

# Annex

## ANNEX

TABLE A1. ALLOCATION AND UTILIZATION OF REGULAR BUDGET RESOURCES IN 2001

Programme	2001 budget GC(44)/6 (at AS 12.70)	2001 adjusted budget (at AS 15.3642)	2001 total expenditure		Unused (over- expended) budget
	(1)	(2)	Amount (3)	% of adjusted budget (3) / (2) (4)	(2) – (3) (5)
Nuclear Power	4 636 000	4 031 000	4 124 557	102.32%	(93 557)
Nuclear Fuel Cycle and Waste Management Technology	5 835 000	5 086 000	5 018 868	98.68%	67 132
Comparative Assessment for Sustainable Energy Development	2 727 000	2 366 000	2 336 980	98.77%	29 020
<b>Subtotal</b>	<b>13 198 000</b>	<b>11 483 000</b>	<b>11 480 405</b>	<b>99.98%</b>	<b>2 595</b>
Food and Agriculture	11 004 000	9 736 000	9 675 594	99.38%	60 406
Human Health	6 218 000	5 516 000	5 510 295	99.90%	5 705
Marine Environment and Water Resources	6 020 000	5 205 000	5 244 874	100.77%	(39 874)
Applications of Physical and Chemical Sciences	9 834 000	8 826 000	8 822 587	99.96%	3 413
<b>Subtotal</b>	<b>33 076 000</b>	<b>29 283 000</b>	<b>29 253 350</b>	<b>99.90%</b>	<b>29 650</b>
Nuclear Safety	6 224 000	5 339 000	5 428 683	101.68%	(89 683)
Radiation Safety	3 805 000	3 287 000	3 675 857	111.83%	(388 857)
Radioactive Waste Safety	2 267 000	1 951 000	1 705 990	87.44%	245 010
Co-ordination of Safety Activities	3 054 000	2 655 529 <sup>a</sup>	2 421 905	91.20%	233 624
<b>Subtotal</b>	<b>15 350 000</b>	<b>13 232 529</b>	<b>13 232 435</b>	<b>100.00%</b>	<b>94</b>
Safeguards	81 890 000	69 937 000	69 970 800	100.05%	(33 800)
Security of Material	1 093 000	938 000	869 058	92.65%	68 942
<b>Subtotal</b>	<b>82 983 000</b>	<b>70 875 000</b>	<b>70 839 858</b>	<b>99.95%</b>	<b>35 142</b>
Management of Technical Co-operation for Development	13 641 000	11 557 471 <sup>a</sup>	11 528 187	99.75%	29 284
<b>Subtotal</b>	<b>13 641 000</b>	<b>11 557 471</b>	<b>11 528 187</b>	<b>99.75%</b>	<b>29 284</b>
<b>Policy-making, Management and Support Services:</b>					
Executive Management	3 064 000	2 612 000	2 705 839	103.59%	(93 839)
Services for Policy-making Organs	6 237 000	5 342 000	5 257 947	98.43%	84 053
Legal Activities, External Relations and Public Information	7 095 000	6 113 000	5 573 120	91.17%	539 880
Administration	12 234 000	10 414 000	9 796 459	94.07%	617 541
General Services	23 080 000	19 281 000	19 084 596	98.98%	196 404
Information Management and Support Services	15 135 000	12 867 000	14 207 791	110.42%	(1 340 791)
<b>Subtotal</b>	<b>66 845 000</b>	<b>56 629 000</b>	<b>56 625 752</b>	<b>99.99%</b>	<b>3 248</b>
<b>TOTAL – Agency's Programmes</b>	<b>225 093 000</b>	<b>193 060 000</b>	<b>192 959 987</b>	<b>99.95%</b>	<b>100 013</b>
Reimbursable work for others	4 891 000	4 174 000	3 844 129	92.10%	329 871
<b>TOTAL</b>	<b>229 984 000</b>	<b>197 234 000</b>	<b>196 804 116</b>	<b>99.78%</b>	<b>429 884</b>

<sup>a</sup> Based on Board of Governor's Resolution GOV/1999/15, an amount of \$34 529 was transferred from the subprogramme "Planning, Co-ordination and Evaluation" to the subprogramme "Safety Conventions" (in the Co-ordination of Safety Activities programme) to cover the cost of emergency assistance provided to Greece, Panama and Poland.

## ANNEX

TABLE A2. EXTRABUDGETARY FUNDS IN 2001 — RESOURCES AND EXPENDITURES

Programme	Extrabudgetary budget figures GC(44)/6 (1)	Resources available in 2001 <sup>a</sup> (2)	Expenditure during 2001 (3)	Unused balance as at 31 Dec 2001 (2)-(3) (4)
Nuclear Power	686 000	1 209 440	589 175	620 265
Nuclear Fuel Cycle and Waste Management Technology	605 000	1 412 638	609 508	803 130
Comparative Assessment for Sustainable Energy Development	0	134 551	103 460	31 091
<b>Subtotal</b>	<b>1 291 000</b>	<b>2 756 629</b>	<b>1 302 143</b>	<b>1 454 486</b>
Food and Agriculture	2 199 992	3 329 472	2 214 614	1 114 858
Food and Agriculture	1 031 008 <sup>b</sup>	0	0	0
Human Health	0	257 096	64 839	192 257
Marine Environment and Water Resources	956 000	1 475 835	867 814	608 021
Applications of Physical and Chemical Sciences	13 000	43 304	20 412	22 892
<b>Subtotal</b>	<b>4 200 000</b>	<b>5 105 707</b>	<b>3 167 679</b>	<b>1 938 028</b>
Nuclear Safety	2 078 000	5 708 581	2 235 562	3 473 019
Radiation Safety	100 000	735 483	299 508	435 975
Radioactive Waste Safety	250 000	406 053	292 248	113 805
Co-ordination of Safety Activities	126 000	296 890	142 178	154 712
<b>Subtotal</b>	<b>2 554 000</b>	<b>7 147 007</b>	<b>2 969 496</b>	<b>4 177 511</b>
Safeguards	6 875 000	30 389 005	15 172 034	15 216 971
Security of Material	1 046 000	1 780 404	757 861	1 022 543
Verification in Iraq pursuant to UNSC Resolutions	10 650 000	2 519 033	2 503 745	15 288
<b>Subtotal</b>	<b>18 571 000</b>	<b>34 688 442</b>	<b>18 433 640</b>	<b>16 254 802</b>
Management of Technical Co-operation for Development	310 000	479 255	346 822	132 433
<b>Subtotal</b>	<b>310 000</b>	<b>479 255</b>	<b>346 822</b>	<b>132 433</b>
<b>Policy-making, Management and Support Services:</b>				
Services for Policy-making Organs	0	4 853	4 853	0
Legal Activities, External Relations and Public Information	805 000	1 453 982	583 755	870 227
Administration	0	9 767	8 837	930
Information Management and Support Services	0	15 552	15 052	500
<b>Subtotal</b>	<b>805 000</b>	<b>1 484 154</b>	<b>612 497</b>	<b>871 657</b>
<b>Agency's Programmes</b>	<b>27 731 000</b>	<b>51 661 194</b>	<b>26 832 277</b>	<b>24 828 917</b>

<sup>a</sup> The column "Resources Available in 2001" includes cash contributions received as well as the unused balances as at 1 January 2001 and cash due from FAO, UNEP and UNOPS for approved activities.

<sup>b</sup> The FAO budget includes \$1 031 008 estimated costs for FAO professional staff working in the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture. The salaries of these staff members are paid by FAO and, therefore, are not included in columns 2 and 3.

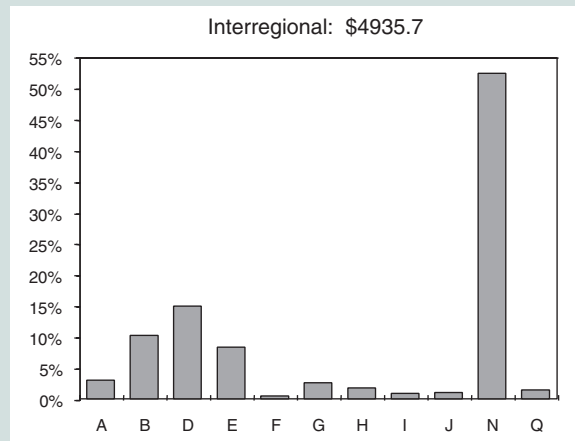
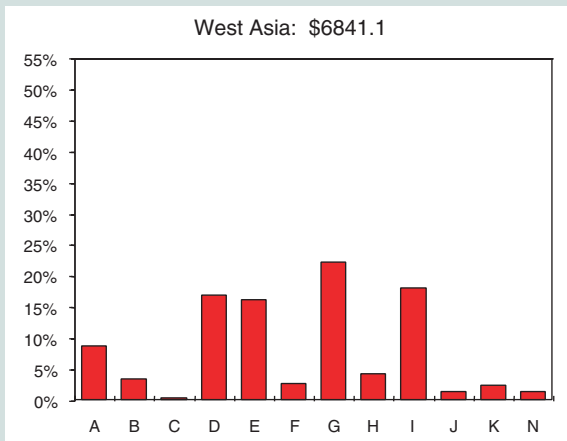
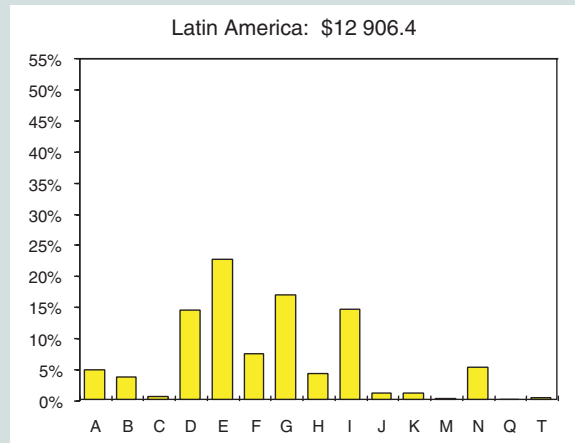
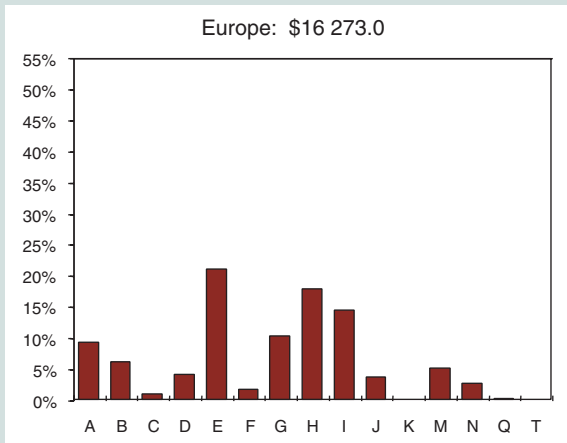
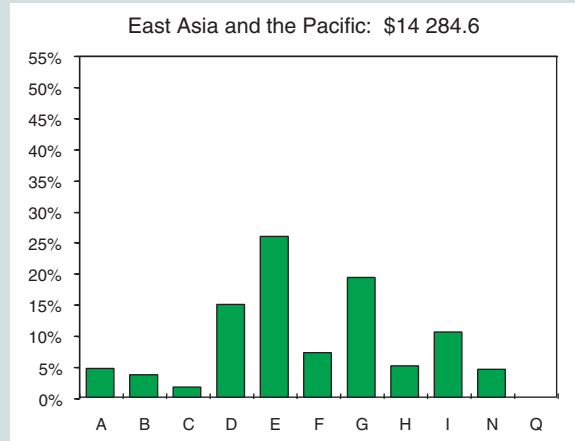
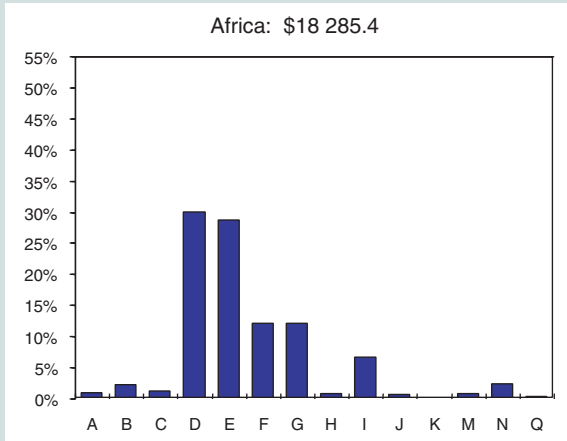
## ANNEX

TABLE A3. **TECHNICAL CO-OPERATION DISBURSEMENTS BY AGENCY PROGRAMME AND REGION IN 2001***I. Summary of all regions (in thousands of dollars)*

