



INTERNATIONAL ATOMIC ENERGY AGENCY



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COUNTRY PROGRAMME SUMMARY

THE AGENCY'S TECHNICAL CO-OPERATION

PROGRAMME WITH

POLAND

1983 - 1993

COUNTRY PROGRAMME SUMMARIES

DEPARTMENT OF TECHNICAL CO-OPERATION

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POLAND

1983 - 1993

COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

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

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

POLAND

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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 \$10.9 million of Agency support received, Poland ranks 12th among all recipients of technical assistance during the period 1958 through 1992, and even ranked first in 1990.

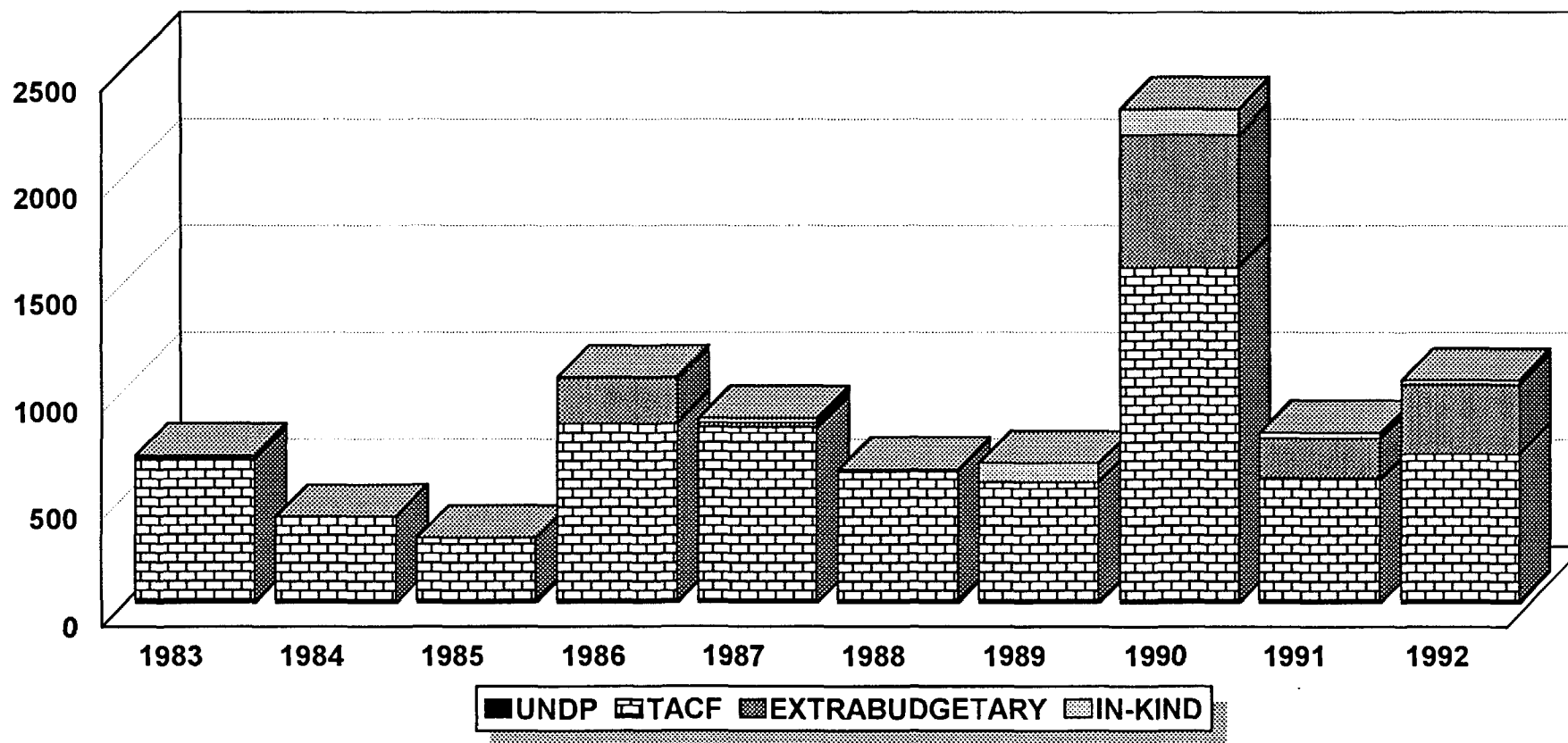
Almost three-quarters of the assistance received during the past ten years has been provided in the form of equipment (73%), complemented by training (24%) and expert services (3%). The bulk of the resources was provided by the TACF (81%), using a significant amount of NCC (over \$2.8 million), the rest was made available through extrabudgetary contributions (16%) and assistance in kind (3%).

With regard to total disbursements -- by sector -- under those projects that were operational during the period 1983 through 1 July 1993, the four major areas have been nuclear engineering and technology (46%), industry and hydrology (18%), nuclear physics and chemistry (14%) and nuclear safety (10%).

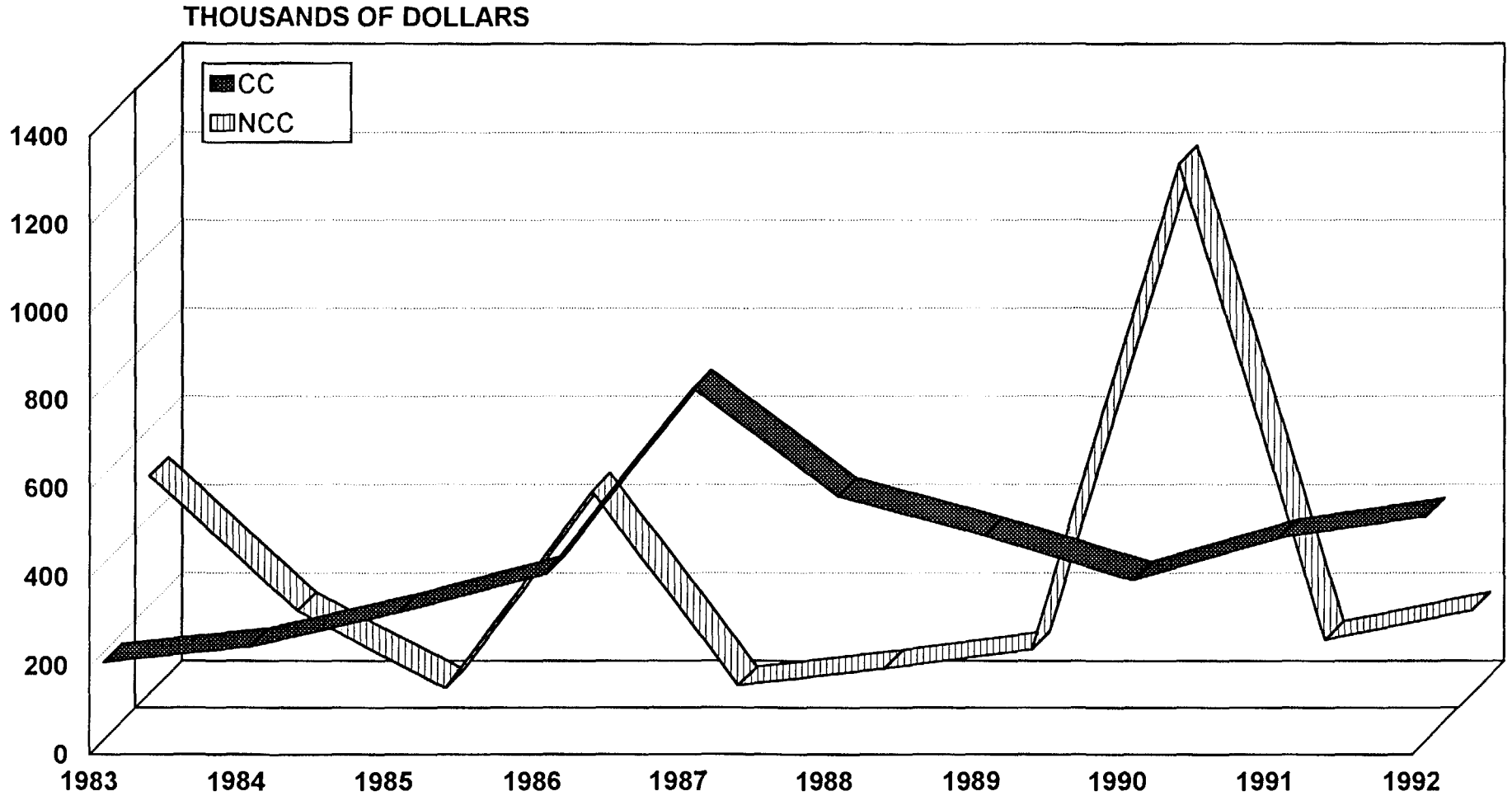
During the same period, the country has provided experts and training course lecturers for a total of 439 assignments, and has hosted one inter-regional and three regional training events with a total of 40 participants.

