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COUNTRY PROGRAMME SUMMARY

THE AGENCY'S TECHNICAL CO-OPERATION
PROGRAMME WITH
VIET NAM
1983 - 1993
COUNTRY PROGRAMME SUMMARIES

EVALUATION SECTION

DEPARTMENT OF TECHNICAL CO-OPERATION

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

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

VIET NAM

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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 \$9.2 million of Agency support received, Viet Nam ranks 16th among all recipients of technical assistance during the period 1958 through 1992.

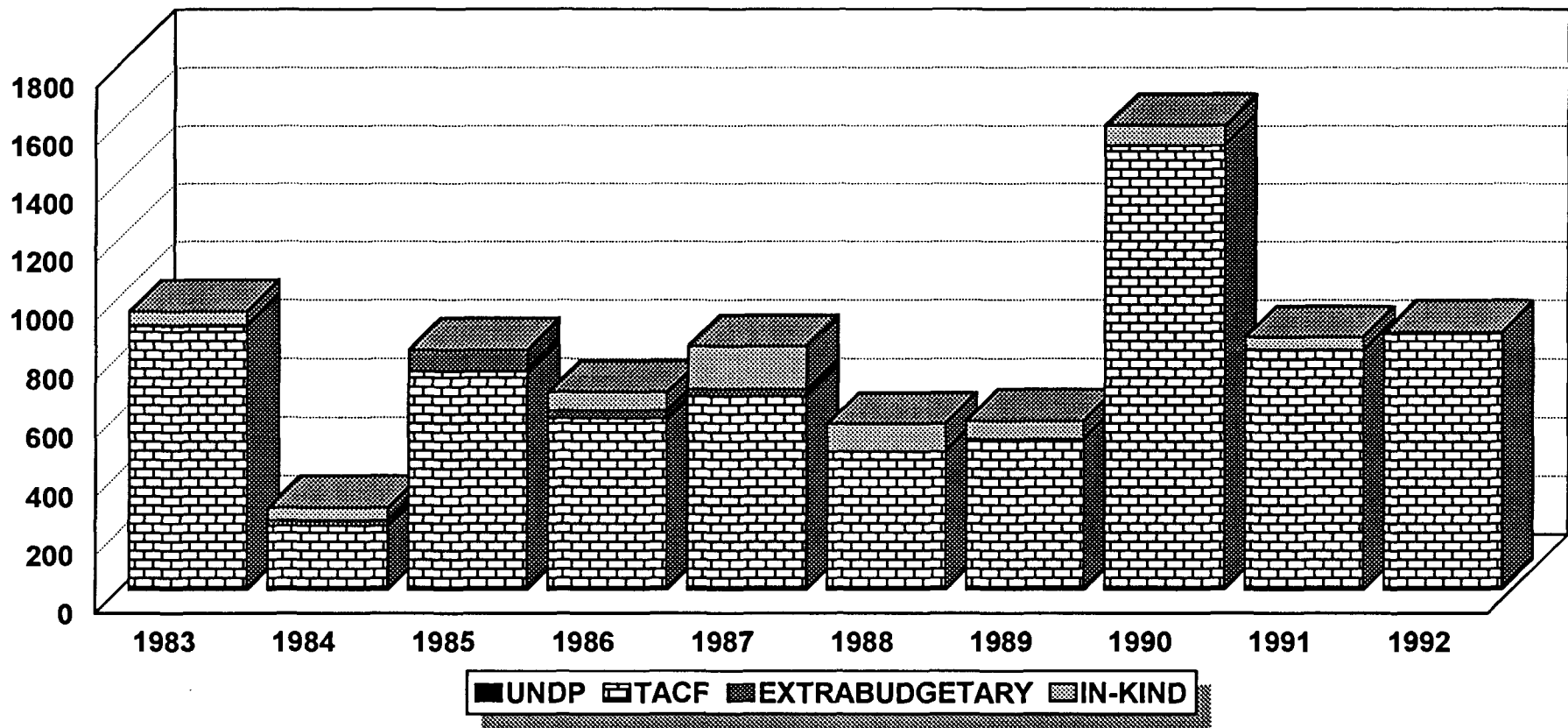
More than half of the assistance received during the past ten years has been provided in the form of equipment (62%), complemented by training (30%) and expert services (8%). The bulk of the resources was made available through the TACF (91%), using a significant amount of NCC (over \$3 million), and only small shares were provided in kind (7%) and through extrabudgetary contributions (2%).

With regard to total disbursements -- by sector -- under those projects that were operational during the period 1983 through 1 March 1993, the three major areas have been industry and hydrology (31%), nuclear engineering and technology (20%) and general atomic energy development (15%), while only smaller shares went to agriculture (9%), nuclear safety (8%), nuclear medicine (7%) and nuclear physics and chemistry (6%).

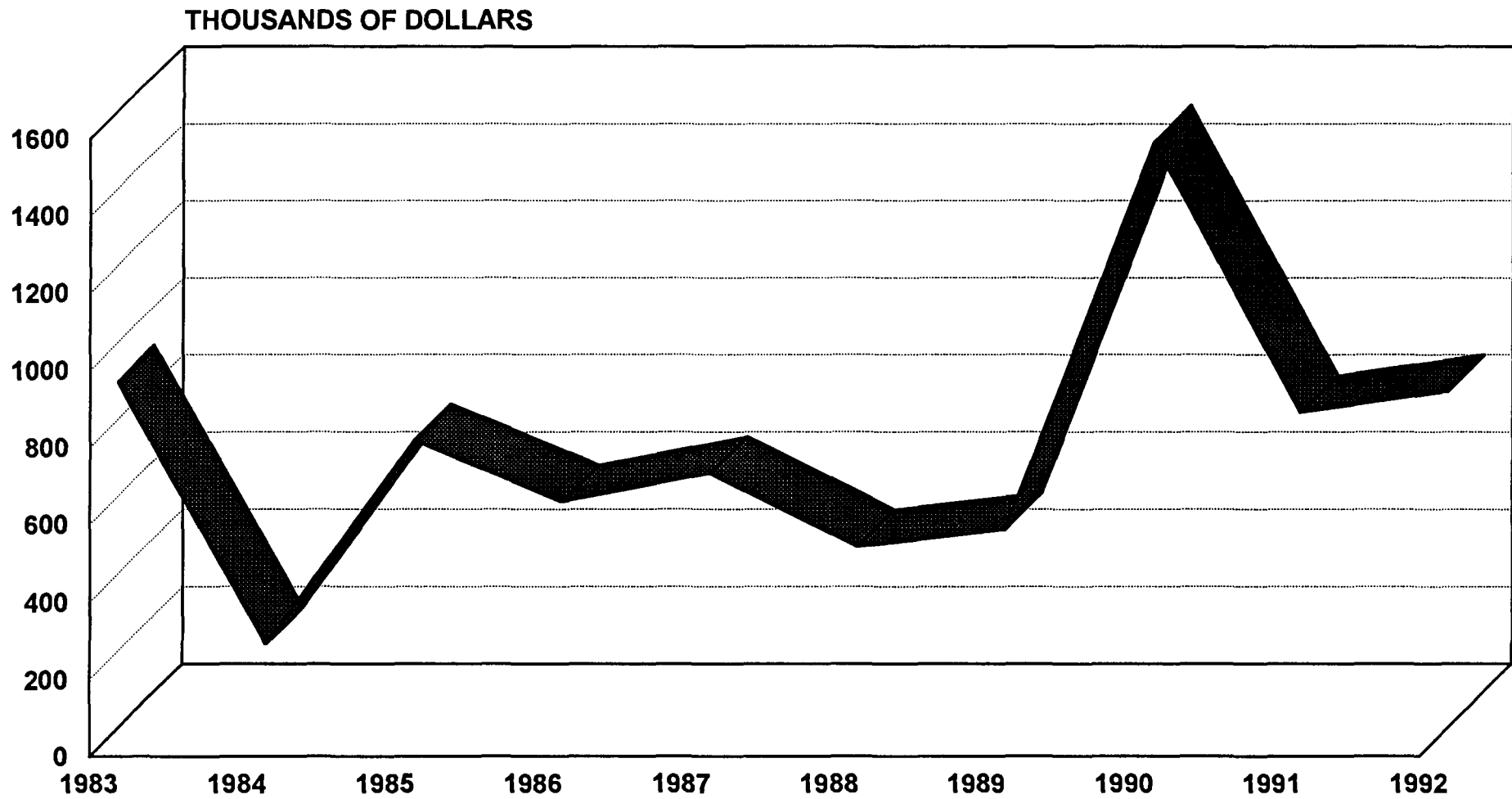
During the same period, the country has provided experts and training course lecturers for a total of 47 assignments, and has hosted one fellowship and one regional workshop with five participants.

