



Annex

TABLE A1. ALLOCATION AND UTILIZATION OF REGULAR BUDGET RESOURCES IN 2000

Programme	2000	2000	2000 total expenditure		Unused (overexpended) budget (2) – (3) (5)
	budget GC(43)/6 (at AS 12.70) (1)	adjusted budget (at AS 14.8635) (2)	Amount (3)	% of revised budget (3) / (2) (4)	
Nuclear Power	4 399 000	3 913 000	3 903 485	99.76%	9 515
Nuclear Fuel Cycle and Waste Technology	5 310 000	4 745 000	4 686 198	98.76%	58 802
Comparative Assessment of Energy Sources	2 805 000	2 499 000	2 492 653	99.75%	6 347
Subtotal	12 514 000	11 157 000	11 082 336	99.33%	74 664
Food and Agriculture	10 685 000	9 656 000	9 554 071	98.94%	101 929
Human Health	6 035 000	5 474 000	5 470 525	99.94%	3 475
Marine Environment, Water Resources and Industry	6 553 000	5 836 000	5 759 160	98.68%	76 840
Physical and Chemical Sciences	8 845 000	8 097 000	8 273 873	102.18%	(176 873)
Subtotal	32 118 000	29 063 000	29 057 629	99.98%	5 371
Nuclear Safety	5 724 000	5 041 000	5 217 968	103.51%	(176 968)
Radiation Safety	3 576 000	3 164 000	3 394 319	107.28%	(230 319)
Radioactive Waste Safety	2 199 000	1 939 000	1 823 867	94.06%	115 133
Co-ordination of Safety Activities	3 101 000	2 772 907 ^a	2 480 753	89.46%	292 154
Subtotal	14 600 000	12 916 907	12 916 907	100.00%	0
Safeguards	80 486 000	70 608 000	70 617 231	100.01%	(9 231)
Security of Material	1 082 000	950 000	861 111	90.64%	88 889
Subtotal	81 568 000	71 558 000	71 478 342	99.89%	79 658
Management of Technical Co-operation for Development	12 851 000	11 234 000	11 070 820	98.55%	163 180
Subtotal	12 851 000	11 234 000	11 070 820	98.55%	163 180
Management, Co-ordination and Support					
Executive Management	5 137 000	4 492 000	4 357 622	97.01%	134 378
Policy-making Organs	6 461 000	5 681 000	5 594 290	98.47%	86 710
Legal Activities, External Relations and Public Information	6 888 000	6 047 093 ^a	5 486 896	90.74%	560 197
Administration	12 808 000	11 203 000	10 735 438	95.83%	467 562
General Services	22 770 000	19 621 000	18 260 762	93.07%	1 360 238
Information Management and Support Services	14 003 000	12 262 000	12 292 544	100.25%	(30 544)
Subtotal	68 067 000	59 306 093	56 727 552	95.65%	2 578 541
TOTAL — Agency Programmes	221 718 000	195 235 000	192 333 586	98.51%	2 901 414
Plus: Reimbursable Work for Others	4 609 000	4 028 000	4 091 275	101.57%	(63 275)
Total Regular Budget	226 327 000	199 263 000	196 424 861	98.58%	2 838 139

^a Based on Board of Governors document GOV/1999/15, an amount of \$45 907 was transferred from Programme Q "Legal Activities, External Relations and Public Information" to Subprogramme K.2 "Safety Conventions" in order to cover the cost of emergency assistance provided to Peru, Thailand and Japan (Tokaimura).

TABLE A2. EXTRABUDGETARY FUNDS IN 2000 — RESOURCES AND EXPENDITURES

Programme	2000	Resources available ¹ in 2000	Expenditure during 2000	Unused balance as at 31 December 2000 (2) – (3) (4)
	extrabudgetary budget figures GC(43)/6 (1)			
Nuclear Power	360 000	327 019	90 194	236 825
Nuclear Fuel Cycle and Waste Technology	350 000	1 201 244	673 718	527 526
Comparative Assessment of Energy Sources	0	321 989	204 455	117 534
Subtotal	710 000	1 850 252	968 367	881 885
Food and Agriculture	3 994 000 ²	3 374 896	2 929 469	445 427
Human Health	40 000	398 812	106 655	292 157
Marine Environment, Water Resources and Industry	782 000	1 732 553	691 379	1 041 174
Physical and Chemical Sciences	0	98 900	13 485	85 415
Subtotal	4 816 000	5 605 161	3 740 988	1 864 173
Nuclear Safety	2 030 000	5 152 280	1 811 632	3 340 648
Radiation Safety	185 000	524 142	284 662	239 480
Radioactive Waste Safety	0	408 383	253 480	154 903
Co-ordination of Safety Activities	128 000	190 440	116 774	73 666
Subtotal	2 343 000	6 275 245	2 466 548	3 808 697
Safeguards	3 674 000	19 205 235	10 311 459	8 893 776
Security of Material	893 000	1 597 507	847 885	749 622
Verification in Iraq pursuant to UNSC Resolutions	3 000 000	2 139 077	1 639 859	499 218
Subtotal	7 567 000	22 941 819	12 799 203	10 142 616
Management of Technical Co-operation for Development	200 000	654 052	364 905	289 147
Subtotal	200 000	654 052	364 905	289 147
Management, Co-ordination and Support				
Services for Policy Making Organs	0	8 554	3 110	5 444
Legal Activities, External Relations and Public Information	620 000	1 392 445	562 024	830 421
Administration	0	4 711	2 007	2 704
Subtotal	620 000	1 405 710	567 141	838 569
Agency's Programmes	16 256 000	38 732 239	20 907 152	17 825 087

¹ The column "Resources available in 2000" includes cash contributions received as well as the unused balances as at 1 January 2000 and cash due from UNEP for approved activities.

² The FAO budget includes \$893 952 estimated costs for FAO professional staff working in the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture. The salaries of the staff members are paid by FAO and are not included in columns 2 and 3.

TABLE A3. **INTERNATIONAL PROBABILISTIC SAFETY ASSESSMENT REVIEW TEAM (IPSART) MISSIONS IN 2000**

Review Type	Nuclear power plant	Country
Updated level 1/2 PSA	Krško	Slovenia
Level 1 and 2 PSA	Jose Cabrera	Spain
Level 1 PSA	South Ukraine	Ukraine
Level 1 PSA	Ignalina	Lithuania
Risk scoping study	High Flux Research Reactor	Netherlands
Follow-up	Tianwan WWER 1000 (China)	Russian Federation

TABLE A4. **OPERATIONAL SAFETY REVIEW TEAM (OSART) MISSIONS IN 2000**

Type	Nuclear power plant	Type	Country
Full OSART	Bellefonte	PWR	France
Full OSART	Muehleberg	BWR	Switzerland
Full OSART	North Anna	PWR	USA
Reduced scope OSART	Temelin	WWER	Czech Republic
OSART follow-up	Golfech	PWR	France
OSART follow-up	Asco	PWR	Spain
OSART follow-up	Khmelnitsky	WWER	Ukraine

TABLE A5. **PEER REVIEW OF OPERATIONAL SAFETY PERFORMANCE EXPERIENCE (PROSPER) MISSIONS IN 2000**

Type	Plant/location	Country
Pilot mission	Hartlepool	United Kingdom
Workshop	Kanupp	Pakistan
Workshop	Khmelnitsky	Ukraine
Workshop	VATESI	Lithuania
Introductory seminar	VNIIAES	Russian Federation

TABLE A6. **SAFETY CULTURE ENHANCEMENT PROGRAMME (SCEP) ACTIVITIES IN 2000**

Type	Plant/location	Country
Workshop	Mochovce	Slovakia
Workshop	KFKI, Budapest	Hungary
Workshop	Daya Bay	China
Assistance visit	Laguna Verde	Mexico
Workshop	Laguna Verde	Mexico
Seminar	INB, Resende	Brazil
Seminar	SKI, Stockholm	Sweden

TABLE A7. **ENGINEERING SAFETY REVIEW SERVICE (ESRS) MISSIONS IN 2000**

Service	Site/plant	Country
Design safety review	Koeberg PBMR	South Africa
Design safety review	Bushehr	Is. Rep. of Iran
Site safety review preparatory mission	Roopur	Bangladesh
Site safety review follow-up	Muria	Indonesia
Instrumentation and control review mission	Tianwan	China
Review of regulatory/safety aspects of feasibility study for desalination	El-Dabaa	Egypt
Review of safety and regulatory requirements and guidance	Korea Next Generation Reactor	Korea, Rep. of
Seismic safety review follow-up	Maamora Centre d'Etudes Nucléaires	Morocco
Seismic safety review follow-up	TR-2 research reactor	Turkey
Seismic safety review	Cernavoda	Romania
Seismic safety review follow-up	Yerevan	Armenia
PSAR review assistance	Bushehr	Is. Rep. of Iran
Review of modernization programme	Units 5 and 6 of Kozloduy	Bulgaria

TABLE A8. **INTEGRATED SAFETY OF RESEARCH REACTORS (INSARR) MISSIONS IN 2000**

Research reactor	Country
HOR Research Reactor, Delft	Netherlands
Maria Research Reactor, Warsaw	Poland

TABLE A9. **SAFETY REVIEW MISSIONS IN 2000 TO RESEARCH REACTORS UNDER PROJECT AND SUPPLY AGREEMENTS**

Research reactor/location	Country
IAN-R1, Bogota	Colombia
Trico II, Kinshasa	Democratic Republic of the Congo
TRIGA Mark II, Bandung	Indonesia
Triga Puspati (RTP), Kuala Lumpur	Malaysia
MA-R1, Rabat	Morocco
PRR-1, Quezon City	Philippines
TRR-1/M1, Bangkok	Thailand
Dalat	Viet Nam

TABLE A10. **INTERNATIONAL REGULATORY REVIEW TEAM (IRRT) MISSIONS IN 2000**

Type of mission	Country
Reduced scope	Czech Republic
Full scope	Finland
Full scope	Hungary
Full scope	China
Preparatory meeting	Mexico

TABLE A11. **PEER REVIEWS OF RADIATION SAFETY INFRASTRUCTURE**

Country	Type of mission
Albania	Review of Model Project milestones
China	RCA review
Dominican Republic	Review of Model Project milestones
Estonia	Review of Model Project milestones
Ghana	Review of Model Project milestones
Guatemala	Review of Model Project milestones
Indonesia	RCA review
Ireland	Radiation safety regulation infrastructure mission
Jordan	Review of Model Project milestones
Kazakhstan	Review of Model Project milestones
Korea, Republic of	RCA review
Latvia	Review of Model Project milestones
Lithuania	Review of Model Project milestones
Malaysia	RCA review
Mongolia	Review of Model Project milestones
Myanmar	Review of Model Project milestones
Namibia	Review of Model Project milestones
Niger	Review of Model Project milestones
Pakistan	RCA review
Panama	Review of Model Project milestones
Singapore	RCA review
Sri Lanka	Review of Model Project milestones
Sudan	Review of Model Project milestones
Yemen	Review of Model Project milestones

TABLE A12. **NUMBER OF STATES HAVING SIGNIFICANT NUCLEAR ACTIVITIES AT THE END OF 1998, 1999 AND 2000**

	Number of States		
	1998	1999	2000
States with safeguards applied under NPT or NPT/Tlatelolco agreements	58 ^a	60	60
States with safeguards applied under Tlatelolco agreements	1	1	1
States with safeguards applied pursuant to other comprehensive safeguards agreements	0	0	0
States with safeguards applied under INFCIRC/66/Rev.2-type agreements ^b	4	4	4
Nuclear weapon States with safeguards applied under voluntary offer agreements	5	5	5
States without any safeguards agreement in force	1	1	1
Total number of States with significant nuclear activities^c	69	71	71

^a This excludes Iraq, where safeguards activities continued to be subsumed under activities carried out pursuant to United Nations Security Council Resolution 687.