Programme	Africa	East Asia and the Pacific	Europe	Latin America	West Asia	Global/inter-regional	Total
<b>A</b> Nuclear Power	195.1	693.5	1538.0	655.2	611.0	164.2	3857.0
<b>B</b> Nuclear Fuel Cycle and Waste Management Technology	413.9	552.4	1032.4	496.3	242.3	516.3	3253.7
<b>C</b> Comparative Assessment for Sustainable Energy Development	247.5	275.6	179.6	87.1	36.0	2.9	828.7
<b>D</b> Food and Agriculture	5496.4	2177.0	692.1	1881.3	1164.8	745.9	12 157.6
<b>E</b> Human Health	5261.3	3716.0	3446.7	2939.6	1115.8	427.1	16 906.5
<b>F</b> Marine Environment and Water Resources	2229.2	1060.9	302.2	974.5	196.5	33.2	4796.4
<b>G</b> Applications of Physical and Chemical Sciences	2224.9	2786.0	1693.5	2197.1	1529.4	141.5	10 572.3
<b>H</b> Nuclear Safety	156.2	765.2	2927.1	575.7	299.5	95.9	4819.6
<b>I</b> Radiation Safety	1236.3	1542.4	2366.6	1909.1	1246.0	59.3	8359.7
<b>J</b> Radioactive Waste Safety	142.3	10.0	629.0	161.3	108.7	65.3	1116.6
<b>K</b> Co-ordination of Safety Activities	22.6	1.7	16.4	164.8	179.4	0.0	384.9
<b>M</b> Security of Material	144.9	0.0	873.7	51.0	0.0	0.0	1069.5
<b>N</b> Management of Technical Co-operation for Development	435.3	674.8	472.4	711.2	107.6	2596.6	4997.9
<b>Q</b> Legal Activities, External Relations and Public Information	71.6	22.8	80.3	32.1	0.0	87.5	294.3
<b>T</b> Information Management and Support Services	8.0	6.0	23.1	70.3	4.1	0.0	111.5
<b>TOTAL</b>	<b>18 285.4</b>	<b>14 284.6</b>	<b>16 273.0</b>	<b>12 906.4</b>	<b>6841.1</b>	<b>4935.7</b>	<b>73 526.2</b>

ANNEX

II. Distribution by region



**Note:** Letters denote Agency programmes; they are explained in part I on the previous page.

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TABLE A4. **ESTIMATED COSTS OF ALTERNATIVE MITIGATION TECHNOLOGIES IN THE POWER GENERATION SECTOR COMPARED WITH BASELINE COAL FIRED STATIONS AND POTENTIAL REDUCTIONS IN CARBON EMISSIONS TO 2010 AND 2020 FOR ANNEX I COUNTRIES**  
(source: *Third Assessment Report of the IPCC, 2001*)

Technology	pf+FGD, NO <sub>x</sub> , etc.	IGCC and super-critical	CCGT	pf+FGD +CO <sub>2</sub> capture	CCGT + CO <sub>2</sub> capture	Nuclear	PV and thermal solar	Hydro	Wind turbines	BIGCC
Energy source	Coal	Coal	Gas	Coal	Gas	Uranium	Solar radiation	Water	Wind	Biofuel
Generating costs (cents/kW-h)	4.90	3.6–6.0	4.9–6.9	7.9	6.4–8.4	3.9–8.0	8.7–40.0	4.2–7.8	3.0–8	2.8–7.6
Emissions (g C/kW-h)	229	190–198	103–122	40	17	0	0	0	0	0
Cost of carbon reduction (\$/t C)	Baseline	-10–40	0–156	159	71–165	-38–135	175–1400	-31–127	-82–135	-92–117
Reduction potential to 2010, (Mt C/a)	Baseline	13	18	2–10	—	30	2	6	51	9
Reduction potential to 2020, (Mt C/a)	Baseline	55	103	5–50	—	191	20	37	128	77

**Abbreviations:** BIGCC: biomass integrated gasification combined cycle; CCGT: combined cycle gas turbine; FGD: flue gas desulphurization; IGCC: integrated gasification combined cycle; pf: pulverized fuel; PV: photovoltaic.

TABLE A5. **ESTIMATED COSTS OF ALTERNATIVE MITIGATION TECHNOLOGIES IN THE POWER GENERATION SECTOR COMPARED WITH BASELINE COAL FIRED STATIONS AND POTENTIAL REDUCTIONS IN CARBON EMISSIONS TO 2010 AND 2020 FOR NON-ANNEX I COUNTRIES**  
(source: *Third Assessment Report of the IPCC, 2001*)

Technology	pf+FGD, NO <sub>x</sub> , etc.	IGCC and super-critical	CCGT	pf+FGD +CO <sub>2</sub> capture	CCGT + CO <sub>2</sub> capture	Nuclear	PV and thermal solar	Hydro	Wind turbines	BIGCC
Energy source	Coal	Coal	Gas	Coal	Gas	Uranium	Solar radiation	Water	Wind	Biofuel
Generating costs (cents/kW-h)	4.45	3.6–6.0	4.45–6.9	7.45	5.95–8.4	3.9–8.0	8.7–40.0	4.2–7.8	3.0–8	2.8–7.6
Emissions (g C/kW-h)	260	190–198	103–122	40	17	0	0	0	0	0
Cost of carbon reduction (\$/t C)	Baseline	-10–200	0–17	136	62–163	-20–77	164–1370	-10–129	-56–137	-63–121
Reduction potential to 2010 (Mt C/a)	Baseline	36	20	0	—	36	0.5	20	12	5
Reduction potential to 2020 (Mt C/a)	Baseline	58	137	5–50	—	220	8	55	45	13

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TABLE A6. **ESTIMATED COSTS OF ALTERNATIVE MITIGATION TECHNOLOGIES IN THE POWER GENERATION SECTOR COMPARED WITH GAS FIRED CCGT POWER STATIONS AND POTENTIAL REDUCTIONS IN CARBON EMISSIONS TO 2010 AND 2020 FOR ANNEX I COUNTRIES** (source: *Third Assessment Report of the IPCC, 2001*)

Technology	CCGT	pf+FGD + CO <sub>2</sub> capture	CCGT + CO <sub>2</sub> capture	Nuclear	PV and thermal solar	Hydro	Wind turbines	BIGCC
Energy source	Gas	Coal	Gas	Uranium	Solar radiation	Water	Wind	Biofuel
Generating costs (cents/kW·h)	3.45	7.6–10.6	4.95	3.9–8.0	8.7–40.0	4.2–7.8	3.0–8	2.8–7.6
Emissions (g C/kW·h)	108	40	17	0	0	0	0	0
Cost of carbon reduction (\$/t C)	Baseline	610–1050	165	46–421	500–3800	66–400	-43–92	-60–224
Reduction potential to 2010 (Mt C/a)	Baseline	—	2–10	62	0.8	3	23	4
Reduction potential to 2020 (Mt C/a)	Baseline	—	5–50	181	9	18	61	36

TABLE A7. **ESTIMATED COSTS OF ALTERNATIVE MITIGATION TECHNOLOGIES IN THE POWER GENERATION SECTOR COMPARED WITH GAS FIRED CCGT POWER STATIONS AND POTENTIAL REDUCTIONS IN CARBON EMISSIONS TO 2010 AND 2020 FOR NON-ANNEX I COUNTRIES** (source: *Third Assessment Report of the IPCC, 2001*)

Technology	CCGT	pf+FGD + CO <sub>2</sub> capture	CCGT + CO <sub>2</sub> capture	Nuclear	PV and thermal solar	Hydro	Wind turbines	BIGCC
Energy source	Gas	Coal	Gas	Uranium	Solar radiation	Water	Wind	Biofuel
Generating costs (cents/kW·h)	3.45	6.9–8.7	4.95	3.9–8.0	8.7–40.0	4.2–7.8	3.0–8	2.8–7.6
Emissions (g C/kW·h)	108	40	17	0	0	0	0	0
Cost of carbon reduction (\$/t C)	Baseline	507–772	165	46–421	500–3800	66–400	-43–92	-60–224
Reduction potential to 2010 (Mt C/a)	Baseline	—	0	10	0.2	9	5	1
Reduction potential to 2020 (Mt C/a)	Baseline	—	5–50	70	4	26	21	6

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TABLE A8. **INTERNATIONAL PROBABILISTIC SAFETY ASSESSMENT REVIEW TEAM (IPSART) MISSIONS IN 2001**

Review type	Nuclear power plant	Country
Level 1 follow-up and level 2 PSA	Ignalina	Lithuania
Level 1 PSA	KANUPP	Pakistan
Level 1 pre-IPSART	Cernavoda	Romania
External events and level 2/3 PSA	Novovoronezh, unit 5	Russian Federation
Level 1 PSA and hazards	Mochovce	Slovakia
Level 1 PSA	Zaporozhe	Ukraine

TABLE A9. **REVIEW OF ACCIDENT MANAGEMENT PROGRAMMES (RAMP) IN 2001**

Type	Location	Country
Pilot RAMP	Krško	Slovenia

TABLE A10. **OPERATIONAL SAFETY REVIEW TEAM (OSART) MISSIONS IN 2001**

Type	Nuclear power plant type	Country
Preparatory meeting	Angra 2 PWR	Brazil
OSART follow-up	Kozloduy WWER	Bulgaria
Preparatory meeting	Pickering PHWR	Canada
Pre-OSART	Lingao PWR	China
Full OSART	Dukovany WWER	Czech Republic
Full OSART	Temelin WWER	Czech Republic
Full OSART	Paks WWER	Hungary

TABLE A11. **PEER REVIEW OF OPERATIONAL SAFETY PERFORMANCE EXPERIENCE (PROSPER) MISSIONS IN 2001**

Type	Plant/location	Country
Introductory mission	Metsamor	Armenia
Assistance mission	Karachi	Pakistan
Preparatory meeting	Cernavoda	Romania
Workshop	Bilibino	Russian Federation
Seminar	VNIIAES	Russian Federation



**ANNEX**

**TABLE A12. SAFETY CULTURE ENHANCEMENT PROGRAMME (SCEP) ACTIVITIES IN 2001**

Type	Location/nuclear power plant	Country
SCEP workshop	INB, Rio de Janeiro and Resende	Brazil
Workshop for managers on the management of safety and safety culture	Eletronuclear, Rio de Janeiro and Angra dos Reis	Brazil
Self-assessment training workshop	INB, Rio de Janeiro and Angra dos Reis	Brazil
Regional workshop on safety culture for non-power nuclear installations	Santiago de Chile	Chile
Regional workshop on management of safety and safety culture	Daya Bay	China
Safety culture seminar	INSTN, Saclay	France
Self-assessment training workshop	Laguna Verde	Mexico
Workshop	Volgodonsk	Russian Federation
Safety culture seminar	Slovak Technical University, Bratislava	Slovakia
Regional workshop on management of safety and safety culture	Piestany	Slovakia
Presentation on management of safety and safety culture	SGS, Stockholm	Sweden
Seminar on management of safety and safety culture	Stockholm	Sweden

**TABLE A13. ENGINEERING SAFETY REVIEW SERVICE (ESRS) MISSIONS IN 2001**

Service	Site/plant	Country
Ageing safety review	Medzamor	Armenia
Seismic safety review follow-up	Medzamor	Armenia
Site safety review (preliminary)	Rooppur	Bangladesh
Periodic safety review	Qinshan	China
Design safety review	Tianwan	China
Review of Agency safety issues	Temelin	Czech Rep.
PSAR review assistance	Bushehr	Islamic Rep. of Iran
Design safety review	Korean Next Generation Reactor	Republic of Korea
Documentation review on severe accident safety features	Tianwan	China
PSAR review, chapters 9 and 10	Bushehr	Islamic Rep. of Iran
Periodic safety review	Krško	Slovenia
Seismic safety review	Istanbul	Turkey

ANNEX

TABLE A14. **INTEGRATED SAFETY OF RESEARCH REACTORS (INSARR) MISSIONS IN 2001**

Type	Research reactor	Country
Pre-INSARR	3MW TRIGA	Bangladesh
Pre-INSARR	La Reina RR	Chile
Pre-INSARR	SPR, NHR, HTR-10	China
Pre-INSARR	GRR-1	Greece
INSARR	GRR-1	Greece
Pre-INSARR	TRR-1	Islamic Rep. of Iran
Pre-INSARR	14 MW TRIGA II	Romania
Pre-INSARR	MNSR RR	Syrian Arab Republic

TABLE A15. **SAFETY REVIEW MISSIONS IN 2001 TO RESEARCH REACTORS UNDER PROJECT AND SUPPLY AGREEMENTS**

Type	Country
Australian Replacement Research Reactor—Review of the Preliminary Safety Analysis Report	Australia
Activities to prepare facilities for INSARR	China
Assistance for the safety review of a newly designed research reactor: MIPR	China
ETRR-2 fact finding mission	Egypt
Follow-up of a safety project for the research reactors	Libyan Arab Jamahiriya
Assistance on the commissioning programme and completion of SAR for the reactor under construction	Morocco
Fact finding mission	Uzbekistan

TABLE A16. **INTERNATIONAL REGULATORY REVIEW TEAM (IRRT) MISSIONS IN 2001**

Type	Country
Full scope	Czech Republic
Full scope	Lithuania
Full scope	Mexico
Pre-IRRT	Thailand
Full scope follow-up	Ukraine

## ANNEX

TABLE A17. NUMBER OF STATES HAVING SIGNIFICANT NUCLEAR ACTIVITIES AT THE END OF 1999, 2000 AND 2001

	Number of States		
	1999	2000	2001
States with safeguards applied under NPT or NPT/Tlatelolco agreements	60	60	61
States with safeguards applied under Tlatelolco agreements	1	1	0
States with safeguards applied pursuant to other comprehensive safeguards agreements	0	0	0
States with safeguards applied under INFCIRC/66/Rev.2-type agreements <sup>a</sup>	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
<b>Total number of States with significant nuclear activities<sup>b</sup></b>	<b>71</b>	<b>71</b>	<b>71</b>

<sup>a</sup> 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.

<sup>b</sup> According to information available to the Agency for the year in question.