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

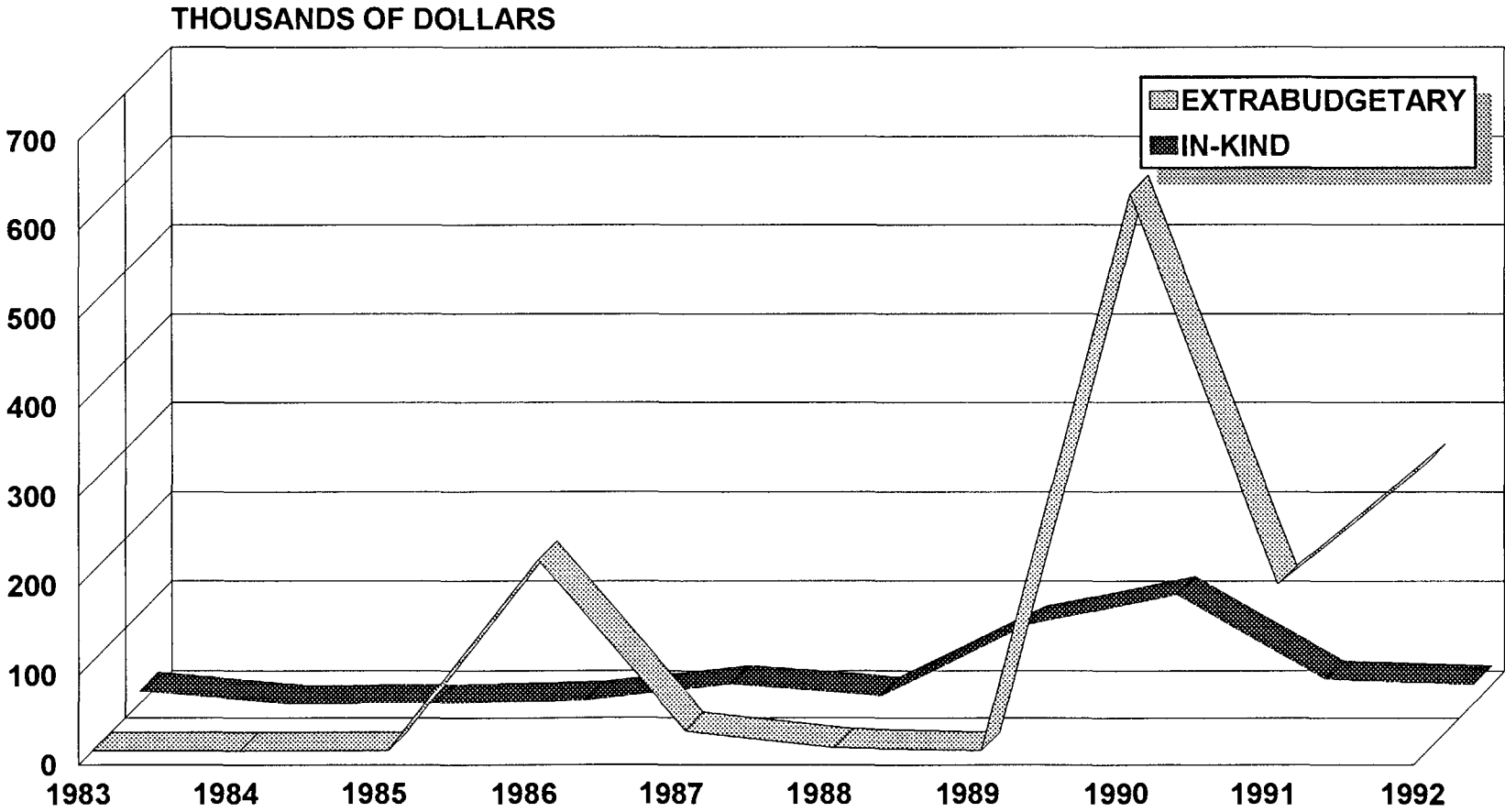
THOUSANDS OF DOLLARS



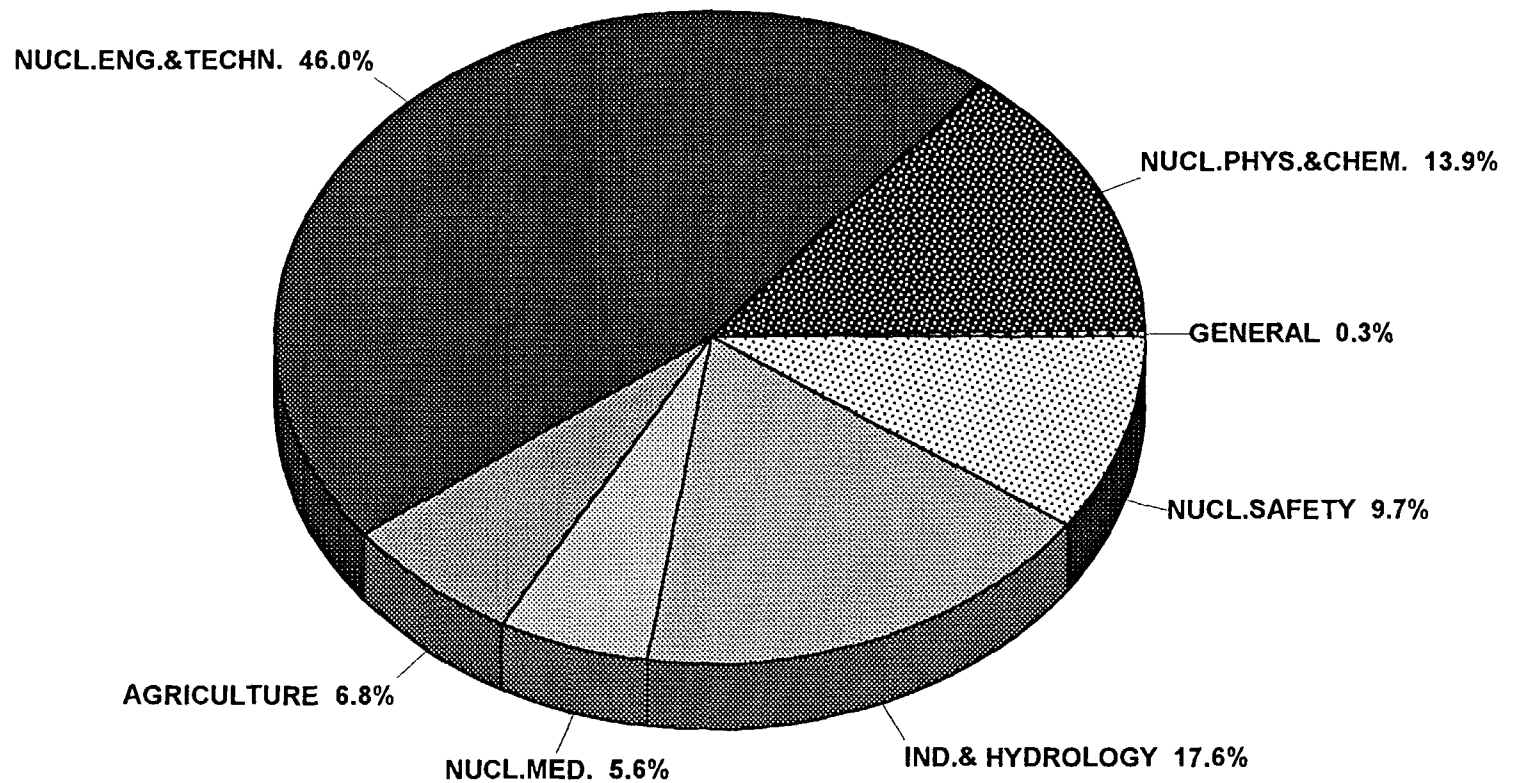
TACF ASSISTANCE PROVIDED TO POLAND (1983 - 1992) BY CC AND NCC



EXTRABUDGETARY AND IN-KIND ASSISTANCE TO POLAND (1983-1992)