^b Some States with INFCIRC/66/Rev.2-type agreements under which the application of safeguards has not yet been suspended, although NPT or other comprehensive safeguards agreements have entered into force, are listed under NPT agreements only. Nuclear weapon States with INFCIRC/66/Rev.2-type agreements in force are not included. Safeguards are also applied to nuclear installations in Taiwan, China.

^c According to information available to the Agency for the year in question.

TABLE A13. **SITUATION ON 31 DECEMBER 2000 WITH RESPECT TO THE CONCLUSION OF SAFEGUARDS AGREEMENTS BETWEEN THE AGENCY AND NON-NUCLEAR-WEAPON STATES IN CONNECTION WITH NPT**

Non-nuclear-weapon States which have signed, ratified, acceded to or succeeded to NPT ^a (1)	Date of ratification, accession or succession (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
Afghanistan	4 February 1970	In force: 20 February 1978	257
Albania ^b	12 September 1990		
Algeria	12 January 1995	In force: 7 January 1997	531
Andorra	7 June 1996	Approved 7 December 2000	
Angola	14 October 1996		
Antigua and Barbuda ^c	27 November 1968	In force: 9 September 1996	528
Argentina ^d	10 February 1995	In force: 18 March 1997	435/Mod.1
Armenia	15 July 1993	In force: 5 May 1994	455
Australia	23 January 1973	In force: 10 July 1974	217
Austria ^e	27 June 1969	Accession: 31 July 1996	193
Azerbaijan	22 September 1992	In force: 29 April 1999	580
Bahamas ^c	10 July 1973	In force: 12 September 1997	544
Bahrain	3 November 1988		
Bangladesh	31 August 1979	In force: 11 June 1982	301
Barbados ^c	21 February 1980	In force: 14 August 1996	527
Belarus	22 July 1993	In force: 2 August 1995	495
Belgium	2 May 1975	In force: 21 February 1977	193
Belize ^f	9 August 1985	In force: 21 January 1997	532
Benin	31 October 1972		
Bhutan	23 May 1985	In force: 24 October 1989	371
Bolivia ^c	26 May 1970	In force: 6 February 1995	465
Bosnia and Herzegovina ^g	15 August 1994	In force: 28 December 1973	204
Botswana	28 April 1969		
Brazil ^d	18 September 1998	In force: 20 September 1999	435/Mod.3
Brunei Darussalam	26 March 1985	In force: 4 November 1987	365
Bulgaria	5 September 1969	In force: 29 February 1972	178
Burkina Faso	3 March 1970		
Burundi	19 March 1971		
Cambodia	2 June 1972	In force: 17 December 1999	586
Cameroon	8 January 1969	Signed: 21 May 1992	
Canada	8 January 1969	In force: 21 February 1972	164
Cape Verde	24 October 1979		
Central African Republic	25 October 1970		
Chad	10 March 1971		
Chile ^h	25 May 1995	In force: 9 September 1996	476/Mod.1
Colombia ⁱ	8 April 1986		
Comoros	4 October 1995		
Congo	23 October 1978		
Costa Rica ^c	3 March 1970	In force: 22 November 1979	278
Côte d'Ivoire	6 March 1973	In force: 8 September 1983	309
Croatia	29 June 1992	In force: 19 January 1995	463
Cyprus	10 February 1970	In force: 26 January 1973	189
Czech Republic ^j	1 January 1993	In force: 11 September 1997	541
Democratic People's Republic of Korea	12 December 1985	In force: 10 April 1992	403

TABLE A13. (cont.)

Non-nuclear-weapon States which have signed, ratified, acceded to or succeeded to NPT ^a (1)	Date of ratification, accession or succession (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
Democratic Republic of the Congo	4 August 1970	In force: 9 November 1972	183
Denmark ^k	3 January 1969	In force: 21 February 1977	193
Djibouti	16 October 1996		
Dominica ^f	10 August 1984	In force: 3 May 1996	513
Dominican Republic ^c	24 July 1971	In force: 11 October 1973	201
Ecuador ^c	7 March 1969	In force: 10 March 1975	231
Egypt	26 February 1981	In force: 30 June 1982	302
El Salvador ^c	11 July 1972	In force: 22 April 1975	232
Equatorial Guinea	1 November 1984	Approved: 13 June 1986	
Eritrea	16 March 1995		
Estonia	7 January 1992	In force: 24 November 1997	547
Ethiopia	5 February 1970	In force: 2 December 1977	261
Fiji	14 July 1972	In force: 22 March 1973	192
Finland ^l	5 February 1969	Accession: 1 October 1995	193
Gabon	19 February 1974	Signed: 3 December 1979	
Gambia	12 May 1975	In force: 8 August 1978	277
Georgia	7 March 1994	Signed: 29 September 1997	
Germany ^m	2 May 1975	In force: 21 February 1977	193
Ghana	4 May 1970	In force: 17 February 1975	226
Greece ⁿ	11 March 1970	Accession: 17 December 1981	193
Grenada ^c	19 August 1974	In force: 23 July 1996	525
Guatemala ^c	22 September 1970	In force: 1 February 1982	299
Guinea	29 April 1985		
Guinea-Bissau	20 August 1976		
Guyana ^c	19 October 1993	In force: 23 May 1997	543
Haiti ^c	2 June 1970	Signed: 6 January 1975	
Holy See	25 February 1971	In force: 1 August 1972	187
Honduras ^c	16 May 1973	In force: 18 April 1975	235
Hungary	27 May 1969	In force: 30 March 1972	174
Iceland	18 July 1969	In force: 16 October 1974	215
Indonesia	12 July 1979	In force: 14 July 1980	283
Iran, Islamic Republic of	2 February 1970	In force: 15 May 1974	214
Iraq	29 October 1969	In force: 29 February 1972	172
Ireland	1 July 1968	In force: 21 February 1977	193
Italy	2 May 1975	In force: 21 February 1977	193
Jamaica ^c	5 March 1970	In force: 6 November 1978	265
Japan	8 June 1976	In force: 2 December 1977	255
Jordan	11 February 1970	In force: 21 February 1978	258
Kazakhstan	14 February 1994	In force: 11 August 1995	504
Kenya	11 June 1970		
Kiribati	18 April 1985	In force: 19 December 1990	390
Korea, Republic of	23 April 1975	In force: 14 November 1975	236

TABLE A13. (cont.)

Non-nuclear-weapon States which have signed, ratified, acceded to or succeeded to NPT ^a (1)	Date of ratification, accession or succession (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
Kuwait	17 November 1989	Signed: 10 May 1999	
Kyrgyzstan	5 July 1994	Signed: 18 March 1998	
Lao People's Democratic Republic	20 February 1970	Signed: 22 November 1991	
Latvia	31 January 1992	In force: 21 December 1993	434
Lebanon	15 July 1970	In force: 5 March 1973	191
Lesotho	20 May 1970	In force: 12 June 1973	199
Liberia	5 March 1970		
Libyan Arab Jamahiriya	26 May 1975	In force: 8 July 1980	282
Liechtenstein	20 April 1978	In force: 4 October 1979	275
Lithuania	23 September 1991	In force: 15 October 1992	413
Luxembourg	2 May 1975	In force: 21 February 1977	193
Madagascar	8 October 1970	In force: 14 June 1973	200
Malawi	18 February 1986	In force: 3 August 1992	409
Malaysia	5 March 1970	In force: 29 February 1972	182
Maldives	7 April 1970	In force: 2 October 1977	253
Mali	10 February 1970		
Malta	6 February 1970	In force: 13 November 1990	387
Marshall Islands	30 January 1995		
Mauritania	26 October 1993		
Mauritius	8 April 1969	In force: 31 January 1973	190
Mexico ^c	21 January 1969	In force: 14 September 1973	197
Micronesia, Federated States of	14 April 1995		
Monaco	13 March 1995	In force: 13 June 1996	524
Mongolia	14 May 1969	In force: 5 September 1972	188
Morocco	27 November 1970	In force: 18 February 1975	228
Mozambique	4 September 1990		
Myanmar	2 December 1992	In force: 20 April 1995	477
Namibia	2 October 1992	In force: 15 April 1998	551
Nauru	7 June 1982	In force: 13 April 1984	317
Nepal	5 January 1970	In force: 22 June 1972	186
Netherlands ^o	2 May 1975	In force: 21 February 1977	193
New Zealand ^p	10 September 1969	In force: 29 February 1972	185
Nicaragua ^c	6 March 1973	In force: 29 December 1976	246
Niger	9 October 1992		
Nigeria	27 September 1968	In force: 29 February 1988	358
Norway	5 February 1969	In force: 1 March 1972	177
Oman	23 January 1997	Approved: 20 September 1999	
Palau, Republic of	14 April 1995		
Panama ^{c,q}	13 January 1977	Signed : 22 December 1988	
Papua New Guinea	13 January 1982	In force: 13 October 1983	312
Paraguay ^c	4 February 1970	In force: 20 March 1979	279
Peru ^c	3 March 1970	In force: 1 August 1979	273
Philippines	5 October 1972	In force: 16 October 1974	216

TABLE A13. (cont.)