TABLE A18. APPROXIMATE QUANTITIES OF MATERIAL SUBJECT TO AGENCY SAFEGUARDS AT THE END OF 2001

Type of material	Quantity of material (t)			
	Comprehensive safeguards agreements <sup>a</sup>	INFCIRC/66 <sup>b</sup>	Nuclear weapon States	Quantity in SQs
<b>Nuclear material</b>				
Plutonium <sup>c</sup> contained in irradiated fuel (including recycled plutonium in fuel elements in reactor cores)	577.5	30	82.9	86 303
Separated plutonium outside reactor cores	13.6	0.1	63.8	9673
HEU (equal to or greater than 20% <sup>235</sup> U)	10.8	0.1	10	580
LEU (less than 20% <sup>235</sup> U)	42 993	2922	4164	13 288
Source material <sup>d</sup> (natural or depleted uranium and thorium)	81 252	1728	11 960	7294
<b>Non-nuclear material<sup>e</sup></b>				
Heavy water	0	479	0	24
<b>Total significant quantities</b>	<b>92 623</b>	<b>4518</b>	<b>20 021</b>	<b>117 162</b>

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

<sup>b</sup> Excluding installations in nuclear weapon States; including installations in Taiwan, China.

<sup>c</sup> The quantity includes an estimated 88.6 t (11 081 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 accountability and C/S measures are applied).

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

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

## ANNEX

TABLE A19. NUMBER OF FACILITIES UNDER SAFEGUARDS OR CONTAINING SAFEGUARDED MATERIAL ON 31 DECEMBER 2001

Facility type	Number of facilities (number of installations)			
	Comprehensive safeguards agreements <sup>a</sup>	INFCIRC/66 <sup>b</sup>	Nuclear weapon States	Total
Power reactors	186 (223)	11 (14)	1 (1)	198 (238)
Research reactors and critical assemblies	141 (152)	7 (7)	1 (1)	149 (160)
Conversion plants	13 (13)	1 (1)	— (—)	14 (14)
Fuel fabrication plants	38 (39)	3 (3)	— (—)	41 (41)
Reprocessing plants	5 (5)	1 (1)	— (—)	6 (6)
Enrichment plants	8 (8)	— (—)	2 (4)	10 (12)
Separate storage facilities	67 (68)	3 (3)	7 (8)	77 (79)
Other facilities	82 (92)	1 (1)	1 (1)	84 (94)
<b>Subtotals</b>	<b>540 (600)</b>	<b>27 (30)</b>	<b>12 (15)</b>	<b>579 (645)</b>
Other locations	325 (423)	3 (30)	— (—)	328 (453)
Non-nuclear installations	— (—)	1 (1)	— (—)	1 (1)
<b>Totals</b>	<b>865 (1023)</b>	<b>31 (61)</b>	<b>12 (15)</b>	<b>908 (1099)</b>

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

<sup>b</sup> Excluding installations in nuclear weapon States; including installations in Taiwan, China.

Table A20. ADDITIONAL SAFEGUARDS SUPPORT PROVIDED BY STATES AND ORGANIZATIONS

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

## ANNEX

TABLE A21. STATUS WITH REGARD TO THE CONCLUSION OF SAFEGUARDS AGREEMENTS AND ADDITIONAL PROTOCOLS<sup>a, b</sup> (as of 31 December 2001)

State <sup>c</sup>	SQP <sup>d</sup>	Status of safeguards agreement(s)	INFCIRC	Additional Protocol status
Afghanistan	X	In force: 20 February 1978	257	
<i>Albania</i>		<i>In force: 25 March 1988</i> <sup>1</sup>	359	
Algeria		In force: 7 January 1997	531	
<i>Andorra</i>		<i>Signed: 9 January 2001</i>		Signed: 9 January 2001
<i>Angola</i>				
Antigua and Barbuda	X	In force: 9 September 1996 <sup>2</sup>	528	
Argentina		In force: 4 March 1994 <sup>3</sup>	435	
Armenia		In force: 5 May 1994	455	Signed: 29 September 1997
Australia		In force: 10 July 1974	217	In force: 12 December 1997
Austria		Accession: 31 July 1996 <sup>4</sup>	193	Signed: 22 September 1998 <sup>5</sup>
Azerbaijan	X	In force: 29 April 1999	580	In force: 29 November 2000
Bahamas	X	In force: 12 September 1997 <sup>2</sup>	544	
<i>Bahrain</i>				
Bangladesh		In force: 11 June 1982	301	In force: 30 March 2001
Barbados	X	In force: 14 August 1996 <sup>2</sup>	527	
Belarus		In force: 2 August 1995	495	
Belgium		In force: 21 February 1977	193	Signed: 22 September 1998
Belize	X	In force: 21 January 1997 <sup>2</sup>	532	
<i>Benin</i>				
Bhutan	X	In force: 24 October 1989	371	
Bolivia	X	In force: 6 February 1995 <sup>2</sup>	465	
Bosnia and Herzegovina		In force: 28 December 1973 <sup>6</sup>	204	
<i>Botswana</i>				
Brazil		In force: 4 March 1994 <sup>7</sup>	435	
Brunei Darussalam	X	In force: 4 November 1987	365	
Bulgaria		In force: 29 February 1972	178	In force: 10 October 2000
<i>Burkina Faso</i>				
<i>Burundi</i>				
Cambodia	X	In force: 17 December 1999	586	
<i>Cameroon</i>		<i>Signed: 21 May 1992</i>		
Canada		In force: 21 February 1972	164	In force: 8 September 2000

<sup>a</sup> This annex does not aim at listing all safeguards agreements that the Agency has concluded. Not included are agreements whose application has been suspended in the light of the application of safeguards pursuant to a comprehensive safeguards agreement.

<sup>b</sup> The Agency also applies safeguards in Taiwan, China under two agreements, INFCIRC/133 and INFCIRC/158, which came into force on 13 October 1969 and 6 December 1971, respectively.

<sup>c</sup> States in bold type are those which are not party to the NPT and whose safeguards agreements are of INFCIRC/66-type. States in italics are those which are party to the NPT but have not concluded a safeguards agreement pursuant to that Treaty; the safeguards agreements referred to are comprehensive safeguards agreements concluded pursuant to the NPT, unless otherwise indicated. Safeguards agreements marked with an asterisk denote voluntary offer safeguards agreements.

<sup>d</sup> Operational small quantity protocol (SQP): States with a legal obligation to conclude a comprehensive safeguards agreement which have nuclear material in quantities not exceeding the limits of paragraph 37 of INFCIRC/153 and no nuclear material in any facility, have the option to conclude an SQP, thus holding in abeyance the implementation of most of the detailed provisions set out in Part II of a comprehensive safeguards agreement as long as these conditions continue to apply. Six States meet the conditions for an SQP but do not have one i.e. Albania, Bosnia and Herzegovina, Côte d'Ivoire, Liechtenstein, Sri Lanka and Tunisia.

## ANNEX

TABLE A21. (cont.)

State <sup>c</sup>	SQP <sup>d</sup>	Status of safeguards agreement(s)	INFCIRC	Additional Protocol status
<i>Cape Verde</i>				
<i>Central African Republic</i>				
<i>Chad</i>				
Chile		In force: 5 April 1995 <sup>8</sup>	476	
China		In force: 18 September 1989	369(*)	Signed: 31 December 1998
Colombia		In force: 22 December 1982 <sup>8</sup>	306	
<i>Comoros</i>				
<i>Congo</i>				
Costa Rica	X	In force: 22 November 1979 <sup>2</sup>	278	Signed: 12 December 2001
Côte d'Ivoire		In force: 8 September 1983	309	
Croatia	X	In force: 19 January 1995	463	In force: 6 July 2000
<b>Cuba</b>		In force: 5 May 1980	281	Signed: 15 October 1999
		In force: 7 October 1983	311	
Cyprus	X	In force: 26 January 1973	189	Signed: 29 July 1999
Czech Republic		In force: 11 September 1997 <sup>9</sup>	541	Signed: 28 September 1999
Democratic People's Republic of Korea		In force: 10 April 1992	403	
Democratic Republic of the Congo		In force: 9 November 1972	183	
Denmark		In force: 21 February 1977 <sup>10</sup>	193	Signed: 22 September 1998
<i>Djibouti</i>				
Dominica	X	In force: 3 May 1996 <sup>11</sup>	513	
Dominican Republic	X	In force: 11 October 1973 <sup>2</sup>	201	
Ecuador	X	In force: 10 March 1975 <sup>2</sup>	231	In force: 24 October 2001
Egypt		In force: 30 June 1982	302	
El Salvador	X	In force: 22 April 1975 <sup>2</sup>	232	
<i>Equatorial Guinea</i>		<i>Approved: 13 June 1986</i>		
<i>Eritrea</i>				
Estonia		In force: 24 November 1997	547	Signed: 13 April 2000
Ethiopia	X	In force: 2 December 1977	261	
Fiji	X	In force: 22 March 1973	192	
Finland		Accession: 1 October 1995 <sup>12</sup>	193	Signed: 22 September 1998 <sup>5</sup>
France		In force: 12 September 1981 Signed: 26 September 2000 <sup>13</sup>	290 (*)	Signed: 22 September 1998
<i>Gabon</i>		<i>Signed: 3 December 1979</i>		
Gambia	X	In force: 8 August 1978	277	
<i>Georgia</i>		<i>Signed: 29 September 1997</i>		Signed: 29 September 1997
Germany		In force: 21 February 1977 <sup>14</sup>	193	Signed: 22 September 1998 <sup>5</sup>
Ghana		In force: 17 February 1975	226	Signed: 12 June 1998 <sup>15</sup>
Greece		Accession: 17 December 1981 <sup>16</sup>	193	Signed: 22 September 1998 <sup>5</sup>
Grenada	X	In force: 23 July 1996 <sup>2</sup>	525	
Guatemala	X	In force: 1 February 1982 <sup>2</sup>	299	Signed: 14 December 2001
<i>Guinea</i>				
<i>Guinea-Bissau</i>				
Guyana	X	In force: 23 May 1997 <sup>2</sup>	543	
<i>Haiti</i>		<i>Signed: 6 January 1975 <sup>2</sup></i>		
Holy See	X	In force: 1 August 1972	187	In force: 24 September 1998
Honduras	X	In force: 18 April 1975 <sup>2</sup>	235	
Hungary		In force: 30 March 1972	174	In force: 4 April 2000

## ANNEX

TABLE A21. (cont.)

State <sup>c</sup>	SQP <sup>d</sup>	Status of safeguards agreement(s)	INFCIRC	Additional Protocol status
Iceland	X	In force: 16 October 1974	215	
<b>India</b>		In force: 30 September 1971	211	
		In force: 17 November 1977	260	
		In force: 27 September 1988	360	
		In force: 11 October 1989	374	
		In force: 1 March 1994	433	
Indonesia		In force: 14 July 1980	283	In force: 29 September 1999
Iran, Islamic Republic of		In force: 15 May 1974	214	
Iraq		In force: 29 February 1972	172	
Ireland		In force: 21 February 1977	193	Signed: 22 September 1998
<b>Israel</b>		In force: 4 April 1975	249/Add.1	
Italy		In force: 21 February 1977	193	Signed: 22 September 1998
Jamaica		In force: 6 November 1978 <sup>2</sup>	265	
Japan		In force: 2 December 1977	255	In force: 16 December 1999
Jordan	X	In force: 21 February 1978	258	In force: 28 July 1998
Kazakhstan		In force: 11 August 1995	504	
<i>Kenya</i>				
Kiribati	X	In force: 19 December 1990	390	
Korea, Republic of		In force: 14 November 1975	236	Signed: 21 June 1999
<i>Kuwait</i>		<i>Signed: 10 May 1999</i>		
<i>Kyrgyzstan</i>		<i>Signed: 18 March 1998</i>		
Lao People's Democratic Republic	X	In force: 5 April 2001	599	
Latvia		In force: 21 December 1993	434	In force: 12 July 2001
Lebanon	X	In force: 5 March 1973	191	
Lesotho	X	In force: 12 June 1973	199	
<i>Liberia</i>				
Libyan Arab Jamahiriya		In force: 8 July 1980	282	
Liechtenstein		In force: 4 October 1979	275	
Lithuania		In force: 15 October 1992	413	In force: 5 July 2000
Luxembourg		In force: 21 February 1977	193	Signed: 22 September 1998
Madagascar	X	In force: 14 June 1973	200	
Malawi	X	In force: 3 August 1992	409	
Malaysia		In force: 29 February 1972	182	
Maldives	X	In force: 2 October 1977	253	
<i>Mali</i>				
Malta	X	In force: 13 November 1990	387	
<i>Marshall Islands</i>				
<i>Mauritania</i>				
Mauritius	X	In force: 31 January 1973	190	
Mexico		In force: 14 September 1973 <sup>17</sup>	197	
<i>Micronesia, Federated States of</i>				
Monaco	X	In force: 13 June 1996	524	In force: 30 September 1999
Mongolia	X	In force: 5 September 1972	188	Signed: 5 December 2001
Morocco	X	In force: 18 February 1975	228	
<i>Mozambique</i>				
Myanmar	X	In force: 20 April 1995	477	
Namibia	X	In force: 15 April 1998	551	Signed: 22 March 2000

## ANNEX

TABLE A21. (cont.)