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

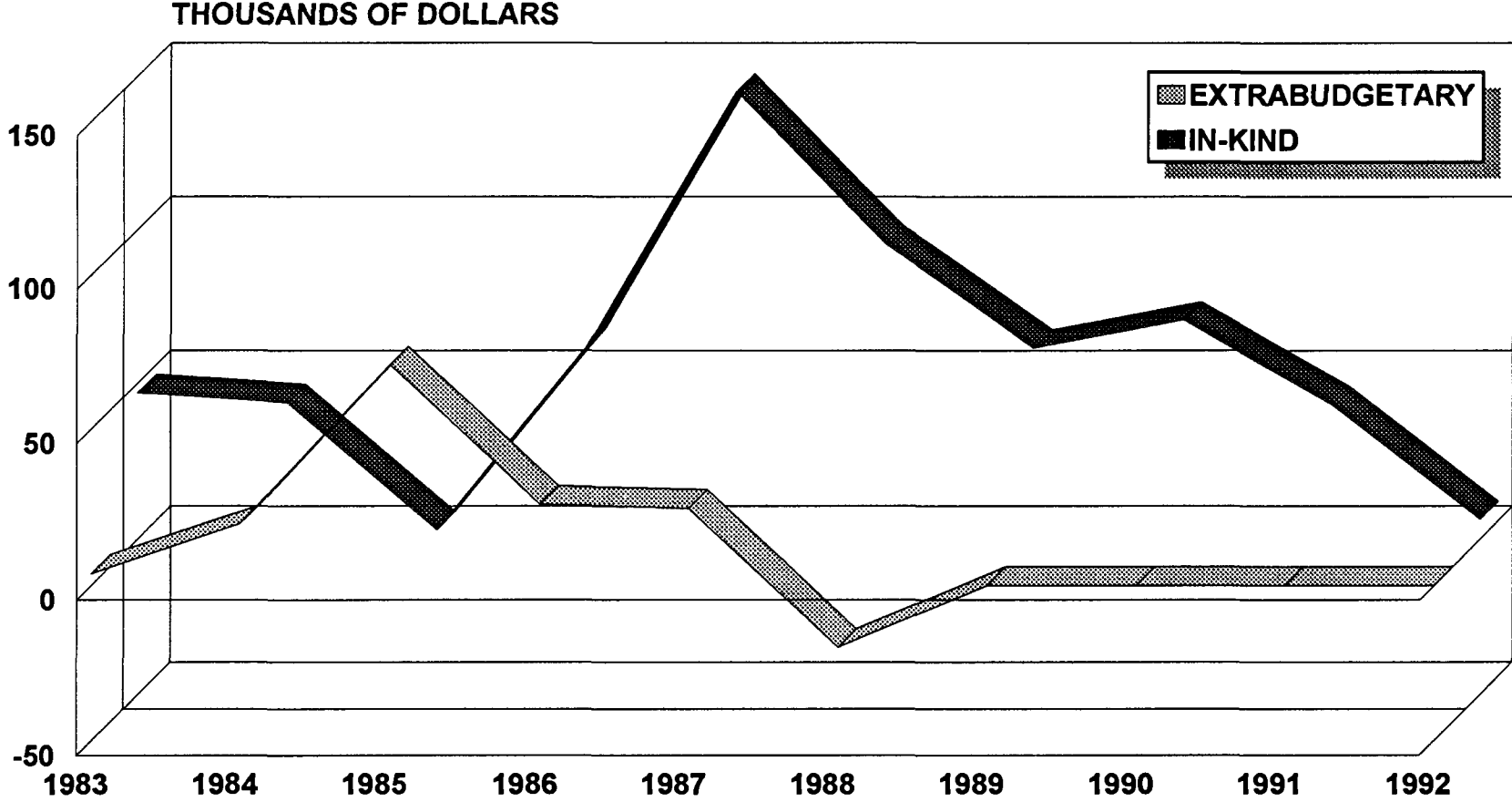
THOUSANDS OF DOLLARS



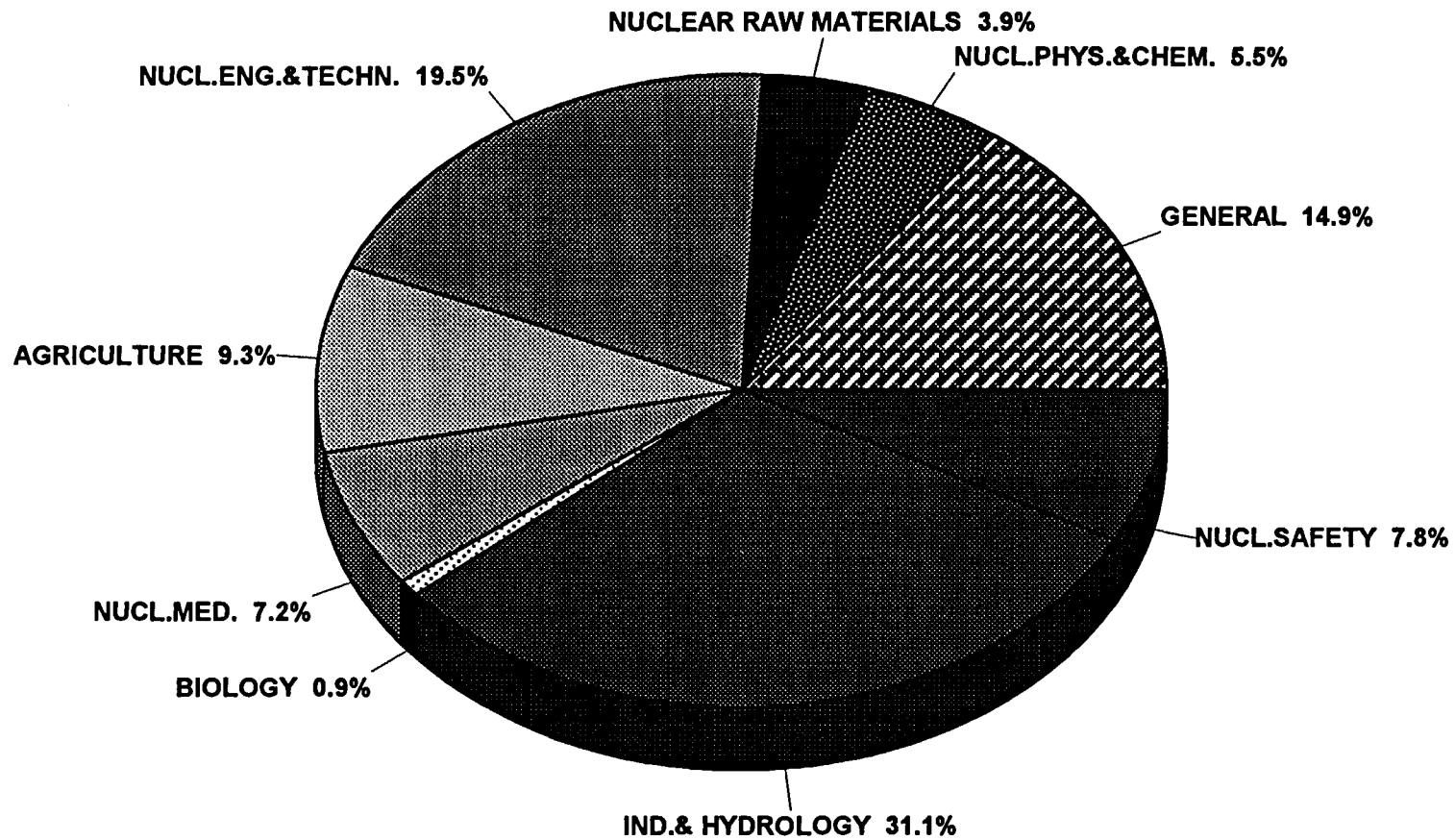
TACF ASSISTANCE PROVIDED TO VIET NAM (1983 - 1992)



EXTRABUDGETARY AND IN-KIND ASSISTANCE TO VIET NAM (1983-1992)