Non-nuclear-weapon States which have signed, ratified, acceded to or succeeded to NPT ^a (1)	Date of ratification, accession or succession (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
Poland	12 June 1969	In force: 11 October 1972	179
Portugal ^f	15 December 1977	Accession: 1 July 1986	193
Qatar	3 April 1989		
Republic of Moldova	11 October 1994	Signed: 14 June 1996	
Romania	4 February 1970	In force: 27 October 1972	180
Rwanda	20 May 1975		
St. Kitts and Nevis ^f	22 March 1993	In force: 7 May 1996	514
St. Lucia ^f	28 December 1979	In force: 2 February 1990	379
St. Vincent and the Grenadines ^f	6 November 1984	In force: 8 January 1992	400
Samoa	17 March 1975	In force: 22 January 1979	268
San Marino	10 August 1970	In force: 21 September 1998	575
São Tome and Principe	20 July 1983		
Saudi Arabia	3 October 1988		
Senegal	17 December 1970	In force: 14 January 1980	276
Seychelles	12 March 1985		
Sierra Leone	26 February 1975	Signed: 10 November 1977	
Singapore	10 March 1976	In force: 18 October 1977	259
Slovakia ^s	1 January 1993	In force: 3 March 1972	173
Slovenia	7 April 1992	In force: 1 August 1997	538
Solomon Islands	17 June 1981	In force: 17 June 1993	420
Somalia	5 March 1970		
South Africa	10 July 1991	In force: 16 September 1991	394
Spain	5 November 1987	Accession: 5 April 1989	193
Sri Lanka	5 March 1979	In force: 6 August 1984	320
Sudan	31 October 1973	In force: 7 January 1977	245
Suriname ^c	30 June 1976	In force: 2 February 1979	269
Swaziland	11 December 1969	In force: 28 July 1975	227
Sweden ^t	9 January 1970	Accession: 1 June 1995	193
Switzerland	9 March 1977	In force: 6 September 1978	264
Syrian Arab Republic	24 September 1969	In force: 18 May 1992	407
Tajikistan	17 January 1997		
Thailand	7 December 1972	In force: 16 May 1974	241
The Former Yugoslav Republic of Macedonia	30 March 1995	Signed: 10 October 2000	
Togo	26 February 1970	Signed: 29 November 1990	
Tonga	7 July 1971	In force: 18 November 1993	426
Trinidad and Tobago ^c	30 October 1986	In force: 4 November 1992	414
Tunisia	26 February 1970	In force: 13 March 1990	381
Turkey	17 April 1980	In force: 1 September 1981	295
Turkmenistan	29 September 1994		
Tuvalu	19 January 1979	In force: 15 March 1991	391
Uganda	20 October 1982		
Ukraine	5 December 1994	In force: 22 January 1998	550
United Arab Emirates	26 September 1995		

TABLE A13. (cont.)

Non-nuclear-weapon States which have signed, ratified, acceded to or succeeded to NPT ^a (1)	Date of ratification, accession or succession (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
United Republic of Tanzania	31 May 1991	Signed: 26 August 1992	
Uruguay ^c	31 August 1970	In force: 17 September 1976	157
Uzbekistan	7 May 1992	In force: 8 October 1994	508
Vanuatu	24 August 1995		
Venezuela ^c	25 September 1975	In force: 11 March 1982	300
Viet Nam	14 June 1982	In force: 23 February 1990	376
Yemen, Republic of	1 June 1979	Signed: 21 September 2000	
Yugoslavia ^d , Federal Republic of	4 March 1970	In force: 28 December 1973	204
Zambia	15 May 1991	In force: 22 September 1994	456
Zimbabwe	26 September 1991	In force: 26 June 1995	483

^a The information in columns (1) and (2) was provided to the Agency by depositary governments of NPT, and an entry in column (1) does not imply the expression of any opinion on the part of the Secretariat concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers. The table does not contain information relating to the participation of Taiwan, China, in NPT.

^b A sui generis comprehensive safeguards agreement with Albania entered into force on 25 March 1988 (INFCIRC/359).

^c The relevant safeguards agreement refers to both NPT and the Treaty of Tlatelolco.

^d An exchange of letters has taken place between this State and the Agency confirming that the safeguards agreement concluded between Argentina, Brazil, ABACC and the Agency for the application of safeguards which entered into force on 4 March 1994 (INFCIRC/435) satisfies the requirements of this State under Article III of the NPT to conclude a safeguards agreement with the Agency. The exchange of letters entered into force on the date of approval by the Board of Governors.

^e The application of safeguards in Austria under the NPT safeguards agreement INFCIRC/156, in force since 23 July 1972, was suspended on 31 July 1996, on which date the agreement of 5 April 1973 (INFCIRC/193) between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency, to which Austria had acceded, entered into force for Austria.

^f An exchange of letters has taken place between this State and the Agency confirming that the NPT safeguards agreement concluded with the State satisfies the obligations of the State under Article 13 of the Treaty of Tlatelolco to conclude a safeguards agreement with the Agency.

^g The NPT safeguards agreement concluded with the Socialist Federal Republic of Yugoslavia (INFCIRC/204), which entered into force on 28 December 1973, continues to be applied in Bosnia and Herzegovina to the extent relevant to the territory of Bosnia and Herzegovina.

^h An exchange of letters has taken place between this State and the Agency confirming that the safeguards agreement concluded with the State pursuant to the Treaty of Tlatelolco satisfies the requirements of the obligations of the State under Article III of the NPT to conclude a safeguards agreement with the Agency. The exchange of letters entered into force on the date of approval by the Board of Governors.

ⁱ A comprehensive safeguards agreement with Colombia concluded pursuant to the Treaty of Tlatelolco entered into force on 22 December 1982 (INFCIRC/306).

- ^j The NPT safeguards agreement concluded with the Czechoslovak Socialist Republic (INFCIRC/173), which entered into force on 3 March 1972, continued to be applied in the Czech Republic to the extent relevant to the territory of the Czech Republic until 11 September 1997, on which date the NPT safeguards agreement concluded with the Czech Republic entered into force.
- ^k The NPT safeguards agreement with Denmark (INFCIRC/176), in force since 1 March 1972, has been replaced by the agreement of 5 April 1973 between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency (INFCIRC/193) but still applies to the Faroe Islands. Upon Greenland's secession from EURATOM as of 31 January 1985, the Agreement between the Agency and Denmark (INFCIRC/176) re-entered into force as to Greenland.
- ^l The application of safeguards in Finland under the NPT safeguards agreement INFCIRC/155, in force since 9 February 1972, was suspended on 1 October 1995, on which date the agreement of 5 April 1973 (INFCIRC/193) between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency, to which Finland had acceded, entered into force for Finland.
- ^m The NPT safeguards agreement of 7 March 1972 concluded with the German Democratic Republic (INFCIRC/181) is no longer in force with effect from 3 October 1990, on which date the German Democratic Republic acceded to the Federal Republic of Germany.
- ⁿ The application of safeguards in Greece under the NPT safeguards agreement INFCIRC/166, provisionally in force since 1 March 1972, was suspended on 17 December 1981, on which date Greece acceded to the agreement of 5 April 1973 (INFCIRC/193) between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency.
- ^o An agreement had also been concluded in respect of the Netherlands Antilles (INFCIRC/229). This agreement entered into force on 5 June 1975.
- ^p The NPT safeguards agreement with New Zealand (INFCIRC/185) also applies to Cook Islands, Niue and Tokelau.
- ^q A comprehensive safeguards agreement with Panama concluded pursuant to the Treaty of Tlatelolco entered into force on 23 March 1984 (INFCIRC/316).
- ^r The application of safeguards in Portugal under the NPT safeguards agreement INFCIRC/272, in force since 14 June 1979, was suspended on 1 July 1986, on which date Portugal acceded to the agreement of 5 April 1973 (INFCIRC/193) between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency.
- ^s The NPT safeguards agreement concluded with the Czechoslovak Socialist Republic (INFCIRC/173), which entered into force on 3 March 1972, continues to be applied in Slovakia to the extent relevant to the territory of Slovakia. A new NPT safeguards agreement concluded with Slovakia was approved by the Board of Governors on 14 September 1998 and signed on 27 September 1999.
- ^t The application of safeguards in Sweden under the NPT safeguards agreement INFCIRC/234, in force since 14 April 1975, was suspended on 1 June 1995, on which date the agreement of 5 April 1973 (INFCIRC/193) between the non-nuclear-weapon States of EURATOM, EURATOM and the Agency, to which Sweden had acceded, entered into force for Sweden.
- ^u The NPT safeguards agreement concluded with the Socialist Federal Republic of Yugoslavia (INFCIRC/204), which entered into force on 28 December 1973, continues to be applied in the Federal Republic of Yugoslavia to the extent relevant to the territory of the Federal Republic of Yugoslavia.

TABLE A14. **SITUATION ON 31 DECEMBER 2000 WITH RESPECT TO THE CONCLUSION OF SAFEGUARDS AGREEMENTS BETWEEN THE AGENCY AND STATES PARTY TO THE TREATY OF TLATELOLCO^a**

States party to the Treaty of Tlatelolco (1)	Date of becoming a party to the Treaty of Tlatelolco (2)	Safeguards agreement with the Agency (3)	INFCIRC (4)
Antigua and Barbuda ^b	11 October 1983	In force: 9 September 1996	528
Argentina ^c	18 January 1994	In force: 18 March 1997	435/Mod.1
Bahamas ^b	26 April 1977	In force: 12 September 1997	544
Barbados ^b	25 April 1969	In force: 14 August 1996	527
Belize ^d	4 November 1994	In force: 18 March 1997	532/Mod.1
Bolivia ^b	18 February 1969	In force: 6 February 1995	465
Brazil ^c	30 May 1994	In force: 10 June 1997	435/Mod.2
Chile	18 January 1994	In force: 5 April 1995	476
Colombia	6 September 1972	In force: 22 December 1982	306
Costa Rica ^b	25 August 1969	In force: 22 November 1979	278
Dominica ^d	25 August 1993	In force: 10 June 1997	513/Mod.1
Dominican Republic ^b	14 June 1968	In force: 11 October 1973	201
Ecuador ^b	11 February 1969	In force: 10 March 1975	231
El Salvador ^b	22 April 1968	In force: 22 April 1975	232
Grenada ^b	20 June 1975	In force: 23 July 1996	525
Guatemala ^b	6 February 1970	In force: 1 February 1982	299
Guyana ^b	6 May 1996	In force: 23 May 1997	543
Haiti ^b	23 May 1969	Signed: 6 January 1975	
Honduras ^b	23 September 1968	In force: 18 April 1975	235
Jamaica ^b	26 June 1969	In force: 6 November 1978	265
Mexico ^{b,e}	20 September 1967	In force: 14 September 1973	197
Nicaragua ^b	24 October 1968	In force: 29 December 1976	246
Panama ^f	11 June 1971	In force: 23 March 1984	316
Paraguay ^b	19 March 1969	In force: 20 March 1979	279
Peru ^b	4 March 1969	In force: 1 August 1979	273
St. Kitts and Nevis ^d	14 February 1997	In force: 18 March 1997	514/Mod.1
St. Lucia ^d	2 June 1995	In force: 12 June 1996	379/Mod.1
St. Vincent and the Grenadines ^d	11 May 1992	In force: 18 March 1997	400/Mod.1
Suriname ^b	10 June 1977	In force: 2 February 1979	269
Trinidad and Tobago ^b	27 June 1975	In force: 4 November 1992	414
Uruguay ^b	20 August 1968	In force: 17 September 1976	157
Venezuela ^b	23 March 1970	In force: 11 March 1982	300

In addition, there are the following safeguards agreements with States party to Additional Protocol I to the Treaty^g:

France	Signed: 26 September 2000	
Netherlands ^b	In force: 5 June 1975	229
United Kingdom	Approved by the Board, Sep.1992	
United States of America	In force: 6 April 1989	366

^a The information in columns (1) and (2) was provided by Mexico as depositary of the Treaty of Tlatelolco. In addition to the States listed in column (1), Cuba signed the Treaty on 25 March 1995.