State <sup>c</sup>	SQP <sup>d</sup>	Status of safeguards agreement(s)	INFCIRC	Additional Protocol status
Nauru	X	In force: 13 April 1984	317	
Nepal	X	In force: 22 June 1972	186	
Netherlands		In force: 5 June 1975 <sup>13</sup>	229	
		In force: 21 February 1977	193	Signed: 22 September 1998 <sup>5</sup>
New Zealand	X	In force: 29 February 1972	185	In force: 24 September 1998
Nicaragua	X	In force: 29 December 1976 <sup>2</sup>	246	
<i>Niger</i>		<i>Approved: 20 March 2001</i>		
Nigeria	X	In force: 29 February 1988	358	Signed: 20 September 2001
Norway		In force: 1 March 1972	177	In force: 16 May 2000
<i>Oman</i>		<i>Signed: 28 June 2001</i>		
<b>Pakistan</b>		In force: 5 March 1962	34	
		In force: 17 June 1968	116	
		In force: 17 October 1969	135	
		In force: 18 March 1976	239	
		In force: 2 March 1977	248	
		In force: 10 September 1991	393	
		In force: 24 February 1993	418	
<i>Palau, Republic of</i>				
<i>Panama</i>	X	<i>In force: 23 March 1984 <sup>18</sup></i>	316	In force: 11 December 2001
Papua New Guinea	X	In force: 13 October 1983	312	
Paraguay	X	In force: 20 March 1979 <sup>2</sup>	279	
Peru		In force: 1 August 1979 <sup>2</sup>	273	In force: 23 July 2001
Philippines		In force: 16 October 1974	216	Signed: 30 September 1997
Poland		In force: 11 October 1972	179	In force: 5 May 2000
Portugal		Accession: 1 July 1986 <sup>19</sup>	193	Signed: 22 September 1998 <sup>5</sup>
<i>Qatar</i>				
<i>Moldova, Republic of</i>		<i>Signed: 14 June 1996</i>		
Romania		In force: 27 October 1972	180	In force: 7 July 2000
Russian Federation		In force: 10 June 1985	327*	Signed: 22 March 2000
<i>Rwanda</i>				
St. Kitts and Nevis	X	In force: 7 May 1996 <sup>11</sup>	514	
St. Lucia	X	In force: 2 February 1990 <sup>11</sup>	379	
St. Vincent and the Grenadines	X	In force: 8 January 1992 <sup>11</sup>	400	
Samoa	X	In force: 22 January 1979	268	
San Marino	X	In force: 21 September 1998	575	
<i>São Tome and Principe</i>				
<i>Saudi Arabia</i>				
Senegal	X	In force: 14 January 1980	276	
<i>Seychelles</i>				
<i>Sierra Leone</i>		<i>Signed: 10 November 1977</i>		
Singapore	X	In force: 18 October 1977	259	
Slovakia		In force: 3 March 1972 <sup>20</sup>	173	Signed: 27 September 1999
Slovenia		In force: 1 August 1997	538	In force: 22 August 2000
Solomon Islands	X	In force: 17 June 1993	420	
<i>Somalia</i>				
South Africa		In force: 16 September 1991	394	
Spain		Accession: 5 April 1989	193	Signed: 22 September 1998 <sup>5</sup>



## ANNEX

TABLE A21. (cont.)

State <sup>c</sup>	SQP <sup>d</sup>	Status of safeguards agreement(s)	INFCIRC	Additional Protocol status
Sri Lanka		In force: 6 August 1984	320	
Sudan	X	In force: 7 January 1977	245	
Suriname	X	In force: 2 February 1979 <sup>2</sup>	269	
Swaziland	X	In force: 28 July 1975	227	
Sweden		Accession: 1 June 1995 <sup>21</sup>	193	Signed: 22 September 1998 <sup>5</sup>
Switzerland		In force: 6 September 1978	264	Signed: 16 June 2000
Syrian Arab Republic		In force: 18 May 1992	407	
<i>Tajikistan</i>				
Thailand		In force: 16 May 1974	241	
<i>The Former Yugoslav Rep. of Macedonia</i>		Signed: 10 October 2000		
<i>Togo</i>		Signed: 29 November 1990		
Tonga	X	In force: 18 November 1993	426	
Trinidad and Tobago	X	In force: 4 November 1992 <sup>2</sup>	414	
Tunisia		In force: 13 March 1990	381	
Turkey		In force: 1 September 1981	295	In force: 17 July 2001
<i>Turkmenistan</i>				
Tuvalu	X	In force: 15 March 1991	391	
<i>Uganda</i>				
Ukraine		In force: 22 January 1998	550	Signed: 15 August 2000
<i>United Arab Emirates</i>				
United Kingdom		In force: 14 December 1972	175 <sup>22</sup>	
		In force: 14 August 1978	263 (*)	Signed: 22 September 1998 <sup>5</sup>
		Approved: September 1992 <sup>13</sup>		
<i>United Republic of Tanzania</i>		Signed: 26 August 1992		
United States of America		In force: 9 December 1980	288 (*)	Signed: 12 June 1998
		In force: 6 April 1989 <sup>13</sup>	366	
Uruguay		In force: 17 September 1976 <sup>2</sup>	157	Signed: 29 September 1997
Uzbekistan		In force: 8 October 1994	508	In force: 21 December 1998
<i>Vanuatu</i>				
Venezuela		In force: 11 March 1982 <sup>2</sup>	300	
Viet Nam		In force: 23 February 1990	376	
<i>Yemen, Republic of</i>		Signed: 21 September 2000		
<i>Yugoslavia, Federal Republic of</i>		In force: 28 December 1973 <sup>23</sup>	204	
Zambia	X	In force: 22 September 1994	456	
Zimbabwe	X	In force: 26 June 1995	483	

<sup>1</sup> Sui generis comprehensive safeguards agreement.

<sup>2</sup> Safeguards agreement refers to both the Treaty of Tlatelolco and the NPT.

<sup>3</sup> Date refers to the safeguards agreement concluded between Argentina, Brazil, ABACC and the Agency. On 18 March 1997, upon approval by the Board of Governors, an exchange of letters entered into force between Argentina and the Agency confirming that the safeguards agreement satisfied the requirements of Article 13 of the Treaty of Tlatelolco and Article III of the NPT to conclude a safeguards agreement with the Agency.

## ANNEX

- <sup>4</sup> 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.
- <sup>5</sup> The Agency has received notification from the State that it has fulfilled its own internal requirements for entry into force of the additional protocol concluded with Euratom and the Agency. The additional protocol will enter into force on the date when the Agency receives written notification from all the States and Euratom that their respective requirements for entry into force have been met.
- <sup>6</sup> 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.
- <sup>7</sup> Date refers to the safeguards agreement concluded between Argentina, Brazil, ABACC and the Agency. On 10 June 1997, upon approval by the Board of Governors, an exchange of letters entered into force between Brazil and the Agency confirming that the safeguards agreement satisfied the requirements of Article 13 of the Treaty of Tlatelolco. On 20 September 1999, upon approval by the Board of Governors, an exchange of letters entered into force confirming that the safeguards agreement also satisfied the requirements of Article III of the NPT.
- <sup>8</sup> Date refers to a safeguards agreement pursuant to Article 13 of the Treaty of Tlatelolco. Upon approval by the Board of Governors an exchange of letters entered into force (for Chile on 9 September 1996; for Colombia on 13 June 2001) confirming that the safeguards agreement satisfied the requirement of Article III of the NPT.
- <sup>9</sup> 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.
- <sup>10</sup> 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 for Greenland.
- <sup>11</sup> An exchange of letters has entered into force between this state and the Agency confirming that the NPT safeguards agreement satisfies the obligations of the state under Article 13 of the Treaty of Tlatelolco.
- <sup>12</sup> 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.
- <sup>13</sup> The safeguards agreement referred to is pursuant to Additional Protocol I to the Treaty of Tlatelolco.
- <sup>14</sup> 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.
- <sup>15</sup> Pending entry into force, the additional protocol is applied provisionally in this State.
- <sup>16</sup> 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.
- <sup>17</sup> The safeguards agreement referred to was concluded pursuant to both the Treaty of Tlatelolco and the NPT. The application of safeguards under an earlier safeguards agreement pursuant to the Treaty of Tlatelolco, which entered into force on 6 September 1968 (INFCIRC/118), was suspended as of 14 September 1973.
- <sup>18</sup> Date refers to a safeguards agreement concluded pursuant to Article 13 of the Treaty of Tlatelolco. A safeguards agreement pursuant to the NPT and the Tlatelolco Treaty was signed on 22 December 1988 but has not yet entered into force.
- <sup>19</sup> 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.

## ANNEX

- <sup>20</sup> 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.
- <sup>21</sup> 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.
- <sup>22</sup> Date refers to the INFCIRC/66-type safeguards agreement, concluded between the United Kingdom and the Agency, which remains in force.
- <sup>23</sup> 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.

ANNEX

TABLE A22. **PARTICIPATION BY STATES IN MULTILATERAL TREATIES FOR WHICH THE DIRECTOR GENERAL IS DEPOSITARY, CONCLUSION OF REVISED SUPPLEMENTARY AGREEMENTS AND ACCEPTANCE OF AMENDMENTS TO ARTICLES VI AND XIV.A OF THE AGENCY'S STATUTE**  
(status as of 31 December 2001)

<b>P&amp;I</b>	Agreement on the Privileges and Immunities of the IAEA.
<b>VC</b>	Vienna Convention on Civil Liability for Nuclear Damage.
<b>VC/OP</b>	Optional Protocol Concerning the Compulsory Settlement of Disputes.
<b>CPPNM</b>	Convention on the Physical Protection of Nuclear Material.
<b>NOT</b>	Convention on Early Notification of a Nuclear Accident.
<b>ASSIST</b>	Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.
<b>JP</b>	Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention.
<b>NS</b>	Convention on Nuclear Safety.
<b>RADW</b>	Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.
<b>PVC</b>	Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage ( <i>not yet entered into force</i> ).
<b>SUPP</b>	Convention on Supplementary Compensation for Nuclear Damage ( <i>not yet entered into force</i> ).
<b>RSA</b>	Revised Supplementary Agreements Concerning the Provision of Technical Assistance by the IAEA (RSA).
<b>VI</b>	Acceptance of Amendment to Article VI of the IAEA Statute.
<b>XIV.A</b>	Acceptance of Amendment to Article XIV.A of the IAEA Statute.

	P&I	VC	VC/OP	CPPNM	NOT	ASSIST	JP	NS	RADW	PVC	SUPP	RSA	VI	XIV.A
* Afghanistan					Sr	Sr						S		
* Albania												S		
* Algeria					Sr	Sr		S				S	X	X
Andorra														
* Angola														
Antigua and Barbuda				P										
* Argentina	P	P		P	Pr	Pr	S	P	P	CS	CS	S		
* Armenia		P		P	P	P		P						
* Australia	P			P	Pr	Pr		P	S		S			
* Austria				Pr	P	Pr		P	P					
* Azerbaijan														
Bahamas														
Bahrain														
* Bangladesh					P	P		P				S		
Barbados														
* Belarus	Pr	P		Pr	Pr	Pr		P	S	S		S	X	X
* Belgium	Pr			Pr	P	P	S	P	S					
Belize														
* Benin														
Bhutan														
* Bolivia	P	P										S		
* Bosnia and Herzegovina		P		P	P	P								
Botswana				P										
* Brazil	P	P		P	P	P		P	S			S		
Brunei														
* Bulgaria	Pw	P		Pw	Pw	Pw	P	P	P			S		
* Burkina Faso												S		
Burundi														
* Cambodia														
* Cameroon	P	P			S	S	P					S		

\*: Agency Member State; **S**: Signatory; **P**: Party; **CS**: Contracting State; **r**: existing reservation/declaration; **w**: withdrawal of previous reservation/declaration.

## ANNEX

TABLE A22. (cont.)

	P&I	VC	VC/OP	CPPNM	NOT	ASSIST	JP	NS	RADW	PVC	SUPP	RSA	VI	XIV.A
* Canada	Pr			P	Pr	Sr		P	P				X	X
Cape Verde														
* Central African Republic														
Chad														
* Chile	Pr	Pr		P	S	S	P	P				S		
* China	Pr			Pr	Pr	Pr		P				S		
* Colombia	P	S	S									S		
Comoros														
Congo														
* Costa Rica					P	P						S		
* Croatia	P	P		P	P	P	P	P	P			S	X	X
* Côte d'Ivoire					S	S						S		
* Cuba	Pr	P		Pr	Pr	Pr		S				S		
* Cyprus	P			Pr	P	P		P				S		
* Czech Rep.	Pw	P		P	P	P	P	P	P	S	S	S		
Dem. People's Rep. of Korea					Sr	Sr								
* Dem Rep. of the Congo					S	S						S		
* Denmark	Pr			P	P	S	P	Pr	Pr					
Djibouti														
Dominica														
* Dominican Republic				S								S		
* Ecuador	P			P								S		
* Egypt	P	P			Pr	Pr	P	S				S		
* El Salvador												S		
Equatorial Guinea														
Eritrea														
* Estonia	P	P		P	P	P	P		S			S		
* Ethiopia												S		
Fiji														
* Finland	P			Pr	P	Pr	P	P	P					X
* France				Pr	Pr	Pr	S	P	P				X	X
* Gabon														
Gambia														
* Georgia												S		
* Germany	Pr			Pr	Pr	Pr	P	P	P				X	X
* Ghana	P							S				S		
* Greece	P			Pr	Pr	Pr	P	P	P			S	X	X
Grenada														
* Guatemala				Pr	P	P						S		
Guinea														
Guinea-Bissau														
Guyana														
* Haiti				S								S		
* Holy See	P				S	S							X	X
Honduras														
* Hungary	Pr	P		Pw	Pw	Pw	P	P	P	S		S		
* Iceland					P	S		S				S		
* India	P				Pr	Pr		Sr						
* Indonesia	Pr			Pr	Pr	Pr		S	S	S	S	S		
* Iran, Islamic Rep. of	P				Pr	Pr						S		

\*: Agency Member State; **S**: Signatory; **P**: Party; **CS**: Contracting State; **r**: existing reservation/declaration; **w**: withdrawal of previous reservation/declaration.

