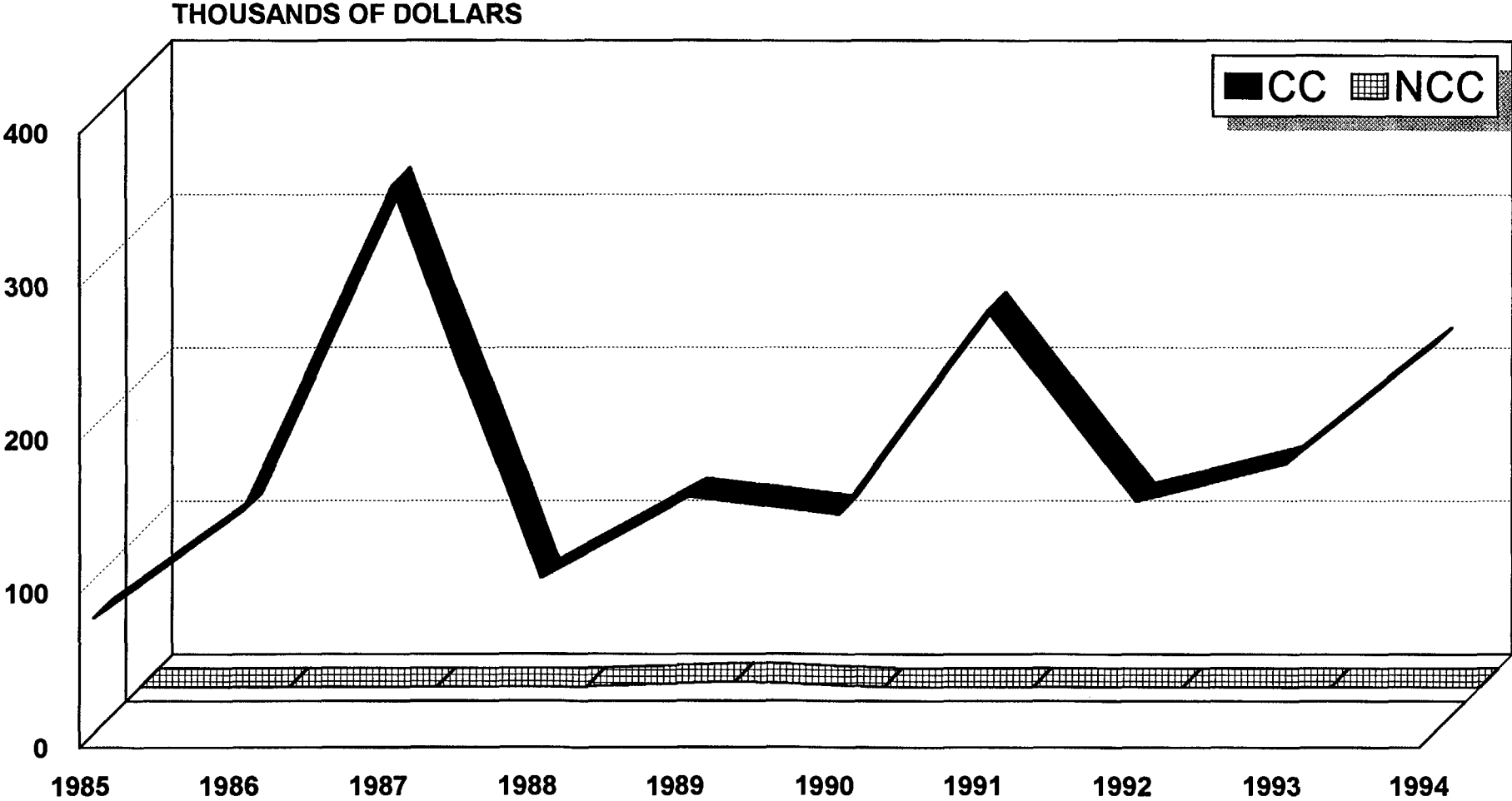
Only four sectors have been involved in project assistance: By far the largest has been agriculture (40%), followed by nuclear medicine (23%), nuclear physics and chemistry (21%), and nuclear safety (16%).

Since 1985, scientists from Panama have completed 18 assignments as Agency experts and training course lecturers or as participants in research co-ordination meetings. During the same period, Panama has hosted one fellowship and four regional group training events for a total of 37 participants.