^b The relevant safeguards agreement refers to both the Treaty of Tlatelolco and the NPT.

^c An exchange of letters has taken place between this State and the Agency confirming that the safeguards agreement concluded between Argentina, Brazil, ABACC and the Agency for the application of safeguards which entered into force on 4 March 1994 (INFCIRC/435) satisfies the requirements of this State under Article 13 of the Treaty of Tlatelolco to conclude a safeguards agreement with the Agency. The exchange of letters entered into force on the date of approval by the Board of Governors.

- ^d An exchange of letters has taken place between this State and the Agency confirming that the NPT safeguards agreement concluded with the State satisfies the obligations of the State under Article 13 of the Treaty of Tlatelolco to conclude a safeguards agreement with the Agency. The exchange of letters entered into force on the date of approval by the Board of Governors.
- ^e The application of safeguards under an agreement with Mexico in connection with the Treaty of Tlatelolco which entered into force on 6 September 1968 (INFCIRC/118) was suspended after the conclusion of an agreement with Mexico in connection with both the Treaty of Tlatelolco and NPT (INFCIRC/197).
- ^f A safeguards agreement pursuant to both the Treaty of Tlatelolco and NPT has been concluded with Panama; the agreement has not yet entered into force.
- ^g Additional Protocol I refers to States outside Latin America and the Caribbean which have de jure or de facto jurisdiction over territories which lie within the limits of the geographical zone established in the Treaty.

TABLE A15. **AGREEMENTS PROVIDING FOR SAFEGUARDS, OTHER THAN THOSE IN CONNECTION WITH NPT OR THE TREATY OF TLATELOLCO, APPROVED BY THE BOARD OF GOVERNORS AS OF 31 DECEMBER 2000^a**

Party(ies) ^b	Subject	Entry into force	INFCIRC
(While the Agency is a party to each of the following agreements, only the State(s) party to them is (are) listed.)			
(i) Project agreements			
Argentina ^c	Siemens SUR-100	13 March 1970	143
	RAEP reactor	2 December 1964	62
Chile ^d	Herald reactor	19 December 1969	137
Colombia ^d	Fuel for research reactor	17 June 1994	460
Democratic Republic of the Congo ^e	TRICO reactor	27 June 1962	37
	Fuel for research reactor	20 September 1990	389
Finland ^e	FIR-1 reactor	30 December 1960	24
	FINN subcritical assembly	30 July 1963	53
Ghana ^e	Research reactor and fuel therefor	14 October 1994	468
Greece ^e	GRR-1 reactor	1 March 1972	163
Indonesia ^e	Additional core-load for TRIGA reactor	19 December 1969	136
	Supply of enriched uranium	15 January 1993	453
	Supply of enriched uranium	15 January 1993	454
Iran, Islamic Republic of ^e	UTRR reactor	10 May 1967	97
Jamaica ^e	Fuel for research reactor	25 January 1984	315
Japan ^e	JRR-3	24 March 1959	3
Malaysia ^e	TRIGA-II reactor	22 September 1980	287
Mexico ^e	TRIGA-III reactor	18 December 1963	52
	Siemens SUR-100	21 December 1971	162
	Laguna Verde Nuclear Power Plant	12 February 1974	203
Morocco ^e	Fuel for research reactor	2 December 1983	313
Nigeria ^e	Research reactor and fuel therefor	29 August 1996	526
Pakistan	PRR reactor	5 March 1962	34
	Booster rods for KANUPP	17 June 1968	116
Peru ^e	Research reactor and fuel therefor	9 May 1978	266
Philippines ^e	PRR-1 reactor	28 September 1966	88
Romania ^e	TRIGA reactor	30 March 1973	206
	Experimental fuel elements	1 July 1983	307
Slovenia ^e	TRIGA-II reactor	4 October 1961	32
	Krško Nuclear Power Plant	14 June 1974	213
Spain ^e	Coral-I reactor	23 June 1967	99
Syrian Arab Republic ^e	Miniature neutron source reactor and enriched uranium	18 May 1992	408
Thailand ^e	Fuel for research reactor	30 September 1986	342
Turkey ^e	Subcritical assembly	17 May 1974	212
Uruguay ^e	URR reactor	24 September 1965	67
Venezuela ^e	RV-1 reactor	7 November 1975	238
Viet Nam ^e	Fuel for research reactor	1 July 1983	308
(ii) Unilateral submissions			
Algeria	Nur research reactor ^h	9 April 1990	361
	Es Salam research reactor ^h	2 June 1992	401
Argentina	Atucha Power Reactor Facility ^f	3 October 1972	168
	Nuclear material ^f	23 October 1973	202
	Embalse Power Reactor Facility ^f	6 December 1974	224

TABLE A15. (cont.)

Party(ies) ^b	Subject	Entry into force	INFCIRC
	Equipment and nuclear material ^f	22 July 1977	250
	Nuclear material, material, equipment and facilities ^f	22 July 1977	251
	Atucha II Nuclear Power Plant ^f	15 July 1981	294
	Heavy water plant ^f	14 October 1981	296
	Heavy water ^f	14 October 1981	297
	Nuclear material ^f	8 July 1982	303
Chile	Nuclear material ^g	31 December 1974	256
	Nuclear material ^g	22 September 1982	304
	Nuclear material ^g	18 September 1987	350
Cuba	Nuclear power plant and nuclear material	5 May 1980	281
	Zero power nuclear reactor and fuel therefor	7 October 1983	311
Democratic People's Republic of Korea	Research reactor and nuclear material therefor ^h	20 July 1977	252
India	Nuclear material, material and facilities	17 November 1977	260
	Nuclear power station	27 September 1988	360
	Nuclear material	11 October 1989	374
	All nuclear material subject to safeguards under INFCIRC/154	1 March 1994	433*
Pakistan	Nuclear material	2 March 1977	248
	Miniature neutron source reactor	10 September 1991	393
	Nuclear power reactor	24 February 1993	418
Spain	Nuclear material ^h	18 June 1975	221
	Vandellos Nuclear Power Plant ^h	11 May 1981	292
	Specified nuclear facilities ^h	11 May 1981	291**
United Kingdom	Nuclear material	14 December 1972	175
Viet Nam	Research reactor and fuel therefor ^h	12 June 1981	293

* Amended in 1994 to cover nuclear material supplied for use in the Tarapur Atomic Power Station (TAPS) which material is required by the supplier to be subject to safeguards. The amendment entered into force on 12 September 1994 (INFCIRC/433/Mod.1).

** Amended in 1985 to cover specified nuclear facilities. The amendment entered into force on 8 November 1985 (INFCIRC/291/Mod.1/Corr.1).

(iii) Agreements concluded with nuclear weapon States on the basis of voluntary offers

China	Nuclear material in facilities selected from list of facilities provided by China	18 September 1989	369
France	Nuclear material in facilities submitted to safeguards	12 September 1981	290
Russian Federation	Nuclear material in facilities selected from list of facilities provided by the Russian Federation	10 June 1985	327
United Kingdom	Nuclear material in facilities designated by the Agency	14 August 1978	263
United States of America	Nuclear material in facilities designated by the Agency	9 December 1980	288

(iv) Other comprehensive safeguards agreements

Albania	All nuclear material and facilities	25 March 1988	359
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TABLE A15. (cont.)

Party(ies) ^b	Subject	Entry into force	INFCIRC
Argentina/Brazil	All nuclear material in all nuclear activities	4 March 1994	435
(v) Other safeguards agreements			
Argentina ^f /United States of America ⁱ		25 July 1969	130
Austria ^h /United States of America		24 January 1970	152
Brazil ^f /Germany ^h		26 February 1976	237
Brazil ^f /United States of America ⁱ		31 October 1968	110
Colombia/United States of America		9 December 1970	144
India/Canada ^h		30 September 1971	211
Iran, Islamic Republic of ^h /United States of America		20 August 1969	127
Israel/United States of America		4 April 1975	249
Japan ^h /Canada ^h		20 June 1966	85
Japan ^h /France		22 September 1972	171
Korea, Republic of/United States of America		5 January 1968	111
Korea, Republic of ^h /France		22 September 1975	233
Pakistan/Canada		17 October 1969	135
Pakistan/France		18 March 1976	239
Philippines ^h /United States of America		19 July 1968	120
Portugal ^h /United States of America ⁱ		19 July 1969	131
South Africa/United States of America		26 July 1967	98
South Africa/France		5 January 1977	244
Spain/Germany ^h		29 September 1982	305
Spain ^h /United States of America ⁱ		9 December 1966	92
Spain/Canada ^h		10 February 1977	247
Sweden ^h /United States of America		1 March 1972	165
Switzerland ^h /United States of America ⁱ		28 February 1972	161
Turkey ^h /United States of America ⁱ		5 June 1969	123
Venezuela ^h /United States of America ⁱ		27 March 1968	122

(vi) The Agency also applies safeguards under two agreements (INFCIRC/133 and INFCIRC/158) to the nuclear facilities in Taiwan, China. Pursuant to the decision adopted by the Board of Governors on 9 December 1971 that the Government of the People's Republic of China is the only government which has the right to represent China in the Agency, the relations between the Agency and the authorities in Taiwan, China, are non-governmental. The agreements are implemented by the Agency on that basis.

^a Safeguards agreements pursuant to the South Pacific Nuclear Weapon Free Zone Treaty (Rarotonga Treaty) are not separately listed with this compilation since the Treaty requires that safeguards by the Agency will be applied pursuant to safeguards agreements equivalent in scope and effect to an agreement required in connection with the NPT on the basis of the material reproduced in INFCIRC/153 (Corrected). As of 31 December 1997, all 11 States Party to the Treaty (Australia, Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Solomon Islands, Tuvalu and Samoa) were covered by safeguards agreements concluded pursuant to NPT.

^b An entry in this column does not imply the expression of any opinion whatsoever on the part of the Agency concerning the legal status of any country or territory or of its authorities or concerning the delimitation of its frontiers.

^c Agency safeguards required by this project agreement are implemented pursuant to the comprehensive safeguards agreement concluded between Argentina, Brazil, the ABACC and the Agency (INFCIRC/435).

^d Agency safeguards required by this project agreement are implemented pursuant to a safeguards agreement in connection with the Treaty of Tlatelolco covering the State indicated.