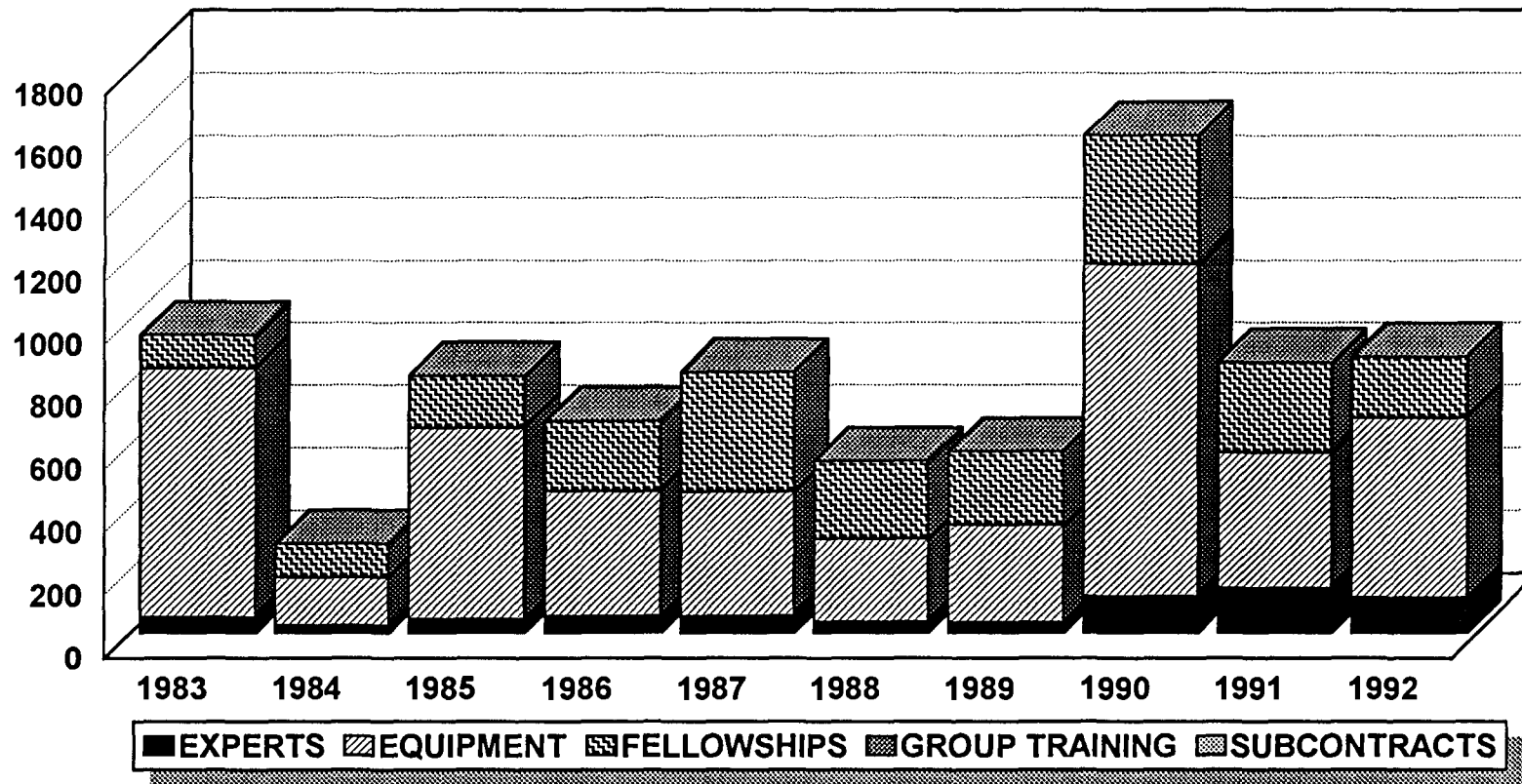


TC PROJECT DISBURSEMENTS IN VIET NAM BY SECTOR (1983 - 1993)

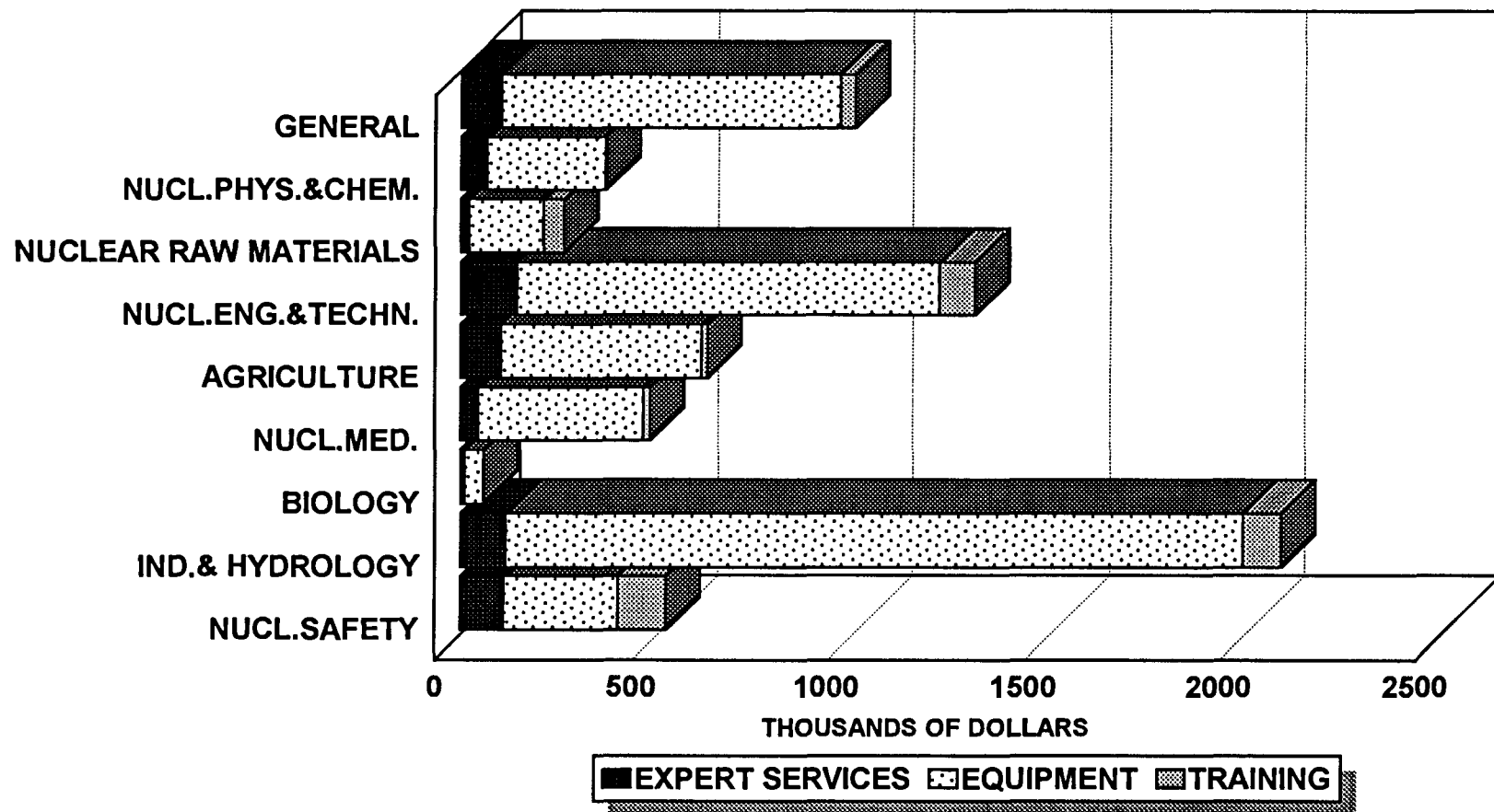


ASSISTANCE PROVIDED BY THE AGENCY TO VIET NAM BY TYPE (1983 - 1992)

THOUSANDS OF DOLLARS



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



THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH VIET NAM

ALL SOURCES

VIET NAM'S RANKING AS A TC RECIPIENT

1958 - 1992

(in \$1000)

YEAR	RANKING	AMOUNT
1958-82	40 th	1188.4
1983	3 rd	948.1
1984	24 th	281.9
1985	7 th	818.6
1986	15 th	674.0
1987	16 th	829.2
1988	16 th	545.8
1989	20 th	576.0
1990	3 rd	1589.2
1991	9 th	860.6
1992	8 th	878.8
1958-92	16 th	9190.6

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

ALL SOURCES

Year	I	II	III	IV	V	VIET NAM
1958-82	BRA 8507.3	IND 6849.4	ARG 5528.2	PAK 5492.7	CHI 5240.1	40 th - 1188.4
1983	EGY 2077.9	PER 1116.8	VIE 948.1	PHI 778.6	IRA 722.1	3 rd - 948.1
1984	EGY 3625.9	PER 1750.4	THA 1094.6	CUB 1028.7	PHI 881.2	24 th - 281.9
1985	EGY 2494.8	PER 1120.7	THA 1117.4	BGD 1068.2	PHI 963.7	7 th - 818.6
1986	EGY 2317.0	BRA 1452.9	THA 1169.4	POL 1050.3	BGD 896.4	15 th - 674.0
1987	HUN 3452.6	EGY 1775.4	THA 1742.4	INS 1312.5	YUG 1223.2	16 th - 829.2
1988	EGY 1486.9	BUL 1361.6	CPR 1278.5	THA 1158.7	BRA 1096.7	16 th - 545.8
1989	CPR 1542.3	EGY 1505.1	THA 1205.3	BRA 1096.5	INS 999.1	20 th - 576.0
1990	POL 2308.1	CPR 2005.0	VIE 1589.2	INS 1412.6	BRA 1229.1	3 rd - 1589.2
1991	INS 1305.2	CPR 975.0	EGY 959.8	BRA 951.2	BUL 934.7	9 th - 860.6
1992	EGY 1586.3	INS 1342.1	CPR 1328.8	MEX 1127.8	POL 1036.4	8 th - 878.8
1958-92	EGY 23808.6	BRA 17736.8	THA 15332.0	INS 13725.9	PER 13129.6	16 th - 9190.6