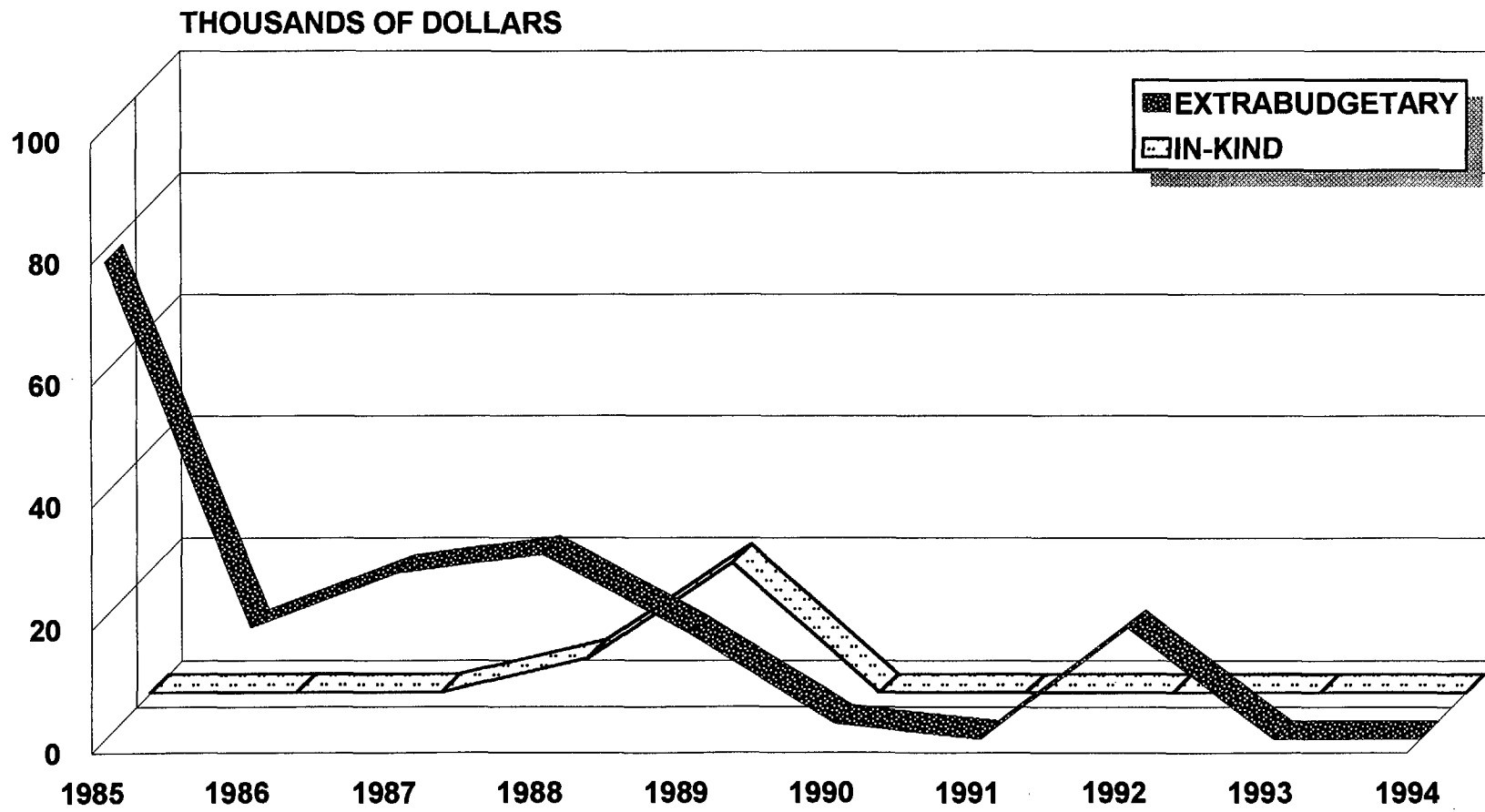
ASSISTANCE PROVIDED BY THE AGENCY TO PANAMA BY SOURCE (1985 - 1994)



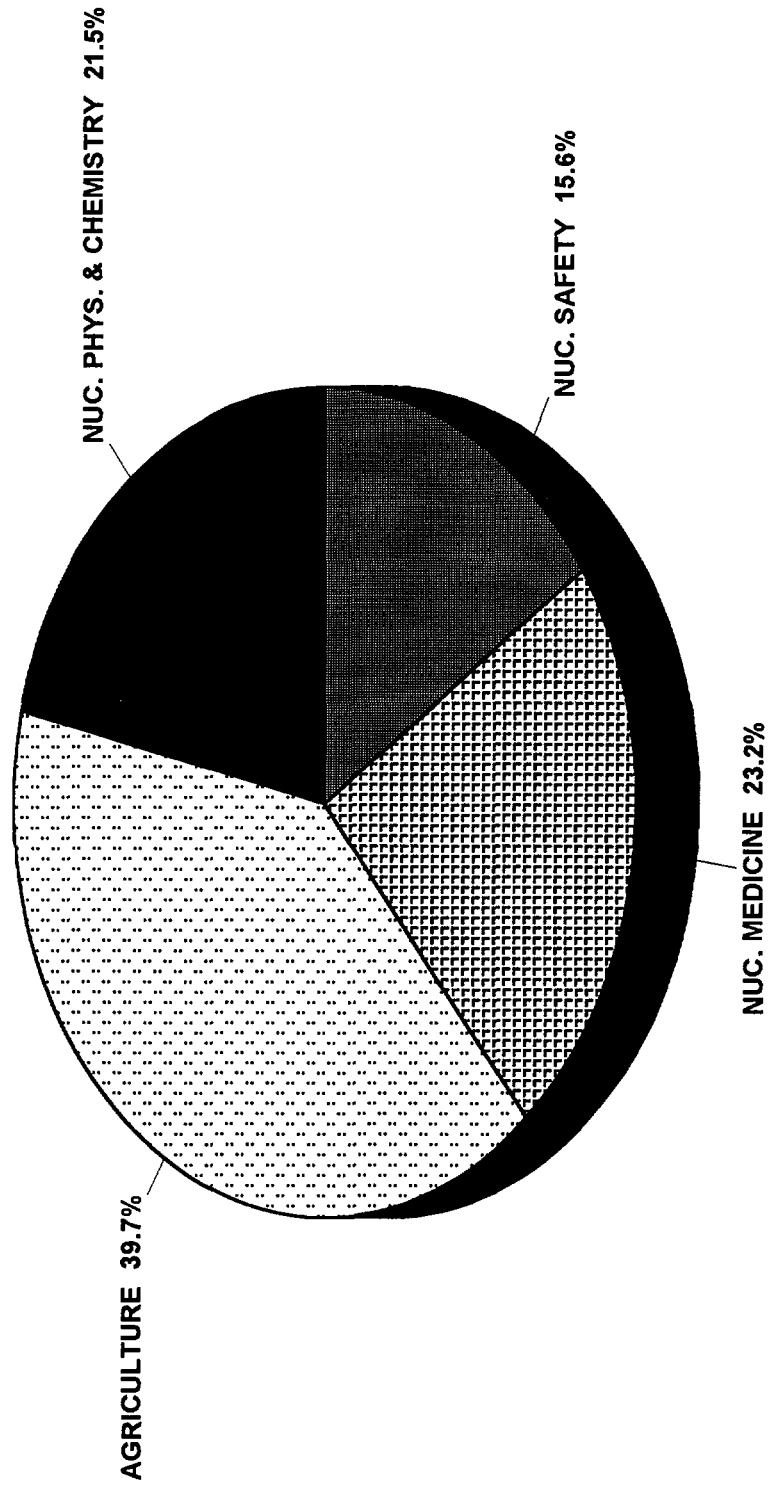
TACF ASSISTANCE PROVIDED TO PANAMA (1985 - 1994)