- e Agency safeguards required by this (these) project agreement(s) are implemented pursuant to an agreement in connection with NPT covering the State indicated.
- f Application of Agency safeguards under this agreement has been suspended in the State indicated. Safeguards are applied pursuant to the comprehensive safeguards agreement concluded between Argentina, Brazil, the ABACC and the Agency (INFCIRC/435).
- g Application of Agency safeguards under this agreement has been suspended in the State indicated as the State has concluded an agreement in connection with the Treaty of Tlatelolco.
- h Application of Agency safeguards under this agreement has been suspended in the State indicated as the State has concluded an agreement in connection with NPT.
- i Application of Agency safeguards under this agreement has been suspended in the USA in order to comply with a provision of INFCIRC/288.

TABLE A16. **SITUATION ON 31 DECEMBER 2000 WITH RESPECT TO THE CONCLUSION OF PROTOCOLS ADDITIONAL TO SAFEGUARDS AGREEMENTS**

State	Status of the protocol	INFCIRC
Andorra	Approved 7 December 2000	
Armenia	Signed 29 September 1997	
Australia	In force 12 December 1997	217/Add.1
Austria	Signed 22 September 1998	
Azerbaijan	In force 29 November 2000	580/Add.1
Bangladesh	Approved 25 September 2000	
Belgium	Signed 22 September 1998	
Bulgaria	In force 10 October 2000	178/Add.1
Canada	In force 8 September 2000	164/Add.1
China	Signed 31 December 1998	
Croatia	In force 6 July 2000	463/Add.1
Cuba	Signed 15 October 1999	
Cyprus	Signed 29 July 1999	
Czech Republic	Signed 28 September 1999	
Denmark	Signed 22 September 1998	
Ecuador	Signed 1 October 1999	
Estonia	Signed 13 April 2000	
Finland	Signed 22 September 1998	
France	Signed 22 September 1998	
Georgia	Signed 29 September 1997	
Germany	Signed 22 September 1998	
Ghana*	Signed 12 June 1998	226/Add.1
Greece	Signed 22 September 1998	
Holy See	In force 24 September 1998	187/Add.1
Hungary	In force 4 April 2000	174/Add.1
Indonesia	In force 29 September 1999	283/Add.1
Ireland	Signed 22 September 1998	
Italy	Signed 22 September 1998	
Japan	In force 16 December 1999	255/Add. 1
Jordan	In force 28 July 1998	258/Add.1
Korea, Republic of	Signed 21 June 1999	
Latvia	Approved 7 December 2000	
Lithuania	In force 5 July 2000	413/Add.1
Luxembourg	Signed 22 September 1998	
Monaco	In force 30 September 1999	524/Add.1
Namibia	Signed 22 March 2000	
Netherlands	Signed 22 September 1998	
New Zealand	In force 24 September 1998	185/Add.1
Nigeria	Approved 7 June 2000	
Norway	In force 16 May 2000	177/Add.1
Peru	Signed 22 March 2000	
Philippines	Signed 30 September 1997	
Poland	In force 5 May 2000	179/Add.1
Portugal	Signed 22 September 1998	
Romania	In force 7 July 2000	180/Add.1
Russian Federation	Signed 22 March 2000	
Slovakia	Signed 27 September 1999	
Slovenia	In force 22 August 2000	538/Add.1
Spain	Signed 22 September 1998	
Sweden	Signed 22 September 1998	
Switzerland	Signed 16 June 2000	
Turkey	Signed 6 July 2000	
Ukraine	Signed 15 August 2000	

TABLE A16. (cont.)

State	Status of the protocol	INFCIRC
United Kingdom	Signed 22 September 1998	
United States of America	Signed 12 June 1998	
Uruguay	Signed 29 September 1997	
Uzbekistan	In force 21 December 1998	508/Add.2

* Pending entry into force of the protocol, it is applied provisionally in this State with effect from the date of signature.

TABLE A17. APPROXIMATE QUANTITIES OF MATERIAL SUBJECT TO AGENCY SAFEGUARDS AT THE END OF 2000

Type of material	Quantity of material (t)			
	Comprehensive safeguards agreements ^a	INFCIRC/66 ^b	Nuclear weapon States	Quantity in SQs
Nuclear material				
Plutonium ^c contained in irradiated fuel	534.4	27.9	80.5	80 360
Separated plutonium outside reactor cores	12.5	0.1	59.7	9 031
Recycled plutonium in fuel elements in reactor cores	10.3	0.4	0	1 340
HEU (equal to or greater than 20% ²³⁵ U)	11.0	0.1	10.7	604
LEU (less than 20% ²³⁵ U)	42 147	2 786	4 041	13 204
Source material ^d (natural or depleted uranium and thorium)	78 942	1 646	11 089	6 990
Non-nuclear material^e				
Heavy water	0	493	0	25
Total significant quantities				111 554

^a Covering safeguards agreements pursuant to NPT and/or Treaty of Tlatelolco and other comprehensive safeguards agreements.

^b Excluding installations in nuclear weapon States; including installations in Taiwan, China.

^c The quantity includes an estimated 90 t (11 199 SQ) of plutonium in irradiated fuel, which is not yet reported to the Agency under the reporting procedures agreed to (the non-reported plutonium is contained in irradiated fuel assemblies to which item accountancy and C/S measures are applied).

^d This table does not include material within the terms of subparagraphs 34(a) and (b) of INFCIRC/153 (Corrected).

^e Non-nuclear material subject to Agency safeguards under INFCIRC/66/Rev.2-type agreements.

TABLE A18. **NUMBER OF FACILITIES UNDER SAFEGUARDS OR CONTAINING SAFEGUARDED MATERIAL ON 31 DECEMBER 2000**

A full list of facilities by individual State is available on the Agency's WorldAtom Web site. A printed copy is available, on request, from the Agency's Division of Public Information.

	Number of facilities (number of installations)							
	Comprehensive safeguards agreements ^a		INFCIRC/66 ^b		Nuclear weapon States		Total	
Power reactors	184	(221)	11	(14)	1	(1)	196	(236)
Research reactors and critical assemblies	147	(160)	8	(8)	1	(1)	156	(168)
Conversion plants	12	(12)	1	(1)	0	(0)	13	(13)
Fuel fabrication plants	38	(39)	4	(4)	0	(0)	42	(43)
Reprocessing plants	5	(5)	1	(1)	0	(0)	6	(6)
Enrichment plants	9	(9)	0	(0)	2	(4)	11	(13)
Separate storage facilities	62	(63)	4	(4)	7	(8)	73	(75)
Other facilities	82	(92)	1	(1)	2	(2)	85	(95)
Subtotals	539	(600)	30	(33)	13	(16)	582	(649)
Other locations	316	(413)	3	(31)	0	(0)	319	(444)
Non-nuclear installations	0	(0)	1	(1)	0	(0)	1	(1)
Totals	855	(1013)	34	(65)	13	(16)	902	(1094)

^a Covering safeguards agreements pursuant to NPT and/or Treaty of Tlatelolco and other comprehensive safeguards agreements.

^b Excluding installations in nuclear weapon States; including installations in Taiwan, China.

TABLE A19. MAIN EQUIPMENT AND ACTIVITIES IN SUPPORT OF SAFEGUARDS

	1999	2000
	Total in inventory	
Gamma ray measurement systems		
Low resolution systems (assay probes)	75	75
High resolution systems (analysers)	39	39
Portable multichannel analysers	280	355
Detectors	908	995
Neutron measurement systems		
Detection heads for active neutron measurements	32	37
Detection heads for passive neutron measurements	35	38
Neutron coincidence counting electronics	92	91
Spent fuel measurement systems		
Cerenkov glow viewing devices	96	109
Spent fuel radiation measuring systems	175	184
Irradiated fuel measuring electronics	75	75
Other measurement systems		
Physical properties devices	150	144
Optical surveillance systems		
Photo cameras	715	715
Video single camera systems	505	516
Video multiple camera systems	134	158
Video review stations	142	142
Seals		
In situ verifiable seals	1 328	1 389
Radiation monitoring systems	81	101
Activities		
Metal cap seals issued	21 300	22 262
Metal cap seals verified	19 718	18 848
Shipment of equipment and supplies	534	467
Hand carried transport of equipment and supplies	514	748
Shipment of reference material and chemicals to facilities	289	293
Shipment of inspection samples, radioactive material standards and contaminated items to the Safeguards Analytical Laboratory	232	235
Procurement actions	1 423	1 439

TABLE A20. ADDITIONAL SAFEGUARDS SUPPORT PROVIDED BY STATES

States and organizations representing groups of States having formal support programmes	States having R&D contracts and test programmes
Argentina, Australia, Belgium, Canada, European Union, Finland, France, Germany, Hungary, Japan, Republic of Korea, Netherlands, Russian Federation, Sweden, United Kingdom, United States of America	Austria, Israel, Latvia, Pakistan, Russian Federation

TABLE A21. **CONVENTIONS NEGOTIATED AND ADOPTED UNDER THE AUSPICES OF THE AGENCY AND FOR WHICH THE DIRECTOR GENERAL OF THE AGENCY IS THE DEPOSITARY (STATUS AND RELEVANT DEVELOPMENTS)**

Agreement on the Privileges and Immunities of the IAEA (reproduced in INFCIRC/9/Rev. 2). In 2000, one State accepted the Agreement. By the end of the year, there were 67 Parties.

Vienna Convention on Civil Liability for Nuclear Damage (reproduced in INFCIRC/500). Entered into force on 12 November 1977. Status remained unchanged during 2000, with 32 Parties.

Optional Protocol Concerning the Compulsory Settlement of Disputes (reproduced in INFCIRC/500/Add.3). Entered into force on 13 May 1999. Status remained unchanged during 2000, with two Parties.

Convention on the Physical Protection of Nuclear Material (reproduced in INFCIRC/274/Rev.1). Entered into force on 8 February 1987. In 2000, four States adhered to the Convention. By the end of the year, there were 68 Parties.

Convention on Early Notification of a Nuclear Accident (reproduced in INFCIRC/335). Entered into force on 27 October 1986. In 2000, two States adhered to the Convention. By the end of the year, there were 86 Parties.

Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency (reproduced in INFCIRC/336). Entered into force on 26 February 1987. In 2000, three States adhered to the Convention. By the end of the year, there were 82 Parties.

Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (reproduced in INFCIRC/402). Entered into force on 27 April 1992. In 2000, one State adhered to the Protocol. By the end of the year, there were 21 Parties.

Convention on Nuclear Safety (reproduced in INFCIRC/449). Entered into force on 24 October 1996. In 2000, one State adhered to the Convention. By the end of the year, there were 53 Parties.

Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (reproduced in INFCIRC/546). Opened for signature on 29 September 1997. In 2000, ten States adhered to the Convention. By the end of the year, there were 23 Contracting States and 41 Signatories.

Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage (reproduced in INFCIRC/566). Opened for signature on 29 September 1997. In 2000, one State adhered to the Protocol. By the end of the year, there were 3 Contracting States and 14 Signatories.

Convention on Supplementary Compensation for Nuclear Damage (reproduced in INFCIRC/567). Opened for signature on 29 September 1997. In 2000, one State adhered to the Convention. By the end of the year, there were 3 Contracting States and 13 Signatories.