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

TECHNICAL ASSISTANCE AND CO-OPERATION FUND

Year	I	II	III	IV	V	VIET NAM
1958-82	HUN 2971.7	EGY 2405.8	PAK 2340.5	THA 2000.3	BRA 1983.5	33 rd - 898.4
1983	EGY 1049.4	VIE 897.4	POL 667.8	PAK 498.5	PHI 430.0	2 nd - 897.4
1984	EGY 1197.2	CUB 655.6	ECU 565.6	BGD 506.3	BUL 472.4	30 th - 218.5
1985	BGD 991.8	VIE 745.0	THA 708.7	BRA 571.8	POR 538.7	2 nd - 745.0
1986	BRA 1381.8	THA 871.9	POL 833.5	BGD 823.9	SYR 751.8	9 th - 586.4
1987	HUN 3305.2	DRK 986.8	BUL 888.5	INS 885.8	EGY 878.9	14 th - 659.9
1988	BUL 1195.6	PER 856.5	EGY 768.6	INS 751.7	MAL 656.0	12 th - 470.4
1989	EGY 990.9	CPR 868.2	POR 769.6	CHI 756.9	MAL 619.4	12 th - 514.7
1990	POL 1562.3	VIE 1518.8	DRK 1156.2	IRA 958.0	YUG 933.4	2 nd - 1518.8
1991	BUL 893.1	PAK 868.8	INS 855.1	VIE 817.6	CPR 814.5	4 th - 817.6
1992	EGY 1255.7	CPR 1009.0	VIE 872.8	INS 826.6	IRA 795.5	3 rd - 872.8
1958-92	EGY 10847.0	HUN 8743.7	POL 8486.4	VIE 8199.9	PAK 8115.6	4 th - 8199.9

ASSISTANCE PROVIDED BY THE AGENCY TO VIET NAM

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	48.8	793.6	105.7	-	-	948.1	-	185.8	711.6	3.8	46.9	948.1
1984	22.9	154.3	104.7	-	-	281.9	-	177.6	40.9	19.7	43.7	281.9
1985	44.4	607.0	167.2	-	-	818.6	-	308.1	436.9	70.9	2.7	818.6
1986	53.6	396.4	224.0	-	-	674.0	-	286.1	300.3	25.9	61.7	674.0
1987	54.4	393.2	381.6	-	-	829.2	-	358.4	301.5	24.7	144.6	829.2
1988	36.3	263.6	245.9	-	-	545.8	-	317.1	153.3	(19.8)	95.2	545.8
1989	33.6	308.8	233.6	-	-	576.0	-	369.4	145.3	-	61.3	576.0
1990	116.1	1 060.6	412.5	-	-	1 589.2	-	775.7	743.1	-	70.4	1 589.2
1991	142.9	430.2	287.5	-	-	860.6	-	652.0	165.6	-	43.0	860.6
1992	111.6	572.5	194.1	0.6	-	878.8	-	852.4	20.4	-	6.0	878.8
1983-92	664.6	4 980.2	2 356.8	0.6	-	8 002.2	-	4 282.6	3 018.9	125.2	575.5	8 002.2

TECHNICAL CO-OPERATION PROJECTS IN VIET NAM
BY SECTOR

PROJECTS COMPLETED AND OPERATIONAL 1983 - 1993

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

SECTOR	NO. OF PROJECTS	ALLOTMENTS \$	% OF TOTAL	DISBURSEMENTS \$	% OF TOTAL
General atomic energy development	5	1 196 369	14.1	1 003 754	14.9
Nuclear physics and chemistry	7	345 910	4.1	367 271	5.5
Nuclear raw materials	2	410 233	4.8	261 406	3.9
Nuclear engineering and technology	11	1 759 307	20.8	1 309 477	19.5
Nuclear techniques in agriculture	4	612 441	7.2	625 263	9.3
Nuclear medicine	8	744 053	8.8	481 298	7.1
Nuclear techniques in biology	2	175 600	2.1	58 253	0.9
Nuclear techniques in industry and hydrology	8	2 600 666	30.7	2 092 156	31.1
Nuclear safety	3	631 470	7.4	522 086	7.8
TOTAL	50	8 476 049	100.0	6 720 964	100.0

TECHNICAL CO-OPERATION PROJECTS IN VIET NAM
COMPLETED AND OPERATIONAL, BY SECTOR, 1983 - 1993
(As of 1 March 1993)

Sector	No. of projects	Total project allotments \$	Total project disbursements \$
<u>Completed projects</u>			
General atomic energy development	4	1 006 119	1 003 754
Nuclear physics and chemistry	6	274 885	297 329
Nuclear raw materials	-	-	-
Nuclear engineering and technology	7	1 030 079	979 679
Nuclear techniques in agriculture	3	449 943	450 994
Nuclear medicine	6	363 243	344 323
Nuclear techniques in biology	-	-	-
Nuclear techniques in industry & hydrology	3	428 619	415 515
Nuclear safety	2	151 799	151 322
TOTAL	31	3 704 687	3 642 916
<u>Operational projects</u>			
General atomic energy development	1	190 250	-
Nuclear physics and chemistry	1	71 025	69 942
Nuclear raw materials	2	410 233	261 406
Nuclear engineering and technology	4	729 228	329 798
Nuclear techniques in agriculture	1	162 498	174 269
Nuclear medicine	2	380 810	136 975
Nuclear techniques in biology	2	175 600	58 253
Nuclear techniques in industry & hydrology	5	2 172 047	1 676 641
Nuclear safety	1	479 671	370 764
TOTAL	19	4 771 362	3 078 048

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

FIELD	TOTAL PROJECT ALLOTMENTS				TOTAL PROJECT DISBURSEMENTS			
	EXPERT SERVICES		EQUIPMENT	TRAINING	EXPERT SERVICES		EQUIPMENT	TRAINING
	M/M	\$	\$	\$	M/M	\$	\$	\$
General atomic energy development	14/03	98 415	870 807	227 147	13/16	103 553	863 304	36 897
Nuclear physics and chemistry	10/05	51 280	294 630	-	10/16	67 123	300 148	-
Nuclear raw materials	5/18	54 590	261 632	94 011	2/05	21 147	189 053	51 206
Nuclear engineering and technology	25/06	201 515	1 432 859	124 933	19/04	142 441	1 076 412	90 624
Nuclear techniques in agriculture	10/25	85 920	511 387	15 134	10/21	102 957	507 806	14 500
Nuclear medicine	11/17	109 150	578 853	56 050	7/11	46 107	418 577	16 614
Nuclear techniques in biology	4/00	40 800	88 150	46 650	1/00	10 074	48 179	-
Nuclear techniques in industry & hydrology	26/12	223 420	2 191 246	186 000	17/03	116 127	1 878 466	97 563
Nuclear safety	15/04	124 699	346 820	159 951	13/02	110 949	288 500	122 637
TOTAL	123/00	989 789	6 576 384	909 876	94/18	720 478	5 570 445	430 041

AGENCY FELLOWS FROM VIET NAM

1983 - 1993¹
(As of 1 March 1993)

Sector	No. of fellowships	No. of months/days	Host countries
General atomic energy development	8	29/04	GDR, MAL, USSR, IAEA
Nuclear physics	27	235/16	IND, HUN, AUS, GDR, POL, UKR, ITA, PAK, GER, NET, USSR, IAEA
Nuclear chemistry	28	228/08	HUN, GDR, IND, CZE, POL, INS, NET, UK, USSR, IAEA
Nuclear raw materials	10	73/02	IND, GDR, CZE, CEC
Nuclear engineering and technology	37	245/02	CZE, HUN, SRL, GDR, GER, YUG, AUS, IND, POL, AUL, MEX, IAEA
Nuclear techniques in agriculture	27	166/05	IND, NET, HUN, ITA, YUG, BUL, BGD, FRA, CUB, GDR, UK, USSR, IAEA
Nuclear medicine	9	88/16	IND, HUN, FRA, PAK, THA, USSR
Nuclear techniques in biology	3	24/17	AUS, NET, YUG, BEL, IAEA
Nuclear techniques in industry and hydrology	27	130/14	HUN, IND, FRA, FIN, POL, ITA, THA, INS, AUL, MAL, CPR, JPN, USSR, IAEA
Nuclear safety	31	240/09	HUN, CZE, AUS, TUR, JPN, POL, THA, MOC, GDR, IND, AUL, MAL, FIN, BEL, SIN, PAK, USSR, IAEA
TOTAL	207	1461/03	

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

VIET NAM
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 March 1992)