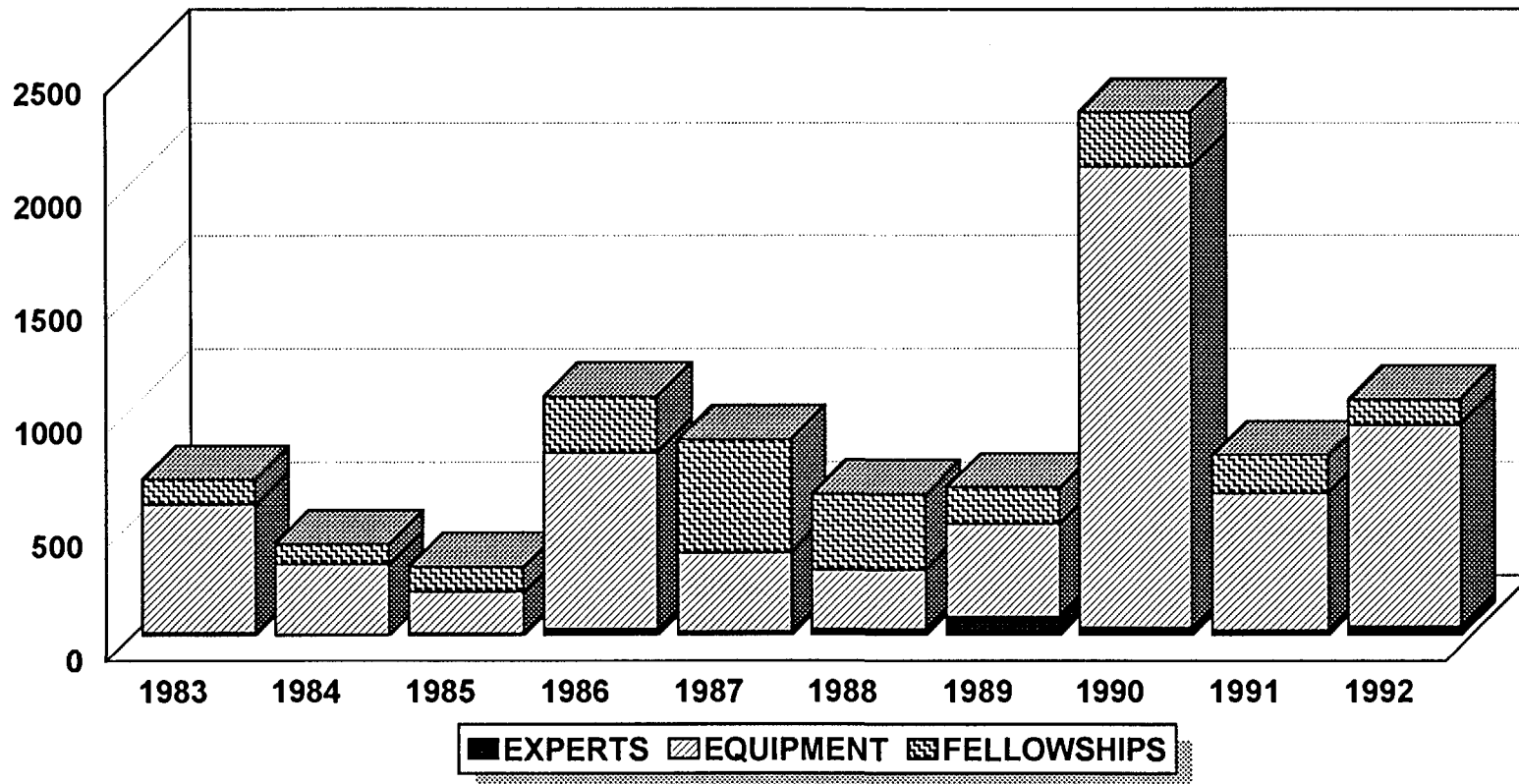


TC PROJECT DISBURSEMENTS IN POLAND BY SECTOR (1983 - 1993)

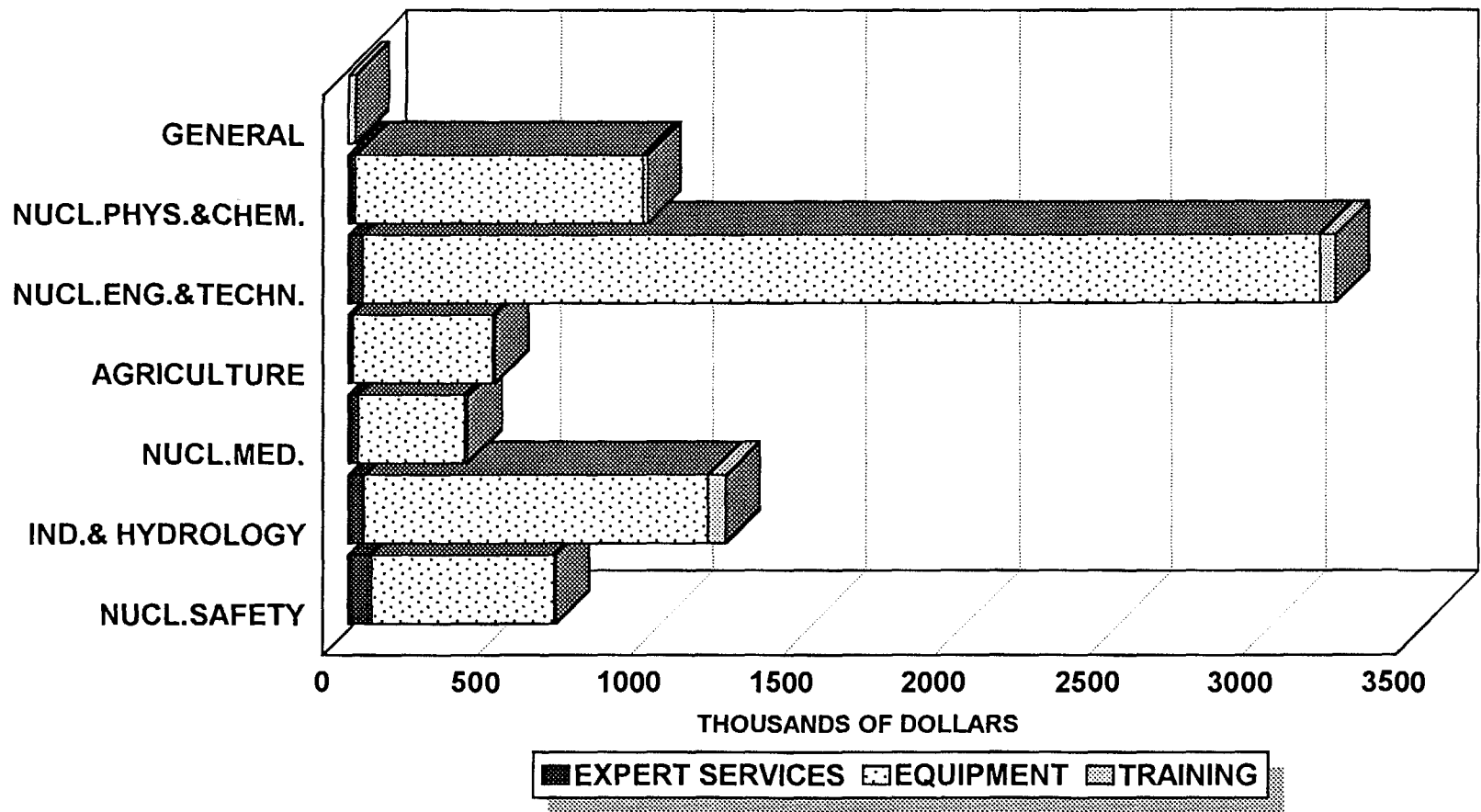


ASSISTANCE PROVIDED BY THE AGENCY TO POLAND BY TYPE (1983 - 1992)

THOUSANDS OF DOLLARS



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



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH POLAND

ALL SOURCES

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

YEAR	RANKING	AMOUNT
1958-82	27 th	2166.9
1983	9 th	685.4
1984	20 th	399.9
1985	28 th	301.7
1986	4 th	1050.3
1987	13 th	860.1
1988	10 th	620.6
1989	13 th	649.3
1990	1 st	2308.1
1991	12 th	792.1
1992	5 th	1036.4
1958-92	12 th	10870.8

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

ALL SOURCES

Year	I	II	III	IV	V	POLAND
1958-82	BRA 8507.3	IND 6849.4	ARG 5528.2	PAK 5492.7	CHI 5240.1	27 th - 2166.9
1983	EGY 2077.9	PER 1116.8	VIE 948.1	PHI 778.6	IRA 722.1	9 th - 685.4
1984	EGY 3625.9	PER 1750.4	THA 1094.6	CUB 1028.7	PHI 881.2	20 th - 399.9
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	28 th - 301.7
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	4 th - 1050.3
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	13 th - 860.1
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	10 th - 620.6
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	13 th - 649.3
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	1 st - 2308.1
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	12 th - 792.1
1992	EGY 1586.3	INS 1342.1	CPR 1328.8	MEX 1127.8	POL 1036.4	5 th - 1036.4
1958-92	EGY 23808.6	BRA 17736.8	THA 15332.0	INS 13725.9	PER 13129.6	12 th - 10870.8

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

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	POLAND
1958-82	HUN 2971.7	EGY 2405.8	PAK 2340.5	THA 2000.3	BRA 1983.5	15 th - 1465.1
1983	EGY 1049.4	VIE 897.4	POL 667.8	PAK 498.5	PHI 430.0	3 rd - 667.8
1984	EGY 1197.2	CUB 655.6	ECU 565.6	BGD 506.3	BUL 472.4	9 th - 399.9
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	23 rd - 300.9
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	3 rd - 833.5
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	9 th - 816.1
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	8 th - 608.0
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	9 th - 560.9
1990	POL 1562.3	VIE 1518.8	DRK 1156.2	IRA 958.0	YUG 933.4	1 st - 1562.3
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	17 th - 579.0
1992	EGY 1255.7	CPR 1009.0	VIE 872.8	INS 826.6	IRA 795.5	10 th - 692.9
1958-92	EGY 10847.0	HUN 8743.7	POL 8486.4	VIE 8199.9	PAK 8115.6	3 rd - 8486.4

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ASSISTANCE PROVIDED BY THE AGENCY TO POLAND

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	10.7	563.2	111.5	-	-	685.4	3.2	175.5	492.3	-	14.4	685.4
1984	1.6	310.6	87.7	-	-	399.9	-	212.0	187.9	-	-	399.9
1985	5.8	186.2	109.7	-	-	301.7	-	288.0	12.9	-	0.8	301.7
1986	27.6	774.8	247.9	-	-	1 050.3	-	375.6	457.9	213.0	3.8	1 050.3
1987	15.0	347.6	497.5	-	-	860.1	-	797.0	19.1	22.1	21.9	860.1
1988	27.1	258.3	335.2	-	-	620.6	-	550.7	57.3	3.8	8.8	620.6
1989	78.4	410.4	160.5	-	-	649.3	-	460.9	100.0	-	88.4	649.3
1990	31.1	2 034.9	242.1	-	-	2 308.1	-	361.5	1 200.8	624.2	121.6	2 308.1
1991	21.3	601.5	169.3	-	-	792.1	-	457.3	121.7	185.9	27.2	792.1
1992	38.1	885.4	112.9	-	-	1 036.4	-	505.3	187.6	321.8	21.7	1 036.4
1983-92	256.7	6 372.9	2 074.3	-	-	8 703.9	3.2	4 183.8	2 837.5	1 370.8	308.6	8 703.9