## ANNEX

TABLE A22. (cont.)

	P&I	VC	VC/OP	CPPNM	NOT	ASSIST	JP	NS	RADW	PVC	SUPP	RSA	VI	XIV.A
* Iraq					Pr	Pr						S		
* Ireland	P			Pr	P	Pr		P	P			S	X	X
* Israel		Sr		Sr	Pr	Pr		S				S		
* Italy	Pr			Pr	Pr	Pr	P	P	S	S	S			
* Jamaica	P											S		
* Japan	P			P	P	Pr		P					X	
* Jordan	Pr				P	P		S				S		
* Kazakhstan	P							S	S			S		
* Kenya												S		
* Korea, Rep. of	Pr			Pr	P	Pr		P	S			S	X	X
* Kuwait	P													
Kyrgyzstan														
Lao People's Dem. Rep.														
* Latvia	P	P			P	P	P	P	P	CS		S		
* Lebanon		P		P	P	P		P	S	S	S	S		
Lesotho														
Liberia														
* Libyan Arab Jamahiriya				P		P						S		
* Liechtenstein				P	P	P							X	X
* Lithuania	P	P		P	P	P	P	P	S	S	S	S	X	X
* Luxembourg	Pr			Pr	P	P		P	P				X	X
* Madagascar												S		
Malawi														
* Malaysia					Pr	Pr						S		
Maldives														
* Mali					S	S		P				S		
* Malta												S	X	X
* Marshall Islands														
Mauritania														
* Mauritius	P				Pr	Pr						S		
* Mexico	Pr	P		P	P	P		P				S		
Micronesia														
* Monaco				P	Pr	Pr		S					X	X
* Mongolia	Pw			Pw	Pw	Pw						S		
* Morocco	Pr	S		S	P	P	S	S	P	CS	CS	S	X	
Mozambique														
* Myanmar					Pr							S	X	X
* Namibia												S		
Nepal														
* Netherlands	P			Pr	Pr	Pr	P	P	P					
* New Zealand	P				P	Pr								
* Nicaragua	P				Pr	Pr		S				S		
* Niger	P	P		S	S	S						S		
* Nigeria					P	P		S				S		
* Norway	P			Pr	P	Pr	P	P	P					
Oman														
* Pakistan	Pr			Pr	Pr	Pr		P				S	X	X
Palau														
* Panama				P	P	P						S		
Papua New Guinea														

\*: Agency Member State; **S**: Signatory; **P**: Party; **CS**: Contracting State; **r**: existing reservation/declaration; **w**: withdrawal of previous reservation/declaration.

## ANNEX

TABLE A22. (cont.)

	P&I	VC	VC/OP	CPPNM	NOT	ASSIST	JP	NS	RADW	PVC	SUPP	RSA	VI	XIV.A
* Paraguay				P	S	S						S		
* Peru		P		P	Pr	Pr		P	S	S	S	S		
* Philippines	P	P	P	P	P	P	S	S	S	S	S	S		
* Poland	Pw	P		Pw	Pw	Pw	P	P	P	S		S	X	X
* Portugal				Pr	P	S	S	P				S		
* Qatar												S		
* Rep. of Moldova		P		P	P	P		P				S		
* Romania	Pr	P		Pr	Pr	Pr	P	P	P	CS	CS	S	X	X
* Russian Federation	Pr	S		Pr	Pr	Pr		P	S					
Rwanda														
St. Kitts and Nevis														
St. Lucia														
St. Vincent and the Grenadines		P			P	P	P							
Samoa														
San Marino														
São Tome and Principe														
* Saudia Arabia					Pr	Pr						S		
* Senegal					S	S						S		
Seychelles														
* Sierra Leone					S	S						S		
* Singapore	Pr				P	P		P				S		
* Slovakia	Pw	P		P	Pr	Pr	P	P	P			S		
* Slovenia	P	P		P	P	P	P	P	P				X	X
Solomon Islands														
Somalia														
* South Africa				Sr	Pr	Pr		P						
* Spain	P	S		Pr	Pr	Pr	S	P	P			S		
* Sri Lanka					Pr	Pr		P				S		
* Sudan				P	S	S		S				S		
Suriname														
Swaziland														
* Sweden	P			Pr	P	Pr	P	P	P				X	X
* Switzerland	Pr			Pr	P	P	S	P	P				X	X
* Syrian Arab Republic	P				S	S		S				S		
* Tajikistan				P										
* Thailand	Pr				Pr	Pr						S		
* The Former Yugoslav Rep. of Macedonia		P		P	P	P						S		
Togo														
Trinidad and Tobago		P		P										
* Tunisia	P			P	P	P		S				S		
* Turkey	Pr			Pr	Pr	Pr	S	P				S		
Turkmenistan														
* Uganda												S		
* Ukraine	Pr	P		P	Pr	Pr	P	Pr	P	S	S	S		
United Arab Emirates					Pr	Pr						S		
* United Kingdom	Pw	S	S	Pr	Pr	Pr	S	P	P				X	X
* United Rep. of Tanzania												S		
* United States of America				P	Pr	Pr		P	S		S			
* Uruguay		P	P		P	P		S				S		

\*: Agency Member State; **S**: Signatory; **P**: Party; **CS**: Contracting State; **r**: existing reservation/declaration; **w**: withdrawal of previous reservation/declaration.

## ANNEX

TABLE A22. (cont.)

	P&I	VC	VC/OP	CPPNM	NOT	ASSIST	JP	NS	RADW	PVC	SUPP	RSA	VI	XIV.A
* Uzbekistan					P									S
Vanuatu														
* Venezuela														S
* Viet Nam	P				Pr	Pr								S
* Yemen														
* Yugoslavia, Fed. Rep. of	P	P	S	P	P	P								S
* Zambia														S
* Zimbabwe					S	S								S

\*: Agency Member State; **S**: Signatory; **P**: Party; **CS**: Contracting State; **r**: existing reservation/declaration; **w**: withdrawal of previous reservation/declaration.



TABLE A23. **CONVENTIONS NEGOTIATED AND ADOPTED UNDER THE AUSPICES OF THE AGENCY AND FOR WHICH THE DIRECTOR GENERAL OF THE AGENCY IS DEPOSITARY (STATUS AND RELEVANT DEVELOPMENTS)**

*Agreement on the Privileges and Immunities of the IAEA* (reproduced in INFCIRC/9/Rev. 2). In 2001, one State accepted the Agreement. By the end of the year, there were 68 Parties.

*Vienna Convention on Civil Liability for Nuclear Damage* (reproduced in INFCIRC/500). Entered into force on 12 November 1977. In 2001, 1 State adhered to the Convention. By the end of the year there were 33 Parties.

*Optional Protocol Concerning the Compulsory Settlement of Disputes* (reproduced in INFCIRC/500/Add.3). Entered into force on 13 May 1999. In 2001, the status remained unchanged 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 2001, one State adhered to the Convention. By the end of the year there were 69 Parties.

*Convention on Early Notification of a Nuclear Accident* (reproduced in INFCIRC/335). Entered into force on 27 October 1986. In 2001, one State adhered to the Convention. By the end of the year there were 87 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 2001, one State adhered to the Convention. By the end of the year there were 83 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 2001, three States adhered to the Protocol. By the end of the year there were 24 Parties.

*Convention on Nuclear Safety* (reproduced in INFCIRC/449). Entered into force on 24 October 1996. In 2001, the status remained unchanged with 53 Parties.

*Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* (reproduced in INFCIRC/546). Entered into force on 18 June 2001. In 2001, four States adhered to the Convention and one State signed it. By the end of the year there were 27 Parties.

*Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage* (reproduced in INFCIRC/566). Opened for signature on 29 September 1997. In 2001, one State adhered to the Protocol and one State signed it. By the end of the year there were 4 Contracting States and 15 Signatories.

*Convention on Supplementary Compensation for Nuclear Damage* (reproduced in INFCIRC/567). Opened for signature on 29 September 1997. In 2001, the status remained unchanged with 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. In 2001, two States adhered to the Agreement. By the end of the year, there were 22 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. In 2001, its status remained unchanged with 17 Parties.

*Revised Supplementary Agreements Concerning the Provision of Technical Assistance by the IAEA (RSA)*. In 2001, three States concluded Agreements. By the end of the year 95 States had 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 2001, four States adhered to the Agreement and three States signed it. By the end of the year there were 5 Contracting States and 17 Signatories.

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TABLE A24. **CO-ORDINATED RESEARCH PROJECTS — NEW OR COMPLETED IN 2001**

*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**

#### *New*

Economic research on, and assessment of, selected nuclear desalination projects and case studies  
 Evaluation of radiation damage to WWER reactor pressure vessels: Using the IAEA database on reactor pressure vessel materials  
 Verification of WWER steam generator tube integrity

#### *Completed*

Intercomparison of techniques for pressure tube inspection and diagnostics  
 Optimization of the coupling of nuclear reactors and desalination systems  
 Potential of thorium based fuel cycles to constrain plutonium and to reduce long term waste toxicities  
 Use of a thorium based fuel cycle in accelerator driven systems (ADSs) to incinerate plutonium and to reduce long term waste toxicities

### **Nuclear Fuel Cycle and Waste Management Technology**

#### *New*

Corrosion of research reactor aluminium-clad spent fuel in water (Phase II)  
 Data processing technologies and diagnostics for water chemistry and corrosion control in nuclear power plants (DAWAC)  
 Nuclear fuel cycle aspects of the disposition of depleted uranium

#### *Completed*

Chemical durability and performance assessment of spent fuel and high level waste forms under simulated repository conditions (extended to 2005)  
 Combined methods of liquid radioactive waste treatment  
 Decommissioning techniques for research reactors  
 Modelling of transport of radioactive substances in primary circuit of water cooled reactors  
 Treatment of liquid effluent from uranium mines and mills during and after operation

### **Comparative Assessment for Sustainable Energy Development**

#### *New*

Cost effectiveness of nuclear power compared to carbon dioxide capture and sequestration from fossil fuel power plants  
 Historical evolution of Indicators of Sustainable Energy Development (ISED) and the use of this information for designing guidelines for future energy strategies in conformity with the objectives of sustainable development  
 Impact of infrastructural requirements on the competitiveness of nuclear power

#### *Completed*

Case studies to assess and compare different energy sources in sustainable energy and electricity supply strategies  
 Estimating the external costs associated with electricity generation options in developing countries using simplified methodologies

### **Food and Agriculture**

#### *New*

Development of strategies for the effective monitoring of veterinary drug residues in livestock and livestock products in developing countries  
 Enabling technologies for the expansion of the sterile insect technique for the Old and New Screwworm  
 Integrated approach for improving small scale market oriented dairy systems  
 Integrated soil, water and nutrient management for sustainable rice-wheat cropping systems in Asia  
 Use of irradiation to ensure hygienic quality of fresh, pre-cut fruits and vegetables and other minimally processed foods of plant origin

TABLE A24. (cont.)

*Completed*

Assessment of soil erosion through the use of caesium-137 and related techniques as a basis for soil conservation, sustainable production and environmental protection  
 Automation in tsetse fly mass rearing for use in sterile insect technique programmes  
 Cellular biology and biotechnology including mutation techniques for creation of new useful banana genotypes  
 Use of isotope techniques in studies on the management of organic matter and nutrient turnover for increased, sustainable agricultural production and environmental preservation  
 Use of nuclear and colorimetric techniques for measuring microbial protein supply from local feed resources in ruminant animals

**Human Health***New*

Application of isotopic and nuclear techniques in the study of nutrition pollution interactions and their impact on the nutritional status of human subjects in developing country populations  
 Comparative assessment of teletherapy modalities  
 Development of techniques at Secondary Standard Dosimetry Laboratories for the dissemination of absorbed dose to water standards  
 Development of thermoluminescence dosimetry based quality audits for radiotherapy dosimetry in non-reference conditions  
 Harmonization of protocols and procedures in the management of neonatal hydronephrosis  
 Isotopic and complementary tools for the study of micronutrient status and interactions in developing country populations exposed to multiple nutritional deficiencies  
 Radiopharmaceutical imaging to predict and evaluate the response of breast cancer to neo-adjuvant chemotherapy  
 Use of nuclear and related analytical techniques in studying human exposure to toxic elements consumed through foodstuffs contaminated by industrial activities

*Completed*

Clinical application of radiosensitizers in cancer radiotherapy  
 Development and validation of an Internet based clinical and technical study communication system for nuclear medicine  
 Development of a quality assurance programme for radiation therapy dosimetry in developing countries  
 Development of an improved serological kit for Chagas diagnosis using radionuclide methods  
 Electron paramagnetic resonance biodosimetry  
 Human immunodeficiency virus (HIV) markers in patients treated with radiotherapy for cervical cancer

**Applications of Physical and Chemical Sciences***New*

Atomic and molecular data for fusion plasma diagnostics  
 Data for molecular processes in edge plasmas  
 Dense magnetized plasmas  
 Development of distance learning modules on troubleshooting of nuclear instruments  
 In situ application of the X ray fluorescence technique

*Completed*

WIMSD library update project

**Nuclear Safety***Completed*

Investigation of methodologies for incident analysis  
 Round robin exercise on WWER-440 reactor pressure vessel weld metal irradiation embrittlement and annealing

TABLE A24. (cont.)