African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA) (Second Extension) (reproduced in INFCIRC/377). Entered into force on 4 April 2000. By the end of 2000, there were 20 Parties.

Second Agreement to Extend the 1987 Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (RCA) (reproduced in INFCIRC/167/Add. 18). Entered into force on 12 June 1997. Its status remained unchanged during 2000, with 17 Parties.

Revised Supplementary Agreement Concerning the Provision of Technical Assistance by the IAEA (RSA). In 2000, three States concluded the Agreement. By the end of the year, there were 92 States that concluded RSA Agreements.

Co-operation Agreement for the Promotion of Nuclear Science and Technology in Latin America and the Caribbean (ARCAL) (reproduced in INFCIRC/582). Opened for signature on 25 September 1998. In 2000, one State adhered to the Agreement. By the end of the year, there were 1 Contracting State and 14 Signatories.

TABLE A22. **CO-ORDINATED RESEARCH PROJECTS — NEW OR COMPLETED IN 2000**

A full list of all current CRPs is available on the Agency's WorldAtom Web site.

A printed copy is available, on request, from the Agency's Division of Public Information.

Nuclear Power

Conservation and application of high temperature gas cooled reactor technology: 2000–2005
 Information management solutions for systematic approach to training (SAT) applications: 2000–2003
 Intercomparison of analysis methods for seismically isolated nuclear structures: 1996–2000
 Mechanism of nickel effect in radiation embrittlement of reactor pressure vessel materials: 2000–2003
 Nuclear power plant outage coding systems: 1999–2000
 Potential of thorium based fuel cycles to constrain plutonium and to reduce long term waste toxicities: 1995–2000
 Surveillance programme results application to reactor pressure vessel integrity assessment: 2000–2003
 Use of a thorium based fuel cycle in accelerator driven systems to incinerate plutonium and to reduce long term waste toxicities: 1996–2000

Nuclear Fuel Cycle and Waste Technology

Corrosion of research reactor aluminium clad spent fuel in water: 1995–2000
 Evaluation of the safety, environmental and non-proliferation aspects of the partitioning and transmutation of actinides and fission products: 1996–2000
 Technological development and practice in on-line monitoring of water chemistry related to fuel behaviour and activity transport: 1995–2000
 Technologies and methods for long term stabilization and isolation of uranium mill tailings: 2000–2004

Comparative Assessment of Energy Sources

Case studies to assess and compare different energy sources in sustainable energy and electricity supply strategies: 1996–2000

Food and Agriculture

Development of improved attractants and their integration into fruit fly sterile insect technique management programmes: 2000–2005
 Improvement of tropical and subtropical fruit trees through induced mutations and biotechnology: 2000–2005
 Quality control of pesticide products: 2000–2005
 Rinderpest seromonitoring and surveillance in Africa using immunoassay technologies: 1997–2000
 Use of isotope techniques in studies on the management of organic matter and nutrient turnover for increased, sustainable agricultural production and environmental preservation: 1995–2000

Human Health

Assessment of levels and health effects of airborne particulate matter in mining, metal refining and metal working industries using nuclear and related analytical techniques: 1996–2000
 Bone single photon emission computer tomography in the management of patients with unexplained back pain: 1997–2000
 Comparative evaluation of ictal brain single photon emission computer tomography, magnetic resonance imaging and X ray computerized tomography of the brain in the management of patients with refractory seizures: 2000–2003
 Comparison of international studies of osteoporosis using isotope techniques: 1994–2000
 Development of a quality assurance programme for radiation therapy dosimetry in developing countries: 1995–2000
 Development of techniques at SSDLs for the dissemination of absorbed dose to water standards: 2000–2003
 Dosimetry in X ray diagnostic radiology: An international Code of Practice: 2000–2005
 Electron paramagnetic resonance biodosimetry: 1998–2000
 Evaluation of technetium-99m based radiopharmaceuticals in the diagnosis and management of breast cancer patients: 1997–2000

TABLE A22. (cont.)

Genotype/phenotype correlation in thalassemia and muscular dystrophy: 1998–2000
 In vivo imaging for infection and inflammation: 1997–2000
 Intravascular radionuclide therapy using beta emitting radiopharmaceuticals for the prevention of re-stenosis following percutaneous transluminal coronary angioplasty: 2000–2004
 Local production and evaluation of primary reagents for the radioimmunoassay of alpha feto protein: 1997–2000
 Management of liver cancer using radionuclide methods with special emphasis on trans-arterial radioconjugate therapy and internal dosimetry: 2000–2005
 Molecular typing of mycobacteria strains in the management of multi-drug resistant tuberculosis: 1997–2000
 Radiochemical, chemical and physical characterization of radioactive particles in the environment: 2000–2005
 Radioimmunoassay of advanced glycation end products in the long term management of diabetes mellitus: 2000–2004
 Reference Asian Man Project (Phase 2): Ingestion and organ content of trace elements of importance in radiological protection (RCA): 1995–2000
 Relationship between vesico-ureteral reflux, pyelonephritis and renal scarring in children with recurrent urinary tract infection using nuclear techniques: 1997–2000
 Use of radiotherapy in advanced cancer: 1995–2000

Marine Environment, Water Resources and Industry

Application of isotope techniques to the assessment of aquifer systems in major urban areas: 1997–2000
 Application of isotopes to the assessment of pollutant behaviour in the unsaturated zone for groundwater protection: 2000–2003
 Isotope techniques for the assessment of slow moving deep ground water and their potential application for the assessment of waste disposal sites: 1997–2000
 Isotopic composition of precipitation in the Mediterranean Basin in relation to air circulation patterns and climate: 2000–2004
 Origins of salinity and impacts on fresh groundwater resources: Optimization of isotopic techniques: 2000–2005
 Radiation synthesis of stimuli-responsive membranes, hydrogels and adsorbents for separation purposes: 2000–2004
 Radiotracer technology for engineering unit operation studies and unit process optimization: 1998–2000
 Sedimentation assessment studies by environmental radionuclides and their application to soil conservation measures: 1995–2000
 Use of isotope techniques in investigating acidic fluids in geothermal exploitation: 1997–2000
 Use of tracers and stable isotopes in surface water pollution studies: 1997–2000
 Validation of protocols for corrosion and deposit evaluation in pipes by radiography: 1997–2000

Physical and Chemical Sciences

Application of MeV ion beams for development and characterization of semiconductor materials: 1997–2000
 Applications and development of small angle neutron scattering: 2000–2003
 Atomic and plasma-wall interaction data for fusion reactor diverter modelling: 1995–2000
 Bulk hydrogen analysis using neutrons: 1997–2000
 Development and application of alpha particle spectrometry: 2000–2004
 Development of agents for imaging central neural system receptors based on technetium-99m: 1995–2000
 Development of computer based troubleshooting tools and instruments: 1996–2000
 Development of kits for radioimmunometric assay of tumour markers: 1998–2000
 Development of kits for technetium-99m radiopharmaceuticals for infection imaging: 2000–2003
 Elements of power plant design for inertial fusion energy: 2000–2005
 In situ applications of X ray fluorescence techniques: 2000–2004
 Nuclear analytical techniques in archaeological investigations: 1996–2000

TABLE A22. (cont.)

Optimization of synthesis and quality control procedures for the preparation of fluorine-18 and iodine-123 labelled peptides: 1997–2000

Standardized high current solid targets for cyclotron production of diagnostic and therapeutic radionuclides: 2000–2003

Use of ion beam techniques for the analysis of light elements in thin films, including depth profiling: 2000–2003

Validation of nuclear techniques for the analysis of precious and rare metals in mineral concentrates: 1997–2000

Nuclear Safety

Investigation of methodologies for incident analysis: 1997–2000

Radiation Safety

Investigation of appropriate methods and procedures to apply probabilistic safety assessment techniques of large radiation sources: 2000–2003

Limitations of radioepidemiological assessments for stochastic radiation effects in relation to radiation protection: 1994–2000

Radioactive Waste Safety

Formulation of approaches to compare the potential impacts of wastes from electricity generation technologies: 1997–2000

Improvement of safety assessment methodologies for near surface disposal facilities for radioactive waste: 1997–2000

Use of selected safety indicators (concentrations, fluxes) in the assessment of radioactive waste disposal: 2000–2005

TABLE A23. **TRAINING COURSES, SEMINARS AND WORKSHOPS IN 2000**

Nuclear Power

Courses

Interregional course on management for excellence in nuclear power plant performance — France
 Interregional course on qualification of nuclear power plant personnel and the role of management — Germany; Republic of Korea
 Regional course on modernization of instrumentation and control in nuclear power plants — Germany
 Regional course on nuclear power project management — Republic of Korea
 Regional course on strengthening nuclear power project management — Spain

Workshops

IAEA–FORATOM workshop on integrated management systems of nuclear installations — Slovenia
 Regional workshop on evaluation of non-destructive testing results for remaining lifetime assessment — Czech Republic
 Regional workshop on good practices in national approaches to nuclear power plant life management — Slovenia
 Regional workshop on impact of privatization and market deregulation on nuclear power plant operation — Hungary
 Regional workshop on in-service inspection effectiveness improvement through inspection qualification — Bulgaria
 Regional workshop on internal and external inspection of the reactor pressure vessel — Croatia
 Regional workshop on managing the early termination of nuclear power plant operations — Germany
 Regional workshop on modern approaches in computer based control system design in nuclear power plant — China
 Regional workshop on on-line testing of nuclear power plant temperature and pressure instrumentation and other critical plant equipment — Mexico
 Regional workshop on operational and safety issues of nuclear power plants — Republic of Korea
 Regional workshop on steam generator tube integrity — Russian Federation
 Workshop on nuclear reaction data and nuclear reactors: Physics, design and safety — Abdus Salam International Centre for Theoretical Physics, Trieste

Seminars

National seminar on nuclear power project management — China
 Seminar on accelerator driven systems and transmutation of nuclear waste: Options and trends — Abdus Salam International Centre for Theoretical Physics, Trieste

Nuclear Fuel Cycle and Waste Technology

Courses

Interregional course on decommissioning of research reactors and other small nuclear installations — USA

Comparative Assessment of Energy Sources

Courses

Regional course on case studies to assess nuclear power as a Clean Development Mechanism under the Kyoto Protocol — Republic of Korea
 Regional course on the use of the Agency's methodologies and tools to analyse priority environmental issues — Indonesia
 Role of nuclear energy and other energy options in greenhouse gas mitigation — Austria

Seminar

National co-ordinators' seminar to exchange experiences of comparative assessment of electricity options — Republic of Korea

Food and Agriculture

Courses

Course on differential diagnosis of the Old World Screwworm and other myiosis fly larvae — United Kingdom

TABLE A23. (cont.)