Name	Field of study	Host country	Date	Duration	Project
TRUONG VAN, MINH	Data processing systems	IAEA	Oct.86 - Sep.87	12/00	VIE/4/003
VUONG MINH QUANG	Economics of atomic energy	GDR	Sep.85 - Sep.86	12/00	VIE/4/005
DAO QUANG, LONG	Neutron activation analysis	USSR	Jun.87 - Dec.88	18/00	-
HOANG THI, NHAN	Analytical nuclear physics	HUN	Jan.85 - Jan.86	12/01	VIE/1/004
LUONG NGOC CHAU	Nuclear physics	USSR	Jun.84 - Dec.85	18/06	VIE/1/003
NGO DANG, NHAN	Reactor physics	HUN	Apr.82 - Jun.83	14/01	VIE/0/002
NGUYEN QUANG, SINH	Reactor physics	POL	May 87 - May 88	12/03	-
NGUYEN TAT, TO	Analytical nuclear physics	BUL	Sep.82 - Sep.83	12/00	-
NGUYEN VAN, DO	Nuclear physics	GDR	Apr.88 - Apr.89	12/00	-
THAI MY, PHE	Analytical nuclear physics	AUS	Sep.86 - Aug.87	12/00	VIE/0/002
TRAN, QUOC DUNG	Reactor physics	HUN	Oct.86 - Oct.87	12/01	VIE/4/005
TRAN, TRUONG	Analytical nuclear physics	AUS	Jan.86 - Jan.87	12/01	VIE/0/002
TRAN DINH, TRI	Reactor physics	HUN	Apr.82 - Oct.83	18/01	VIE/0/002

VIET NAM
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 March 1992)

Name	Field of study	Host country	Date	Duration	Project
TRAN XUAN, QUANG	Analytical nuclear physics	IND	Jan.87 - Jan.88	12/01	VIE/0/002
TRINH VAN, GIAP	Dosimetry	ITA PAK	Nov.89 - Nov.90	12/04	VIE/9/004
VU XUAN, BIET	Analytical nuclear physics	GDR	Oct.85 - Oct.86	12/01	VIE/8/002
LE, HAI	Radiation chemistry	IND	Oct.86 - Oct.87	12/01	VIE/2/003
LE, TAT MUA	Nuclear chemistry	USSR	Jun.87 - Jun.88	12/00	-
LY BA, BACH	Activation analysis	GDR	Nov.84 - Nov.85	12/00	INT/1/018
NGUYEN CONG DUC	Production & control of radiopharmaceuticals	HUN	Oct.85 - Oct.86	12/01	VIE/0/002
NGUYEN VAN SUC	Radioanalytical technique	IND	Nov.90 - Nov.91	12/00	RAS/0/014
PHAM, HOANG HA	Analytical chemistry	HUN	Mar.88 - Mar.89	12/01	VIE/1/005
PHAM MINH, TUAN	Processing of nuclear materials	CZE	Sep.88 - Sep.89	12/00	-
CHAU, LE HA	Nuclear instrumentation	HUN	Apr.87 - Apr.88	12/00	VIE/4/003
DAO MINH, TAM	Nuclear instrumentation	HUN	Aug.88 - Aug.89	12/01	VIE/4/003
DO KHAC, TRINH	Reactor technology	CZE	Sep.83 - Sep.84	12/00	-

VIET NAM
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 March 1992)

Name	Field of study	Host country	Date	Duration	Project
DO VAN, HIEP	Reactor technology	POL	Mar.88 - Mar.89	12/01	VIE/0/002
DOAN MINH, CHUNG	Nuclear instrumentation	HUN	Sep.86 - Sep.87	12/00	-
HO, THAI HA	Nuclear instrumentation	HUN	Mar.85 - Aug.86	18/00	VIE/4/003
HOANG, VAN HUNG	Nuclear chemical engineering	GDR	Mar.87 - Mar.88	12/01	-
LUONG BA, HUNG	Nuclear electronics	HUN	Mar.86 - Mar.87	12/01	VIE/4/002
NGUYEN THI, KHANH	Nuclear instrumentation	HUN	Apr.88 - Apr.89	12/00	VIE/0/002
NGUYEN, VIET ZUNG	Nuclear instrumentation	HUN	May 82 - Sep.83	16/00	VIE/4/003
PHAM NGOC, TUAN	Nuclear instrumentation	GDR	Jun.90 - May 91	12/00	VIE/4/003
TRINH, DINH HAI	Nuclear instrumentation	GDR	Oct.89 - Oct.90	12/01	RAS/0/014
VU, QUOC TRONG	Nuclear instrumentation	HUN	Dec.84 - Dec.85	12/01	VIE/4/003
BUI THI HONG THANH	Plant physiology	IAEA	Apr.88 - Apr.89	12/00	VIE/5/011
LE THI, DINH	Mutation breeding	IND	Dec.83 - Dec.84	12/01	VIE/5/008
NGUYEN TIEN, THINH	Plant breeding	ITA	May 86 - May 87	12/01	VIE/5/008

VIET NAM
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 March 1992)

Name	Field of study	Host country	Date	Duration	Project
PHAM, LE HA	Plant breeding and genetics	BUL	Mar.88 - Mar.89	12/01	-
CHAU, LE MINH	Nuclear medicine	IND	Jul.83 - Jul.84	12/05	VIE/6/011
NGUYEN XUAN, CU	Radiotherapy	HUN	Jan.88 - Jan.89	12/01	-
NGUYEN, THI HOA	Radioimmunoassay	PAK	May 90 - May 91	12/01	RAS/0/014
PHAM THANH, HAI	Nuclear medicine	HUN	Jun.90 - Jun.91	12/00	RAS/0/014
VO, VAN CAN	Nuclear medicine	IND	Jun.87 - Jun.88	12/00	-
TRAN, QUE	Radiation biology	NET	Oct.86 - Oct.87	12/01	-
LE VAN KHOI	Tracer techniques for industrial processes	POL	Sep.86 - Sep.87	12/00	-
LE, TAT DAC	Non-destructive testing	IND	Apr.90 - Apr.91	12/00	RAS/0/014
BUI, QUOC THANG	Safety evaluation	HUN	May 90 - May 91	12/01	RAS/0/014
DANG, THANH LUONG	Radiation protection	CZE	Oct.86 - Oct.87	12/02	VIE/9/003
HA, VAN SON	Radiation protection	GDR	May 90 - Apr.91	12/00	VIE/9/004
HOANG VAN NGUYEN	Radiation protection	CZE	May 86 - May 87	12/01	VIE/0/002

VIET NAM
LONG-TERM FELLOWSHIPS
1983 - 1993
(As of 1 March 1992)

Name	Field of study	Host country	Date	Duration	Project
LE, THI LE MINH	Safety evaluation	HUN	Sep.86 - Sep.87	12/00	-
LE, VAN CONG	Radiation protection	IND	Jan.90 - Jan.91	12/01	VIE/9/004
LUONG BA, VIEN	Safety evaluation	POL	Mar.88 - Mar.89	12/01	-
NGUYEN THANH BINH	Environmental monitoring	USSR	Mar.85 - Sep.86	18/02	VIE/9/003
NGUYEN XUAN, THANG	Environmental monitoring	HUN	Jan.85 - Jan.86	12/01	VIE/9/003
NGUYEN, QUANG LONG	Environmental monitoring	JPN	Jan.87 - Jan.88	12/02	-
PHAM MAI, KHANH	Environmental protection	MOC	Jan.90 - Jan.91	12/01	ras/0/014
TRUONG, VAN MIET	Safety evaluation	USSR	Sep.88 - Sep.89	12/00	-
VUONG THU, BAC	Environmental monitoring	CZE AUS	Jan.90 - Jan.91	12/02	RAS/0/014

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

Name	Field of study	Host country	Date	Duration	Project
LE VAN SO	1. Production of radioisotopes 2. Production of isotopes	HUN AUL	Nov.84 - Mar.85 Sep.92 - Nov.92	4/00 2/00	VIE/0/002 RAS/0/018
LUONG NGOC CHAU	1. Nuclear physics 2. Analytical nuclear physics	USSR GER	Jun.84 - Dec.85 Started: Nov.92	18/06 6/00	VIE/1/003 RAS/0/018
NGUYEN NGOC TICH	1. Neutron activation analysis 2. Neutron activation analysis	HUN NET	Oct.83 - Oct.84 Feb.91 - Aug.91	11/27 5/28	VIE/0/002 RAS/0/018
VUONG MINH QUANG	1. Economics of atomic energy 2. Economic aspects of atomic energy	GDR IAEA	Sep.85 - Sep.86 Oct.88 - Nov.88	12/00 0/26	VIE/4/005 RAS/0/013

AGENCY TRAINING COURSES WITH VIETNAMESE PARTICIPATION

1983 - 1993
(As of 1 March 1993)

Field	Number of participants	Number of courses
General atomic energy development	31	22
Nuclear physics	19	16
Nuclear chemistry	6	5
Nuclear raw materials	5	4
Nuclear engineering and technology	33	29
Nuclear techniques in agriculture	24	17
Nuclear medicine	25	20
Nuclear techniques in biology	9	8
Nuclear techniques in industry & hydrology	54	37
Nuclear safety	26	20
TOTAL	232	178