**Radiation Safety**

*Completed*

Development of radiological basis for the transport safety requirements for low specific activity materials and surface contaminated objects

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TABLE A25. **TRAINING COURSES, SEMINARS AND WORKSHOPS IN 2001**

<b>Nuclear Power</b>
<i>Courses</i>
Korea International Cooperation Agency/IAEA training course on nuclear power planning and project management for middle level managers — Republic of Korea
Regional course on mechanical equipment — Republic of Korea
Regional course on modernization of nuclear power plant instrumentation and control systems — Germany
Regional course on optimization of nuclear power plant maintenance programmes — Germany
<i>Seminar</i>
Status and prospects for small and medium sized reactors — Egypt
<i>Workshops</i>
Regional workshop on ageing management programme for mechanical equipment and instrumentation and control equipment — Headquarters
Regional workshop on application of the leak-before-break concept — Slovenia
Regional workshop on condition monitoring methods and techniques for assessing lifetime — Ukraine
Regional workshop on configuration management throughout plant service life — Slovenia
Regional workshop on data acquisition system and ageing management — Romania
Regional workshop on the economics of nuclear power plant performance — Hungary
Regional workshop on experience in the management of delayed nuclear power projects — Slovakia
Regional workshop on human-machine interface design for the main control room — Brazil
Regional workshop on management competencies required for the competitive environment — China
Regional workshop on managing human resources during organizational transition — Romania
Regional workshop on nuclear power plant maintenance and in-service inspection — China
Regional workshop on qualification of in-service inspection systems with special regard to the technical justification — Czech Republic
Regional workshop on strategies and policies in implementation of nuclear power plant life management programmes — Slovenia
Regional workshop on structural integrity assessment — Germany
Regional workshop on modern instrumentation and control technology for advanced process control systems — Islamic Republic of Iran
Workshop on advanced nuclear power plant simulation — Abdus Salam International Centre for Theoretical Physics, Trieste
Workshop on desalination economic evaluation — Abdus Salam International Centre for Theoretical Physics, Trieste
Workshop on hybrid nuclear systems for energy production, utilization of actinides and transmutation of long lived radioactive waste — Abdus Salam International Centre for Theoretical Physics, Trieste
Workshop on technologies for desalination — Abdus Salam International Centre for Theoretical Physics, Trieste
<b>Nuclear Fuel Cycle and Waste Management Technology</b>
<i>Courses</i>
Course on implementation of burnup credit in spent fuel management systems — USA
Course on nuclear fuel cycle — Morocco
Decommissioning of research reactors and other small nuclear facilities — Republic of Korea
Demonstration of predisposal waste management and procedures — Russian Federation
Regional course on management of disused sealed radioactive sources — South Africa
<i>Workshop</i>
Computational workshop and course on implementing burnup credit — USA
<b>Comparative Assessment for Sustainable Energy Development</b>
<i>Courses</i>
National group training on energy planning for electricity generation using the Agency's WASP model — Armenia; Haiti

TABLE A25. (cont.)

National group training on the Energy and Power Evaluation Program (ENPEP) — Sudan  
 National group training on the IAEA's model FINPLAN for financial analysis of nuclear power projects — Bulgaria  
 National group training on the use of Model for Analysis of Energy Demand (MAED) — Syrian Arab Republic  
 Regional course on the Energy and Power Evaluation Program (ENPEP) as an IAEA tool for greenhouse gas (GHG) abatement cost studies —Ukraine  
 Regional course on the use of the Agency's methodologies and tools in greenhouse gas abatement studies — Republic of Korea

*Seminars*

Regional seminar to exchange experiences in conducting national studies on greenhouse gas abatement — Viet Nam

*Workshops*

Interregional workshop on enhanced energy system analysis and planning, incorporating social, economic and environmental aspects in decision making — USA

**Food and Agriculture***Courses*

Interregional course on the use of the sterile insect and related techniques for the area wide management of insect pests — USA  
 National group training in agriculture and related fields — Nigeria  
 National group training studying the fate of nitrate in soil and water under intensive vegetable production systems — Mauritius  
 Regional (AFRA) course on improved mutation, in vitro culture and drought screening techniques for the improvement of African crops — South Africa  
 Regional course on the application of neutron probe and nitrogen-15 under fertigation — Turkey  
 Regional Latin America course on fruit fly area wide management — Mexico

*Workshops*

FAO/IAEA regional training workshop on mutagenesis, molecular pathology and markers in date palm improvement — Tunisia  
 FAO/IAEA training workshop on in vitro plant multiplication, selection, mutagenesis and molecular marker studies in plant improvement — Malaysia  
 FAO/IAEA training workshop on induced mutations and biotechnology in ornamental plant improvement — Indonesia  
 FAO/IAEA workshop on introduction of quality assurance/quality control principles in the analysis of pesticide products — Hungary  
 FAO/IAEA (RCA) workshop on process control of irradiation as a sanitary and phytosanitary treatment for food — China  
 FAO/IAEA/WHO regional workshop for Africa and the Near East on development of quality assurance for mycotoxin analysis of food and feed — Egypt  
 ICGFI regional workshop for Latin America on certification of irradiation as a sanitary and phytosanitary treatment for food — Brazil  
 National training workshop on disease surveillance, reporting and emergency preparedness systems — Pakistan  
 RCA training workshop on in vitro techniques for feed evaluation — Indonesia  
 Regional training workshop update on technologies for the surveillance of rinderpest freedom — Senegal  
 Regional West Asia workshop on using GIS for SIT data management — Austria  
 Regional workshop to train trainers on methodologies and use of information communication technology (ICT) based training materials in animal reproduction and health — United Republic of Tanzania  
 South African Development Community/IAEA technical co-operation workshop on diagnostic kit production and related quality assurance issues in South African developing countries — Zimbabwe  
 Second FAO/IAEA interregional consultants meeting/workshop on developing standardized training material to assist FAO/IAEA Member States to establish quality systems for veterinary diagnostic laboratories — South Africa

TABLE A25. (cont.)

Workshop on integrated crop, soil, water and nutrient management in rice based cropping systems with emphasis on biofertilizer technologies — Bangladesh

### Human Health

#### Courses

- Course on basic clinical radiobiology (IAEA/ESTRO) — Spain  
 Course on clinical research in radiation oncology (IAEA/ESTRO) — Turkey  
 Course on dose and monitor unit calculations for high energy photon beams, basic principles and application to modern techniques (IAEA/ESTRO) — Portugal  
 Course on evidence based radiation oncology: principles and methods (IAEA/ESTRO) — Egypt  
 Course on imaging for target volume determination in radiotherapy (IAEA/ESTRO) — Poland  
 Course on intensity modulated radiation therapy (IAEA/ESTRO) — Netherlands  
 Course on modern brachytherapy techniques (IAEA/ESTRO) — France; Slovakia  
 Course on physics for clinical radiotherapy (IAEA/ESTRO) — Belgium  
 Course on radiation oncology in the new millennium (RCA/ISRO) — India  
 Course on radiotherapy treatment planning: Principles and practices (IAEA/ESTRO) — Ireland  
 Course on the physical aspects of quality assurance in radiotherapy — Argentina  
 National course on basic radioimmunoassay — Sudan  
 National course on radioimmunoassay: Theory, methodology and quality control — Viet Nam  
 Regional course on basic nuclear cardiology — Egypt  
 Regional (AFRA) course on brachytherapy — Tunisia  
 Regional course on formulation of immunoradiometric assay for prostatic specific antigen using antibodies from open sources — Syrian Arab Republic  
 Regional course on molecular biology techniques in diagnosis of viral hepatitis — Uruguay  
 Regional course on nuclear cardiology — Estonia  
 Regional course on nuclear cardiology technicians — Algeria  
 Regional course on nuclear oncology — Italy  
 Regional course on paediatric nuclear medicine for nuclear medicine physicians — Cyprus  
 Regional course on radiation oncology: What have we learnt from evidenced based medicine? (RCA/ISRO) — India  
 Regional (RCA) course on radiobiological and physical aspects of brachytherapy in uterine cervix cancer — Japan  
 Regional course on radionuclide and molecular techniques in the detection of drug resistant malaria — Uganda  
 Regional course on scintimammography, sentinel lymph node detection and intra-operative surgical probe technology — Pakistan  
 Seminar on iron and zinc fortification of wheat flour — Indonesia  
 Regional course on the operation of tissue banking: First phase — Argentina  
 Regional (RCA) course on treatment planning in clinical radiation oncology — Australia

#### Seminars

- National screening programme for neonatal hypothyroidism: Regional seminar for policy makers and professionals on congenital hypothyroidism — Philippines

#### Workshops

- International workshop on  $k_0$  users — Belgium  
 International workshop on multi-micronutrient deficiency control in the life cycle — Peru  
 National workshop on neonatal screening for congenital hypothyroidism in Viet Nam — Viet Nam  
 National workshop on nuclear medicine — Colombia  
 National workshop on a service network with tele-imaging and tele-maintenance — Bolivia  
 Regional (AFRA) workshop on evidence based diagnostic radioimmunology — Mauritius  
 Regional management workshop on strategies to enhance utilization of local radiopharmaceuticals — Republic of Korea  
 Regional training workshop on atmospheric chemistry and transport — Republic of Korea  
 Regional training workshop on nuclear cardiology techniques — South Africa  
 Regional training workshop on paediatric nuclear medicine — Tunisia

## ANNEX

TABLE A25. (cont.)

- Regional training workshop on quality control of single photon emission computed tomography (SPECT) systems — Morocco
- Regional training workshop on radionuclide treatment of liver cancer — Australia
- Regional training workshop on review of the distance assistance training programme for nuclear medicine technologists — South Africa
- Regional workshop on application of SPECT techniques in cardiology and oncology for nuclear medicine technologists — Viet Nam
- Regional workshop on application of the manual of procedures in nuclear nephro-urology and its clinical applications — Mexico
- Regional workshop on management of thyroid cancer — Philippines
- Regional workshop on myocardial perfusion scintigraphy using SPECT for nuclear medicine physicians — Indonesia
- Regional workshop on neutron monitoring and dosimetry — Republic of Korea
- Regional workshop on quality assurance programme for molecular based diagnosis of infectious diseases — Thailand
- Regional (AFRA) workshop on radiation oncology departmental management decision making — South Africa
- Regional workshop on traceability of measurements for protection level dosimetry — Latvia
- Regional workshop on treatment planning — Germany
- Workshop on capacity building in Africa in the area of food and nutrition — South Africa

### Marine Environment and Water Resources

#### *Courses*

- Advanced regional course on isotope data interpretation — USA
- Basic regional course on the use of methodologies of isotope hydrology — Tunisia
- MEDPOL course on the analyses of chlorinated pesticides and PCBs in marine samples — Monaco
- MEDPOL course on the analyses of trace metals in marine samples — Monaco
- Regional course on groundwater: Evaluation, techniques and management — Colombia
- Regional course on isotope hydrology — Namibia

#### *Workshop*

- Regional workshop for project assessment of isotope applications for improved drinking water resources management — Republic of Korea

### Applications of Physical and Chemical Sciences

#### *Courses*

- Accelerator training school 2001 — Indonesia
- Regional course on fabrication of non-destructive testing test pieces — South Africa
- Regional course on surface methods: Level II — Jordan; Tunisia
- Regional course on ultrasonic testing proficiency of welds — Australia

#### *Workshops*

- Regional workshop on neutron beam research — Republic of Korea
- Workshop on nuclear data for science and technology: Accelerator driven waste incineration — Italy

### Nuclear Safety

#### *Courses*

- Course on advanced ultrasonic testing — Russian Federation; Lithuania
- Course on safety design requirements of nuclear power plants — China
- Group training on the introduction of existing regulatory and utility design safety requirements — China
- Regional basic professional course on nuclear safety — France
- Regional basic professional course on nuclear safety (East Asia and Pacific) — USA
- Regional course for junior operators and regulators on safety and utilization of research reactors — Austria; Slovakia
- Regional course on advanced probabilistic safety assessment (PSA) modelling techniques — United Kingdom
- Regional course on regulatory control of nuclear power plants — Germany
-



ANNEX

TABLE A25. (cont.)

Regional course on the safety assessment of nuclear power plants — United Kingdom

*Seminars*

INES seminar — Czech Republic; Slovakia

International seminar on horizontal steam generators — Finland

Seminar on automated ultrasonic testing — Spain

Seminar on qualification of welding techniques — USA

Seminar on self-assessment of operational safety performance — Russian Federation

*Workshops*

First regional workshop on safety analysis and computer code utilization — Republic of Korea

Management workshop on competencies for competitive environment — China

National workshop on configuration management — China

National workshop on external events in site and design of nuclear power plants — Lithuania

National workshop on fundamental event analysis techniques — Republic of Korea

National workshop on operational experience and event analysis techniques — Republic of Korea

National workshop on self-assessment of operational safety — Pakistan

Regional training workshop on safety analysis methodology and computer code utilization — Republic of Korea

Regional workshop on accident management — Ukraine

Regional workshop on ageing of research reactors — Brazil

Regional workshop on comparison of thermal hydraulic analyses performed to support WWER-1000 PSAs — Russian Federation

Regional workshop on core calculations — Argentina

Regional workshop on development of safety analyses reports — Slovenia

Regional workshop on emergency preparedness of research reactors — Romania

Regional workshop on extended shutdown and decommissioning of research reactors — Latvia

Regional workshop on fundamental techniques for event analyses — Lithuania

Regional workshop on modernization of protection systems — Mexico; Peru

Regional workshop on periodic safety review — Bulgaria

Regional workshop on RBMK safety issues — Lithuania

Regional workshop on regulatory review of licensee safety performance — USA

Regional workshop on risk informed regulations — Hungary

Regional workshop on safety culture — China

Regional workshop on safety culture enhancement programme support — Slovakia

Regional workshop on safety culture for research reactors — Chile

Regional workshop on strategies for safe operation — Republic of Korea

Regional workshop on the IAEA nuclear safety standards (safety requirements) — Japan

Regional workshop on tools for enhancement of regulatory effectiveness — Slovenia

Regional workshop on WWER-1000 design basis documentation management system — Czech Republic

Strengthening safety assessment capabilities of nuclear power plants — Ukraine

Workshop for middle and senior managers on harmonization of PSA — Spain

Workshop on ageing of research reactors — China

Workshop on assessing and assuring plant modification safety — Slovenia

Workshop on BWR water chemistry — Germany

Workshop on challenges to the operator–regulator interface — Germany

Workshop on check criteria before acceptance for three categories of fast reactor design basis accidents — China

Workshop on engineering safety assessment of existing nuclear power plants — Russian Federation

Workshop on periodic safety review — Bulgaria

Workshop on probabilistic safety assessment for pressurized heavy water reactors — Canada

Workshop on PSA: A tool to support operational decision making — India

Workshop on regulatory aspects for research reactors — Viet Nam

Workshop on regulatory body review and assessment of safety analysis reports — Czech Republic

Workshop on regulatory requirement for licensing research reactors — Malaysia

Workshop on requirements for level 2 PSA — China

TABLE A25. (cont.)