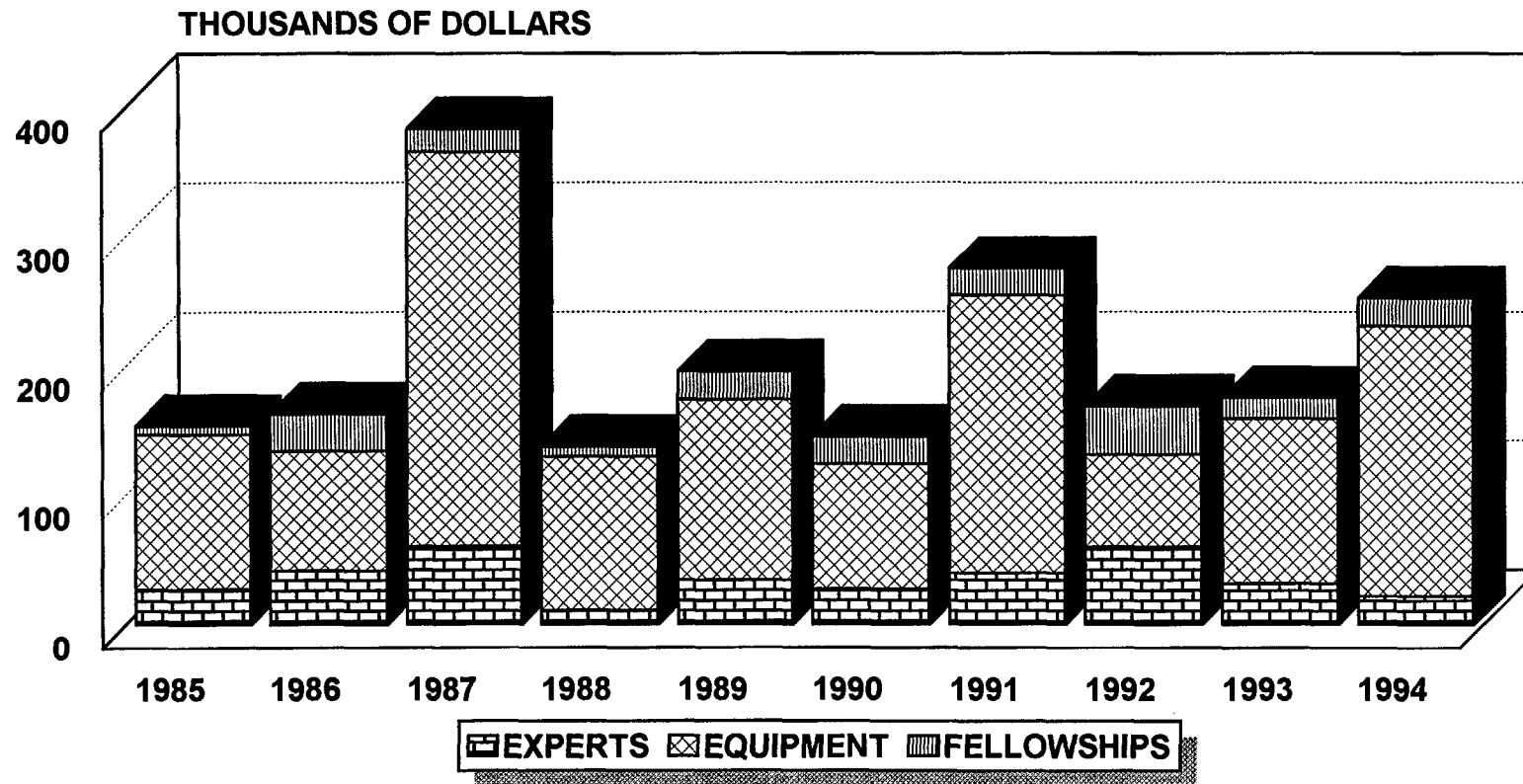
EXTRABUDGETARY AND IN-KIND ASSISTANCE PROVIDED TO PANAMA (1985 - 1994)