TECHNICAL CO-OPERATION PROJECTS IN POLAND
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1983 - 1993

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

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	2	138 478	1.6	23 417	0.3
Nuclear physics and chemistry	10	1 222 960	14.2	976 622	14.0
Nuclear raw materials	-	-	-	-	-
Nuclear engineering and technology	5	3 221 551	37.5	3 224 378	46.0
Nuclear techniques in agriculture	2	485 053	5.6	478 720	6.8
Nuclear medicine	2	403 779	4.7	390 517	5.6
Nuclear techniques in biology	-	-	-	-	-
Nuclear techniques in industry and hydrology	7	2 031 073	23.6	1 233 852	17.6
Nuclear safety	12	1 101 740	12.8	677 078	9.7
TOTAL	40	8 604 634	100.0	7 004 584	100.0

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

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	1	3 178	3 178
Nuclear physics and chemistry	6	714 200	683 583
Nuclear raw materials	-	-	-
Nuclear engineering and technology	5	3 221 551	3 224 378
Nuclear techniques in agriculture	2	485 053	478 720
Nuclear medicine	2	403 779	390 517
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	3	83 200	84 425
Nuclear safety	8	372 064	351 086
TOTAL	27	5 283 025	5 215 887
<u>Operational projects</u>			
General atomic energy development	1	135 300	20 239
Nuclear physics and chemistry	4	508 760	293 039
Nuclear raw materials	-	-	-
Nuclear engineering and technology	-	-	-
Nuclear techniques in agriculture	-	-	-
Nuclear medicine	-	-	-
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	4	1 947 873	1 149 427
Nuclear safety	4	729 676	325 992
TOTAL	13	3 321 609	1 788 697

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

FIELD	TOTAL PROJECT ALLOTMENTS				TOTAL PROJECT DISBURSEMENTS			
	EXPERT SERVICES		EQUIPMENT	TRAINING	EXPERT SERVICES		EQUIPMENT	TRAINING
	M/M	\$	\$	\$	M/M	\$	\$	\$
General atomic energy development	-	-	-	138 478	-	-	-	23 417
Nuclear physics and chemistry	6/10	51 547	1 125 576	45 837	3/09	24 199	936 323	16 100
Nuclear raw materials	-	-	-	-	-	-	-	-
Nuclear engineering and technology	6/03	42 050	3 124 553	54 948	6/00	48 757	3 126 394	49 227
Nuclear techniques in agriculture	2/23	19 255	456 998	8 800	2/23	15 894	454 007	8 819
Nuclear medicine	7/07	46 960	346 369	10 450	6/25	33 620	346 368	10 529
Nuclear techniques in biology	-	-	-	-	-	-	-	-
Nuclear techniques in industry & hydrology	14/17	153 580	1 795 557	81 936	7/01	52 607	1 124 022	57 223
Nuclear safety	22/07	181 032	845 528	75 180	11/28	76 492	595 498	5 088
TOTAL	59/07	494 424	7 694 581	415 629	37/26	251 569	6 582 612	170 403

AGENCY FELLOWS FROM POLAND

1983 - 1993¹
(As of 1 July 1993)

Sector	No. of fellowships	No. of months/days	Host countries
General atomic energy development	5	32/20	BEL, USA, USSR, IAEA
Nuclear physics	21	144/14	HUN, GER, AUS, DEN, GDR, FRA, UKR, USA, CAN, UK, CER, UPP
Nuclear chemistry	16	122/27	BEL, NOR, GER, DEN, AUS, HUN, UK, IAEA
Nuclear raw materials	-	-	-
Nuclear engineering and technology	38	187/16	USA, FRA, DEN, NET, GER, SPA, YUG, BUL, CZE, AUS, UK, USSR
Nuclear techniques in agriculture	29	141/15	USA, NET, HUN, CAN, GER, SWI, FRA, BEL, ITA, DEN, UK, IAEA
Nuclear medicine	11	103/29	GER, USA, ITA, FRA, UK
Nuclear techniques in biology	9	55/20	GER, ITA, SWI, NET, UK
Nuclear techniques in industry and hydrology	31	112/15	DEN, USA, CAN, AUL, FRA, GER, SPA, NET, HUN, JPN, USSR, IAEA
Nuclear safety	37	339/02	BEL, ITA, USA, SWE, NET, GER, FIN, SWI, HUN, UK, USSR, IAEA
TOTAL	207	1240/08	

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

POLAND
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 July 1993)

Name	Field of study	Host country	Date	Duration	Project
PAWLAK	Regulatory review and assessment	USA	May 85 - Jul.86	14/01	-
ZURUCKI	Nuclear materials management	BEL	Mar.86 - Mar.87	12/01	-
BRODA	Radiometry and dosimetry	FRA	Mar.87 - Jun.88	15/02	-
DYDEJCZYK	Neutron physics	GER	Apr.85 - Apr.86	12/00	INT/1/018
KAWECKA-KRAWCZYNSKA	Neutron physics	GER	Feb.83 - May 84	14/28	-
KMIEC	Nuclear physics	GER	Mar.88 - Mar.89	12/01	-
KUCINSKI	Nuclear physics	GER	Jan.88 - Jan.89	12/01	-
LOSKA	Neutron spectroscopy	GDR	Mar.83 - Sep.84	18/02	INT/1/018
OSTROWSKI	Accelerator physics	CER	Feb.87 - Feb.88	12/00	POL/4/003
POHORECKI	Neutron spectrometry	GER	Jul.83 - Oct.84	15/02	INT/1/018
SCHWENK	Neutron physics	GER	May 84 - Sep.85	16/01	INT/1/018
WOLNY	Neutron spectrometry	DEN	May 85 - May 86	12/01	-
ZAZULA	Neutron physics	GER	Mar.84 - Mar.85	12/01	INT/1/018

POLAND
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 July 1993)

Name	Field of study	Host country	Date	Duration	Project
KALUSKA	Radiation chemistry	UK	Sep.85 - Oct.86	13/00	POL/4/003
LECHOTYCKI	Analytical chemistry	UK	Nov.85 - Nov.86	12/00	POL/1/004
MATYJEK	Physical chemistry	IAEA	Apr.88 - Jul.89	15/02	POL/1/006
MIKOLAJCZAK	Analytical chemistry	IAEA	Started: Nov.91	24/00	RER/0/005
SZOPA	Analytical chemistry	BEL	Feb.86 - Feb.87	12/00	POL/1/004
WAWRZONEK	Analytical chemistry	IAEA	Jul.89 - Jan.91	18/02	-
CWIKILEWICZ	Nuclear engineering and technology	GER	Sep.87 - Aug.88	12/00	-
DOMANSKI	Heat transfer	GER	Oct.86 - Sep.87	12/00	-
DROZDZAL	Reliability analysis	GER	Apr.87 - Mar.88	12/00	INT/9/063
IWANSKI	Heat transfer in LWRs	FRA	Nov.84 - May 86	18/00	-
JASZCZUK	Quality assurance	GER	Aug.87 - Aug.88	12/01	-
KOWALSKI, T.	Nuclear instrumentation	NET	Jan.86 - Jan.87	12/01	-
LOPACIUK	Nuclear instrumentation	USA	Jun.87 - Jun.88	12/00	-

POLAND
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 July 1993)

Name	Field of study	Host country	Date	Duration	Project
TOMCZAK	NPP control	USA	Jan.88 - Jan.89	12/01	-
ZAJAC	Reactor technology	GER	Apr.91 - Apr.92	12/00	RER/0/005
ZAWANOWSKI	NPP's commercial operation	SPA	Nov.87 - Nov.88	12/00	-
CZERWINSKI	Plant breeding	GER	Jan.87 - Jan.88	12/01	POL/5/006
OSTASZEWSKI	Animal production	USA	Jul.83 - Oct.84	15/13	-
SZAREJKO	Plant breeding	CAN	Nov.86 - Nov.87	12/00	POL/5/006
SZCZAWINSKA	Food irradiation	USA	Jun.87 - Jul.88	13/01	POL/8/006
WOLKO	Plant breeding	USA	May 87 - May 88	12/14	POL/5/006
ZAABIELSKI	Food irradiation	USA	Sep.86 - Sep.87	12/00	-
FUHRMANIAK-WEHR	Nuclear medicine	UK	Aug.84 - Oct.85	14/01	-
GRYCZYNSKA	Nuclear medicine	ITA	Sep.86 - May 88	20/00	-
HORST-SIKORSKA	Medical research	GER	Jan.89 - Jan.90	12/01	-
KOZAK	Nuclear medicine	SWE	Oct.83 - Oct.84	12/01	-

POLAND
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 July 1993)

Name	Field of study	Host country	Date	Duration	Project
MICHALKIEWICZ	Fundamental medical research	ITA	Oct.89 - Apr.91	18/02	-
KAJTA	Radiation biology	UK	Nov.87 - Nov.88	12/00	-
KLIMKIEWICZ	Tracer applications in industry	DEN	Apr.85 - Apr.86	12/01	-
KOZACZEK	Non-destructive testing	USA	Jan.87 - Jan.88	12/01	-
PRZYBYLOWICZ	Analytical and instrumental techniques	CAN	Jan.86 - Jul.87	18/02	INT/1/018
BEDNAREK	Radiation protection	GER	Jun.86 - Jun.87	12/00	POL/9/007
CHOLERZYNSKI	Radwaste treatment	USA	May 87 - Jun.88	13/01	-
DABROWSKI	Safety of reactors and nuclear materials	FIN	Jul.86 - Sep.87	14/02	-
GOLNIK	Dosimetry	NET	Mar.87 - Mar.88	12/01	-
HRYCZUK	Experimental reactor safety	USA	Feb.86 - Mar.87	13/10	-
JANCZAK	Reactor safety	SWE	Dec.82 - Jun.84	18/01	-
KOSLACZ	Safety of reactors and nuclear materials	GER	Mar.86 - May 87	14/02	-
KOSMOWSKI	Nuclear safety	GER	Jan.87 - Jan.88	12/01	-