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

Name	Course No.	Course title	Year	Location
DAC BANG, VO	RAS/8/062 (032) RAS/8/064 (004)	RWS on nucleonic control systems in the steel industry Regional executive management seminar on the application of nucleonic control systems to coal processing operations	1991 1989	JPN THA
DANG, NGUYET ANH	INT/4/102 (001) RAS/0/015 (012)	ITC on interfacing in nuclear experiments RWS on nucleonic control systems in the steel industry	1990 1992	THA CPR
DANG, THANH LUONG	RAS/6/015 (001) RAS/9/006 (004)	RTC on radiation dosimetry RWS on intercomparison for personal dosimeters	1989 1990	CPR JPN
HOANG VAN NGUYEN	RAS/9/006 (004) RAS/9/012 (001)	RWS on intercomparison for personal dosimeters RTC on dosimetric assessment of internal contamination	1990 1992	JPN AUL
NGUYEN DUY HANG	RAS/5/019 (001) RAS/8/061 (074)	RTC on immunoassay techniques in animal production and disease control RWS on industrial sterilization of medical products - regulatory aspects	1990 1990	INS MAL
NGUYEN LE SON	RAS/8/061 (049) RAS/8/061 (105)	RTC on the use of tracer technology in industry RTC on NDT of magnetic particle and liquid penetrant (level III)	1989 1991	MAL INS
NGUYEN MINH CHAU	RAS/8/061 (080) RAS/8/062 (034)	RTC on NDT of surface methods (level II) RWS on image processing in materials science and in NDT	1990 1992	MAL IND
NGUYEN NHAT QUANG	RAS/8/062 (022) RAS/8/062 (026)	RWS on fabrication of NDT test pieces RWS on weld defect sizing using NDT	1990 1991	JPN JPN
NGUYEN QUOC HIEN	INT/4/087 (001) RAS/8/062 (027)	ITC on radiation technology and engineering RTC on radiation chemistry	1986 1991	HUN JPN

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

Name	Course No.	Course title	Year	Location
NGUYEN VAN, DO	INT/1/034 (001)	ITC on basic and applied nuclear physics	1985	ITA
	INT/1/044 (001)	ITC on applied nuclear physics and data measurements at neutron generators	1988	GDR
NGUYEN XUAN, PHACH	INT/6/027 (001)	ITC and study tour on nuclear medicine	1983	USSR
	INT/9/100 (001)	ITC on radioactivity measurements for environmental monitoring purposes	1989	FRA
NGUYEN-THO, NHAN	INT/9/053 (001)	ITC on safety of nuclear power plants and of fuel cycle installations	1984	FRA
	RAS/0/010 (001)	RWS on IAEA technical co-operation practices and procedures	1984	THA
NGUYEN, DONG HAI	INT/0/044 (001)	ITC on energy planning in developing countries with special attention to nuclear energy	1987	FRA
	RAS/0/013 (005)	Fourth RWS on energy, electricity and nuclear power planning	1990	MOR ROK
NGUYEN, TIEN DUNG	INT/4/105 (001)	Advanced ITC on nuclear electronics	1991	MEX
	RAS/4/008 (001)	RWS on maintenance of nuclear medical instruments	1990	IND
NGUYEN, TRI HO	RAS/0/013 (004)	Third RWS on energy, electricity and nuclear power planning	1989	CPR
	RAS/0/013 (006)	RTC on electric system expansion planning	1992	PAK
NGUYEN, VAN DE	INT/4/084 (001)	ITC on qualification of operational personnel	1986	GFR
	RAS/0/013 (003)	RTC on nuclear power project planning and implementation	1989	ROK
NGUYEN, XUAN HONG	INT/5/090 (001)	ITC and study tour on induced mutation techniques in plant breeding	1983	BUL
	RAS/5/021 (005)	Regional RCM on the use of isotopes in studies to improve yield and nitrogen fixation of grain legumes in the tropics and sub-tropics of Asia	1992	USSR CPR

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

Name	Course No.	Course title	Year	Location
PHAM QUANG NGOC	RAS/7/003 (001)	RTC on radiation sterilization of tissue grafts for safe clinical use in health care	1988	CPR
	RAS/7/003 (003)	RTC on radiation sterilization of tissue grafts for clinical use in health care	1990	ROK
PHAN, NHU NGOC	INT/1/031 (001)	Study tour on the utilization of low-energy accelerators	1985	GFR HUN ITA USSR GDR
	INT/1/044 (001)	ITC on applied nuclear physics and data measurements at neutron generators	1988	
TRAN KHAC AN	INT/4/071 (001)	ITC on research reactor operation	1984	HUN
	INT/4/100 (001)	ITC on interfacing in nuclear experiments	1989	THA
TRAN TICH CANH	RAS/8/061 (048)	RTC on industrial radiation sterilization - quality control and sterility assurance	1989	THA
	RAS/8/061 (073)	RTC on industrial radiation sterilization - quality control and sterility assurance	1990	THA
	RAS/8/061 (104)	RWS on industrial sterilization - regulatory aspects	1991	THA
TRAN, BAC HAI	RAS/7/003 (002)	RWS on radiation and nuclear techniques for sterilization and clinical quality control of tissue grafts in tissue banking	1989	THA
	RAS/8/061 (077)	RTC on industrial radiation sterilization - quality control and compatibility of materials	1990	IND
VO VAN, THUAN	RAS/8/061 (102)	RTC on radiation crosslinking technology	1990	CPR
	RAS/8/062 (015)	RWS on radiation engineering - electron beam facilities	1989	JPN

PROJECTS COMPLETED IN VIET NAM SINCE 1983
(As of 1 March 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1983	VIE/0/002	Nuclear institute development	9/29	67 920	830 986	30 956	10/06	65 835	830 986	30 956	1992
1986	VIE/0/003	Nuclear information centre	0/29	6 815	22 251	-	0/29	10 164	22 250	-	1989
1987	VIE/0/004	Preparatory studies for a nuclear power project	2/13	17 370	10 000	-	1/19	19 277	3 749	-	1989
1989	VIE/0/005	Nuclear information centre	0/22	6 310	7 570	5 941	0/22	8 277	6 319	5 941	1992
1979	VIE/1/003	Nuclear physics	2/00	7 600	54 000	-	1/23	10 411	58 406	-	1983
1980	VIE/1/004	Nuclear physics teaching	2/00	8 400	101 500	-	2/13	12 841	101 289	-	1983
1982	VIE/1/005	Nuclear physics (Dalat University)	1/29	10 620	32 200	-	1/29	11 712	32 394	-	1989
1982	VIE/1/006	Nuclear physics (Hanoi University)	1/00	5 400	25 000	-	1/04	7 156	26 890	-	1983
1987	VIE/1/007	Experimental nuclear physics	1/06	8 460	-	-	1/06	14 184	-	-	1989

PROJECTS COMPLETED IN VIET NAM SINCE 1983
(As of 1 March 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1982	VIE/2/003	Radiation polymerization	2/00	10 800	10 905	-	2/01	10 819	11 227	-	1989
1981	VIE/4/002	Nuclear electronics laboratory	6/00	28 800	54 500	-	6/10	33 968	54 334	-	1983
1983	VIE/4/003	Nuclear instrumentation	1/00	7 200	121 149	24 120	1/00	7 134	121 595	24 605	1991
1983	VIE/4/004	Nuclear fuel for research reactor	-	-	600 000	-	-	-	550 657	-	1984
1985	VIE/4/005	Nuclear manpower development	1/00	6 900	-	-	0/18	7 008	-	-	1986
1987	VIE/4/006	Computer centre for reactor physics	0/14	3 360	36 400	-	0/14	3 449	36 382	-	1990
1988	VIE/4/007	Nuclear instrumentation and microcomputer applications	1/20	12 865	55 525	-	1/17	12 704	51 306	-	1991
1988	VIE/4/008	Nuclear track detectors	2/04	17 760	61 500	-	2/09	17 466	59 071	-	1991
1979	VIE/5/008	Plant mutation breeding	1/00	3 800	151 923	-	0/28	5 759	151 888	-	1985

PROJECTS COMPLETED IN VIET NAM SINCE 1983
(As of 1 March 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1985	VIE/5/010	Isotope techniques in soil-plant studies	1/00	6 900	-	-	0/19	3 061	-	-	1985
1987	VIE/5/011	Isotope techniques in soil-plant studies	4/15	37 920	249 400	-	4/15	40 447	249 839	-	1992
1980	VIE/6/010	Nuclear medicine	-	-	59 700	-	-	-	61 675	-	1983
1983	VIE/6/011	Radioisotopes in medicine	3/00	18 600	45 061	-	3/04	16 471	45 059	-	1989
1984	VIE/6/012	Nuclear medicine (Hue)	1/22	27 440	79 400	-	1/22	5 877	79 040	-	1991
1986	VIE/6/013	Nuclear medicine (Dalat)	0/16	3 680	-	-	0/16	3 876	-	-	1989
1988	VIE/6/015	Nuclear medicine (Lam Dong Hospital)	1/09	10 530	44 982	-	1/09	13 501	44 840	-	1992
1989	VIE/6/016	Technetium-99m production and quality control	1/00	8 100	61 200	4 550	0/20	6 382	63 051	4 551	1991
1980	VIE/8/002	Nuclear techniques in metallurgy	2/00	11 600	130 000	-	1/29	10 124	127 173	-	1985