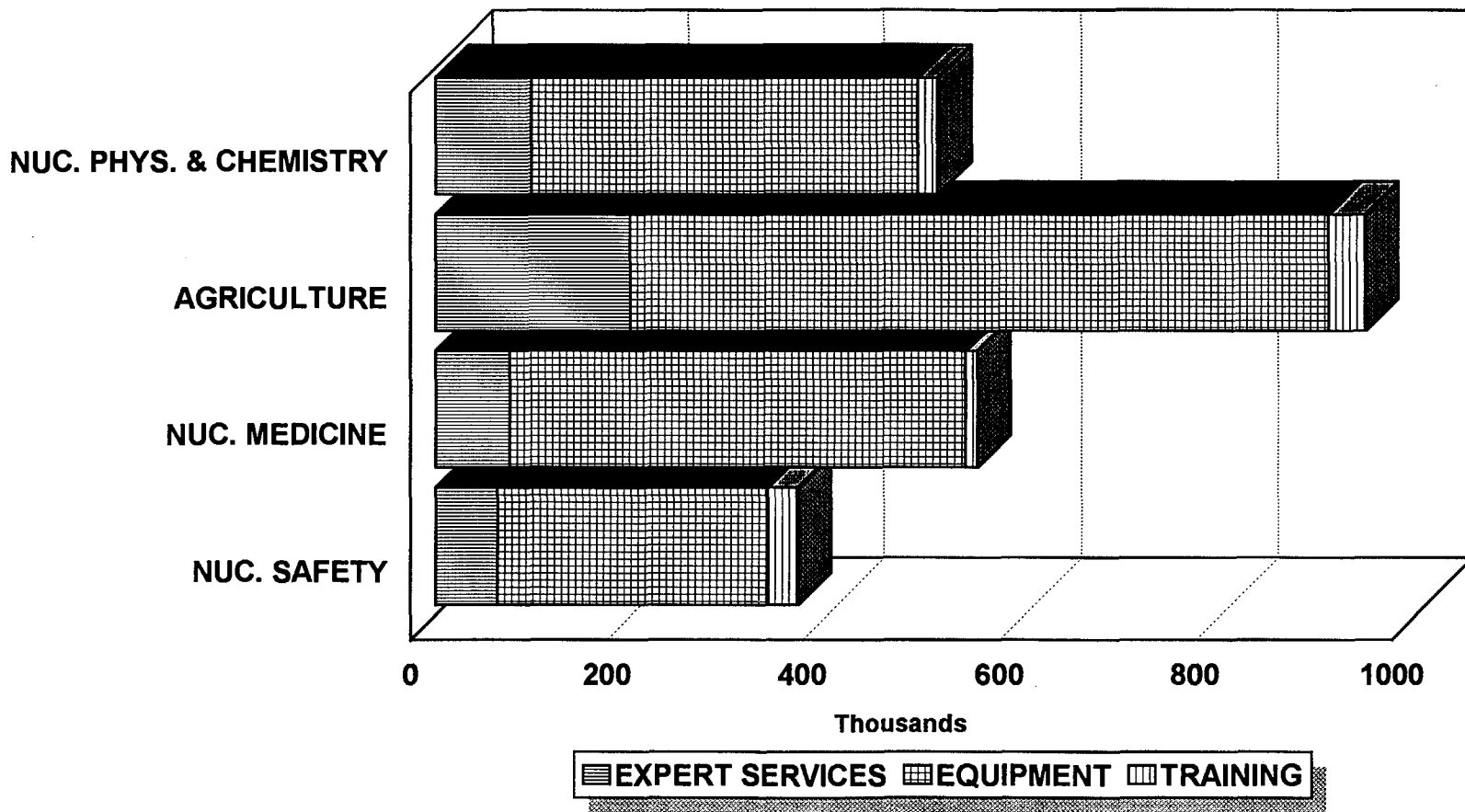
TC PROJECT DISBURSEMENTS IN PANAMA BY SECTOR (1985 - 1995)



ASSISTANCE PROVIDED BY THE AGENCY TO PANAMA BY TYPE (1985 - 1994)



EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO PANAMA BY SECTOR (1985 - 1995)



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH PANAMA

ALL SOURCES

PANAMA'S RANKING AS A TC RECIPIENT
1958 - 1994
(in \$1000)

YEAR	RANKING	AMOUNT
1958-84	58 th	755.5
1985	50 th	153.0
1986	50 th	162.2
1987	34 th	383.3
1988	55 th	136.5
1989	52 nd	195.1
1990	61 st	144.5
1991	43 rd	275.0
1992	62 nd	168.2
1993	62 nd	174.7
1994	52 nd	252.2
1958-94	56 th	2800.2

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1994 (in \$1000)**

ALL SOURCES

Year	I	II	III	IV	V	PANAMA
1958-84	EGY 10650.4	BRA 9513.7	PER 7574.2	IND 7412.8	PHI 6679.0	58 th - 755.5
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	50 th - 153.0
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	50 th - 162.2
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	34 th - 383.3
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	55 th - 136.5
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	52 nd - 195.1
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	61 st - 144.5
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	43 rd - 275.0
1992	EGY 1586.3	INS 1342.1	CPR 1328.8	MEX 1127.8	POL 1036.4	62 nd - 168.2
1993	INS 1285.9	CPR 1091.7	PAK 1012.2	EGY 905.3	IRA 810.1	62 nd - 174.7
1994	URT 2153.3	IRA 1438.5	CPR 1336.1	ARG 1225.8	GHA 1166.9	52 nd - 252.2
1958-94	EGY 25492.2	BRA 19165.8	THA 16827.6	INS 16088.4	PER 14350.7	56 th - 2800.2