POLAND
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 July 1993)

Name	Field of study	Host country	Date	Duration	Project
KRAJEWSKA	Environmental protection	GER	Aug.91 - Jul.92	12/00	-
KRAJEWSKI	Environmental radiation protection	UK	Oct.86 - Jan.88	15/03	-
KRZYSZTOSZEK	Reactor safety	GER	Nov.89 - Nov.90	12/00	RER/0/003
MACHIEWICZ	Safety evaluation	GER	Feb.88 - Jan.90	24/00	-
NOWAK	NPP safety	ITA	Sep.82 - Jan.84	16/01	-
PIETRZAK	Safety evaluation	GER	Oct.85 - Jan.87	15/02	-
SKOREK	Safety analysis	GER	Feb.87 - Jan.88	12/00	-
STARON	Safety of reactors and nuclear materials	GER	Apr.91 - Jun.92	14/00	FRER/0/005
SWOBODA	Regulatory practices for nuclear power	USA	Dec.86 - Jan.88	13/01	-
URBANCZYK	Radwaste radionuclide migration	NET	Apr.86 - Apr.87	12/00	-
WALIGORSKI	Dosimetry	USA	Feb.85 - Apr.86	13/26	-

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

Name	Field of study	Host country	Date	Duration	Project
BOGUS	1. Radiation processing	HUN	Sep.89 - Oct.89	0/12	POL/8/007
	2. Radiation processing	YUG HUN NET	Feb.93	0/08	POL/9/018
CHMIELEWSKI	1. Radiation processing	GER SPA USA	Oct.88 - Nov.88	1/02	POL/8/007
	2. Radiation processing	JPN	May 92 - Jun.92	0/26	POL/8/007
DOBROWOLSKI	1. Quality assurance	SPA	Jul.88	0/12	POL/4/005
	2. Quality control	USA	Dec.90	0/12	POL/4/005
JASZCZUK	1. Quality assurance	GER	Aug.87 - Aug.88	12/01	-
	2. Quality assurance	GER	Dec.90	0/19	POL/4/005
JEDRZEJEWSKI	1. Reactor technology	YUG	Sep.86	0/12	-
	2. Quality assurance	SPA	Jul.88	0/12	POL/4/005
	3. Quality assurance	USA	Dec.90	0/12	POL/4/005
KOZACZEK	1. Reactor technology	YUG	Sep.86	0/12	-
	2. Non-destructive testing	USA	Jan.87 - Jan.88	12/01	-
LICKI	1. Industrial applications	GER	May 89 - Jun.89	0/12	POL/8/007
	2. Radiation processing	GER	Sep.91	1/00	POL/8/007

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

Name	Field of study	Host country	Date	Duration	Project
LOPACIUK	1. Nuclear instrumentation 2. Nuclear instrumentation, electronics and reactor control	USA	Jun.87 - Jun.88	12/00	-
		USA	Mar.91 - Nov.91	8/01	POL/4/009
OSTASZEWSKI	1. Animal production 2. Animal science	USA	Jul.83 - Oct.84	15/13	-
		FRA	Mar.90 - Apr.90	0/26	POL/5/007
PODWAPINSKI	1. Nuclear instrumentation 2. Nuclear instrumentation	GER	Jan.89 - Dec.89	11/02	RER/0/003
		GER	Mar.90 - Sep.90	6/01	RER/0/003
ZIMEK	1. Radiation processing 2. Industrial applications 3. Electron beam technology 4. Radiation processing	USA	Feb.85 - Mar.85	0/26	POL/4/003
		GER	May 89 - Jun.89	0/12	POL/8/007
		USSR	Nov.89 - Dec.89	1/00	RER/0/003
		JPN	May 92 - Jun.92	0/26	POL/8/007

AGENCY TRAINING COURSES WITH POLISH PARTICIPATION

1983 - 1993
(As of 1 July 1993)

Field	Number of participants	Number of courses
General atomic energy development	9	4
Nuclear physics	8	8
Nuclear chemistry	2	1
Nuclear raw materials	-	-
Nuclear engineering and technology	56	30
Nuclear techniques in agriculture	8	7
Nuclear medicine	5	4
Nuclear techniques in biology	2	2
Nuclear techniques in industry & hydrology	4	4
Nuclear safety	68	50
TOTAL	162	110

MULTIPLE PARTICIPATION IN AGENCY TRAINING COURSES
BY POLISH NATIONALS
1983 - 1993
(As of 1 July 1993)

Name	Course No.	Course title	Year	Location
BEDNARSKI, Z.	INT/4/103 (001) INT/9/113 (001)	ITC on qualification of NPP operations personnel ITC on safety in NPP operation: prevention and management of accidents	1990 1991	GFR USA
BORYSIEWICZ	INT/9/043 (001) RER/9/005 (001)	ITC on probabilistic methods applied to safety analysis RWS on probabilistic safety assessment	1983 1989	USA HUN
HOLOWNIA	RER/4/002 (002) RER/4/002 (007)	RWS on in-service inspection standards plus QA RWS and on-the-job training on NDT, audits and erosion-corrosion of RPV and piping of WWER-type reactors	1989 1990	SPA SPA
JACKOWSKI	INT/4/081 (001) RER/9/004 (001)	ITC on quality assurance Regional working group on source term code package for WWER-type reactors (STCP)	1986 1989	FRA USSR
JASZCZUK	RER/4/002 (004) RER/4/002 (006)	RWS on pressure vessel examination RWS on WWER 440/1000 steam-generator in service inspection	1989 1990	SPA YUG
JEDRZEJEWSKI	RER/4/002 (002) RER/4/002 (007) RER/4/002 (008)	RWS on in-service inspection standards plus QA RWS and on-the-job training on NDT, audits and erosion-corrosion of RPV and piping of WWER-type reactors Regional on-the-job training course on in-service inspection of Krsko NPP	1989 1990 1990	SPA SPA YUG
JURKOWSKI	INT/4/082 (001) INT/9/073 (001)	ITC on commissioning of NPPs ITC on safety in NPP operation	1986 1987	UK USA CAN
KOZIEL	INT/4/074 (001) INT/9/135 (001)	IWS on the conversion of research reactors to low-enrichment uranium fuels ITC on physical protection of nuclear facilities and materials	1985 1993	VEN USA

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

Name	Course No.	Course title	Year	Location
KRZYSZTOSZEK	INT/9/071 (001)	ITC on physical protection of nuclear facilities and materials	1987	USA
	INT/9/137 (001)	ITC on interim storage of spent fuel from NPPs and research reactors	1993	FRA
KUCZYNSKI	INT/4/103 (001)	ITC on qualification of NPP operations personnel	1990	GFR
	INT/9/094 (001)	ITC on accident management in NPPs	1989	USA
	RER/4/002 (005)	Regional on-the-job training course in eddy current inspection of steam generator tubes on WWER-440-type NPP	1989	BUL
	RER/4/002 (006)	RWS on WWER 440/1000 steam generator in-service inspection	1990	YUG
KULIG	INT/9/043 (001)	ITC on probabilistic methods applied to safety analysis	1983	USA
	RER/9/005 (001)	RWS on probabilistic safety assessment	1989	HUN
PAWLAK	INT/9/094 (001)	ITC on accident management in NPPs	1989	USA
	INT/9/129 (001)	ITC on planning, organization and implementation of radiation protection on a national level	1992	USA
SKARZEWSKI	INT/9/075 (001)	ITC on safe transport of radioactive materials	1987	UK
	INT/9/103 (001)	ITC on safety and regulation of radiation sources	1990	USA
	INT/9/134 (001)	ITC on management of occupational exposure to ionizing radiation	1993	USA
SKONIECZNY	INT/0/050 (001)	ITC on electric system expansion planning (WASP)	1990	USA
	INT/0/052 (001)	ITC on integrated energy and electricity planning for nuclear power development with emphasis on ENPEP	1991	USA
SOBKOWICZ	INT/9/062 (001)	ITC on radiation protection	1984	IND
	INT/9/082 (001)	ITC on radiological protection and nuclear safety	1987	ARG
STANKIEWICZ	INT/1/035 (001)	ITC on the preparation of nuclear data for use in reactor calculations	1986	IND
	INT/9/102 (001)	ITC on probabilistic safety assessment (PSA) for NPP safety	1989	USSR

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

Name	Course No.	Course title	Year	Location
WACLAWEK	INT/9/079 (001) INT/9/129 (001)	ITC on management of radioactive waste ITC on planning, organization and implementation of radiation protection on a national level	1987 1992	GFR USA
WLODARSKI	INT/4/084 (001) INT/9/080 (010)	ITC on qualification of operational personnel ITC on implications of radiation-induced embrittlement for the integrity of pressure vessels	1986 1987	GFR ARG
WOJCIECHOWSKI	INT/4/092 (001) INT/9/061 (001)	ITC on the application of small computers to research reactor operations ITC on physical protection of nuclear facilities and materials	1987 1985	YUG USA
ZAK	INT/4/082 (001) INT/9/048 (001)	ITC on commissioning of NPPs ITC on planning, preparedness and response to radiological emergencies	1986 1984	UK USA
ZANTOWICZ	RER/4/002 (003) RER/4/002 (004) RER/4/002 (005) RER/4/002 (007)	RWS on eddy current techniques - practical approach RWS on pressure vessel examination Regional on-the-job training course in eddy current inspection of steam generator tubes on WWER-440-type NPP RWS and on-the-job training on NDT, audits and erosion-corrosion of RPV and piping of WWER-type reactors	1989 1989 1989 1990	YUG SPA BUL SPA
ZARUCKI	INT/9/089 (001) INT/9/114 (001)	ITC on the physical protection of nuclear facilities and materials ITC on planning, preparedness and response to radiological emergencies	1988 1991	USA USA