Course on food irradiation process control — USA
 FAO/IAEA course on implementation of quality assurance/quality control measures in residue analysis laboratories — Austria
 FAO/IAEA regional course on the Old World Screwworm — Islamic Republic of Iran
 FAO/IAEA regional course on the sterile insect technique as a component for integrated area wide tsetse and trypanosomosis management — United Republic of Tanzania
 Regional Asia course on new frontiers of developing and handling mutants — China
 WHO/IAEA course on African trypanosomoses — France

Workshops

AFRA workshop on adoption of appropriate selection techniques for the development of drought tolerant germplasm — Nigeria
 AFRA workshop on production of standards and internal quality control (IQC) materials for self-coating radioimmunoassay of progesterone — Mauritius
 AFRA/ARCAL/RCA workshop on the development of an international protocol on irradiation as a quarantine treatment for food and agricultural commodities — Morocco
 CLAM/FAO/IAEA workshop on peach fruit fly (*Bactocera zonata*) — Spain
 FAO regional workshop on screwworm strategies in the Caribbean — Panama
 FAO/IAEA regional workshop on in vitro mutagenesis, tissue culture and molecular markers — Thailand
 FAO/IAEA regional workshop on public information on the use of irradiation as sanitary and phytosanitary treatment of food — Malaysia
 FAO/IAEA study tour/workshop on the red palm weevil and peach fruit fly — Egypt
 FAO/IAEA workshop on certification of irradiation as a sanitary and phytosanitary treatment for food and agricultural commodities — Australia
 FAO/IAEA workshop on developing standardized training material to assist Member States to establish quality systems for veterinary diagnostic laboratories — Austria
 FAO/IAEA workshop on genetic sexing and population genetics of the screwworm — Austria
 FAO/IAEA workshop on improvement of the sterile insect technique for the codling moth to facilitate expansion of field application — Austria
 FAO/IAEA workshop on improving and harmonizing rinderpest diagnosis and surveillance — Mali
 FAO/IAEA workshop on in vitro protocols and mutant selection using Bayoud toxin — Morocco
 FAO/IAEA workshop on the development of cost effective diets for the mass production of tsetse flies — Austria
 FAO/IAEA workshop on the development of quality assurance for mycotoxin analysis of food and feed for Eastern European countries — Austria
 FAO/IAEA workshop on the supply of sterile flies for medfly sterile insect technique in the Mediterranean Basin — Austria
 FAO/IAEA/AFRA workshop on the industrial and public acceptance of food irradiation — Ghana
 FAO/IAEA/UCR workshop on in vitro culture techniques for the improvement of vegetatively propagated tropical food crops — Costa Rica
 RCA workshop on production of iodinated tracer for self-coating radioimmunoassay of progesterone — Thailand
 Regional Asia workshop on food irradiation — China
 Regional West Asia workshop on phosphorus fertilizers in fertigation — Austria
 Regional West Asia workshop on the use of low quality irrigation water in fertigation — Lebanon
 Workshop on trade opportunities for irradiated food — USA

Human Health

Courses

Course on basic clinical radiobiology (IAEA-ESTRO) — Slovakia
 Course on clinical research in radiation oncology (IAEA-ESTRO) — United Kingdom
 Course on evidence based radiation oncology — Singapore
 Course on evidence based radiation oncology principles and methods (IAEA-ESTRO) — Spain
 Course on imaging for target volume determination in radiotherapy (IAEA-ESTRO) — Italy
 Course on physics for clinical radiotherapy (IAEA-ESTRO) — Belgium

TABLE A23. (cont.)

Course on radiotherapy treatment planning: Modern brachytherapy techniques (IAEA-ESTRO) — Italy

Course on radiotherapy treatment planning: Principles and practices (IAEA-ESTRO) — Netherlands

Group activity on in vivo bioavailability measurements of trace elements — China

Interregional course on molecular biology techniques and radionuclide tracers in the control of infectious diseases — Thailand

Project co-ordinators' meeting on quality assurance in the radiation sterilization of tissue grafts — Indonesia

Regional course on application of radionuclide methods in the management of infection and inflammation — Algeria

Regional course on applications of the manual of rules and procedures in nuclear nephro-urology — Cuba

Regional course on cardiac brain single photon emission computer tomography — Cuba

Regional course on cardiac single photon emission computer tomography and scintimammography techniques for nuclear medicine technologists — Bangladesh

Regional course on cell irradiation in clinical nuclear medicine practice — France

Regional course on interventional nuclear medicine — Bulgaria

Regional course on laboratory automation for radioimmunoassay — Syrian Arab Republic

Regional course on myocardial perfusion scintigraphy using single photon emission computer tomography — India

Regional course on paediatric nuclear medicine — South Africa

Regional course on physical aspects of quality assurance in radiotherapy — Australia

Regional course on production of basic reagents for radioimmunoassay of tumour markers — Tunisia

Regional course on proton emission tomography in clinical practice — China

Regional course on quality assurance in single photon emission computer tomography system imaging — Saudi Arabia

Regional course on radioimmunoassay of free prostatic specific antigen and human chorionic gonadotrophin — Jordan

Regional course on radionuclide techniques in the management of diabetes — Philippines

Regional course on radiotherapeutic management of paediatric tumours — Egypt

Regional course on servicing medical linear accelerators — Jordan

Regional course on the effective use of AMRA equipment — Morocco

Regional course on the physical aspects of quality assurance in radiotherapy — Syrian Arab Republic

Regional course on the physical aspects of quality assurance in radiotherapy — Australia

Workshops

International workshop on BioMAP — Portugal

National workshop on overview of the UNDP/RCA/IAEA subproject on air pollution and its trends: Neutron activation analysis and air pollution studies using nuclear analytical techniques in Slovenia — Philippines

Regional workshop on advanced single photon emission computer tomography technologies — Brazil

Regional workshop on effective use of PIP software — United Arab Emirates

Regional workshop on isotopic technique applications in human nutrition with emphasis on micronutrient intervention programmes — China

Regional workshop on quality control of single photon emission computer tomography systems — Algeria

Regional workshop on radionuclide treatment of liver cancer — Singapore

Regional workshop on scintimammography and application of surgical gamma probes in the management of breast cancer — Indonesia

Research workshop on monitoring of natural and human-made radionuclides and heavy metal waste in environment — Russian Federation

Workshop on maintenance and quality control of radiotherapy cobalt-60 machines — Kenya

Workshop on micronutrients and health: Molecular biological mechanisms — Malaysia

Workshop on standardization of dose measurements at calibration facilities — Algeria

Workshop on the use of stable isotopes for evaluating nutrition intervention programmes in Latin America — Argentina

Seminars

Seminar on calibration procedures and traceability of radiation measurements in the Baltic States — Lithuania

Seminar on analytical techniques in monitoring the environment — India

TABLE A23. (cont.)

Marine Environment, Water Resources and Industry

Courses

- Advanced regional course on site specific numerical flow and transport modelling for water resources — Thailand
- Course on chlorinated pesticides and PCBs — IAEA-MEL, Monaco
- Course on determination of trace elements in marine environmental samples — Morocco
- Course on determination of trace metals in marine samples — IAEA-MEL, Monaco
- Course on petroleum hydrocarbons and chlorinated pesticides in environmental samples — Ukraine
- Regional course on application of tracers to study transport processes and sedimentation rates in the marine environment — Thailand
- Regional course on geochemical modelling for water resources management — Philippines
- Regional course on isotopes and geochemical modelling for groundwater resources management — Zimbabwe
- Regional executive course for water resources managers on breakthroughs in isotope applications in water resources management in Asia and the Pacific — Republic of Korea

Workshops

- Assessment workshop for project RAS/8/084 — Philippines
- Workshop on in situ marine radioactivity monitoring — Ireland
- Workshop on isotopes in climate and GNIP Scientific Steering Committee — Germany

Physical and Chemical Sciences

Courses

- Group fellowship training in the maintenance of nuclear spectroscopy instruments — Agency's Laboratories, Seibersdorf
- Group fellowship training in the methodology and applications of the X ray fluorescence technique — Agency's Laboratories, Seibersdorf
- National course on accelerators — Indonesia
- National course on building and repair of personal computers and local area networks — Zambia
- National course on microprocessor based nuclear instruments — Myanmar; Sri Lanka
- National course on power conditioning for safe and reliable operation of electronic systems — United Republic of Tanzania
- Regional course and examination on surface methods testing, level 2 — Jordan
- Regional course on design and application of portable nucleonic gauges — New Zealand
- Regional course on fabrication of non-destructive testing test pieces — Jordan
- Regional course on hospital radiopharmacy — Cyprus
- Regional course on industrial digital radiography — Republic of Korea
- Regional course on model level 3 examination in eddy current testing — Pakistan
- Regional course on non-destructive testing in railways — South Africa
- Regional course on non-destructive testing of concrete structures — Singapore
- Regional course on process, quality control and safety in radiation processing — Chile
- Regional course on quality control and quality assurance in radiochemistry and nuclear related analysis — Egypt
- Regional course on radiation processing of natural polysaccharides — Viet Nam
- Regional course on radiation sterilization for medical and pharmaceutical applications — Tunisia
- Regional course on radiographic testing, level 3 — Syrian Arab Republic
- Regional course on radiotracer and sealed source techniques and applications in industry and environment — South Africa
- Regional course on radiotracers in mineral ore processing — Indonesia
- Regional course on standard software for tracer applications and nucleonic gauge design and calibration — Viet Nam
- Regional course on tracers in oil fields — Argentina
- Regional course on ultrasonic testing, level 3 — Islamic Republic of Iran
- National course on repair and maintenance of microprocessor and microcontroller based instruments — Sudan

TABLE A23. (cont.)