**"TOP FIVE" RECIPIENTS OF AGENCY ASSISTANCE
1958 - 1994 (in \$1000)**

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	PANAMA
1958-84	EGY 4652.4	HUN 3458.4	PAK 3272.4	THA 2825.4	CUB 2761.7	54 th - 615.5
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	61 st - 74.9
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	51 st - 144.1
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	27 th - 356.4
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	57 th - 100.9
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	53 rd - 156.8
1990	POL 1562.3	VIE 1518.8	DRK 1156.2	IRA 958.0	YUG 933.4	60 th - 142.0
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	39 th - 275.0
1992	EGY 1255.7	CPR 1009.0	VIE 872.8	INS 826.6	IRA 795.5	59 th - 150.2
1993	INS 1040.5	CPR 896.5	PAK 847.6	IRA 807.4	THA 721.5	57 th - 174.7
1994	URT 1392.9	IRA 1260.8	ARG 1206.5	CPR 1022.8	PAK 933.0	46 th - 252.2
1958-94	EGY 12209.1	PAK 9896.2	INS 9666.8	POL 9602.4	VIE 9566.6	54 th - 2442.7

ASSISTANCE PROVIDED BY THE AGENCY TO PANAMA

Financial Summary 1985 - 1994
(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
1985	26.7	119.8	6.5	-	-	153.0	-	74.9	-	78.1	-	153.0
1986	41.2	92.2	28.8	-	-	162.2	-	144.1	-	18.1	-	162.2
1987	59.8	305.8	17.7	-	-	383.3	-	356.4	-	26.9	-	383.3
1988	10.5	118.6	7.4	-	-	136.5	-	100.5	0.4	30.0	5.6	136.5
1989	33.9	139.3	21.9	-	-	195.1	-	153.3	3.5	17.1	21.2	195.1
1990	26.9	96.5	21.1	-	-	144.5	-	142.0	-	2.5	-	144.5
1991	39.4	214.9	20.7	-	-	275.0	-	275.0	-	-	-	275.0
1992	59.3	71.2	37.7	-	-	168.2	-	150.2	-	18.0	-	168.2
1993	31.4	127.4	15.9	-	-	174.7	-	174.7	-	-	-	174.7
1994	21.6	208.9	21.7	-	-	252.2	-	252.2	-	-	-	252.2
1985-94	350.7	1 494.6	199.4	-	-	2 044.7	-	1 823.3	3.9	190.7	26.8	2 044.7

TECHNICAL CO-OPERATION PROJECTS IN PANAMA
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1985 - 1995

TOTAL PROJECT ALLOTMENTS AND DISBURSEMENTS
(As of 1 November 1995)

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	-	-	-	-	-
Nuclear physics and chemistry	3	505 964	18.8	513 084	21.5
Nuclear raw materials	-	-	-	-	-
Nuclear engineering and technology	-	-	-	-	-
Nuclear techniques in agriculture	7	1 083 827	40.3	947 952	39.7
Nuclear medicine	3	544 967	20.3	552 989	23.2
Nuclear techniques in biology	-	-	-	-	-
Nuclear techniques in industry and hydrology	-	-	-	-	-
Nuclear safety	5	552 372	20.6	370 879	15.6
TOTAL	18	2 687 130	100.0	2 384 904	100.0

TECHNICAL CO-OPERATION PROJECTS IN PANAMA
 COMPLETED AND OPERATIONAL, BY SECTOR, 1985 - 1995
 (As of 1 November 1995)

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	3	505 964	513 084
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	4	656 185	660 510
Nuclear medicine	3	544 967	552 989
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	-	-	-
Nuclear safety	2	170 068	168 437
TOTAL	12	1 877 184	1 895 020
<u>Operational projects</u>			
General atomic energy development	-	-	-
Nuclear physics and chemistry	-	-	-
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	3	427 642	287 442
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	-	-	-
Nuclear safety	3	382 304	202 442
TOTAL	6	809 946	489 884

**EXPERT SERVICES, EQUIPMENT AND PROJECT-FUNDED TRAINING PROVIDED TO PANAMA, BY SECTOR
PROJECTS COMPLETED AND OPERATIONAL 1985 - 1995
(As of 1 November 1995)**

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	13/17	94 255	391 227	20 482	13/17	98 020	395 363	19 701
Nuclear raw materials	-	-	-	-	-	-	-	-
Nuclear engineering and technology	-	-	-	-	-	-	-	-
Nuclear techniques in agriculture	30/21	245 443	756 342	82 042	24/18	199 788	710 110	38 054
Nuclear medicine	8/16	66 998	465 861	12 108	8/20	76 115	464 766	12 108
Nuclear techniques in biology	-	-	-	-	-	-	-	-
Nuclear techniques in industry & hydrology	-	-	-	-	-	-	-	-
Nuclear safety	10/14	105 760	385 208	61 404	7/07	63 409	276 212	31 258
TOTAL	63/08	512 456	1 998 638	176 036	54/02	437 332	1 846 451	101 121

AGENCY FELLOWS FROM PANAMA

1985 - 1995 ^{1/}
 (As of 1 November 1995)

Sector	No. of fellowships	No. of months/days	Host countries
General atomic energy development	1	1/03	RUS
Nuclear physics	2	3/11	CHI, FRA
Nuclear chemistry	5	13/26	ARG, AUS, HUN, VEN, IAEA
Nuclear raw materials	1	2/01	IAEA
Nuclear engineering and technology	3	10/07	COL, MEX, IAEA
Nuclear techniques in agriculture	7	21/06	BRA, CAN, ECU, GER, USA, IAEA
Nuclear medicine	4	23/06	BRA, CAN, COL
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry and hydrology	1	1/00	BRA
Nuclear safety	10	18/09	ARG, BRA, CHI, MEX, SPA, USA
TOTAL	34	94/09	

^{1/} Awarded since 1985, but only includes fellows who have completed or at least started training.