PROJECTS COMPLETED IN POLAND SINCE 1983
(As of 1 July 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1983	POL/0/002	Application of nuclear techniques	-	-	-	3 178	-	-	-	3 178	1984
1983	POL/1/004	Nuclear analytical techniques	1/00	6 900	140 000	-	-	-	139 160	-	1987
1983	POL/1/005	Neutron standardization laboratory	0/07	1 447	43 357	-	0/07	377	43 357	-	1987
1984	POL/1/006	Mass spectrometry	-	-	347 596	-	-	-	344 824	-	1989
1983	POL/2/008	Radiopharmaceutical quality assurance	-	-	60 000	-	-	-	42 614	-	1984
1979	POL/2/009	Radiochemical laboratory	1/15	9 300	18 900	-	1/19	5 030	19 125	-	1985
1988	POL/2/010	Exploration for and evaluation of natural resources	1/00	7 200	79 500	-	1/00	12 232	76 864	-	1991
1981	POL/4/003	Electron beam radiation processing	0/04	640	1 185 514	-	0/04	740	1 184 876	-	1989

**PROJECTS COMPLETED IN POLAND SINCE 1983
(As of 1 July 1993)**

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1981	POL/4/004	Use of linear accelerator	1/20	10 550	148 520	12 300	1/17	7 797	148 519	13 537	1989
1987	POL/4/005	Quality control system	4/09	30 860	137 885	23 998	4/09	40 220	140 365	19 291	1991
1987	POL/4/007	Procurement assistance ^{1/}	-	-	24 152	-	-	-	24 152	-	1991
1988	POL/4/009	Modernization of Maria reactor	-	-	1 628 482	18 650	-	-	1 628 482	16 399	1991
1985	POL/5/006	Plant breeding using induced mutations	1/29	13 570	304 794	-	1/29	6 599	304 805	-	1989
1987	POL/5/007	Isotopes in animal science	0/24	5 685	152 204	8 800	0/24	9 295	149 202	8 819	1991
1985	POL/6/002	Computerized tomography	6/22	46 960	20 479	10 450	6/25	33 620	20 478	10 529	1990
1991	POL/6/003	Upgrading of the nuclear medicine centre	0/15	-	325 890	-	-	-	325 890	-	1992

^{1/} Funds-in-Trust

PROJECTS COMPLETED IN POLAND SINCE 1983
(As of 1 July 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1982	POL/8/004	Radioisotope techniques in environmental protection	1/00	5 400	18 000	-	1/00	5 349	18 166	-	1983
1984	POL/8/005	Isotopes in hydrology	-	-	46 000	-	-	-	46 707	-	1987
1986	POL/8/006	Food irradiation	-	-	13 800	-	-	-	14 203	-	1987
1981	POL/9/006	Monitoring of radioactivity in the Baltic Sea	0/12	1 920	30 500	-	0/12	2 235	29 793	-	1984
1983	POL/9/007	Radiation protection	-	-	65 500	-	-	-	64 327	-	1987
1988	POL/9/008	Environmental protection	-	-	67 055	-	-	-	69 047	-	1991
1989	POL/9/009	Whole-body counting	0/12	3 540	74 319	-	0/17	4 083	69 017	-	1993
1989	POL/9/010	Atmospheric dispersion modelling	-	-	70 270	-	-	-	70 270	-	1991
1989	POL/9/011	Pre-OSART mission to Zarnowiec NPP	6/12	10 760	-	-	6/12	10 699	-	-	1990

PROJECTS COMPLETED IN POLAND SINCE 1983
(As of 1 July 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1990	POL/9/012	Evaluation of safety for Zarnowiec NPP	3/00	25 200	-	-	0/09	10 820	-	-	1990
1992	POL/9/016	Health effects of ionizing radiation	0/25	23 000	-	-	1/03	20 795	-	-	1993
	TOTAL	27 projects	31/26	202 932	5 002 717	77 376	28/07	169 891	4 974 243	71 753	

OPERATIONAL PROJECTS IN POLAND
(As of 1 July 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	POL/0/003	Manpower development	-	-	-	135 300	-	-	-	20 239
1991	POL/1/010	Biomedical applications of radiation technology	-	-	185 466	24 687	-	-	167 238	10 686
1993	POL/1/011	Determination of material properties by nuclear techniques	1/00	10 350	86 300	6 150	-	-	-	-
1991	POL/2/011	Advanced X-ray fluorescence methods of trace analysis	0/18	6 000	104 457	9 000	0/08	5 902	103 141	5 414
1993	POL/2/012	Technology and quality control of radio-pharmaceuticals	1/00	10 350	60 000	6 000	0/05	658	-	-
1988	POL/8/007	Electron beam technology for flue gas purification ^{1/} (phase II)	4/10	46 120	1 049 163	57 186	4/10	21 252	1 033 897	57 223
1991	POL/8/009	Upgrading of isotope hydrology laboratory	1/00	10 800	325 000	3 000	-	-	-	-
1993	POL/8/012	Upgrading environmental radioactivity monitoring laboratory	2/00	22 200	155 000	6 450	-	-	-	-

^{1/} Figures for equipment include \$25 000 for analytical equipment provided by the USA in kind.

**OPERATIONAL PROJECTS IN POLAND
(As of 1 July 1993)**

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	POL/8/013	Electron beam technology for flue gas purification (phase III)	6/07	69 060	188 594	15 300	1/21	26 006	11 049	-
1991	POL/9/013	Disposal of low- and medium-level radioactive waste	5/22	59 140	130 012	41 100	1/15	13 310	68 951	2 860
1991	POL/9/014	Improving radioactive waste treatment technologies	4/14	46 672	329 872	11 580	1/20	14 550	224 093	-
1993	POL/9/017	Measurement of radon in the air and water	1/00	10 800	42 000	3 150	-	-	-	-
1993	POL/9/018	Measurement of natural radionuclides in flue gas emissions	-	-	36 000	19 350	-	-	-	2 228
	TOTAL	13 projects	27/11	291 492	2 691 864	338 253	9/19	81 678	1 608 369	98 650

Footnote-a/ projects not yet upgraded:

POL/5/008 Mutation breeding and other biotechnology methods
 POL/8/008 Electron accelerator for ecological purposes
 POL/8/010 Computer-based methods for calibration of well-logging tools
 POL/8/011 Upgrading of gamma facility

COUNTERPART INSTITUTIONS IN POLAND (I)

(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>GENERAL ATOMIC ENERGY DEVELOPMENT</u>		
POL/0/002	Ministry of Science, Higher Education and Technology, Warsaw	-
POL/0/003	National Atomic Energy Agency, Warsaw	KNAPIK
<u>NUCLEAR PHYSICS AND CHEMISTRY</u>		
POL/1/004	Institute of Nuclear Chemistry and Technology, Zeran Centre, Warsaw	PARUS
POL/1/005	Institute of Atomic Energy, Department of Radiation Protection, Swierk	JOZEFOWICZ
POL/1/006	University of Warsaw, Department of Chemistry, Warsaw	SOBKOWSKI
POL/1/010	Lodz Technical University, Institute of Applied Radiation Chemistry, Lodz	ROSIAK BURCZAK
POL/1/011	Academy of Mining and Metallurgy, Institute of Physics and Nuclear Techniques, Krakow	DUBIEL NIZOIL
POL/2/008	Institute of Nuclear Research, Radioisotope Production and Distribution Centre, Swierk	PASTERNAK RADOSZEWSKI
POL/2/009	Institute of Nuclear Chemistry and Technology, Zeran Centre, Warsaw	PARUS
POL/2/010	Academy of Mining and Metallurgy, Institute of Physics and Nuclear Techniques, Krakow	PRZEWLOCKI
POL/2/011	Academy of Mining and Metallurgy, Institute of Physics and Nuclear Techniques, Krakow	HOLYNSKA

COUNTERPART INSTITUTIONS IN POLAND (I)

(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR PHYSICS AND CHEMISTRY (cont'd)</u>		
POL/2/012	The Radioisotope Centre, Otwock-Swierk	RADOSZEWSKI DEPTULA
<u>NUCLEAR ENGINEERING AND TECHNOLOGY</u>		
POL/4/003	Institute of Nuclear Chemistry and Technology, Department of Radiation Chemistry, Warsaw	STACHOWICZ
POL/4/004	Lodz Technical University, Institute of Applied Radiation Chemistry, Lodz	ROSIAK
POL/4/005	Institute of Atomic Energy, Swierk	DOBROWOLSKI
POL/4/007	Institute of Atomic Energy, Swierk	MICHALIK CHWASZCZEWSKI
POL/4/009	Institute of Atomic Energy, Swierk	MICHALIK
<u>AGRICULTURE</u>		
POL/5/006	1. Academy of Sciences, Botanical Garden, Warsaw	MOLSKI
	2. Plant Breeding and Acclimatization Institute, Radzikow	CZEMBOR
	3. Poznanska Hodowla Roslin, Plant Breeding Station, Wiatrowo	SWIECICKI
	4. Hodowla Buraka Cukrowego, Plant Breeding Station, Lagiewniki	MADAJEWSKI
	5. Silesian University, Department of Genetics, Katowice	SZAREJKO
	6. Plant Breeding and Acclimatization Institute, Department of Cereals, Krakow	WEGRZYN
	7. National Atomic Energy Agency, Warsaw	CISZEK