Workshop on requisites for establishment of regulatory body, licensing, inspection and enforcement — Viet Nam  
 Workshop on safe operating envelope for nuclear power plants with pressurized heavy water reactors — Canada  
 Workshop on strengthening management of plant operational safety — Ukraine  
 Workshop on Tianwan nuclear power plant reactor protection system and validation and verification of the safety software — Germany  
 Workshop on training staff of a regulatory body based on competency — Brazil

### Radiation Safety

#### *Courses*

National course on assistance with preparation of national training courses on radiation protection — Bolivia  
 National course on assistance with preparation of national training courses on radiation protection for officers in radiotherapy and nuclear medicine — Bolivia  
 National course on emergency preparedness and response to radiological emergencies — Costa Rica  
 National course on emergency response and preparedness — Guatemala  
 National course on health surveillance and medical management of overexposed workers — Romania  
 National course on organization and implementation of a national regulatory programme for the control of radiation sources — Bosnia and Herzegovina  
 National course on radiation protection for officers in radiotherapy and nuclear medicine — Bolivia  
 National course on radiation protection for radiation protection officers — Guatemala  
 National course on radiation protection in diagnostic and interventional radiology — Latvia  
 National course on radiation protection in diagnostic radiology — Albania  
 National course on radiation protection in diagnostic radiology — Republic of Moldova  
 National course on radiation protection in hospitals — Saudi Arabia  
 National course on radiation protection in industrial radiography — The Former Yugoslav Republic of Macedonia  
 National course on radiation protection in nuclear medicine — Lithuania  
 National course on radiation protection in radiotherapy — Estonia  
 National course on regulatory control of radiation sources — Malta  
 Post-graduate educational course in radiation protection and nuclear safety — Argentina  
 Post-graduate educational course in radiation protection and safety of radiation — Malaysia  
 Regional course on assessment of occupational exposure due to external radiation sources — Turkey  
 Regional course on design, implementation and management of individual monitoring programmes — Japan  
 Regional course on organization and implementation of a national regulatory programme for the control of radiation sources — Islamic Republic of Iran; Slovenia  
 Regional post-graduate diploma course in radiation protection — Syrian Arab Republic  
 Regional post-graduate educational course in radiation protection and safety of radiation sources — South Africa  
 Regional train the trainers course for developing a syllabus/training material for optimization of radiation protection — Republic of Korea  
 Regional train the trainers course on medical education for nuclear accident preparedness — Slovenia

#### *Seminars*

National forum on the Basic Safety Standards — Colombia  
 National seminar on legislative assistance (experts from URT) — Austria  
 National seminar on regulatory framework for nuclear and radiation safety — Nigeria

#### *Workshops*

IAEA–GCC workshop on radiation protection and waste safety infrastructure — Bahrain  
 National train the trainers workshop on diagnosis and biological dose assessment of radiation injuries — China  
 National workshop in nuclear medicine — Saudi Arabia  
 National workshop on planning medical response to radiological accidents — Egypt  
 National workshop on radiation protection in diagnostic, radiology, radiotherapy and nuclear medicine — Jordan  
 Regional training workshop on radiation protection in diagnostic and interventional radiology — France  
 Regional workshop on management of occupational radiation exposure during outages, Karachi nuclear power plant — Pakistan

TABLE A25. (cont.)

Regional workshop on optimization of radiation protection in nuclear power plants for regulatory staff — Spain  
 Regional workshop on the safety of radiation sources and security of radioactive materials — Morocco; Thailand  
 Workshop on radiation protection for occupationally exposed workers of the IAEA Marine Environment Laboratory  
 — Monaco

### Radioactive Waste Safety

#### Courses

Regional course on decontamination and decommissioning of research reactors and other small nuclear facilities  
 — Republic of Korea  
 Regional course on exposures to the public and their control — Belarus  
 Regional course on sources, assessment, monitoring and control of public exposures — Lithuania

#### Seminars

Executive seminar on information/guidance on decommissioning — Lithuania

#### Workshops

National training workshop on rapid measurements of caesium-137 and strontium-90 in food — Ukraine  
 Regional workshop on safety assessment methodologies for “RADON” radioactive waste disposal facilities —  
 Russian Federation

### Safeguards

#### Courses

Course on implementation of state systems of accounting for and control of nuclear material — USA  
 Regional course on state systems of accounting for and control of nuclear material — Argentina; Australia

#### Seminars

Regional seminar on the protocol additional to nuclear safeguards agreements — Peru  
 Seminar on legislative assistance to representatives from Bulgaria and the Slovak Republic — Headquarters

#### Workshops

National workshop on additional protocol and safeguards implementation — Romania  
 Workshop on IAEA safeguards — Japan  
 Workshop on IAEA safeguards activities — Russian Federation  
 Workshop on nuclear material accounting and reporting — Ukraine  
 Workshop on the additional protocol for the Czech Republic and the Slovak Republic — Headquarters

### Security of Material

#### Courses

Fifth Brno regional course on physical protection system design methodology (IAEA-USDOE) — Czech Republic  
 Regional course on practical operation of physical protection systems — Russian Federation  
 Regional train the trainers course on combating illicit trafficking of nuclear and/or radioactive materials  
 (IAEA-Russian Customs Academy) — Russian Federation

#### Seminars

Subregional workshop-seminar on physical protection — Lithuania

#### Workshops

National design basis threat (DBT) workshop — Kazakhstan; Romania; Slovakia  
 National workshop on combating illicit trafficking of nuclear and/or radioactive materials — Azerbaijan;  
 Kazakhstan  
 Regional workshop on physical protection and combating the illegal movement of nuclear material and other  
 radioactive sources — Argentina

TABLE A25. (cont.)

<b>Policy-making, Management and Support Services</b>
National public information seminar on application of nuclear science and technology for human welfare — Indonesia
Regional public information seminar on peaceful uses of nuclear energy in central and eastern Europe — Slovenia
Regional public information seminar on serving human needs: Nuclear energy and technology for Africa — South Africa
Regional workshop on case studies in nuclear public information — Republic of Korea

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TABLE A26. PUBLICATIONS ISSUED IN 2001

Nuclear Power
A systematic approach to human performance improvement in nuclear power plants: Training solutions — IAEA-TECDOC-1204
Assuring the competence of nuclear power plant contractor personnel — IAEA-TECDOC-1232
Country nuclear power profiles: 2001 edition (print and CD-ROM)
Critical experiments and reactor physics calculations for low enriched HTGRs — IAEA-TECDOC-1249
Current status and future development of modular high temperature gas cooled reactor technology — IAEA-TECDOC-1198
Design and evaluation of heat utilization systems for the high temperature engineering test reactor — IAEA-TECDOC-1236
Effective management of nuclear power plant instrumentation and control modernization projects including development of a database (proceedings of a specialists meeting) (CD-ROM)
Gas turbine power conversion systems for modular HTGRs — IAEA-TECDOC-1238
Heat transport and afterheat removal for gas cooled reactors under accident conditions — IAEA-TECDOC-1163
Information integration in control rooms and technical offices in nuclear power plants — IAEA-TECDOC-1252
Introduction of nuclear desalination — Technical Reports Series No. 400
Managing change in nuclear utilities — IAEA-TECDOC-1226
Modernization of instrumentation and control in nuclear power plants (proceedings of a regional training course) (CD-ROM)
Nuclear power engineering section newsletter, Vo. 3, No. 1
Nuclear power programme planning: An integrated approach — IAEA-TECDOC-1259
Nuclear power reactors in the world — Reference Data Series No. 2
Operating experience with nuclear power stations in Member States in 1999
Operating experience with nuclear power stations in Member States in 2000
Performance of operating and advanced light water reactor designs — IAEA-TECDOC-1245
Quality assurance for safety in nuclear power plants and other nuclear installations — Safety Series No. 50-C/SG-Q (CD-ROM)
Reactor simulator development workshop material — Training Course Series No. 12
Reference manual on the IAEA JRQ correlation monitor steel for irradiation damage studies — IAEA-TECDOC-1230
Risk management: A tool for improving nuclear power plant performance — IAEA-TECDOC-1209
Safety related design and economic aspects of HTGRs — IAEA-TECDOC-1210
Staffing requirements for future small and medium reactors (SMRs) based on operating experience and projections — IAEA-TECDOC-1193
Thermohydraulic relationships for advanced water cooled reactors — IAEA-TECDOC-1203
Nuclear Fuel Cycle and Waste Management Technology
Analysis of uranium supply to 2050 — special publication
Assessment of uranium deposit types and resources: A worldwide perspective — IAEA-TECDOC-1258
Characterization of groundwater flow for near surface disposal facilities — IAEA-TECDOC-1199
Country nuclear fuel cycle profiles — Technical Reports Series No. 404
Design criteria for a worldwide directory of radioactive contaminated sites (DRCS) — IAEA-TECDOC-1251
Handling and processing of radioactive waste from nuclear applications — Technical Reports Series No. 402
Impact of new environmental and safety regulations on uranium exploration, mining, milling and management of its waste — IAEA-TECDOC-1244
Implementation of burnup credit in spent fuel management systems — IAEA-TECDOC-1241

TABLE A26. (cont.)

- Management for the prevention of accidents from disused sealed radioactive sources — IAEA-TECDOC-1205
- Manual of acid in situ leach uranium mining technology — IAEA-TECDOC-1239
- Methods for the minimization of radioactive waste from decontamination and decommissioning of nuclear facilities — Technical Reports Series No. 401
- Monitoring of geological repositories for high level radioactive waste — IAEA-TECDOC-1208
- Multi-purpose container technologies for spent fuel management — IAEA-TECDOC-1192
- Nuclear fuel behaviour modelling at high burnup and its experimental support — IAEA-TECDOC-1233
- Nuclear graphite waste management (proceedings of a Technical Committee meeting held in Manchester, United Kingdom, 18–20 October 1999) — IAEA-NGWM/CD (CD-ROM)
- Organization and management for decommissioning of large nuclear facilities — Technical Reports Series No. 399
- Performance of engineered barrier materials in near surface disposal facilities for radioactive waste: Results of a Co-ordinated Research Project — IAEA-TECDOC-1255
- Procedures and techniques for closure of near surface disposal facilities for radioactive waste — IAEA-TECDOC-1260
- Radioactive waste management status and trends — IAEA/WMDB/ST/1 (CD-ROM)
- Seismic design considerations of nuclear fuel cycle facilities — IAEA-TECDOC-1250
- Technical considerations in the design of near surface disposal facilities for radioactive waste — IAEA-TECDOC-1256
- Technologies for the management of radioactive waste from nuclear power plants and back end nuclear fuel cycle activities (proceedings of a symposium held in Taejon, Republic of Korea, 30 August–3 September 1999) — C&S Papers Series No. 6 (IAEA-CSP-6/CD)
- Use of scientific and technical results from underground research laboratory investigations for the geological disposal of radioactive waste — IAEA-TECDOC-1243
- Waste Inventory Record Keeping Systems (WIRKS) for the management and disposal of radioactive waste — IAEA-TECDOC-1222
- Waste management research abstracts, Nos 25, 26 (CD-ROM)

#### Comparative Assessment for Sustainable Energy Development

- Energy, electricity and nuclear power estimates for the period up to 2020: July 2001 — Reference Data Series No. 1
- Wien Automatic System Planning (WASP) package: A computer code for power generating system expansion planning version, WASP-IV — Computer Manual Series No. 16

#### Food and Agriculture

- Animal production and health newsletter, Nos 33, 34
- Consumer acceptance and market development of irradiated food in Asia and the Pacific — IAEA-TECDOC-1219
- Economic evaluation of three alternative methods for control of the Mediterranean Fruit Fly (Diptera: Tephritidae) in Israel, Jordan Lebanon, Syrian Arab Republic and Territories under the Jurisdiction of the Palestinian Authority — IAEA-TECDOC-1265
- Food and environmental protection newsletter, Vo. 3, Nos 1, 2
- Impact of long term pesticide usage on soil properties using radiotracer techniques — IAEA-TECDOC-1248
- Induced mutations in connection with biotechnology for crop improvement in Latin America — IAEA-TECDOC-1216
- Insect and pest control newsletter, Nos 56, 57
- In vitro techniques for selection of radiation induced mutations adapted to adverse environmental conditions — IAEA-TECDOC-1227
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TABLE A26. (cont.)