PANAMA
LONG-TERM FELLOWSHIPS
1985 - 1995
(As of 1 November 1995)

Name	Field of study	Host country	Date	Duration	Project
CHEN LEE	Nuclear medicine 6B	CAN	Oct.86 - Sep.87	12/00	PAN/6/005

PANAMANIAN NATIONALS WHO WERE AWARDED MORE THAN ONE
FELLOWSHIP OR SCIENTIFIC VISIT
1985 - 1995
(As of 1 November 1995)

Name	Field of study	Host country	Date	Duration	Project
DEL ROSARIO DE INFANTE	1. Radiation protection 2. Environmental protection	9C 9G BRA BRA	Mar.90 - Jun.90 Jun.94	3/28 1/00	RLA/0/011 PAN/9/005
FERNANDEZ	1. Radiometry and dosimetry 2. Analytical chemistry	1K 2C FRA AUS	Jan.87 - Apr.87 Oct.92 - Nov.92	2/29 1/03	PAN/2/004 PAN/2/005
GARCIA DE SALDANA	1. Nuclear radiochemistry 2. Analytical chemistry	2B 2C ARG VEN	Mar.86 - Sep.86 May 92 - Jul.92	5/07 2/00	PAN/2/004 PAN/2/005
JAEN OSORIO	1. Moessbauer spectroscopy 2. Analytical chemistry	1G 2C CHI HUN	Nov.85 Sep.88 - Dec.88	0/12 3/03	RLA/0/006 PAN/2/004
SCOTLAND WILTSHIRE	1. Radiation protection 2. Radiation protection	9C 9C USA BRA	May 90 - Jun.90 Oct.91 - Dec.91	0/10 2/23	RLA/0/011 PAN/9/004

AGENCY TRAINING COURSES WITH PANAMANIAN PARTICIPATION

1985 - 1995
(As of 1 November 1995)

Field	Number of participants	Number of courses
General atomic energy development	6	6
Nuclear physics	-	-
Nuclear chemistry	8	8
Nuclear raw materials	-	-
Nuclear engineering and technology	6	6
Nuclear techniques in agriculture	17	14
Nuclear medicine	11	9
Nuclear techniques in biology	1	1
Nuclear techniques in industry & hydrology	2	2
Nuclear safety	23	20
TOTAL	74	66

MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY PANAMANIAN NATIONALS
1985 - 1995
(As of 1 November 1995)

Name	Course No.	Course title	Year	Location
BARRERA FERNANDEZ	RLA/5/028 (001)	RWS on the utilization of immunoassay for the diagnosis and epidemiology of animal diseases	1991	BRA
	RLA/5/028 (002)	RTC on animal health	1992	COL
	RLA/5/028 (008)	NTC on epidemiology and data analysis in ELISA for the diagnosis of animal diseases (ARCAL III)	1994	ELS
CHEN ABREGO	RLA/9/013 (001)	RTC on management of spent radiation sources	1992	BRA
	RLA/9/017 (001)	Sub-regional workshop on control of radiation safety	1993	GUA
DEL ROSARIO DE INFANTE	RLA/2/005 (001)	RTC on determination of radionuclides in food and environmental samples	1989	BRA
	RLA/9/011 (007)	RTC on measurement of environmental samples	1992	ARG
DONALDSON GREGORY	RLA/9/011 (006)	RTC on establishment of a programme on occupational monitoring	1992	BRA
	RLA/9/015 (001)	RTC on safety and regulation of radiation sources	1993	MEX
	RLA/9/023 (001)	RTC on waste management: An integrated systems approach	1995	SPA
GIBBS COUSIN	INT/9/129 (001)	ITC on planning, organization and implementation of radiation protection on a national level	1992	USA
	RLA/9/009 (041)	RTC on clinical and radiation protection dosimetry	1989	BRA
LEONE KAM	RLA/2/003 (005)	RTC on application of nuclear analytical techniques in fossil energy resources	1990	MEX
	RLA/2/004 (001)	RTC on nuclear analytical techniques in the agroindustry and food analysis	1988	BRA
MORGAN HAY	RLA/4/008 (004)	RTC on repair of multichannel analysers	1991	BRA
	RLA/4/008 (013)	Final regional meeting of project co-ordinators (ARCAL II)	1994	CUB

**MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY PANAMANIAN NATIONALS
1985 - 1995
(As of 1 November 1995)**

Name	Course No.	Course title	Year	Location
PALMA PEREZ	RLA/4/006 (021)	RWS on maintenance of gamma cameras	1990	COL
	RLA/6/009 (001)	RTC on the maintenance of nuclear medical instruments	1985	COS
SCOTLAND WILTSHIRE	INT/9/093 (001)	ITC on safety and regulation of sealed sources of radioactive material	1989	USA
	INT/9/134 (001)	ITC on management of occupational exposure to ionizing radiation	1993	USA
	RLA/9/011 (014)	Regional meeting on co-ordinated studies on regulatory criteria	1993	MEX
	RLA/9/017 (001)	Sub-regional workshop on control of radiation safety	1993	GUA
TERAN CARLYSLE	RLA/9/011 (004)	RTC on thermoluminescence applied to dosimetry	1991	ECU
	RLA/9/011 (006)	Regional symposium on radiation protection and nuclear safety	1992	BRA
TUNON PUYOL	RLA/9/010 (001)	RTC on safety and regulation of radiation sources	1991	MEX
	RLA/9/011 (011)	Regional informative seminar on application of new ICRP recommendations	1993	ECU
	RLA/9/019 (001)	Educational RTC on radiation protection and nuclear safety	1994	ARG