COUNTERPART INSTITUTIONS IN POLAND (I)

(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>AGRICULTURE (cont'd)</u>		
POL/5/007	Agricultural University of Warsaw, Department of Animal Physiology, Warsaw	BAREJ
<u>NUCLEAR MEDICINE</u>		
POL/6/002	Medical Academy, Lodz	LINIECKI
POL/6/003	Medical Academy, Nuclear Medicine Centre, Department of Endocrinology, Poznan	SOWINSKI
<u>NUCLEAR APPLICATIONS IN INDUSTRY AND HYDROLOGY</u>		
POL/8/004	Institute of Nuclear Chemistry and Technology, Department XVI of Nuclear Methods for Process Engineering, Warsaw	MICHALIK
POL/8/005	Academy of Mining and Metallurgy, Institute of Physics and Nuclear Techniques, Krakow	GRABCZAK
POL/8/006	1. Institute for Nuclear Studies, Swierk 2. University of Agriculture of Poznan, Laboratory of Nuclear Methods in Agriculture, Poznan	CISZEK FISZER
POL/8/007	Institute of Nuclear Chemistry and Technology, Warsaw	CHMIELEWSKI
POL/8/009	Academy of Mining and Metallurgy, Institute of Physics and Nuclear Techniques, Krakow	FLORKOWSKI MESZON
POL/8/012	1. Silesian Technical University, Department of Radioisotopes, Gliwice 2. Polish National INQUA Committee, Warsaw	PAZDUR ZASTAWNY STARKEL

COUNTERPART INSTITUTIONS IN POLAND (I)

(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR TECHNIQUES IN INDUSTRY AND HYDROLOGY (cont'd)</u>		
POL/8/013	1. Institute of Nuclear Chemistry and Technology, Warsaw	CHMIELEWSKI TYMINSKI
	2. Eps Kaweczyn, Warsaw	KOZIKOWSKI
	3. Design Office "Proatom", Warsaw	SIENKOWSKI
	4. Institute of Atomic Energy, Swierk	LICKI
	5. Institute for Nuclear Studies, Swierk	SOWINSKI
<u>NUCLEAR SAFETY</u>		
POL/9/006	Central Laboratory for Radiological Protection, Warsaw	JAWOROWSKI
POL/9/007	Central Laboratory for Radiological Protection, Warsaw	JAGIELAK
POL/9/008	Central Laboratory for Radiological Protection, Warsaw	JAGIELAK
POL/9/009	Institute of Atomic Energy, Department of Radiation Protection, Swierk	DESZCZAK
POL/9/010	1. Zarnowiec Nuclear Power Plant, Environment Measurement Centre, Wejherowo	TORBICKI
	2. Zarnowiec Nuclear Power Plant, Wejherowo	-
POL/9/011	Zarnowiec Nuclear Power Plant, Wejherowo	HOLOWNIA
POL/9/012	1. National Atomic Energy Agency, Warsaw	RANIEWSKI
	2. Zarnowiec Nuclear Power Plant, Wejherowo	HOLOWNIA
POL/9/013	State Geological Institute, Department of Hydrogeology and Engineering Geology, Warsaw	MITREGA

COUNTERPART INSTITUTIONS IN POLAND (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR SAFETY</u> (cont'd)		
POL/9/014	Institute of Atomic Energy, Otwock-Swierk	TOMCZAK
POL/9/016	National Atomic Energy Agency, Warsaw	JANIKOWSKI
POL/9/017	Central Laboratory for Radiological Protection, Warsaw	MAMONT-CIESLA HENSCHKE
POL/9/018	Lodz Technical University, Institute of Applied Radiation Chemistry, Lodz	BEM REIMSCHUESSEL

COUNTERPART INSTITUTIONS IN POLAND (II)

(By Institute)

WARSAW

National Atomic Energy Agency

Warsaw

POL/0/003	Manpower Development
POL/5/006	Plant Breeding Using Induced Mutations
POL/9/012	Evaluation of Safety for Zarnowiec Nuclear Power Plant
POL/9/016	Health Effects of Ionizing Radiation

Ministry of Science, Higher Education and Technology

Warsaw

POL/0/002	Application of Nuclear Techniques
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Institute of Nuclear Chemistry and Technology

Warsaw

POL/8/007	Electron Beam Technology for Flue Gas Purification (Phase II)
POL/8/013	Electron Beam Technology for Flue Gas Purification (Phase III)

Institute of Nuclear Chemistry and Technology

Zeran Centre

Warsaw

POL/1/004	Nuclear Analytical Techniques
POL/2/009	Radiochemical Laboratory

Institute of Nuclear Chemistry and Technology

Department of Radiation Chemistry

Warsaw

POL/4/003	Electron Beam Radiation Processing
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Institute of Nuclear Chemistry and Technology

Department XVI of Nuclear Methods for Process Engineering

Warsaw

POL/8/004	Radioisotope Techniques in Environmental Protection
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COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

WARSAW (cont'd)

Central Laboratory for Radiological Protection
Warsaw

POL/9/006	Monitoring of Radioactivity in the Baltic Sea
POL/9/007	Radiation Protection
POL/9/008	Environmental Protection
POL/9/017	Measurement of Radon in the Air and Water

University of Warsaw
Department of Chemistry
Warsaw

POL/1/006	Mass Spectrometry
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Agricultural University of Warsaw
Department of Animal Physiology
Warsaw

POL/5/007	Isotopes in Animal Science
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Academy of Sciences
Botanical Garden
Warsaw

POL/5/006	Plant Breeding Using Induced Mutations
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State Geological Institute
Department of Hydrogeology and Engineering Geology
Warsaw

POL/9/013	Disposal of Low- and Medium-Level Radioactive Waste
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Polish National INQUA Committee
Warsaw

POL/8/012	Upgrading Environmental Radioactivity Monitoring Laboratory
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COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

WARSAW (cont'd)

Eps Kaweczyn
Warsaw

POL/8/013 Electron Beam Technology for Flue Gas Purification (Phase III)

Design Office "Proatom"
Warsaw

POL/8/013 Electron Beam Technology for Flue Gas Purification (Phase III)

KRAKOW

Academy of Mining and Metallurgy
Institute of Physics and Nuclear Techniques
Krakow

POL/1/011 Determination of Material Properties by Nuclear Techniques
POL/2/010 Exploration for and Evaluation of Natural Resources
POL/2/011 Advanced X-Ray Fluorescence Methods of Trace Analysis
POL/8/005 Isotopes in Hydrology
POL/8/009 Upgrading of Isotope Hydrology Laboratory

Plant Breeding and Acclimatization Institute
Department of Cereals
Krakow

POL/5/006 Plant Breeding Using Induced Mutations

SWIERK

Institute of Atomic Energy
Swierk

POL/4/005 Quality Control System
POL/4/007 Procurement Assistance (Funds-in-Trust)
POL/4/009 Modernization of Maria Reactor
POL/8/013 Electron Beam Technology for Flue Gas Purification (Phase III)

COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

SWIERK (cont'd)

Institute of Atomic Energy
Department of Radiation Protection
Swierk

POL/1/005 Neutron Standardization Laboratory
POL/9/009 Whole-Body Counting

Institute of Nuclear Research
Radioisotope Production and Distribution Centre
Swierk

POL/2/008 Radiopharmaceutical Quality Assurance

Institute for Nuclear Studies
Swierk

POL/8/006 Food Irradiation
POL/8/013 Electron Beam Technology for Flue Gas Purification (Phase III)

OTWOCK-SWIERK

The Radioisotope Centre
Otwock-Swierk

POL/2/012 Technology and Quality Control of Radiopharmaceuticals

Institute of Atomic Energy
Otwock-Swierk

POL/9/014 Improving Radioactive Waste Treatment Technologies

COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

LODZ

Lodz Technical University
Institute of Applied Radiation Chemistry
Lodz

POL/1/010	Biomedical Applications of Radiation Technology
POL/4/004	Use of Linear Accelerator
POL/9/018	Measurement of Natural Radionuclides in Flue Gas Emissions

Medical Academy
Lodz

POL/6/002	Computerized Tomography
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POZNAN

Medical Academy
Nuclear Medicine Centre
Department of Endocrinology
Poznan

POL/6/003	Upgrading of the Nuclear Medicine Centre
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University of Agriculture of Poznan
Laboratory of Nuclear Methods in Agriculture
Poznan

POL/8/006	Food Irradiation
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RADZIKOW

Plant Breeding and Acclimatization Institute
Radzikow

POL/5/006	Plant Breeding Using Induced Mutations
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COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

WIATROWO

Poznanska Hodowla Roslin
Plant Breeding Station
Wiatrowo

POL/5/006 Plant Breeding Using Induced Mutations

LAGIEWNIKI

Hodowla Buraka Cukrowego
Plant Breeding Station
Lagiewniki

POL/5/006 Plant Breeding Using Induced Mutations

KATOWICE

Silesian University
Department of Genetics
Katowice

POL/5/006 Plant Breeding Using Induced Mutations

GLIWICE

Silesian Technical University
Department of Radioisotopes
Gliwice

POL/8/012 Upgrading Environmental Radioactivity Monitoring Laboratory

COUNTERPART INSTITUTIONS IN POLAND (II)
(By Institute)