**PROJECTS COMPLETED IN VIET NAM SINCE 1983
(As of 1 March 1993)**

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS				COMPLETED
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING	
			M/M	\$	\$	\$	M/M	\$	\$	\$	
1984	VIE/8/005	Non-destructive testing	2/29	20 935	145 714	7 235	2/29	15 666	145 906	6 654	1992
1989	VIE/8/006	Non-destructive testing	1/08	10 760	102 375	-	1/08	7 762	102 230	-	1992
1981	VIE/9/003	Radiation monitoring	2/15	12 300	105 900	-	2/12	11 300	106 649	-	1984
1989	VIE/9/005	Underwater inspection of Dalat nuclear research reactor	2/06	17 879	15 720	-	2/06	18 037	15 336	-	1990
	TOTAL	31 projects	61/16	417 024	3 214 861	72 802	60/17	410 668	3 159 541	72 707	

OPERATIONAL PROJECTS IN VIET NAM
(As of 1 March 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	VIE/0/006	Manpower development	-	-	-	190 250	-	-	-	-
1989	VIE/1/008	Nuclear analytical services	-	-	71 025	-	-	-	69 942	-
1986	VIE/3/002	Nuclear analytical techniques for prospection	2/18	22 640	186 632	72 561	2/05	21 147	187 038	51 206
1993	VIE/3/003	Uranium ore processing laboratory	3/00	31 950	75 000	21 450	-	-	2 015	-
1989	VIE/4/009	Design and production of nuclear instruments	1/00	8 850	111 460	20 093	0/29	8 892	89 517	16 237
1991	VIE/4/010	Renovation of the Dalat reactor control system	7/00	67 800	251 125	53 800	4/00	32 681	36 323	41 650
1991	VIE/4/011	Service facilities for radiation detectors	2/28	26 830	86 200	26 920	1/27	19 139	76 959	8 132
1993	VIE/4/012	Nuclear instrumentation services	2/00	21 150	55 000	-	-	-	268	-
1989	VIE/5/012	Animal science	4/10	37 300	110 064	15 134	4/19	53 690	106 079	14 500
1991	VIE/6/017	Development of nuclear medicine in South Viet Nam	2/00	18 600	138 510	25 700	-	-	124 912	12 063

OPERATIONAL PROJECTS IN VIET NAM
(As of 1 March 1993)

STARTED	PROJECT NO.	TITLE	ALLOTMENTS				DISBURSEMENTS			
			EXPERTS		EQUIPMENT	TRAINING	EXPERTS		EQUIPMENT	TRAINING
			M/M	\$	\$	\$	M/M	\$	\$	\$
1993	VIE/6/018	Upgrading brachytherapy services (Ho Chi Minh City)	2/00	22 200	150 000	25 800	-	-	-	-
1991	VIE/7/002	Analysis of environmental samples	2/00	19 650	53 150	22 050	1/00	10 074	48 179	-
1993	VIE/7/003	Haematological laboratory for radiation injury	2/00	21 150	35 000	24 600	-	-	-	-
1982	VIE/8/003	Isotope hydrology	6/05	39 950	165 488	38 932	6/19	37 821	164 672	40 407
1984	VIE/8/004	Food irradiation	4/00	32 175	1 287 669	40 883	2/29	26 139	1 262 463	33 440
1991	VIE/8/007	Establishment of sedimentology laboratory	3/00	30 450	115 000	49 150	1/09	18 615	76 022	13 513
1993	VIE/8/008	Nuclear techniques for groundwater pollution protection	3/00	34 200	155 000	12 000	-	-	-	3 549
1993	VIE/8/009	NDT for industrial and engineering non-metallic products	4/00	43 350	90 000	37 800	-	-	-	-
1989	VIE/9/004	Radiation protection development	10/13	94 520	225 200	159 951	8/14	81 612	166 515	122 637
	TOTAL	19 projects	61/14	572 765	3 361 523	837 074	34/01	309 810	2 410 904	357 334

COUNTERPART INSTITUTIONS IN VIET NAM (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>GENERAL ATOMIC ENERGY DEVELOPMENT</u>		
VIE/0/002	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGO QUANG
VIE/0/003	Vietnam National Atomic Energy Institute, Nuclear Applications Research Centre, Ho Chi Minh Ville	THUONG
VIE/0/004	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN-THO
VIE/0/005	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN HOANG ANH
VIE/0/006	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN TIEN NGUYEN
<u>NUCLEAR PHYSICS AND CHEMISTRY</u>		
VIE/1/003	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	HIEN
VIE/1/004	Polytechnical Institute of Hanoi, Hanoi	NGUYEN QUANG
VIE/1/005	University of Dalat, Nuclear Physics Laboratory, Dalat	TRAN
VIE/1/006	Hanoi University, Department of Nuclear Physics, Hanoi	DAC BANG
VIE/1/007	Vietnam National Atomic Energy Commission, Hanoi	VO KIM THANH
VIE/1/008	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN, T.A.
VIE/2/003	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN, M.S.

COUNTERPART INSTITUTIONS IN VIET NAM (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR RAW MATERIALS</u>		
VIE/3/002	Vietnam National Atomic Energy Commission, Hanoi	HUYNH VAN TRUNG
VIE/3/003	Vietnam National Atomic Energy Commission, Institute of Technology of Radioactive and Rare Earth Elements, Hanoi	THAI BA
<u>NUCLEAR ENGINEERING AND TECHNOLOGY</u>		
VIE/4/002	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	TON-THAT
VIE/4/003	1. Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat 2. University of Dalat, Dalat	TON-THAT -
VIE/4/004	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGO QUANG
VIE/4/005	National Institute for Nuclear Research, Hanoi	NGUYEN-THO
VIE/4/006	1. Vietnam National Atomic Energy Commission, Hanoi 2. Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN TIEN NGUYEN -
VIE/4/007	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN, H.X.
VIE/4/008	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN XUAN
VIE/4/009	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	TON-THAT

COUNTERPART INSTITUTIONS IN VIET NAM (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR ENGINEERING AND TECHNOLOGY (cont'd)</u>		
VIE/4/010	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	TRAN HA ANH
VIE/4/011	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN XUAN
VIE/4/012	Vietnam National Atomic Energy Commission, Institute of Nuclear Science and Technology, Hanoi	NGUYEN PHUC
<u>AGRICULTURE</u>		
VIE/5/008	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	LE DAC LIEU
VIE/5/010	Institute of Food Crops, Tu Loc	VU TUYEN HOANG
VIE/5/011	Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville	VO TONG XUAN LE DAC LIEU
VIE/5/012	Ministry of Agriculture, Institute of Agricultural Sciences of South Viet Nam Ho Chi Minh Ville	LE XUAN CUONG
<u>NUCLEAR MEDICINE</u>		
VIE/6/010	Bach Mai University Hospital, Department of Nuclear Medicine, Hanoi	PHAN VAN DUYET
VIE/6/011	Bach Mai University Hospital, Department of Nuclear Medicine, Hanoi	PHAN VAN DUYET
VIE/6/012	Hue Medical University, Department of Nuclear Medicine, Hue	VO

COUNTERPART INSTITUTIONS IN VIET NAM (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR MEDICINE (cont'd)</u>		
VIE/6/013	Lam Dong Provincial Hospital, Dalat	VO-NGAN
VIE/6/015	Lam Dong Provincial Hospital, Dalat	VO-NGAN
VIE/6/016	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	LE VAN SO
VIE/6/017	Cho-Ray Hospital, Department of Nuclear Medicine, Ho Chi Minh Ville	TRINH
VIE/6/018	1. Saigon Cancer Centre, Ho Chi Minh Ville 2. Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN CHANG HUNG LE VAN SO
<u>NUCLEAR TECHNIQUES IN BIOLOGY</u>		
VIE/7/002	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN, M.S.
VIE/7/003	Vietnam National Atomic Energy Institute, Radiation Health Department, Hanoi	TRAN MINH VINH
<u>NUCLEAR TECHNIQUES IN INDUSTRY AND HYDROLOGY</u>		
VIE/8/002	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN HY
VIE/8/003	Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville	TRAN KIM THACH NGUYEN, T.V.
VIE/8/004	Vietnam National Atomic Energy Commission, Hanoi	NGUYEN VAN CHAU

COUNTERPART INSTITUTIONS IN VIET NAM (I)
(By Project)

<u>Project No.</u>	<u>Institute</u>	<u>Counterpart(s)</u>
<u>NUCLEAR TECHNIQUES IN INDUSTRY AND HYDROLOGY (cont'd)</u>		
VIE/8/005	Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville	NGUYEN DANG
VIE/8/006	1. Vietnam National Atomic Energy Commission, Laboratory of Industrial Application of Nuclear Techniques, Hanoi 2. Institute of Technical Physics, Hanoi	NGUYEN NGUYEN DAC BANG
VIE/8/007	1. Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville 2. Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	PHAM ZUY HIEN PHAM NGOC C.
VIE/8/008	Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville	LE VAN KHOI
VIE/8/009	Vietnam National Atomic Energy Commission, Centre for Nuclear Techniques, Ho Chi Minh Ville	NGUYEN DANG
<u>NUCLEAR SAFETY</u>		
VIE/9/003	National Institute for Nuclear Research, Hanoi	HIEN
VIE/9/004	1. Vietnam National Atomic Energy Commission, Hanoi 2. Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGUYEN DINH TU TRAN HA ANH
VIE/9/005	Vietnam National Atomic Energy Commission, Dalat Nuclear Research Institute, Dalat	NGO QUANG