PROJECTS COMPLETED IN PANAMA SINCE 1985
(As of 1 November 1995)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1982	PAN/2/003	Radiopharmaceuticals	6/20	41 700	154 928	-	6/20	40 709	158 969	-	1988
1985	PAN/2/004	Nuclear analytical techniques	5/04	36 575	164 207	6 030	5/04	36 994	164 302	6 030	1990
1991	PAN/2/005	Radioanalytical laboratory	1/23	15 980	72 092	14 452	1/23	20 317	72 092	13 671	1993
1981	PAN/5/003	Radioisotopes in agriculture	8/01	46 538	137 630	-	8/01	45 843	130 827	-	1990
1983	PAN/5/004	Genetic improvement of bananas, plantains and sugar-cane	4/10	17 350	198 295	-	2/10	19 530	198 350	-	1991
1987	PAN/5/006	Radioimmunoassay in reproductive efficiency studies	3/00	22 255	59 000	-	3/10	28 362	59 321	-	1990
1989	PAN/5/007	Pesticide residues in food and agriculture	5/00	42 600	103 917	28 600	5/02	47 091	103 928	27 258	1993

PROJECTS COMPLETED IN PANAMA SINCE 1985
(As of 1 November 1995)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1982	PAN/6/005	Nuclear medicine	4/12	30 688	322 809	-	4/16	35 387	322 317	-	1990
1990	PAN/6/006	Use of DNA probes in diagnosis of tropical diseases	1/26	15 680	59 772	12 108	1/26	15 551	59 366	12 108	1994
1991	PAN/6/007	Upgrading in nuclear medicine	2/08	20 630	83 280	-	2/08	25 177	83 083	-	1993
1987	PAN/9/003	Film dosimetry	2/09	16 250	73 885	-	2/09	17 885	73 885	-	1991
1991	PAN/9/004	Monitoring and control of radio-active contamination	1/11	12 260	56 803	10 870	1/11	14 239	53 887	8 541	1993
	TOTAL	12 Projects	46/04	318 506	1 486 618	72 060	44/20	347 085	1 480 327	67 608	

OPERATIONAL PROJECTS IN PANAMA
(As of 1 November 1995)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	PAN/5/008	Bound pesticide residues: Impact in food and environment	2/24	30 390	165 000	12 792	2/01	26 491	153 350	9 866
1993	PAN/5/009	Immunoassay in animal health	3/16	39 510	46 500	10 050	2/18	20 094	37 300	-
1995	PAN/5/011	Nutrition and production studies in cattle	4/00	46 800	46 000	30 600	1/06	12 377	27 034	930
1993	PAN/9/005	Environmental monitoring	2/24	30 450	150 720	25 384	2/04	25 965	130 512	22 309
1995	PAN/9/006	Quality control in mammography	1/00	11 400	53 800	18 400	0/11	5 320	9 834	408
1995	PAN/9/007	Development of radiation protection legislation	3/00	35 400	50 000	6 750	1/02	-	8 094	-
	TOTAL	6 Projects	17/04	193 950	512 020	103 976	9/12	90 247	366 124	33 513

COUNTERPART INSTITUTIONS IN PANAMA (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR CHEMISTRY</u>		
PAN/2/003	University of Panama, Research and Training Department, Institute for Special Assays, Panama City	NUNEZ
PAN/2/004	University of Panama, Faculty of Natural and Exact Sciences, Nuclear Technical Research Centre, Panama City	RAMON GONZALEZ
PAN/2/005	University of Panama, Faculty of Natural and Exact Sciences, Nuclear Technical Research Centre, Panama City	RAMON GONZALEZ FERNANDEZ
<u>AGRICULTURE</u>		
PAN/5/003	University of Panama, Faculty of Agriculture and Livestock Breeding Sciences, Panama City	TEJEIRA AROSEMENA
PAN/5/004	Panama Agricultural and Stockbreeding Research Institute, Panama City	SILVERA
PAN/5/006	1. University of Panama, Faculty of Natural and Exact Sciences, Research Centre for Biology of Animal Reproduction, Panama City 2. Ministry of Agriculture and Livestock Breeding Development, Panama City	DE GRACIA SCANAPIECO CARRIZO
PAN/5/007	Panama Agricultural and Stockbreeding Research Institute, Panama City	RAMON GONZALEZ

COUNTERPART INSTITUTIONS IN PANAMA (I)

(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>AGRICULTURE (cont'd)</u>		
PAN/5/008	Panama Agricultural and Stockbreeding Research Institute, Panama City	ESPINOSA GONZALEZ CEBALLOS ALFONSO
PAN/5/009	1. University of Panama, Panama City 2. Ministry of Agriculture, Panama City 3. Panama Agricultural and Stockbreeding Research Institute, Panama City	ROSAS GEORGE CLAVEL GONZALEZ VEGA ALBA CABALLERO
PAN/5/011	1. University of Panama, Centre for Cryobiology Research, Panama City 2. Ministry of Agriculture, Panama City	LASSO -
<u>NUCLEAR MEDICINE</u>		
PAN/6/005	Ministry of Health, "Santo Tomas" Hospital, Nuclear Medicine Service, Panama City	HERRERA CASTILLO
PAN/6/006	Centre for Research and Diagnostics of Tropical Diseases, Panama City	DE CARREIRA PASCALE
PAN/6/007	Ministry of Health, "Santo Tomas" Hospital, Nuclear Medicine Service, Panama City	HERRERA CASTILLO QUINTERO CORTES