WEJHEROWO

Zarnowiec Nuclear Power Plant
Wejherowo

POL/9/010	Atmospheric Dispersion Modelling
POL/9/011	Pre-OSART Mission to Zarnowiec Nuclear Power Plant
POL/9/012	Evaluation of Safety for Zarnowiec Nuclear Power Plant

Zarnowiec Nuclear Power Plant
Environment Measurement Centre
Wejherowo

POL/9/010	Atmospheric Dispersion Modelling
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THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH

POLAND

SINCE 1983

LONG-TERM EXPERT ASSIGNMENTS

NONE

RESEARCH CONTRACTS/AGREEMENTS IN POLAND SINCE 1983 ¹
(As of 1 July 1993)

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear physics	4	15 600
Nuclear chemistry	15	220 000
Nuclear engineering and technology	6	43 144
Nuclear techniques in agriculture	11	128 000
Nuclear medicine	13	105 200
Nuclear techniques in biology	3	30 000
Nuclear techniques in industry & hydrology	10	117 750
Safety in nuclear energy	14	133 400
TOTAL	76	793 094

¹/ New awards since 1983

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

Name	No. of assignments	Project(s)
ADAMSKI	1	ALB/4/006
BICZEL	1	RER/9/005
BOGUS	1	RER/8/003
BORYSIEWICZ	6	RER/9/002, RER/9/005
BULHAK	1	RER/8/003
BYSZEWSKI	4	ALB/4/006, UKR/4/002, INT/9/104
CHMIELEWSKI	4	IRA/8/009, POL/8/007, RER/8/003
CISZEK	2	RER/5/003
CUDNY	7	GHA/4/008, MON/0/002, VIE/4/007, INT/4/064, INT/4/070, INT/4/115
CZUBEK	3	DRK/3/003, MAG/3/004, INT/3/011
DEPUTAT	4	SYR/8/003, TUR/9/010
DOBROWOLSKI	17	ALG/8/005, EGY/9/024, IRA/9/011, MON/8/003, SAU/8/002, SAU/8/003, SYR/8/003, TUN/8/007, VIE/8/009, RAB/8/002, RAF/8/014
DOMANSKI	9	RER/9/004
DROZDZAL	1	INT/9/063
DUDEK	2	RER/9/003
DURSKI	1	POL/6/002
DZIEWONSKI	1	IRA/8/009
DZIUK	4	ETH/6/003, VIE/6/015, ZIM/6/002, INT/0/048
DZIUNIKOWSKI	3	IVC/0/003, RAS/8/008
FILIPCZAK	1	INT/0/052
FISZER	1	INT/0/038

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

Name	No. of assignments	Project(s)
FLORKOWSKI	17	CUB/8/007, CUB/8/009, JOR/8/003, MEX/8/009, SUD/8/004, SUD/8/005, TUR/8/011, URT/8/005, ZIM/8/002, RAF/8/008, RAF/8/018
FRYDRYK	1	RER/9/004
GACEK	2	LIB/5/006
GEMBICKI	5	ECU/6/007, PER/6/010, URT/6/004
GLOWKA	1	POL/8/007
GOLAB	1	SYR/9/005
GOLOS	1	RER/9/002
GORONCEK	1	POL/2/009
GRABCZAK	2	JOR/8/003, SUD/8/004
GRABOWSKI	1	RER/9/003
GUZIK	1	RER/9/005
HOLOWNIA	2	INT/9/078
HOLYNSKA	8	KEN/0/003, MAG/1/005, INT/1/039, RAF/8/015
HRYNKIOERWICZ	1	RER/4/008
JACKOWSKI	26	RER/9/002, RER/9/004
JANCZAK	1	IRA/9/011
JANKOWSKI	3	BGD/9/006, LIB/9/010, MON/9/004
JOSEFOWICZ, E.T.	5	IRQ/9/004
JOSEFOWICZ, K.J.	1	POL/1/005
KACZMAREK	2	INT/5/125, INT/5/128
KALUSKA	1	RER/8/003
KAMINSKI	1	POL/6/002
KAROLCZAK	1	POL/4/004

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

Name	No. of assignments	Project(s)
KIELBASA	1	IRA/9/011
KLISINSKA	12	RER/9/002, RER/9/004
KOSOWICZ	7	COL/6/004, GUA/6/007, INS/2/010, INS/6/003, NIR/6/006, SRL/6/011, SRL/6/015
KOSZELA	1	RER/9/002
KOWALCZYK	4	RER/9/002, RER/9/004
KOWALEWSKI	1	POL/8/007
KOWALIK	3	RER/9/004
KRASOWSKI	1	LIB/4/007
KREFT	2	RAS/8/062
KRUK	2	RER/9/002, RER/9/004
KUC	1	IRA/8/008
KULIG	26	INS/9/014, INT/9/063, RER/9/002, RER/9/004, RER/9/005
KULIKOWSKA	6	BGD/4/012, INS/4/027, MEX/4/037, YUG/9/018, INT/4/092
KUPSC	1	RER/9/005
KWIATEK	1	RER/4/008
LENDAS	2	NIC/8/004, PER/8/006
LUBIS	1	POL/4/004
LUTY	1	POL/8/007
MADEJ	1	NIR/5/014
MALOSZEWSKI	3	BRA/8/022, CUB/8/007, RLA/8/014
MARCINKOWSKI	1	INT/1/018
MARKOWICZ	1	RAS/3/005

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

Name	No. of assignments	Project(s)
MARONSKY	1	RER/9/003
MASHOWSKI	1	RER/9/002
MICHALIK	1	RAS/8/061
MIGDAL	1	RER/5/003
MIKULSKI	1	IRA/9/011
MITREGA	1	POL/9/013
MUCHLADO-MARONSKA	2	RER/9/003
NAUMAN	2	MEX/2/010, SIL/6/003
NIWIADOMSKI	3	DRK/1/004, MEX/1/011
NIWODNICZANSKI	5	JOR/1/003, KEN/0/003, ROM/3/002, URT/1/003
OGLAZA	3	RER/9/010
OSTACHOWICZ	1	POL/2/011
PACHAN	1	INT/0/038
PALIGE	1	IRA/8/009
PARUS	1	POL/2/009
PAZDUR	1	BRA/0/010
PLAWSKI	2	YUG/1/013
PODOWSKI	2	ARG/4/077, CPR/9/006
PRZEWLOCKI	4	LIB/8/002, INT/0/038, RLA/8/019
PYTEL	12	ALB/4/006, GRE/4/008, GRE/4/009, IRA/4/017, IRA/9/011, IRQ/4/010, IRQ/9/004, POR/4/012, TUR/4/021
RABIEJ	1	INT/9/055
RAJCHEL	1	TUR/2/010
RAZNAK	1	RER/9/002

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

Name	No. of assignments	Project(s)
ROMANOWSKI	1	POL/8/007
ROSIAK	4	CPR/8/006, INS/8/014, INS/8/017
ROZANSKI	2	NIC/8/006, INT/8/023
SALWA	18	RER/9/002, RER/9/004
SIWICKI	1	POL/9/014
SKORNIK	9	IRQ/9/004, INT/9/055, RER/9/003
STACHOWICZ	1	RER/5/003
STEMPNIEWICZ	3	RER/9/004
STAPIEN-RUDZKA	3	RER/9/005
STEPNIEWSKI	3	RER/9/002, RER/9/004
STERLINSKI	1	INT/9/055
STRUPCZEWSKI	16	EGY/9/024, IRA/4/017, IRA/9/011, IRQ/9/004, SYR/4/002, SYR/9/005
STUPNICKI	11	ALB/5/044, COL/5/012, JOR/5/005, MON/5/003, SUD/5/016, TUN/5/010, TUN/5/015, UGA/5/009, ZAI/2/010
SUWALSKI	1	MON/1/003
SWIECICKI	3	ZAI/5/008
SZAREJKO	4	PER/5/015, TUR/5/014
SZCZUREK	41	RER/9/002, RER/9/004, RER/9/005
SZYBINSKI	2	MAL/6/013, SIL/6/003
TARKOWSKA	1	MOR/6/008
TREHCINSKI	1	VIE/4/002
TURKIEWICZ	2	MON/1/002, TUN/1/006
TYS	1	COS/1/005

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

Name	No. of assignments	Project(s)
WALIGORSKI	1	VIE/9/004
WASILEWSKA-RADWANSKA	2	NER/0/003
WIZA	1	INT/0/038
WLODARSKI	1	POL/4/005
WORONKIN	1	INT/4/079
ZALEWSKI	1	RER/8/003
ZARNOWIECKI	1	VIE/9/004
ZEMLO	1	RER/4/008
ZERNIK	1	POL/8/007
ZIMEK	9	BRA/8/021, ECU/8/005, POL/8/007, RER/8/003
ZUBER	1	RAS/0/015
ZYSZKOWSKI	3	IRQ/9/004, SYR/4/002
TOTAL	439	

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

NONE ^{1/}

^{1/} Four fellows (one each from Afghanistan, Iran, Mongolia and Viet Nam) have been accepted by Polish host institutions, but have not yet started their studies.

**REGIONAL AND INTERREGIONAL TRAINING EVENTS
HOSTED BY POLAND
1983 - 1993
(As of 1 July 1993)**

Course No.	Course Title	Partici- pants	Year
INT/9/078 (001)	ITC on safe operation of nuclear power plants	19	1987
RER/2/002 (001)	RTC on radioisotope techniques in mineral exploitation	10	1989
RER/5/003 (002)	RWS on food irradiation technology	9	1988
RER/5/003 (004)	RWS on the use of electron accelerators for food irradiation	2	1991
	TOTAL	40	