National course on research and development for advanced technology — Indonesia
 National course on thermoluminescent detector readers — El Salvador
 National course on X ray equipment — Bolivia; Ecuador; El Salvador
 Regional course on digital signal processing — Cuba
 Regional course on liquid scintillation counters — Malaysia
 Regional course on maintenance, troubleshooting and repair of instruments constructed with surface mount devices — Morocco
 Regional course on troubleshooting of nuclear instruments based on advanced technology — Malaysia

Workshops

Regional expert workshop on quality assurance and cobalt-60 brachytherapy source production — China
 Regional management workshop to review the good manufacturing practices guidebook and project self-assessment — Republic of Korea
 Regional workshop on detectors — Mexico
 Regional workshop on digital electronics — Brazil
 Regional workshop on electron treatment of paper pulp for the viscose rayon industry — India
 Regional workshop on gamma cameras — Venezuela
 Regional workshop on good manufacturing practices in clean area operations for the production of technetium-99m kits and radiopharmaceuticals — Indonesia
 Regional workshop on instrumentation for nuclear medicine — Peru
 Regional workshop on maintenance and repair of electrometers and chambers — Brazil
 Regional workshop on nucleonic gauge design, calibration and applications — Brazil
 Regional workshop on quality assurance in biological control of technetium-99m kits and technetium-99m radiopharmaceuticals — Malaysia
 Regional workshop on quality assurance of technetium-99m kits and ingredients — Thailand
 Regional workshop on radiation processing of agro-wastes — Malaysia
 Regional workshop on radiotracers for efficiency testing of wastewater treatment plants — Republic of Korea
 Regional workshop on the application of gamma scanning and neutron gauge techniques in petrochemical industry — Venezuela
 Second regional workshop on quality assurance/quality control of nuclear analytical techniques — Latvia
 Second regional workshop on radiation treatment of industrial wastewater — Czech Republic
 Task force workshop in non-destructive testing in industry — South Africa
 Workshop on nuclear reaction data and nuclear reactors: Physics, design and safety — Italy

Nuclear Safety

Courses

Course on management for excellence in nuclear power plant performance — France
 Interregional course on advances in monitoring, assessment and enhancement of operational safety of nuclear power plants — USA
 Interregional course on regulatory aspects and safety documentation of research reactors — USA
 Interregional course on the safety of spent fuel storage — USA
 National basic professional course on nuclear safety — Romania
 Regional basic professional training course on nuclear safety — Brazil
 Regional course on nuclear fuel/ core management — Republic of Korea
 Regional course on nuclear power plant siting — Indonesia
 Regional course on nuclear safety information for decision makers — Malaysia
 Regional course on operational safety of nuclear power plants including management — Germany
 Regional course on operational safety of research reactors — Japan
 Regional course on prerequisites of institutional requirements for deployment of nuclear power — Headquarters
 Regional course on regulatory control of nuclear power plants — Germany
 Regional course on risk based inspection: theory and applications — Lithuania
 Regional course on safety assessment of nuclear power plants to assist in decision making — Finland
 Regional course on safety in the operation and utilization of research reactors — Indonesia

TABLE A23. (cont.)

Regional course on the use of system computer codes for accident analysis — Croatia
 Regional course on ultrasonic testing for detection, characterization and repair of intergranular stress corrosion cracking, flaw sizing and weld overlay examination — Russian Federation

Workshops

Regional workshop on configuration management and managing safety during planned outages — Republic of Korea
 Regional workshop on operational and safety issues for nuclear power plants with special focus on management of operational safety — Republic of Korea
 Workshop on design, evaluation and licensing of nuclear power plant modifications — Slovenia
 Workshop on development and validation of emergency operating procedures — Czech Republic
 Workshop on emergency action levels for nuclear power plants — China
 Workshop on fire protection in nuclear power plants — China
 Workshop on integrated regulatory enforcement and inspection — Indonesia
 Workshop on management of safety and safety culture — Slovenia
 Workshop on modelling of external hazards in probabilistic safety analysis — Bulgaria
 Workshop on nuclear safety analysis of research reactors — Viet Nam
 Workshop on nuclear safety and risk assessment — Indonesia
 Workshop on operating experience feedback on human factors — Bulgaria
 Workshop on operational safety monitoring and assessment — Slovenia
 Workshop on operational safety performance indicators — China
 Workshop on operational safety standards implementation and best practices — Headquarters
 Workshop on periodic safety review — China
 Workshop on periodic safety reviews and ageing — Czech Republic
 Workshop on probabilistic approach to regulatory decision making — Belgium
 Workshop on probabilistic safety assessment applications — China
 Workshop on regulatory experience with nuclear power plant commissioning — Headquarters
 Workshop on regulatory information for the public and media — Slovenia
 Workshop on regulatory requirements and practices for ageing management — Slovakia
 Workshop on research reactor safety assessment, standards and conduct of inspection — Headquarters
 Workshop on safety assessment and regulatory control for research reactors — Viet Nam
 Workshop on safety culture and research reactors — Hungary
 Workshop on severe accident policy and safety goals — China
 Workshop on strengthening nuclear power plant management — China
 Workshop on the characterization, management and storage of spent fuel — Poland
 Workshop on the decommissioning process: regulatory, technical and management aspects — Slovenia
 Workshop on the role of risk monitors in operational safety — Czech Republic

Radiation Safety

Courses

Group training on assessment of legislative and regulatory infrastructure — Czech Republic
 Group training on radiation and waste safety in the oil and gas industry — Syrian Arab Republic
 Group training on radiation protection, waste management and quality assurance in nuclear medicine — Sweden
 Group training on radiation safety in industrial irradiators — Canada
 Joint IAEA/WCO/ICP-INTERPOL awareness course on combating the illicit trafficking of nuclear and other radioactive material — Austria
 National course on combating illicit trafficking of nuclear and other radioactive materials — Belarus; Ukraine
 National course on dosimetry in radiotherapy — Lithuania
 National course on radiation protection for radiation protection officers — Costa Rica
 National course on radiation protection in diagnostic radiology — The Former Yugoslav Republic of Macedonia
 National course on radiation protection in diagnostic radiology and nuclear medicine — Estonia
 National course on radiation protection in industrial radiography — Republic of Moldova

TABLE A23. (cont.)

National course on radiation protection in medical facilities — Georgia
 National course on radiation protection in medical practices — Albania; Armenia; Latvia; Republic of Moldova
 National course on thermoluminescent dosimetry system service and maintenance — Finland
 Post-graduate group training on radiation protection and safety of radiation sources — Malaysia
 Professional training pilot course on radiation protection — Belarus
 Radiation protection in medical exposure — Singapore
 Regional course for inspectors on the application of the guides for a system for an initial response to radiological events — Brazil
 Regional course on calibration of dosimeters and survey instruments for radiation protection — Latvia
 Regional course on medical response in radiological accidents — Argentina
 Regional course on planning, organization and implementation of a regulatory programme for radiation protection — South Africa
 Regional course on radiation protection in diagnostic and interventional radiology — Panama
 Regional course on regulatory control of radiation sources — Slovakia
 Regional course on response and preparedness for radiological emergencies — Cuba
 Regional course on safe transport of radioactive material — Argentina; Australia; Belarus
 Regional post-graduate diploma course on radiation protection — Syrian Arab Republic
 Regional post-graduate educational course on radiation protection and nuclear safety — Argentina
 Regional post-graduate educational course on radiation protection and safety of radiation sources — South Africa
 Regional train the trainers course for instructor trainees: Medical education for nuclear accident preparedness — Ukraine

Workshops

National workshop on licensing and inspection — Uzbekistan
 National workshop on radiation and waste safety in industrial practices — Bangladesh
 National workshop on radiation protection and quality assurance in radiotherapy — Bangladesh
 National workshop on radiation protection for radiologists and radiographers — Albania
 National workshop on radiation protection in radiodiagnostics — Sri Lanka
 Regional workshop on calibration of personal dosimeters and survey instruments for radiation protection — Japan
 Regional workshop on developing radiation safety capabilities for response to nuclear accidents or radiological emergencies and a legal framework covering emergency preparedness and response and civil liability for nuclear damage — Brazil
 Regional workshop on radiation protection and safety in radiotherapy — Philippines
 Regional workshop on radiation protection in diagnostic and interventional radiology — France
 Regional workshop on safety of radiation sources and materials — Viet Nam
 Regional workshop on standardization of dose measurements at calibration — Algeria
 Regional workshop on the Regulatory Authority Information System (RAIS) — South Africa
 Workshop on practical response to a radiological emergency — Slovenia
 Workshop on practices and optimization during maintenance outages — China
 Workshop on public information procedures for nuclear emergencies — Viet Nam

Radioactive Waste Safety

Courses

Regional course on discharge control and environmental monitoring of radioactive material associated with medical and industrial practices — Chile
 Regional course on discharge control and environmental monitoring under the Model Project on upgrading radiation and waste safety infrastructure in Europe — Estonia
 Regional course on effluent monitoring and environment assessment — Japan
 Regional course on safety assessment methodologies for near surface disposal facilities — Spain

Workshops

Regional workshop on radiation protection principles applied to waste management — Republic of Korea
 Regional workshop on safety assessment methodologies for near surface disposal — Hungary

TABLE A24. **MAJOR PUBLICATIONS ISSUED IN 2000**

Only a selection of the Agency's scientific publications issued in 2000 is presented here.

[A full list of all publications is available on the Agency's WorldAtom Web site.](#)

A printed copy is available, on request, from the Agency's Division of Public Information.

Nuclear Power

Economic evaluation of bids for nuclear power plants — Technical Reports Series No. 396

Nuclear power reactors in the world — Reference Data Series No. 2

Quality assurance for software important to safety — Technical Reports Series No. 397

Nuclear Fuel Cycle and Waste Technology

MOX fuel cycle technologies for medium and long term deployment — C&S Papers Series CSP-3/P

Uranium 1999: Resources, production and demand (jointly with OECD/NEA)

Waste management database profiles, No. 3 (CD-ROM)

Waste management research abstracts, Vol. 25 (CD-ROM)

Comparative Assessment of Energy Sources

Energy, electricity and nuclear power estimates for the period up to 2020 (2000 edition) — Reference Data Series No.1

Physical and Chemical Sciences

Bulletin on atomic and molecular data for fusion, Nos 58 and 59

CINDA 1999 (1988–1999): Index to literature and computer files on microscopic neutron data — Special publication

CINDA 2000 (1998–2000): Index to literature and computer files on microscopic neutron data — Special publication

Nuclear Fusion

Nuclear Fusion — Yokohama special issue 3

Research reactors of the world — Reference Data Series No. 3

Nuclear Safety

Fire safety in the operation of nuclear power plants — Safety Standards Series NS-G-2.1

Legal and governmental infrastructure for nuclear, radiation, radioactive waste and transport safety — Safety Standards Series GS-R-1

Operational limits and conditions and operating procedures for nuclear power plants — Safety Standards Series NS-G-2.2

Safety of nuclear power plants: Design — Safety Standards Series NS-R-1

Safety of nuclear power plants: Operation — Safety Standards Series NS-R-2

Software for computer based systems important to safety in nuclear power plants — Safety Standards Series NS-G-1.1

Radiation Safety

Calibration of radiation protection monitoring instruments — Safety Reports Series No. 16

Indirect methods for assessing intakes of radionuclides causing occupational exposure — Safety Reports Series No. 18

Lessons learned from accidental exposures in radiotherapy — Safety Reports Series No. 17

National competent authorities responsible for approvals and authorizations in respect of the transport of radioactive material, List No. 31. 2000 Edition — IAEA-NCAL-31

Regulations for the safe transport of radioactive material, 1996 edition (revised) — Safety Standards Series No. TS-R-1 (ST-1, Revised)

The radiological accident in Istanbul — Special Publication

The radiological accident in Lilo — Special Publication

The radiological accident in Yanango — Special Publication

TABLE A24. (cont.)

Radioactive Waste Safety

Predisposal management of radioactive waste, including decommissioning — Safety Standards Series No. WS-R-2

Regulatory control of radioactive discharges to the environment — Safety Standards Series No. WS-G-2.3

Safety of radioactive waste management — Proceedings Series