COUNTERPART INSTITUTIONS IN VIET NAM (II)
(By Institute)

HANOI

Vietnam National Atomic Energy Commission
Hanoi

VIE/0/004	Preparatory Studies for a Nuclear Power Project
VIE/0/005	Nuclear Information Centre
VIE/0/006	Manpower Development
VIE/1/007	Experimental Nuclear Physics
VIE/3/002	Nuclear Analytical Techniques for Prospection
VIE/4/006	Computer Centre for Reactor Physics
VIE/4/007	Nuclear Instrumentation and Microcomputer Applications
VIE/4/008	Nuclear Track Detectors
VIE/4/011	Service Facilities for Radiation Detectors
VIE/8/004	Food Irradiation
VIE/9/004	Radiation Protection Development

Vietnam National Atomic Energy Commission
Institute of Technology of Radioactive and Rare Earth Elements
Hanoi

VIE/3/003	Uranium Ore Processing Laboratory
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Vietnam National Atomic Energy Commission
Institute of Nuclear Science and Technology
Hanoi

VIE/4/012	Nuclear Instrumentation Services
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Vietnam National Atomic Energy Commission
Laboratory of Industrial Application of Nuclear Techniques
Hanoi

VIE/8/006	Non-Destructive Testing
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Polytechnical Institute of Hanoi
Hanoi

VIE/1/004	Nuclear Physics Teaching
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COUNTERPART INSTITUTIONS IN VIET NAM (II)
(By Institute)

HANOI (cont'd)

Hanoi University
Department of Nuclear Physics
Hanoi

VIE/1/006 Nuclear Physics

National Institute for Nuclear Research
Hanoi

VIE/4/005 Nuclear Manpower Development
VIE/9/003 Radiation Monitoring

Bach Mai University Hospital
Department of Nuclear Medicine
Hanoi

VIE/6/010 Nuclear Medicine
VIE/6/011 Radioisotopes in Medicine

Vietnam National Atomic Energy Institute
Radiation Health Department
Hanoi

VIE/7/003 Haematological Laboratory for Radiation Injury

Institute of Technical Physics
Hanoi

VIE/8/006 Non-Destructive Testing

COUNTERPART INSTITUTIONS IN VIET NAM (II)
(By Institute)

DALAT

Vietnam National Atomic Energy Commission
Dalat Nuclear Research Institute
Dalat

VIE/0/002	Nuclear Institute Development
VIE/1/003	Nuclear Physics
VIE/1/008	Nuclear Analytical Services
VIE/2/003	Radiation Polymerization
VIE/4/002	Nuclear Electronics Laboratory
VIE/4/003	Nuclear Instrumentation
VIE/4/004	Nuclear Fuel for Research Reactor
VIE/4/006	Computer Centre for Reactor Physics
VIE/4/009	Design and Production of Nuclear Instruments
VIE/4/010	Renovation of the Dalat Reactor Control System
VIE/5/008	Plant Mutation Breeding
VIE/6/016	Technetium-99m Production and Quality Control
VIE/6/018	Upgrading Brachytherapy Services
VIE/7/002	Analysis of Environmental Samples
VIE/8/002	Nuclear Techniques in Metallurgy
VIE/8/007	Establishment of Sedimentology Laboratory
VIE/9/004	Radiation Protection Development
VIE/9/005	Underwater Inspection of Dalat Nuclear Research Reactor

University of Dalat
Dalat

VIE/4/003	Nuclear Instrumentation
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University of Dalat
Nuclear Physics Laboratory
Dalat

VIE/1/005	Nuclear Physics
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Lam Dong Provincial Hospital
Dalat

VIE/6/013	Nuclear Medicine
VIE/6/015	Nuclear Medicine

COUNTERPART INSTITUTIONS IN VIET NAM (II)
(By Institute)

HO CHI MINH VILLE

**Vietnam National Atomic Energy Commission
Centre for Nuclear Techniques
Ho Chi Minh Ville**

VIE/5/011	Isotope Techniques in Soil-Plant Studies
VIE/8/003	Isotope Hydrology
VIE/8/005	Non-Destructive Testing
VIE/8/007	Establishment of Sedimentology Laboratory
VIE/8/008	Nuclear Techniques for Groundwater Pollution Protection
VIE/8/009	NDT for Industrial and Engineering Non-Metallic Products

**Vietnam National Atomic Energy Institute
Nuclear Applications Research Centre
Ho Chi Minh Ville**

VIE/0/003	Nuclear Information Centre
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**Ministry of Agriculture
Institute of Agricultural Sciences of South Viet Nam
Ho Chi Minh Ville**

VIE/5/012	Animal Science
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**Cho-Ray Hospital
Department of Nuclear Medicine
Ho Chi Minh Ville**

VIE/6/017	Development of Nuclear Medicine in South Viet Nam
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**Saigon Cancer Centre
Ho Chi Minh Ville**

VIE/6/018	Upgrading Brachytherapy Services
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COUNTERPART INSTITUTIONS IN VIET NAM (II)
(By Institute)

HUE

Hue Medical University
Department of Nuclear Medicine
Hue

VIE/6/012 Nuclear Medicine

TU LOC

Institute of Food Crops
Tu Loc

VIE/5/010 Isotope Techniques in Soil-Plant Studies

**THE AGENCY'S TECHNICAL CO-OPERATION PROGRAMME WITH
VIET NAM
SINCE 1983**

LONG-TERM EXPERT ASSIGNMENTS

NONE

RESEARCH CONTRACTS/AGREEMENTS IN VIET NAM SINCE 1983 ¹
(As of 1 March 1993)

Field of activity	No. of contracts/ agreements	Amount allocated \$
Nuclear physics	2	14 500
Nuclear chemistry	4	29 900
Nuclear raw materials	1	10 778
Nuclear engineering and technology	4	38 500
Nuclear techniques in agriculture	14	123 000
Nuclear medicine	3	22 000
Nuclear techniques in biology	2	11 000
Nuclear techniques in industry & hydrology	1	15 500
Safety in nuclear energy	7	68 500
TOTAL	38	333 678

¹/ New awards since 1983

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

Name	No. of assignments	Project(s)
DANG, THANH LUONG	1	RAS/9/006
DOAN BINH	1	RAS/0/015
HA QUANG THUY	1	RAS/4/008
HA-VINH, PHUONG	4	MOR/0/002, TUN/0/004, VIE/0/004
HIEN, PHAM DUY	1	RAS/0/015
HOANG VAN NGUYEN	3	RAS/9/006, VIE/9/004
LE VAN SO	1	RAS/0/015
LE XUAN CUONG	1	VIE/5/012
NGO QUANG, HUY	3	RAS/8/061
NGUYEN ANH TUAN	2	RAS/6/011, RAS/6/018
NGUYEN DANG, NHUAN	1	RAS/8/061
NGUYEN DINH TU	1	RAS/8/062
NGUYEN HONG, PHAN	1	RAS/0/013
NGUYEN MANH LIEN	1	RAS/9/006
NGUYEN QUOC HIEN	4	RAS/0/015, RAS/8/062
NGUYEN TIEN NGUYEN	1	VIE/4/006
NGUYEN VAN HUNG	1	VIE/9/004
NGUYEN VAN MAI	1	VIE/9/004
NGUYEN VAN NGOC	1	VIE/3/002
NGUYEN XUAN QUI	1	VIE/9/004
NGUYEN-THO, NHAN	2	RAS/0/012, RAS/8/062
NGUYEN, HUU XI	3	INT/4/054, RAS/4/008
PHAM NGOC CHUONG	1	RAS/8/061

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

Name	No. of assignments	Project(s)
PHAM QUANG NGOC	1	RAS/7/003
PHAM ZUY HIEN	2	INT/0/045, INT/0/048
PHAM, QUOC TRINH	3	INT/9/064, RAS/9/006
PHAN VAN DUYET	2	RAS/6/011
TRAN, BAC HAI	1	RAS/7/003
VU, QUOC TRONG	1	INT/4/113
TOTAL	47	

**REGIONAL AND INTERREGIONAL TRAINING EVENTS
HOSTED BY VIET NAM
1983 - 1993
(As of 1 March 1993)**

Course No.	Course Title	Partici- pants	Year
RAS/4/012 (004)	RWS on evaluation of modern spectroscopy amplifiers	5	1993
	TOTAL	5	

**AGENCY FELLOWSHIPS AND SCIENTIFIC VISITS
HOSTED BY VIET NAM
1983 - 1993
(As of 1 March 1993)**

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

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