Irradiation to control *Vibrio* infection from consumption of raw seafood and fresh produce — IAEA-TECDOC-1213

Mutation breeding newsletter, No. 45

Mutation breeding review, No. 13

Performance indicators for rinderpest surveillance — IAEA-TECDOC-1261

Plant breeding and genetics newsletter, Nos 6, 7

Radioactively labelled DNA probes for crop improvement — IAEA-TECDOC-1253

Radioimmunoassay and related techniques to improve artificial insemination programmes for cattle reared under tropical and subtropical conditions — IAEA-TECDOC-1220

Sesame improvement by induced mutations — IAEA-TECDOC-1195

Soils newsletter, Vols 23, 24

Standardized methods to verify absorbed dose in irradiated food for insect control — IAEA-TECDOC-1201

Use of isotope and radiation methods in soil and water management and crop nutrition — Training Course Series No. 14

#### Human Health

Absorbed dose determination in external beam radiotherapy: An international Code of Practice for dosimetry based on standards of absorbed dose to water — Technical Reports Series No. 398

Current status of neutron capture therapy — IAEA-TECDOC-1223

Implementation of microsource high dose rate (mHDR) brachytherapy for developing countries — IAEA-TECDOC-1257

SSDL newsletter, Nos 44, 45

The role of radiotherapy in the management of cancer patients infected by human immunodeficiency virus (HIV) — IAEA-TECDOC-1224

Therapeutic applications of radiopharmaceuticals — IAEA-TECDOC-1228

#### Marine Environment and Water Resources

Isotope based assessment of groundwater renewal in water scarce regions — IAEA-TECDOC-1246

Isotope techniques in water resource investigations in arid and semi-arid regions — IAEA-TECDOC-1207

New approaches for stable isotope ratio measurements — IAEA-TECDOC-1247

Use of isotope techniques in lake dynamics investigations — IAEA-TECDOC-1206

Water and environment news, Nos 13, 14

#### Applications of Physical and Chemical Sciences

Atomic and plasma-material interaction data for fusion, Vols 7, 9

Bulletin on atomic and molecular data for fusion, Nos 60, 61

Charged particle cross-section database for medical radioisotope production: Diagnostic radioisotopes and monitor reactions — IAEA-TECDOC-1211

CINDA 2000

Compilation and evaluation of fission yield nuclear data — IAEA-TECDOC-1168

Co-ordination of the international network of nuclear structure and decay data evaluators — INDC(NDS)-422

Development of a database for prompt gamma-ray neutron activation analysis — INDC(NDS)-424

Final report of the ITER EDA — ITER EDA Documentation Series No. 21

Fusion energy 2000 — C&S Papers Series No. 8

Guidebook for the fabrication of non-destructive testing (NDT) test specimens — Training Course Series No. 13

International bulletin on atomic and molecular data for fusion, Issue Nos 59, 60

TABLE A26. (cont.)

- ITER Council proceedings 2000 — ITER EDA Documentation Series No. 20
- ITER CTA newsletter, No. 1
- ITER EDA newsletter, Vol. 9, Nos 11, 12; Vol. 10, Nos 2–7
- ITER-FEAT outline design report — ITER EDA Documentation Series No. 18
- Long term needs for nuclear data development: Texts of papers presented at the Advisory Group meeting — INDC(NDS)-428
- Nuclear data newsletter, Nos 31, 32
- Nuclear research centres in the 21st century — special publication
- Nuclear structure and decay data (NSDD) network — INDC(NDS)-421
- Quality aspects of research reactor operations for instrumental neutron activation analysis — IAEA-TECDOC-1218
- Radiotracer technology as applied to industry — IAEA-TECDOC-1262
- Report on the IAEA consultants' meeting on the co-ordination of nuclear reaction data centres (technical aspects) — INDC(NDS)-427
- Second (final) IAEA Research Co-ordination meeting on charge exchange cross-section data for fusion plasma studies — INDC(NDS)-426
- Second (final) IAEA Research Co-ordination meeting on plasma-material interaction data for mixed plasma facing materials in fusion reactors — INDC(NDS)-429
- Strategic planning for research reactors — IAEA-TECDOC-1212
- Summary of the ITER final design report — ITER EDA Documentation Series No. 22
- Summary report of the Advisory Group meeting on long term needs for nuclear data development — INDC(NDS)-423
- Summary report of the consultants' meeting on improvement of the standard cross-sections for light elements — INDC(NDS)-425
- Tc-99m labelled peptides for imaging of peripheral receptors — IAEA-TECDOC-1214
- Technical basis for the ITER-FEAT outline design — ITER EDA Documentation Series No. 19
- The applications of research reactors — IAEA-TECDOC-1234
- Use of irradiation for chemical and microbial decontamination of water, wastewater and sludge — IAEA-TECDOC-1225
- Use of research reactors for neutron activation analysis — IAEA-TECDOC-1215
- X ray fluorescence in the IAEA and its Member States, Newsletter, No. 2

### Nuclear Safety

- Application of non-destructive testing and in-service inspection to research reactors — IAEA-TECDOC-1263
- Applications of probabilistic safety assessment (PSA) for nuclear power plants — IAEA-TECDOC-1200
- Assessment and management of ageing of major nuclear power plant components important to safety — IAEA-TECDOC-1197
- Mitigation of hydrogen hazards in water cooled power reactors — IAEA-TECDOC-1196
- Modifications to nuclear power plants — Safety Standards Series No. NS-G-2.3
- Quality management of the nuclear regulatory body — PDRP-6
- Regulatory review of probabilistic safety assessment (PSA) level 2 — IAEA-TECDOC-1229
- Safety aspects of nuclear plants coupled with seawater desalination units — IAEA-TECDOC-1235
- Safety assessment and verification for nuclear power plants — Safety Standards Series No. NS-G-1.2
- Safety of and regulations for nuclear fuel cycle facilities — IAEA-TECDOC-1221
- Seismic evaluation of existing nuclear power facilities — IAEA-TECDOC-1202
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## ANNEX

TABLE A26. (cont.)

The International Nuclear Event Scale (INES) user's manual, 2001 edition  
The operating organization of nuclear power plants — Safety Standards Series No. NS-G-2.4  
Training the staff of the regulatory body for nuclear facilities: A competency framework — IAEA-TECDOC-1254

### Radiation Safety

An international peer review of the biosphere modelling programme of the US Department of Energy's Yucca Mountain Site Characterization Project — special publication  
Arrangements for transition from the 1985 edition (as amended 1990) to the 1996 edition of the IAEA Transport Regulations — IAEA-TECDOC-1194  
Arrangements for transition from the 1985 edition (as amended 1990) to the 1996 edition of the IAEA Transport Regulations — IAEA-TECDOC-1194 (Rev. 1)  
Assessment by peer review of the effectiveness of a regulatory programme for radiation safety — IAEA-TECDOC-1217  
Building competence in radiation protection and the safe use of radiation sources — Safety Standards Series No. RS-G-1.4  
Cytogenetic analysis for radiation dose assessment, a manual — Technical Reports Series No. 405  
Directory of national competent authorities' approval certificates for package design, special form material and shipment of radioactive material, 2001 edition — IAEA-TECDOC-1237  
Emergency communications with the IAEA Emergency Response Centre — special publication  
Generic models for use in assessing the impact of discharges of radioactive substances to the environment — Safety Reports Series No. 19  
IAEA Emergency Response Network ERNET — special publication  
Inventory of accidents and losses at sea involving radioactive material — IAEA-TECDOC-1242  
Investigation of an accidental exposure of radiotherapy patients in Panama: Report of a team of experts, 26 May–1 June 2001 — special publication  
Joint radiation emergency management plan of the international organizations JPLAN — special publication  
National competent authorities responsible for approvals and authorizations in respect of the transport of radioactive material: List No. 32 (2001 edition)  
National regulatory authorities with competence in the safety of radiation sources and the security of radioactive materials (proceedings of an international conference held in Buenos Aires, 11–15 December 2000) — C&S Papers Series No. 9  
ORPGUIDE: Occupational radiation protection, IAEA Safety Standards Series — special publication (CD-ROM)  
Present and future environmental impact of the Chernobyl accident — IAEA-TECDOC-1240  
Radiological protection of patients in diagnostic and interventional radiology, nuclear medicine and radiotherapy (including CD-ROM) — Proceedings Series  
Radiological protection of patients in diagnostic and interventional radiology, nuclear medicine and radiotherapy: Contributed papers (including CD-ROM) — C&S Papers Series No. 7  
Restoration of environments with radioactive residues — Proceedings Series  
Severity, probability and risk of accidents during maritime transport of radioactive material — IAEA-TECDOC-1231  
The criticality accident in Sarov — special publication  
Training in radiation protection and the safe use of radiation sources — Safety Reports Series No. 20

### Radioactive Waste Safety

Decommissioning of nuclear fuel cycle facilities — Safety Standards Series No. WS-G-2.4

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TABLE A26. (cont.)

**Co-ordination of Safety Activities**

Maintaining knowledge, training and infrastructure for research and development in nuclear safety — INSAG Note No. 4

Nuclear safety review for the year 2000

**Safeguards**

International safeguards: Verification and nuclear material security — Proceedings Series

**Policy-making, Management and Support Services**

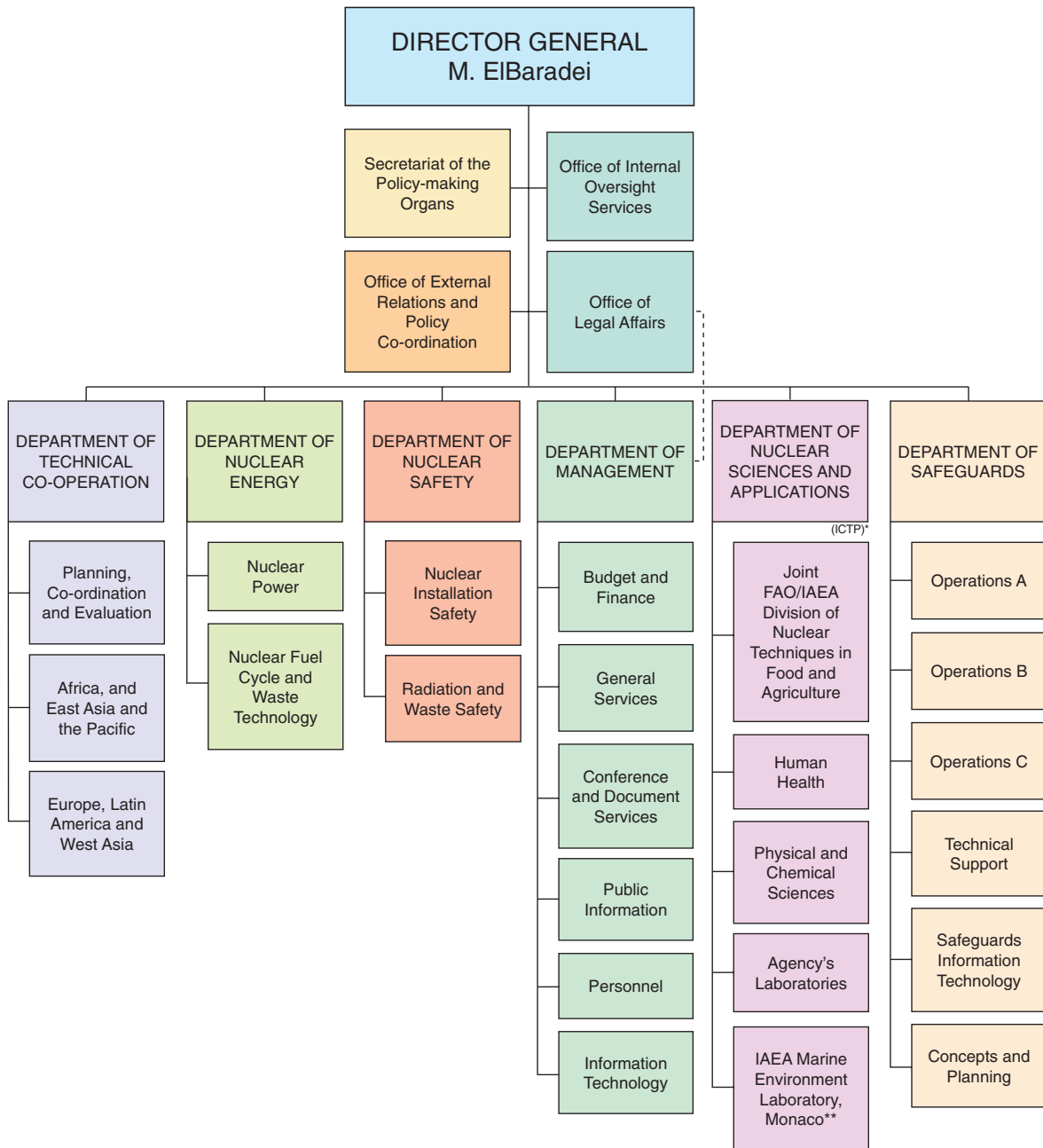
INIS: Authority list for journal titles — INIS Reference Series No. 11

Manual for online retrieval from the INIS database on the internet — INIS Reference Series No. 24

Nuclear Fusion, Vol. 41, Nos 1–12

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## ORGANIZATIONAL CHART (as of 31 December 2001)



\* The Abdus Salam International Centre for Theoretical Physics (Abdus Salam ICTP), legally referred to as "International Centre for Theoretical Physics", is operated as a joint programme by UNESCO and the Agency. Administration is carried out by UNESCO on behalf of both organizations. The Agency's involvement in the Centre is managed by the Department of Nuclear Sciences and Applications.

\*\* With the participation of UNEP and IOC.



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