COUNTERPART INSTITUTIONS IN PANAMA (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR SAFETY</u>		
PAN/9/003	Social Security Fund, Metropolitan Hospital Complex, Service of Radiological Protection, Panama City	GIBBS COUSIN
PAN/9/004	Social Security Fund, Metropolitan Hospital Complex, Service of Radiological Protection, Panama City	GIBBS COUSIN SCOTLAND WILTSHIRE
PAN/9/005	Social Security Fund, Panama City	GIBBS COUSIN HENRIQUEZ
PAN/9/006	Social Security Fund, "Arnulfo Arias" Hospital, Panama City	GIBBS COUSIN
PAN/9/007	Social Security Fund, "Arnulfo Arias" Hospital, Panama City	GIBBS COUSIN

COUNTERPART INSTITUTIONS IN PANAMA (II)
(By Institute)

PANAMA CITY

**Ministry of Agriculture
Panama City**

PAN/5/009 Immunoassay in Animal Health
PAN/5/011 Nutrition and Production Studies in Cattle

**Ministry of Agriculture and
Livestock Breeding Development
Panama City**

PAN/5/006 Radioimmunoassay in Reproductive Efficiency Studies

**Ministry of Health
"Santo Tomas" Hospital
Nuclear Medicine Service
Panama City**

PAN/6/005 Nuclear Medicine
PAN/6/007 Upgrading in Nuclear Medicine

**University of Panama
Panama City**

PAN/5/009 Immunoassay in Animal Health

**University of Panama
Centre for Cryobiology Research
Panama City**

PAN/5/011 Nutrition and Production Studies in Cattle

**University of Panama
Research and Training Department
Institute for Special Assays
Panama City**

PAN/2/003 Radiopharmaceuticals

COUNTERPART INSTITUTIONS IN PANAMA (II)
(By Institute)

PANAMA CITY

University of Panama
Faculty of Natural and Exact Sciences
Nuclear Technical Research Centre
Panama City

PAN/2/004 Nuclear Analytical Techniques
PAN/2/005 Radioanalytical Laboratory

University of Panama
Faculty of Natural and Exact Sciences
Research Centre for Biology
and Animal Reproduction
Panama City

PAN/5/006 Radioimmunoassay in Reproductive Efficiency Studies

University of Panama
Faculty of Agriculture
and Livestock Breeding
Panama City

PAN/5/003 Radioisotopes in Agriculture

Panama Agricultural
and Stockbreeding Research Institute
Panama City

PAN/5/004 Genetic Improvement of Bananas, Plantains and Sugar-Cane
PAN/5/007 Pesticide Residues in Food and Agriculture
PAN/5/008 Bound Pesticide Residues: Impact in Food and Agriculture
PAN/5/009 Immunoassay in Animal Health

Centre for Research
and Diagnostics of Tropical Diseases
Panama City

PAN/6/006 Use of DNA Probes in Diagnosis of Tropical Diseases

COUNTERPART INSTITUTIONS IN PANAMA (II)
(By Institute)

PANAMA CITY

**Social Security Fund
Panama City**

PAN/9/005 Environmental Monitoring

**Social Security Fund
Metropolitan Hospital Complex
Service of Radiological Protection
Panama City**

PAN/9/003 Film Dosimetry
PAN/9/004 Monitoring and Control of Radioactive Contamination

**Social Security Fund
"Arnulfo Arias" Hospital
Panama City**

PAN/9/006 Quality Control in Mammography
PAN/9/007 Development of Radiation Protection Legislation

**THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH
PANAMA
(1985 - 1995)**

LONG-TERM EXPERT ASSIGNMENTS

NONE

RESEARCH CONTRACTS/AGREEMENTS IN PANAMA SINCE 1985 ^{1/}
(As of 1 November 1995)

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear chemistry	1	cost-free
Nuclear engineering and technology	1	5 000
Nuclear techniques in agriculture	7	82 500
Nuclear medicine	1	5 000
TOTAL	10	92 500

^{1/} New awards since 1985.

**SCIENTISTS FROM PANAMA SERVING AS AGENCY
TECHNICAL CO-OPERATION EXPERTS AND
TRAINING COURSE LECTURERS
OR
PARTICIPATING IN CO-ORDINATION MEETINGS
1985 - 1995
(As of 1 November 1995)**

Name	No. of assignments	Project(s)
DE MARINAS	1	RLA/8/016
FLETCHER	1	PAN/9/004
GIBBS COUSIN	4	PAN/9/003, PAN/9/005, RLA/6/016, RLA/9/017
HERRERA CASTILLO	1	PAN/6/020
JAEN OSORIO	1	RLA/2/003
MEJIA RODRIGUEZ	1	RLA/6/027
NUNEZ	1	RLA/2/007
PERDOMO EHLERS	5	INT/0/048, PER/5/012, PER/5/017
SCOTLAND WILTSHIRE	2	RLA/9/011, RLA/9/016
TEJEIRA AROSEMENA	1	PAN/5/003
TOTAL	18	

**AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS
HOSTED BY PANAMA
1985 - 1995
(As of 1 November 1995)**

Recipient country	No. of fellowships	No. of scientific visits	TOTAL ¹
ECUADOR	1	-	1
TOTAL	1	-	1

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

**REGIONAL AND INTERREGIONAL GROUP TRAINING EVENTS
HOSTED BY PANAMA
1985 - 1995
(As of 1 November 1995)**

Course No.	Course Title	Partici- pants	Year
RLA/2/003 (021)	Second Regional Meeting of Project Investigators (ARCAL IV)	11	1994
RLA/6/029 (001)	RWS on Radiotherapy and its Clinical Applications	16	1995
RLA/9/017 (002)	Sub-regional Training Course on Radiation Protection in Diagnostic Radiology	7	1994
RLA/9/017 (005)	Sub-regional Workshop on the Safe Transport of Radioactive Material	3	1995
	TOTAL	37	